TETRA TECH

December 10, 2012

Mr. Eric Amadi
c/o Ms. Victoria Stovall
Wisconsin Department of Natural Resources Southeast Region
2300 North Martin Luther King Jr Drive
Milwaukee, WI 53212

RE: Work Plan Addendum – Tar Plant Residuals
Former Wabash Alloys Facility
9100 South Fifth Avenue, Oak Creek, Wisconsin 53154
WDNR BRRTS Activity # 02-41-553761

Dear Mr. Amadi:

On behalf of Beazer East, Inc., Tetra Tech GEO is submitting the enclosed Work Plan Addendum for further site characterization of tar plant residuals for the above-referenced site for your review. Two copies of the work plan and a $500 review fee are enclosed.

The work plan calls for delineating the presence of tar at the site using a tar screening tool called TarGOST® or using visual observations from boreholes if it is the determined that the TarGOST® tool is not providing useful data. Beazer is evaluating the possibility of entering into the Voluntary Party Liability Exemption (VPLE) program and is therefore interested in knowing if the use of these procedures for tar delineation would be acceptable under the VPLE program or if direct testing would be required. In our October 31, 2012 conference call with Darsi Foss you suggested putting this request in writing so you could take it to the Closure Committee for consideration.

We understand that we can move forward with this investigative work without your approval and, depending on the window of opportunity for site access, we may need to do so. But our hope is to get your comments before we implement the work. Please do not hesitate to contact us should you have any questions or require additional information.

Sincerely,

Tetra Tech GEO

Michael R. Noel, P.G.
Vice President, Principal Hydrogeologist

Encl.
cc: Mike Slenska, Beazer East, Inc.

TETRA TECH GEO
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Tel 262.792.1282 Fax 262.792.1310 www.tetratechgeo.com www.tetratech.com

WORK PLAN ADDENDUM
SITE INVESTIGATION
FORMER WABASH ALLOYS PROPERTY
9100 South Fifth Avenue
Oak Creek, Wisconsin

Prepared for:

Beazer

Beazer East, Inc.
One Oxford Centre
Suite 3000
Pittsburgh, PA 15219-6401

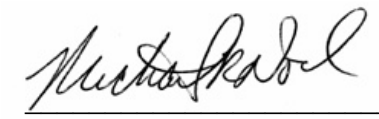
Prepared by:

Tetra Tech GEO
175 N. Corporate Drive, Suite 100
Brookfield, WI 53045

December 7, 2012

CERTIFICATION

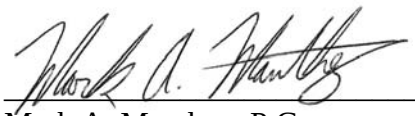
"I, Michael R. Noel, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (3), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."



Michael R. Noel, P.G.
Vice President, Principal Hydrogeologist

December 7, 2012
Date

"I, Mark A. Manthey, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."



Mark A. Manthey, P.G.
Senior Hydrogeologist

December 7, 2012
Date

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TABLES

APPENDICES

1.0 INTRODUCTION

1.1 Purpose

This work plan addendum provides a scope of work to further delineate soil and groundwater impacts associated with the former coal tar distillation plant operations at the former Wabash Alloys Facility owned by Connell Ltd Partnership, LLC (Connell) in Oak Creek, Wisconsin (Site). The rationale for proposed boring and well locations is based on the results of previous investigation work completed in accordance with the initial work plan dated September 22, 2011. Summary tables and figures of the previous sampling efforts related to tar plant operations are included in this addendum. Sampling results for metals and PCBs are not included as those are being reported and addressed directly by Connell associated with the former aluminum smelting and recycling operations that took place at the Site.

1.2 Previous Sampling Results

Figure 1 provides the locations of previous sampling efforts. This includes the sampling conducted by RMT in 2010 for Connell, sampling conducted by Tetra Tech in 2011 and sampling on City of Oak Creek property (Depot Road and Utility Access Road) conducted by Sigma in 2003 and Bonestroo in 2010. City sampling location designations include an "OC" prefix. Borehole and well construction logs from Tetra Tech's investigation are included as Appendix A. Figures 2 and 3 provide water level elevation maps for the water table and deeper piezometers, respectively. Tetra Tech VOC and SVOC sampling results are summarized in Tables 1 and 2 for soil and in Tables 3 and 4 for groundwater. Groundwater samples were not collected from monitoring wells MW-106, MW-109 and MW-114 because of the presence of NAPL tar in the well. Soil sampling results for VOCs and SVOCs (in benzo(a)pyrene equivalents) are presented in Figures 4 and 5 which include the data from RMT, Tetra Tech, Sigma and Bonestroo sampling efforts. Tetra Tech groundwater sampling results for VOCs and SVOCs (in benzo(a)pyrene equivalents) are presented in Figures 6 and 7. Figure 8 includes a delineation of tar observations from boreholes and monitoring wells.

2.0 FIELD INVESTIGATION

The proposed scope of work includes additional site characterization to delineate the extent of tar, additional VOC and PAH sampling to delineate the limits of impacted soil north and south of the Site and additional groundwater monitoring wells to confirm the extent of VOC and PAH impacted groundwater downgradient of the Site. Although PCBs are being addressed by Connell, the soil samples collected north and south of the Site for VOC and PAH analysis will also be analyzed for PCBs.

2.1 Tar Delineation Probes/Boreholes

Figure 8 includes a delineation of areas where tar was observed in boreholes or monitoring wells and the proposed location of an additional 54 probe locations to provide lateral and vertical delineation of the tar areas. The additional characterization will be carried out using the Tar-specific Green Optical Screening Tool or TarGOST® (Appendix B). The TarGOST® is a modified version of the Rapid Optical Screening Tool (ROST®) and uses visible wavelength fluorescence spectroscopy to yield a monotonic response in the presence of coal tar in soil. TarGOST® was developed exclusively for detection of coal tars, creosotes, heavy crudes, and tank bottoms. TarGOST® is designed to respond to the highly impacted soils (limit of detection of 250-500 ppm) and not low level staining or dissolved phase. TarGOST® will be used to provide real-time, semi-quantitative assessment of the extent of tar at the site. The TarGOST® will be deployed using a Geoprobe®. Five of the probe locations (Figure 8) fall within a potential wetland area identified on the WDNR wetlands indicator website (http://dnrmaps.wi.gov/imf/imf.jsp?site=SurfaceWaterViewer.wetlands). The investigation work being proposed does not require a wetlands permit based on section 281.36, Wis. Statutes, and NR 299 and NR 103, Wisconsin Administrative Code.

Prior to mobilizing to the Site a 40 ml vial sample of the NAPL tar will be collected from one of the Site monitoring wells where tar was observed (MW-106, MW-109 and MW-114). The sample will be analyzed with the TarGOST® system to confirm if TarGOST® is a viable investigative tool for the Site. If the TarGOST® is viable, the system will be mobilized to the Site and the initial probes will be installed in the areas of observed tar (B-05, B-08, B-12, B-13, B-15, B-16, B-17, B-18 and B-19) and in non-contaminated areas (near B-04, B-25, and B-29) to calibrate the system and confirm useful data is being obtained before continuing site wide. Probes inside the building will be installed through a concrete core through the floor.

If the initial analysis or on-site testing indicates TarGOST® is not viable, the tar delineation will be carried out using visual observations of tar in boreholes. Using this approach, soil samples will be collected using a Geoprobe® direct push soil core sampler. Borings inside the building will be installed through a concrete core through the floor. Continuous soil samples will be collected to a depth of 15 feet bgs at each proposed borehole location. The soil samples will be logged according to the United Soil Classification System. Observations of tar staining and odor will be noted. Soil samples will be screened for the presence of ionizable VOCs at 2-foot intervals using a photoionization detector (PID) equipped with a 10.6 eV lamp.

2.2 VOC, PAH and PCB Soil Sampling

Figures 9 and 10 provide isoconcentration maps of total VOCs (BTEX and trimethylbenzene) and B(a)P equivalents using the maximum concentration observed at each borehole location. Figure 11 provides a composite of the tar observation and isoconcentration maps. Figures 9 and 10 show the proposed locations of an additional 21 borings to provide samples for analysis of VOCs by EPA Method 8260, PAHs by EPA Method 8270 and PCBs by EPA Method 8082. Soil samples will be collected using a Geoprobe® direct push soil core sampler. Continuous soil samples will be collected to a depth of 15 feet bgs at each proposed borehole location. The soil samples will be logged according to the United Soil Classification System. Observations of tar staining and odor will be noted. Soil samples will be screened for the presence of ionizable VOCs at 2-foot intervals using a photoionization detector (PID) equipped with a 10.6 eV lamp. Soil samples from each borehole will be collected from a depth of 0-2 feet and from the zone below the water table with the highest PID measurement.

2.3 Borehole Abandonment

The soil borings will be decommissioned in accordance with the procedures outlined in Chapter NR141 of the Wisconsin Administrative Code (WAC). For the interior borings, the concrete cores will be replaced in the floor after borehole abandonment. WDNR borehole abandonment forms will be completed for each abandoned soil boring. Copies of the borehole abandonment forms will be included in an appendix of the Site investigation report. WDNR soil boring log information forms will be completed by Tetra Tech GEO personnel for each soil boring. Copies of the WDNR soil boring logs will be included in an appendix of the Site investigation report.

2.4 Groundwater Monitoring Well Installation and Sampling

Figure 12 provides a delineation of the areas where VOC and SVOC concentrations in groundwater exceed NR140 Enforcement Standards. Three water table monitor wells will be installed at the proposed locations shown on Figure 12 to delineate the extent of the downgradient groundwater plume. The wells will be installed to a depth of 15-20 feet bgs, depending on depth to water. The locations of these wells may be adjusted based on potential underground or above ground obstructions and site access.

The sonic method of drilling will be used to drill the boreholes in which the monitor wells will be installed. The sonic method of drilling was selected because it minimizes the amount of investigative waste produced and is a quicker drilling method in comparison to other drilling methods. The water table monitor wells will be constructed of 2-inch nominal diameter schedule 40 PVC well casing and stainless steel screen. The screen will have a slot size of 0.010-inches and a nominal length of 10 feet. Monitoring wells will be completed with flush mounted protective covers. The flush mounted protective covers will comply with the specifications listed in NR 141.13(4) WAC.

The monitoring wells will be developed in accordance with the procedures described in NR 141.21 WAC. PVC bailers will be used to surge and purge the monitor wells during development. If a monitor well does not bail dry, a portable submersible pump may be used to complete the development of the well. WDNR monitoring well development forms will be completed for each monitor well. The monitoring well development forms will be included in an appendix of the Site investigation report.

Groundwater samples will be collected from the new and existing monitoring wells except for the three wells that contain NAPL tar. Product thickness measurements will be obtained from these three wells. Depth to groundwater measurements will be collected from the monitor wells in conjunction with the groundwater sampling round. An electronic water level meter will be used to measure the water levels in the monitor wells to the nearest 0.01 foot. Low-flow purging and sampling method will be used to collect the groundwater samples from the monitor wells. The groundwater samples will be submitted for laboratory analyses of VOCs by EPA Method 8260 and PAHs by EPA Method 8270.

Sample containers provided by the laboratory subcontractor will be used to collect the groundwater samples. One duplicate groundwater sample will be collected from one of the monitor wells for QA/QC purposes. The duplicate sample will be submitted for laboratory analyses of VOCs and SVOCs. The groundwater samples will be stored at a temperature of approximately 4 degrees Celsius and will be delivered to the laboratory following standard chain-of-custody procedures. Each sample container will have a self-adhesive label attached to it with the sample identification and date and time the sample was collected written on the label. The sample identification will consist of the monitor well identification.

2.5 Survey

The locations and elevations of the soil probes/borings and monitoring wells will be surveyed by a state licensed surveyor so they can be accurately placed on the Site base map. The locations, ground surface elevation, top of protective cover elevation, and top of well casing elevation of the monitor wells will be surveyed by a licensed surveyor in accordance with the specifications listed in NR141.065(2) WAC. WDNR monitoring well construction summary forms will be completed for each monitor well and will be included in an appendix of the Site investigation report.

3.0 DECONTAMINATION AND INVESTIGATION-DERIVED WASTE

The TarGOST® and downhole sampling equipment used to collect the soil samples will be decontaminated between samples using a solution of trisodium phosphate (TSP) and potable water. A stiff bristle brush will be used to remove soil particles from the sampling equipment. The equipment will then be rinsed with potable water.

The bailers and portable pumps used to develop the monitor wells will be decontaminated between wells using a solution of TSP and potable water. The inner and outer surfaces of the bailers will be rinsed with the TSP and water solution. The bailers will then be rinsed with distilled water and dried before being used to develop another monitor well. If a portable pump is used to develop the wells, the pump will be decontaminated between wells by operating the pumping for several minutes in a 5-gallon bucket containing a solution of TSP and potable water. The pump will then be operated for several minutes in a 5-gallon bucket containing clean potable water and then rinsed with distilled water. The pump will be allowed to dry before being used in another monitor well.

The drilling/Geoprobe® subcontractor will be instructed to provide clean drill rods for the drilling of the boreholes in which the monitor wells will be installed. The drill rods used during the investigation will be cleaned using a pressure washer or a steam cleaner.

The soil cuttings produced during the installation of the soil borings and monitor wells will be contained in 55-gallon drums and temporarily stored on-site pending determination of appropriate disposal options for the soil. The drums will be labeled as containing IDW soil cuttings. The date the soil cuttings were generated and the borehole identification from which the soil cuttings were collected will also be included on the drum labels. A composite sample of the drummed soil will be collected and submitted for waste profile analysis.

Groundwater produced during the development and sampling of the monitor wells will be contained in 55-gallon drums and temporarily stored on-site pending determination of appropriate disposal options for the water. The drums will be labeled as containing IDW groundwater. The monitor well identification from which the groundwater was purged and the date(s) the groundwater was purged from the monitor wells will also be noted on the labels. A composite sample of the drummed water will be collected and submitted for waste profile analysis.

4.0 REPORT

Once all the tasks described above are completed, and if it is determined that soil and groundwater impacts have been adequately defined, a Site investigation report in compliance with the requirements of Chapter NR716 WAC will be prepared by Tetra Tech personnel presenting the findings of the Site investigation. The report will include copies of the WDNR soil boring logs, monitor well construction summary forms, and monitor well development forms for the soil borings and monitor wells installed as part of this scope of work and copies of the soil and groundwater analytical results. Tables summarizing the soil and groundwater analytical results and figures showing the locations of the soil borings and monitor wells will also be included in the report. The analytical summary tables will include the detection limit for any parameter concentration below the limit of quantification. The TarGOST® data will be processed using MVS three-dimensional visualization software to create 3D and 2D images of the tar presence.

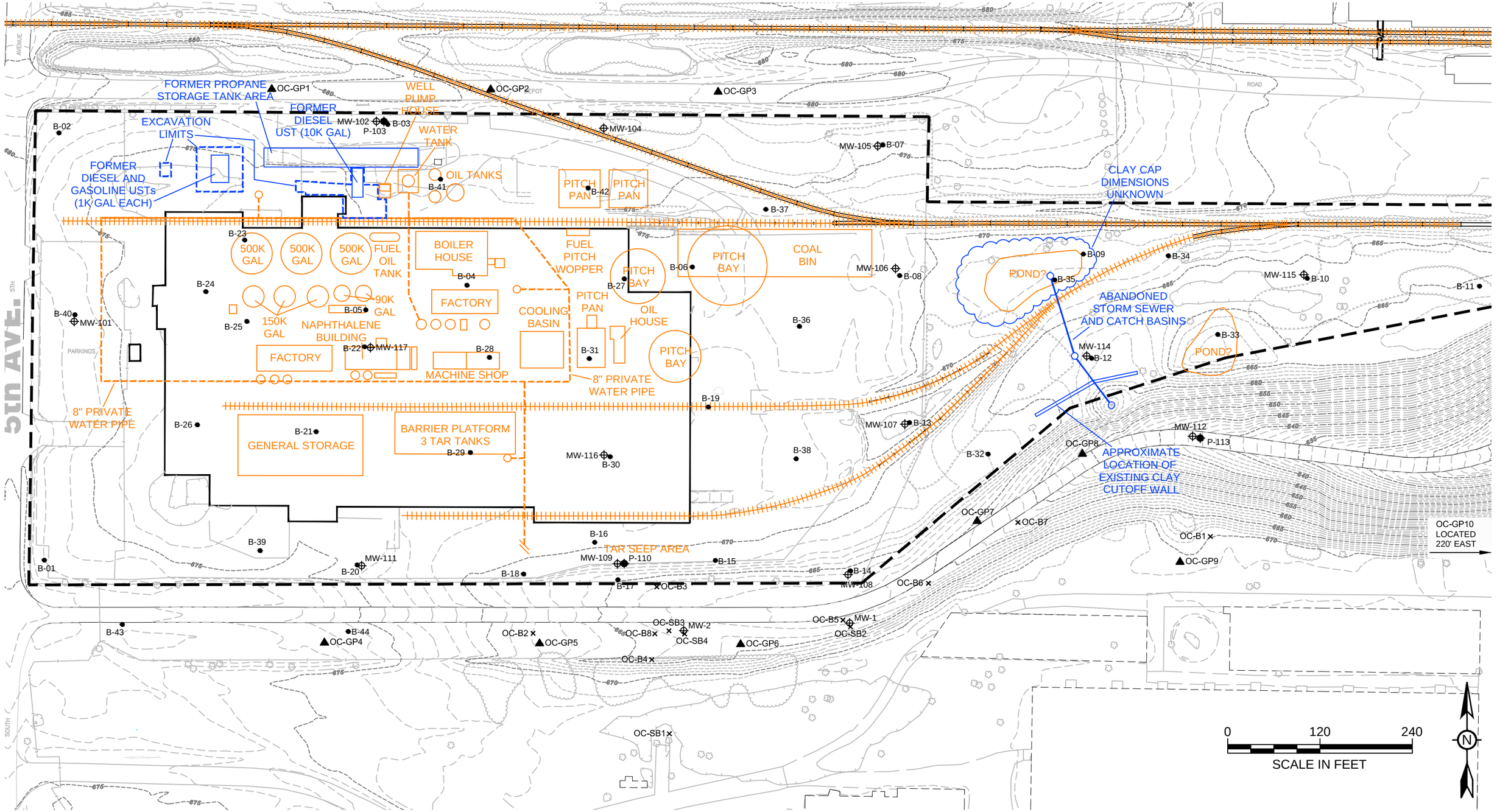
5.0 SCHEDULE

The schedule for work will depend on Site access. For on-site work activities, access approval will be required from Connell, and the work will likely need to be conducted after Connell has completed ongoing building cleaning activities but prior to initiation of building demolition activities. Off-site work activities to be completed along Depot Road to the north and the utility access road to the south require access approval by the City of Oak Creek, and that work would be done in conjunction with the on-site work while equipment was mobilized to the Site. A couple of borehole/well locations are located south of the utility access road on DuPont property which will require access approval by the property owner. With WDNR's approval of this Work Plan, Beazer will begin to coordinate the access approvals necessary for implementation.

6.0 HEALTH AND SAFETY PLAN

A copy of the health and safety plan is included in Appendix E of the September 22, 2011 Work Plan.

FIGURES



EXPLANATION

MW-101	WATER TABLE WELL	OC-SB1	SOIL BORING (CITY OF OAK CREEK)
P-103	NESTED PIEZOMETER	OC-GP1	GEOPROBE (CITY OF OAK CREEK)
B-01	SOIL BORING		APPROXIMATE PROPERTY BOUNDARY

FORMER TAR PLANT STRUCTURES

PAST REMEDIAL ACTIVITIES

TITLE: CONNELL LLC PROPERTY
SITE LAYOUT AND PREVIOUS SAMPLING LOCATIONS

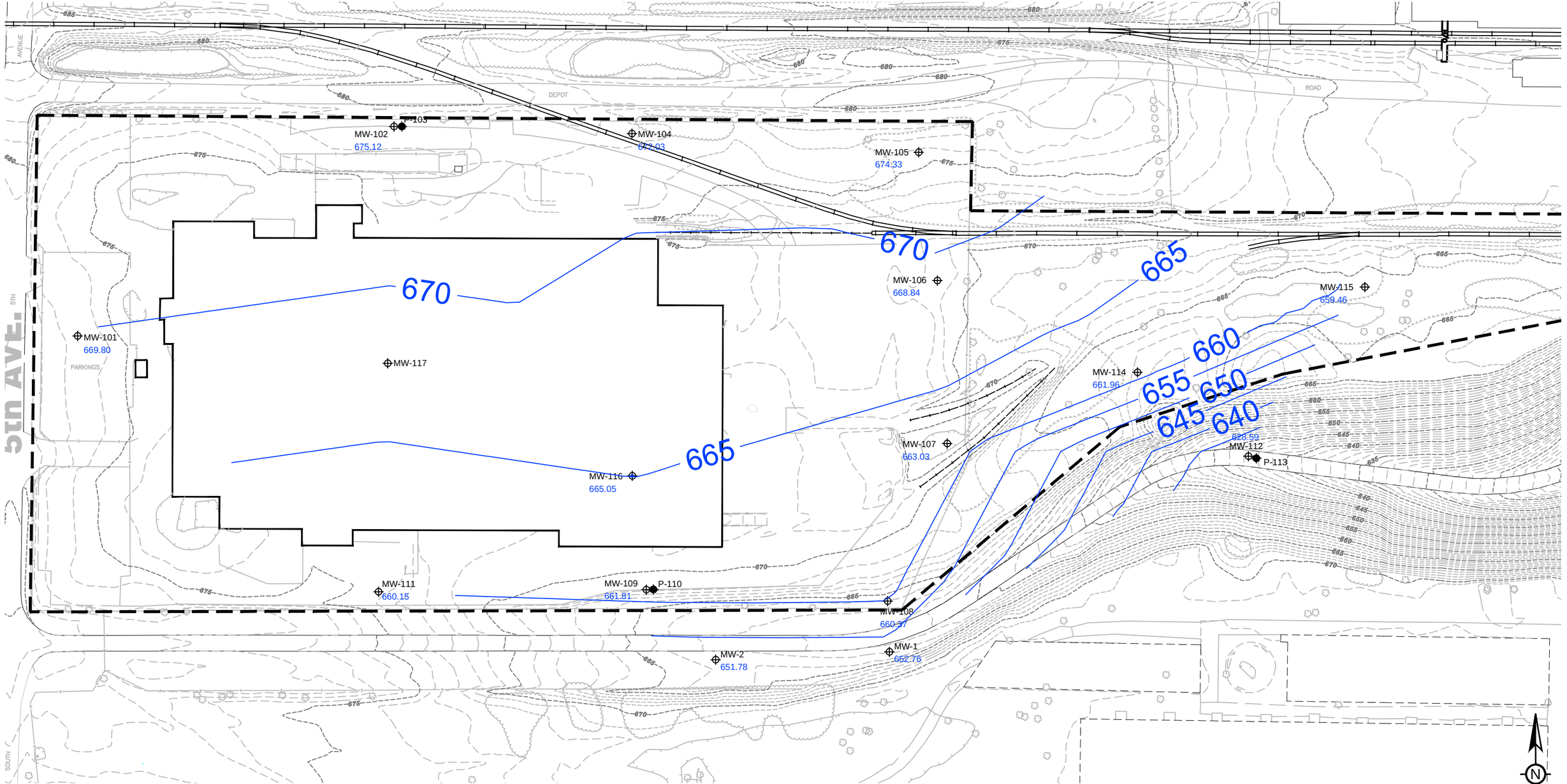
LOCATION: OAK CREEK, WISCONSIN

TETRA TECH

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2201220
DATE	11/13/12

FIGURE: 1

S:\CAD\BEAZER\WABASH\10-16-12\FIGURE 1 - SITE LAYOUT.DWG



EXPLANATION

MW-101	WATER TABLE WELL	660	WATER TABLE CONTOUR
P-103	NESTED PIEZOMETER		APPROXIMATE PROPERTY BOUNDARY
669.86	WATER TABLE ELEVATION		

0 120 240

SCALE IN FEET

TITLE: CONNELL LLC PROPERTY
WATER TABLE MAP (FEBRUARY 1, 2012)

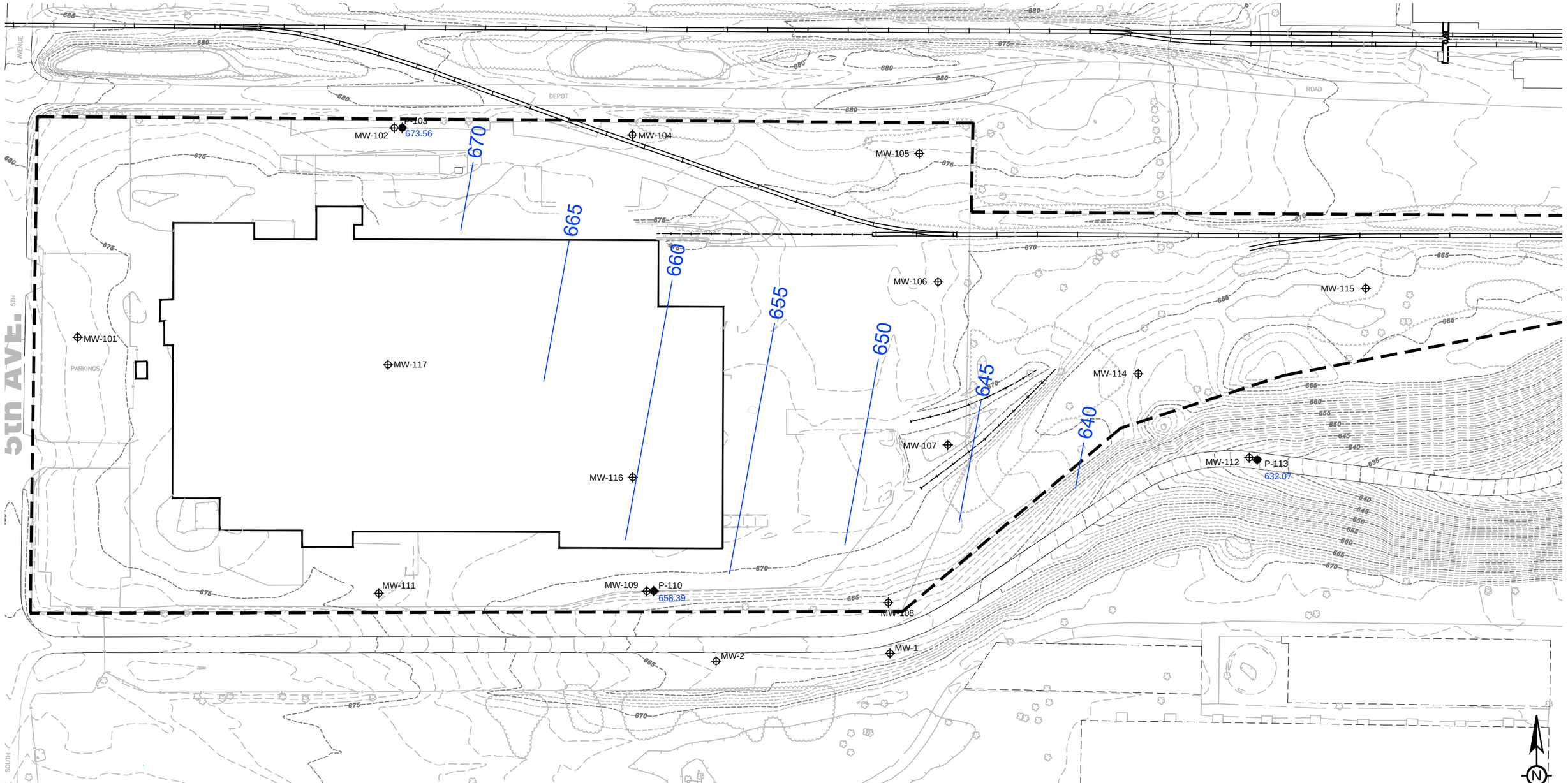
LOCATION: OAK CREEK, WISCONSIN

TETRA TECH

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2201220
DATE	2/16/12

FIGURE: 2

S:\CAD\BEAZER\WABASH\1-11-12\WATER TABLE MAP2.DWG



EXPLANATION

MW-101	WATER TABLE WELL	660	DEEP AQUIFER ZONE CONTOUR
P-103	NESTED PIEZOMETER		APPROXIMATE PROPERTY BOUNDARY
673.54	DEEP AQUIFER ZONE ELEVATION		

0 120 240

SCALE IN FEET

TITLE: CONNELL LLC PROPERTY

DEEP POTENTIOMETRIC SURFACE MAP (FEBRUARY 1, 2012)

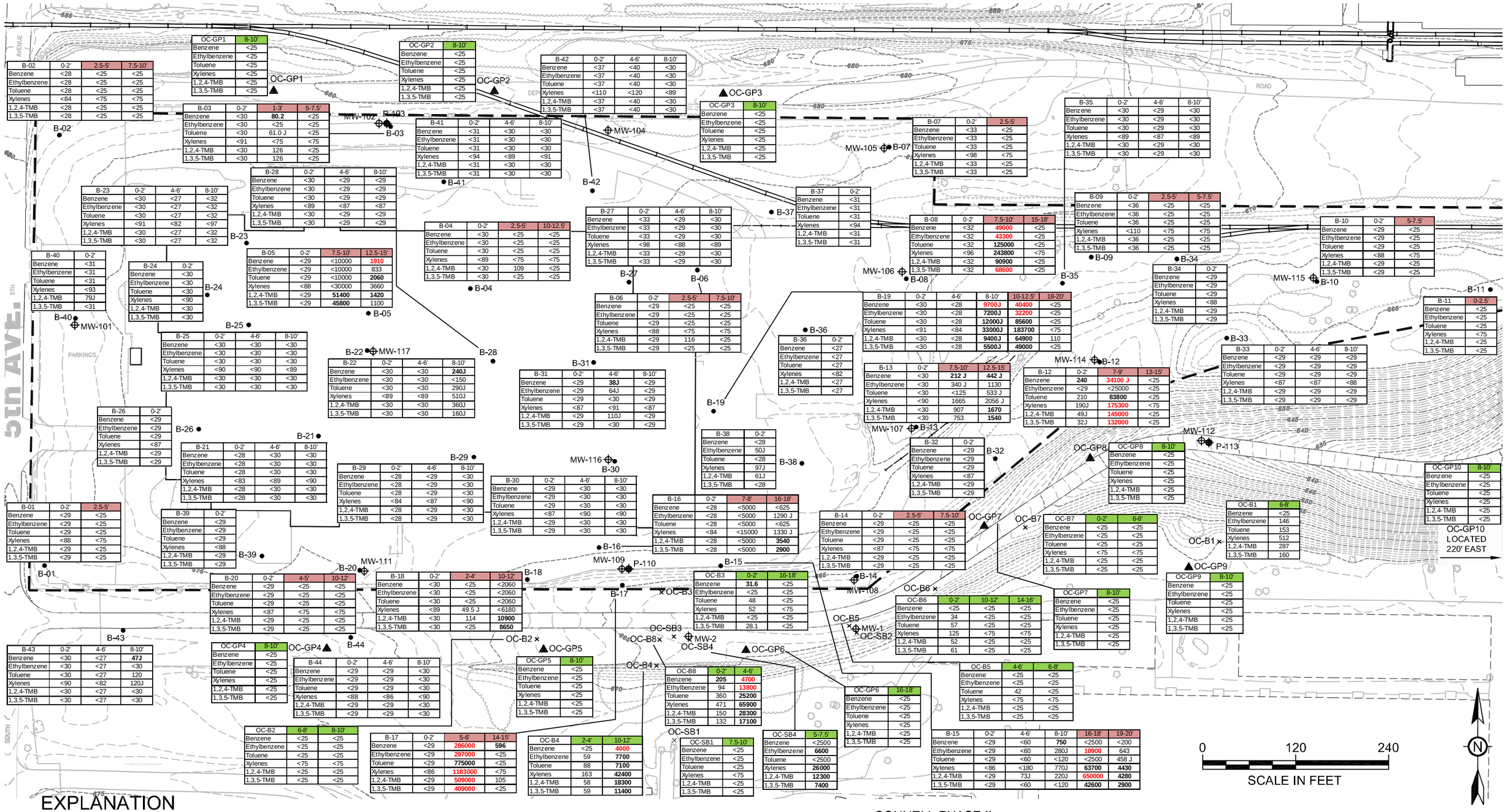
LOCATION: OAK CREEK, WISCONSIN

TETRA TECH

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2201220
DATE	11/13/12

FIGURE: 3

S:\CAD\BEAZER\WABASH\1-11-12\DEEP AQUIFER ZONE MAP2.DWG



B-02	0-2'	2.5-5'	7.5-10'
Benzene	<28	<25	<25
Ethylbenzene	<28	<25	<25
Toluene	<28	<25	<25
Xylenes	<84	<75	<75
1,2,4-TMB	<28	<25	<25
1,3,5-TMB	<28	<25	<25

OC-GP1	8-10'
Benzene	<25
Ethylbenzene	<25
Toluene	<25
Xylenes	<25
1,2,4-TMB	<25
1,3,5-TMB	<25

OC-GP2	8-10'
Benzene	<25
Ethylbenzene	<25
Toluene	<25
Xylenes	<25
1,2,4-TMB	<25
1,3,5-TMB	<25

B-42	0-2'	4-6'	8-10'
Benzene	<37	<40	<30
Ethylbenzene	<37	<40	<30
Toluene	<37	<40	<30
Xylenes	<110	<120	<89
1,2,4-TMB	<37	<40	<30
1,3,5-TMB	<37	<40	<30

OC-GP3	8-10'
Benzene	<25
Ethylbenzene	<25
Toluene	<25
Xylenes	<25
1,2,4-TMB	<25
1,3,5-TMB	<25

B-03	0-2'	1-3'	5-7.5'
Benzene	<30	**80.2**	<25
Ethylbenzene	<30	<25	<25
Toluene	<30	61.0 J	<25
Xylenes	<91	<75	<75
1,2,4-TMB	<30	126	<25
1,3,5-TMB	<30	126	<25

B-41	0-2'	4-6'	8-10'
Benzene	<31	<30	<30
Ethylbenzene	<31	<30	<30
Toluene	<31	<30	<30
Xylenes	<94	<89	<91
1,2,4-TMB	<31	<30	<30
1,3,5-TMB	<31	<30	<30

B-07	0-2'	2.5-5'
Benzene	<33	<25
Ethylbenzene	<33	<25
Toluene	<33	<25
Xylenes	<98	<75
1,2,4-TMB	<33	<25
1,3,5-TMB	<33	<25

B-35	0-2'	4-6'	8-10'
Benzene	<30	<29	<30
Ethylbenzene	<30	<29	<30
Toluene	<30	<29	<30
Xylenes	<89	<87	<89
1,2,4-TMB	<30	<29	<30
1,3,5-TMB	<30	<29	<30

B-23	0-2'	4-6'	8-10'
Benzene	<30	<27	<32
Ethylbenzene	<30	<27	<32
Toluene	<30	<27	<32
Xylenes	<91	<82	<97
1,2,4-TMB	<30	<27	<32
1,3,5-TMB	<30	<27	<32

B-28	0-2'	4-6'	8-10'
Benzene	<30	<29	<29
Ethylbenzene	<30	<29	<29
Toluene	<30	<29	<29
Xylenes	<89	<87	<87
1,2,4-TMB	<30	<29	<29
1,3,5-TMB	<30	<29	<29

B-37	0-2'
Benzene	<31
Ethylbenzene	<31
Toluene	<31
Xylenes	<94
1,2,4-TMB	<31
1,3,5-TMB	<31

B-09	0-2'	2.5-5'	5-7.5'
Benzene	<36	<25	<25
Ethylbenzene	<36	<25	<25
Toluene	<36	<25	<25
Xylenes	<110	<75	<75
1,2,4-TMB	<36	<25	<25
1,3,5-TMB	<36	<25	<25

B-10	0-2'	5-7.5'
Benzene	<29	<25
Ethylbenzene	<29	<25
Toluene	<29	<25
Xylenes	<88	<75
1,2,4-TMB	<29	<25
1,3,5-TMB	<29	<25

B-40	0-2'
Benzene	<31
Ethylbenzene	<31
Toluene	<31
Xylenes	<93
1,2,4-TMB	79J
1,3,5-TMB	<31

B-24	0-2'
Benzene	<30
Ethylbenzene	<30
Toluene	<30
Xylenes	<90
1,2,4-TMB	<30
1,3,5-TMB	<30

B-05	0-2'	7.5-10'	12.5-15'
Benzene	<29	<10000	**1910**
Ethylbenzene	<29	<10000	833
Toluene	<29	<10000	**2060**
Xylenes	<88	<30000	3660
1,2,4-TMB	<29	**51400**	**1420**
1,3,5-TMB	<29	**45800**	1100

B-04	0-2'	2.5-5'	10-12.5'
Benzene	<30	<25	<25
Ethylbenzene	<30	<25	<25
Toluene	<30	<25	<25
Xylenes	<89	<75	<75
1,2,4-TMB	<30	109	<25
1,3,5-TMB	<30	<25	<25

B-27	0-2'	4-6'	8-10'
Benzene	<33	<29	<30
Ethylbenzene	<33	<29	<30
Toluene	<33	<29	<30
Xylenes	<98	<88	<89
1,2,4-TMB	<33	<29	<30
1,3,5-TMB	<33	<29	<30

B-08	0-2'	7.5-10'	15-19'
Benzene	<32	49000	<25
Ethylbenzene	<32	43300	<25
Toluene	<32	**125000**	<25
Xylenes	<96	**243800**	<75
1,2,4-TMB	<32	**90900**	<25
1,3,5-TMB	<32	68600	<25

B-34	0-2'
Benzene	<29
Ethylbenzene	<29
Toluene	<29
Xylenes	<88
1,2,4-TMB	<29
1,3,5-TMB	<29

B-11	0-2.5'
Benzene	<25
Ethylbenzene	<25
Toluene	<25
Xylenes	<75
1,2,4-TMB	<25
1,3,5-TMB	<25

B-06	0-2'	2.5-5'	7.5-10'
Benzene	<29	<25	<25
Ethylbenzene	<29	<25	<25
Toluene	<29	<25	<25
Xylenes	<88	<75	<75
1,2,4-TMB	<29	116	<25
1,3,5-TMB	<29	<25	<25

B-19	0-2'	4-6'	8-10'	10-12.5'	18-20'
Benzene	<30	<28	**9700J**	**40400**	<25
Ethylbenzene	<30	<28	**7200J**	**32200**	<25
Toluene	<30	<28	**12000J**	**85600**	<25
Xylenes	<91	<84	**33000J**	**183700**	<75
1,2,4-TMB	<30	<28	**9400J**	**64900**	110
1,3,5-TMB	<30	<28	**5500J**	**49000**	<25

B-33	0-2'	4-6'	8-10'
Benzene	<29	<29	<29
Ethylbenzene	<29	<29	<29
Toluene	<29	<29	<29
Xylenes	<87	<87	<88
1,2,4-TMB	<29	<29	<29
1,3,5-TMB	<29	<29	<29

B-36	0-2'
Benzene	<27
Ethylbenzene	<27
Toluene	<27
Xylenes	<82
1,2,4-TMB	<27
1,3,5-TMB	<27

B-13	0-2'	7.5-10'	12.5-15'
Benzene	<30	**212 J**	**442 J**
Ethylbenzene	<30	340 J	1130
Toluene	<30	<125	533 J
Xylenes	<90	1665	2056 J
1,2,4-TMB	<30	907	**1670**
1,3,5-TMB	<30	753	**1540**

B-12	0-2'	7-9'	13-15'
Benzene	**240**	34100 J	<25
Ethylbenzene	<29	<25000	<25
Toluene	210	**83800**	<25
Xylenes	190J	175300	<75
1,2,4-TMB	49J	145000	<25
1,3,5-TMB	32J	132000	<25

B-31	0-2'	4-6'	8-10'
Benzene	<29	**38J**	<29
Ethylbenzene	<29	64J	<29
Toluene	<29	<30	<29
Xylenes	<87	<91	<87
1,2,4-TMB	<29	110J	<29
1,3,5-TMB	<29	<30	<29

B-22	0-2'	4-6'	8-10'
Benzene	<30	<30	**240J**
Ethylbenzene	<30	<30	<150
Toluene	<30	<30	290J
Xylenes	<89	<89	510J
1,2,4-TMB	<30	<30	360J
1,3,5-TMB	<30	<30	160J

B-25	0-2'	4-6'	8-10'
Benzene	<30	<30	<30
Ethylbenzene	<30	<30	<30
Toluene	<30	<30	<30
Xylenes	<90	<90	<89
1,2,4-TMB	<30	<30	<30
1,3,5-TMB	<30	<30	<30

B-26	0-2'
Benzene	<29
Ethylbenzene	<29
Toluene	<29
Xylenes	<87
1,2,4-TMB	<29
1,3,5-TMB	<29

B-21	0-2'	4-6'	8-10'
Benzene	<28	<30	<30
Ethylbenzene	<28	<30	<30
Toluene	<28	<30	<30
Xylenes	<83	<89	<90
1,2,4-TMB	<28	<30	<30
1,3,5-TMB	<28	<30	<30

B-29	0-2'	4-6'	8-10'
Benzene	<28	<29	<30
Ethylbenzene	<28	<29	<30
Toluene	<28	<29	<30
Xylenes	<84	<87	<90
1,2,4-TMB	<28	<29	<30
1,3,5-TMB	<28	<29	<30

B-30	0-2'	4-6'	8-10'
Benzene	<29	<30	<30
Ethylbenzene	<29	<30	<30
Toluene	<29	<30	<30
Xylenes	<87	<90	<90
1,2,4-TMB	<29	<30	<30
1,3,5-TMB	<29	<30	<30

B-38	0-2'
Benzene	<28
Ethylbenzene	50J
Toluene	<28
Xylenes	97J
1,2,4-TMB	61J
1,3,5-TMB	<28

B-32	0-2'
Benzene	<29
Ethylbenzene	<29
Toluene	<29
Xylenes	<87
1,2,4-TMB	<29
1,3,5-TMB	<29

B-16	0-2'	7-8'	16-18'
Benzene	<28	<5000	<625
Ethylbenzene	<28	<5000	1290 J
Toluene	<28	<5000	<625
Xylenes	<84	<15000	1330 J
1,2,4-TMB	<28	<5000	**3540**
1,3,5-TMB	<28	<5000	**2900**

B-14	0-2'	2.5-5'	7.5-10'
Benzene	<29	<25	<25
Ethylbenzene	<29	<25	<25
Toluene	<29	<25	<25
Xylenes	<87	<75	<75
1,2,4-TMB	<29	<25	<25
1,3,5-TMB	<29	<25	<25

OC-B7	0-2'	6-8'
Benzene	<25	<25
Ethylbenzene	<25	<25
Toluene	<25	<25
Xylenes	<75	<75
1,2,4-TMB	<25	<25
1,3,5-TMB	<25	<25

OC-GP8	8-10'
Benzene	<25
Ethylbenzene	<25
Toluene	<25
Xylenes	<25
1,2,4-TMB	<25
1,3,5-TMB	<25

OC-GP10	8-10'
Benzene	<25
Ethylbenzene	<25
Toluene	<25
Xylenes	<25
1,2,4-TMB	<25
1,3,5-TMB	<25

OC-B1	6-8'
Benzene	<25
Ethylbenzene	146
Toluene	153
Xylenes	512
1,2,4-TMB	287
1,3,5-TMB	160

B-01	0-2'	2.5-5'
Benzene	<29	<25
Ethylbenzene	<29	<25
Toluene	<29	<25
Xylenes	<88	<75
1,2,4-TMB	<29	<25
1,3,5-TMB	<29	<25

B-39	0-2'
Benzene	<29
Ethylbenzene	<29
Toluene	<29
Xylenes	<88
1,2,4-TMB	<29
1,3,5-TMB	<29

B-20	0-2'	4-5'	10-12'
Benzene	<29	<25	<25
Ethylbenzene	<29	<25	<25
Toluene	<29	<25	<25
Xylenes	<87	<75	<75
1,2,4-TMB	<29	<25	<25
1,3,5-TMB	<29	<25	<25

B-18	0-2'	2-4'	10-12'
Benzene	<30	<25	<2060
Ethylbenzene	<30	<25	<2060
Toluene	<30	<25	<2060
Xylenes	<89	49.5 J	<6180
1,2,4-TMB	<30	114	**10900**
1,3,5-TMB	<30	<25	**8650**

OC-B3	0-2'	16-18'
Benzene	**31.6**	<25
Ethylbenzene	<25	<25
Toluene	48	<25
Xylenes	52	<75
1,2,4-TMB	<25	<25
1,3,5-TMB	28.1	<25

B-43	0-2'	4-6'	8-10'
Benzene	<30	<27	**47J**
Ethylbenzene	<30	<27	<30
Toluene	<30	<27	120
Xylenes	<90	<82	120J
1,2,4-TMB	<30	<27	<30
1,3,5-TMB	<30	<27	<30

OC-GP4	8-10'
Benzene	<25
Ethylbenzene	<25
Toluene	<25
Xylenes	<25
1,2,4-TMB	<25
1,3,5-TMB	<25

B-44	0-2'	4-6'	8-10'
Benzene	<29	<29	<30
Ethylbenzene	<29	<29	<30
Toluene	<29	<29	<30
Xylenes	<88	<86	<90
1,2,4-TMB	<29	<29	<30
1,3,5-TMB	<29	<29	<30

OC-GP5	8-10'
Benzene	<25
Ethylbenzene	<25
Toluene	<25
Xylenes	<25
1,2,4-TMB	<25
1,3,5-TMB	<25

OC-B8	0-2'	4-6'
Benzene	**205**	4700
Ethylbenzene	94	13800
Toluene	360	**25200**
Xylenes	471	**65900**
1,2,4-TMB	150	**28300**
1,3,5-TMB	132	**17100**

OC-GP6	16-18'
Benzene	<25
Ethylbenzene	<25
Toluene	<25
Xylenes	<25
1,2,4-TMB	<25
1,3,5-TMB	<25

OC-B5	4-6'	6-8'
Benzene	<25	<25
Ethylbenzene	<25	<25
Toluene	42	<25
Xylenes	<75	<75
1,2,4-TMB	<25	<25
1,3,5-TMB	<25	<25

OC-B6	0-2'	10-12'	14-16'
Benzene	<25	<25	<25
Ethylbenzene	34	<25	<25
Toluene	57	<25	<25
Xylenes	125	<75	<75
1,2,4-TMB	52	<25	<25
1,3,5-TMB	61	<25	<25

OC-GP7	8-10'
Benzene	<25
Ethylbenzene	<25
Toluene	<25
Xylenes	<25
1,2,4-TMB	<25
1,3,5-TMB	<25

OC-GP9	8-10'
Benzene	<25
Ethylbenzene	<25
Toluene	<25
Xylenes	<25
1,2,4-TMB	<25
1,3,5-TMB	<25

B-17	0-2'	5-6'	14-15'
Benzene	<29	286000	**596**
Ethylbenzene	<29	297000	<25
Toluene	<29	**775000**	<25
Xylenes	<86	1183000	<75
1,2,4-TMB	<29	509000	105
1,3,5-TMB	<29	409000	<25

OC-B4	2-4'	10-12'
Benzene	<25	4000
Ethylbenzene	59	**7700**
Toluene	88	**7100**
Xylenes	163	**42400**
1,2,4-TMB	58	**18300**
1,3,5-TMB	59	**11400**

OC-SB1	7.5-10'
Benzene	<25
Ethylbenzene	<25
Toluene	<25
Xylenes	<75
1,2,4-TMB	<25
1,3,5-TMB	<25

OC-SB4	5-7.5'
Benzene	<2500
Ethylbenzene	**6600**
Toluene	<2500
Xylenes	**26000**
1,2,4-TMB	**12300**
1,3,5-TMB	**7400**

B-15	0-2'	4-6'	8-10'	16-18'	19-20'
Benzene	<29	<60	**750**	<2500	<200
Ethylbenzene	<29	<60	280J	10900	643
Toluene	<29	<60	<120	<2500	458 J
Xylenes	<86	<180	770J	**63700**	**4430**
1,2,4-TMB	<29	73J	220J	650000	**4280**
1,3,5-TMB	<29	<60	<120	**42600**	**2900**

EXPLANATION

- MW-101 — WATER TABLE WELL
- P-103 — NESTED PIEZOMETER
- B-01 — SOIL BORING
- OC-SB1 — SOIL BORING (CITY OF OAK CREEK)
- OC-GP1 — GEOPROBE (CITY OF OAK CREEK)
- APPROXIMATE PROPERTY BOUNDARY

SAMPLE ID — CONNELL PHASE II / CITY OF OAK CREEK

B-42	GW RCL	DC RCL	0-2.5'	14-16'
Benzene	**5.1**	**1,500**		
Ethylbenzene	**1,570**	**7,970**		
Toluene	**1,107**	**818,000**		
Xylenes	**3,940**	**258,000**		
1,2,4-TMB	**1,394**	**92,200**		
1,3,5-TMB	**1,379**	**64,900**		

VOCs (ug/Kg)

BOLD RED INDICATES CONCENTRATION EXCEEDS BOTH DIRECT CONTACT AND GROUNDWATER PATHWAY RESIDUAL CLEANUP LEVEL

BOLD INDICATES CONCENTRATION EXCEEDS GROUNDWATER PATHWAY RESIDUAL CLEANUP LEVEL

TITLE: CONNELL LLC PROPERTY
VOCs IN SOIL

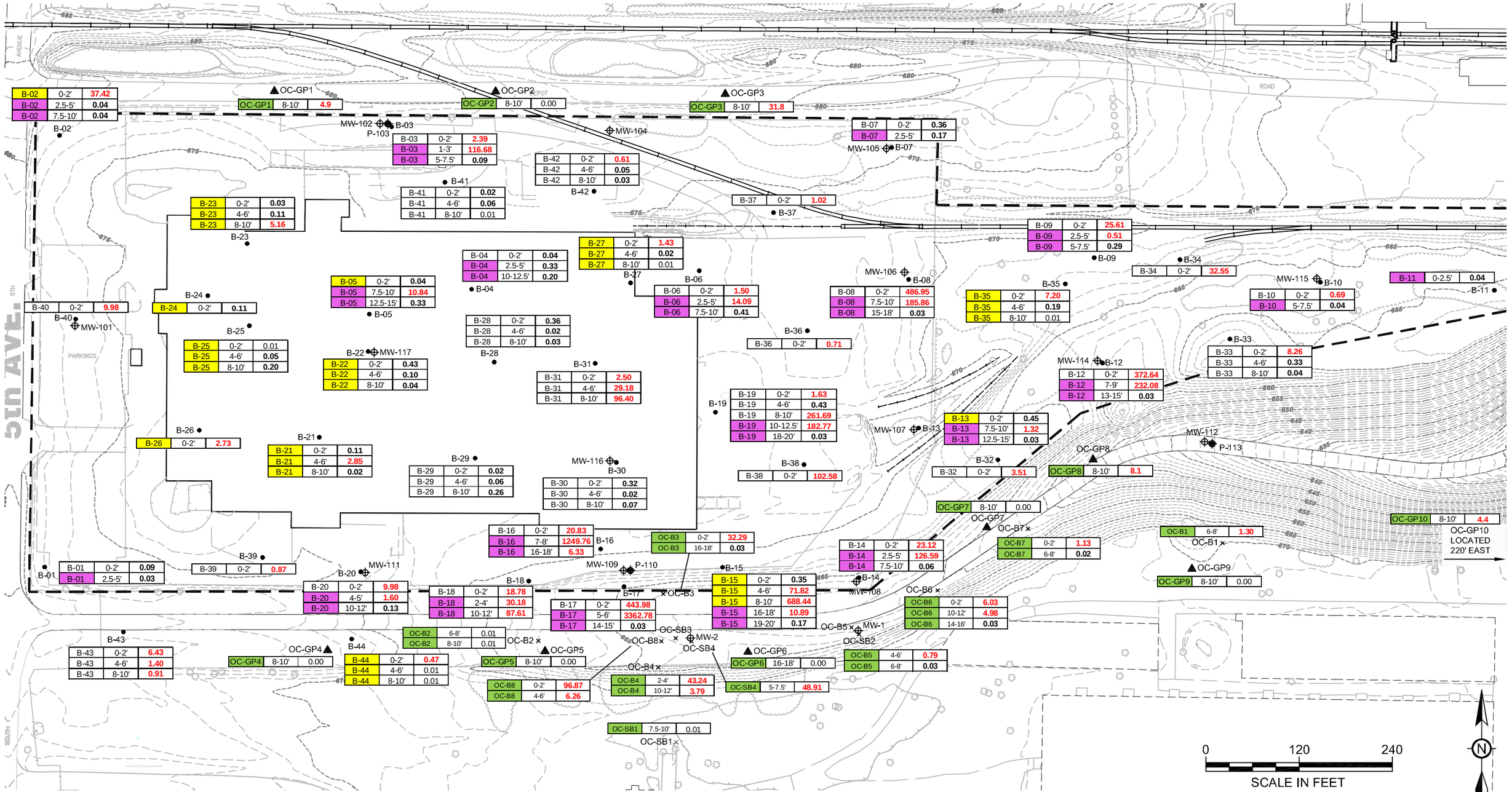
LOCATION: OAK CREEK, WISCONSIN

TETRA TECH

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2201220
DATE	10/16/12

FIGURE: 4

S:\CAD\BEAZER\WABASH\10-16-12\FIGURE 5 - VOCS SOIL MAP.DWG



EXPLANATION

- MW-101 — WATER TABLE WELL
- P-103 — NESTED PIEZOMETER
- B-01 — SOIL BORING
- OC-SB1 — SOIL BORING (CITY OF OAK CREEK)
- OC-GP1 — GEOPROBE (CITY OF OAK CREEK)

WHITE - PAH
YELLOW - SVOC
MAGENTA - PAH
GREEN - PAH

B-01	0-2'	0.09

SAMPLE DEPTH
TOTAL PAH/SVOC (mg/Kg)

B-01, B-02, B-03, OC-B1 — CONNELL PHASE II CITY OF OAK CREEK

APPROXIMATE PROPERTY BOUNDARY

0.33 — BOLD INDICATES CONCENTRATION EXCEEDS THE NON-INDUSTRIAL DIRECT CONTACT RCL OF 0.02 mg/Kg

10.84 — BOLD AND RED INDICATES CONCENTRATION EXCEEDS THE NON-INDUSTRIAL DIRECT CONTACT RCL OF 0.02 mg/Kg AND THE PROTECTION OF GROUNDWATER RCL OF 0.47 mg/Kg

TITLE: CONNELL LLC PROPERTY
BENZO(A)PYRENE EQUIVALENTS IN SOIL

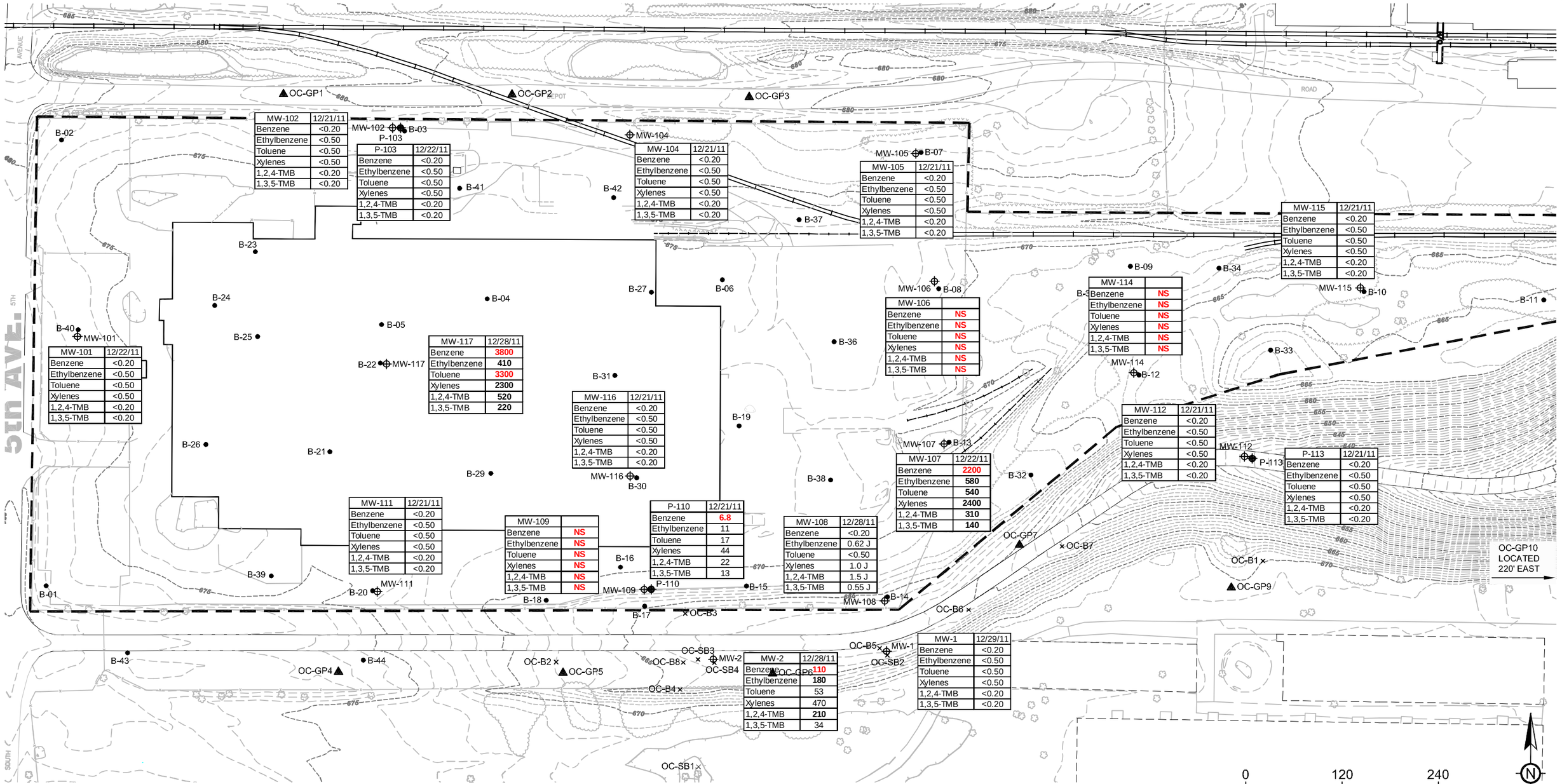
LOCATION: OAK CREEK, WISCONSIN

TETRA TECH

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2201220
DATE	11/15/12

FIGURE: 5

S:\CAD\BEAZER\WABASH\10-16-12\FIGURE 6 - BAP SOIL MAP.DWG



EXPLANATION

- MW-101 — WATER TABLE WELL
- P-103 — NESTED PIEZOMETER
- B-01 — SOIL BORING
- OC-SB1 — SOIL BORING (CITY OF OAK CREEK)
- OC-GP1 — GEOPROBE (CITY OF OAK CREEK)
- APPROXIMATE PROPERTY BOUNDARY

SAMPLE ID

MW-107	PAL	ES
Benzene	**0.5**	**5**
Ethylbenzene	**140**	**700**
Toluene	**200**	**1,000**
Xylenes	**1,000**	**10,000**
1,2,4-TMB	**96**	**480**
1,3,5-TMB	**96**	**480**

VOCs (ug/L)

NS "NS" INDICATES LOCATION NOT SAMPLED DUE TO PRESENCE OF FREE PRODUCT

BOLD AND RED INDICATES CONCENTRATION EXCEEDS WDNR NR140 ENFORCEMENT STANDARD

BOLD INDICATES CONCENTRATION EXCEEDS WDNR NR140 PREVENTIVE ACTION LIMIT

TITLE: CONNELL LLC PROPERTY
VOCs IN GROUNDWATER

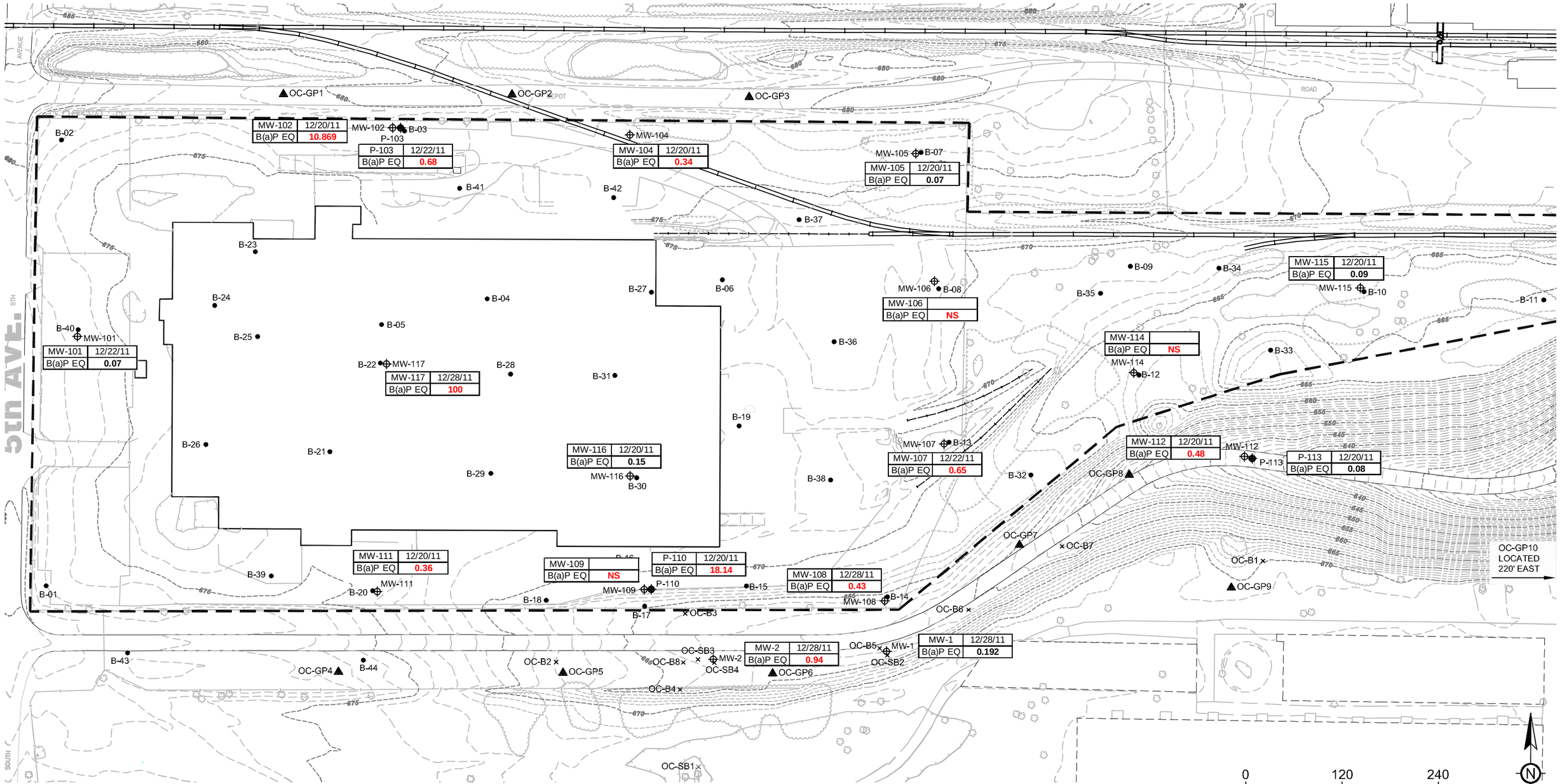
LOCATION: OAK CREEK, WISCONSIN

TETRA TECH

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2201220
DATE	2/1/12

FIGURE: 6

S:\CAD\BEAZER\WABASH\1-11-12\VOCS GROUNDWATER MAP.DWG



EXPLANATION

- MW-101 — WATER TABLE WELL
- P-103 — NESTED PIEZOMETER
- B-01 — SOIL BORING
- OC-SB1 — SOIL BORING (CITY OF OAK CREEK)
- OC-GP1 — GEOPROBE (CITY OF OAK CREEK)
- APPROXIMATE PROPERTY BOUNDARY

SAMPLE ID — MW-1 | 12/28/11 | B(a)P EQ | 0.192 — BENZO(A)PYRENE EQUIVALENTS (ug/L)

"NS" INDICATES LOCATION NOT SAMPLED DUE TO PRESENCE OF FREE PRODUCT

0.15 — BOLD INDICATES CONCENTRATION EXCEEDS WDNR NR140 PREVENTIVE ACTION LIMIT OF 0.02 ug/L

100 / NS — BOLD AND RED INDICATES CONCENTRATION EXCEEDS WDNR NR140 ENFORCEMENT STANDARD OF 0.2 ug/L

TITLE: CONNELL LLC PROPERTY
BENZO(A)PYRENE EQUIVALENTS IN GROUNDWATER

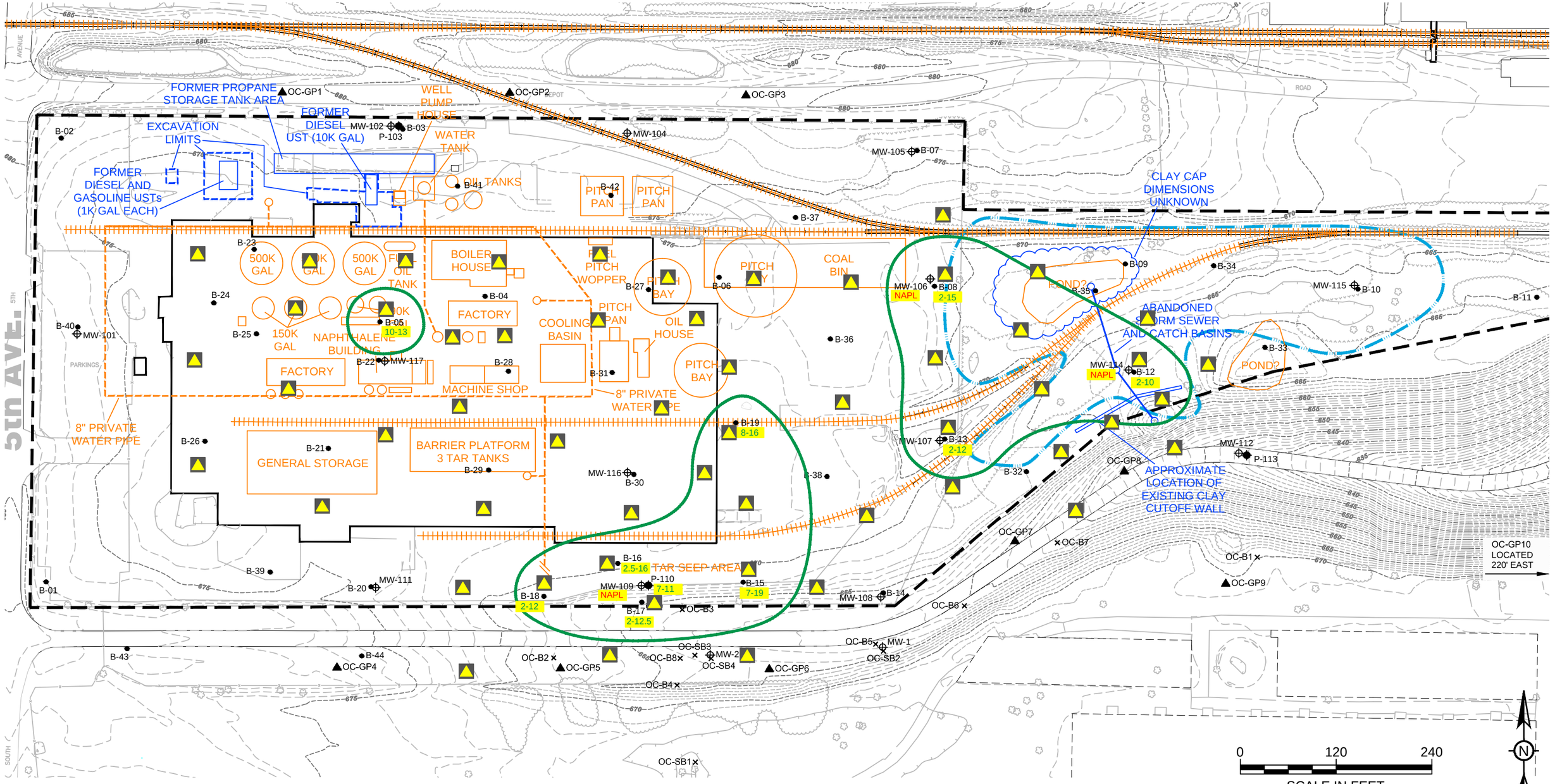
LOCATION: OAK CREEK, WISCONSIN

TETRA TECH

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2201220
DATE	11/13/12

FIGURE: 7

S:\CAD\BEAZER\WABASH\1-11-12\BAP GROUNDWATER MAP.DWG



EXPLANATION

- MW-101 — WATER TABLE WELL
- P-103 — NESTED PIEZOMETER
- B-01 — SOIL BORING
- OC-SB1 — SOIL BORING (CITY OF OAK CREEK)
- OC-GP1 — GEOPROBE (CITY OF OAK CREEK)
- APPROXIMATE PROPERTY BOUNDARY
- 2.5-16 — TAR OBSERVATION FROM BOREHOLE LOG (FEET BELOW GROUND SURFACE)
- NAPL — TAR OBSERVATION IN MONITORING WELL
- PROPOSED TarGOST® OR VISUAL TAR OBSERVATION LOCATION (0-15')
- FORMER TAR PLANT STRUCTURES
- PAST REMEDIAL ACTIVITIES
- APPROXIMATE BOUNDARY OF POTENTIAL WETLAND AREA IDENTIFIED ON WDNR SURFACE WATER DATA VIEWER WETLANDS INDICATOR WEBSITE

TITLE: CONNELL LLC PROPERTY
TAR OBSERVATIONS AND PROPOSED DELINEATION PROBES/BOREHOLES

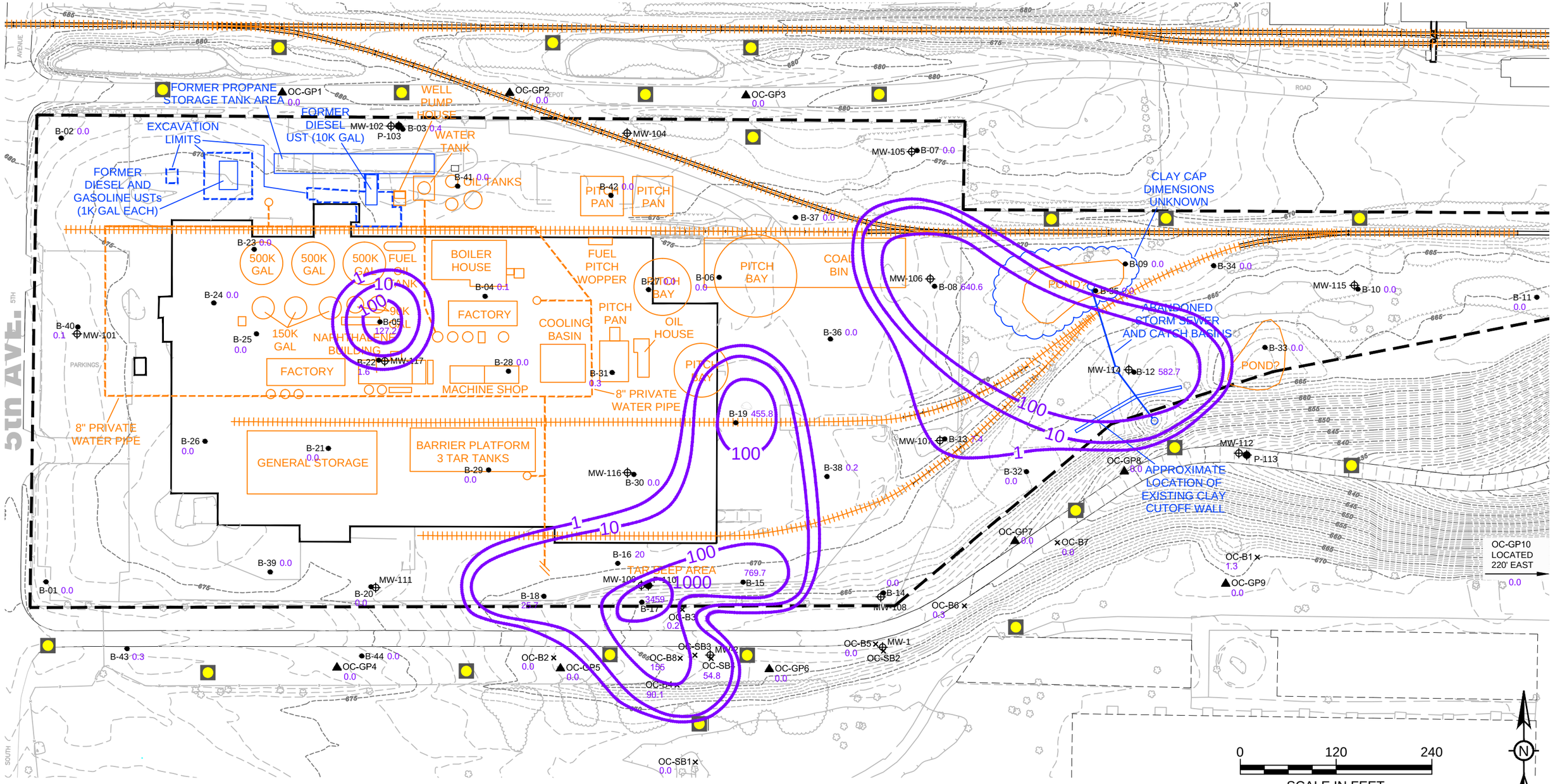
LOCATION: OAK CREEK, WISCONSIN

TETRA TECH

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2201220
DATE	11/27/12

FIGURE: 8

S:\CAD\BEAZER\WABASH\10-16-12\FIGURE 11A - TAR OBSERVATIONS PLUME MAP 11-20-12.DWG



EXPLANATION

- MW-101 — WATER TABLE WELL
- P-103 — NESTED PIEZOMETER
- B-01 — SOIL BORING
- OC-SB1 — SOIL BORING (CITY OF OAK CREEK)
- OC-GP1 — GEOPROBE (CITY OF OAK CREEK)
- APPROXIMATE PROPERTY BOUNDARY
- —10— TOTAL VOCs MAXIMUM CONCENTRATION AT BOREHOLE LOCATION (mg/Kg)
- PROPOSED VOC AND PCB SAMPLING (0-2' AND HIGHEST PID BELOW WATER TABLE)
- FORMER TAR PLANT STRUCTURES
- PAST REMEDIAL ACTIVITIES

TITLE: CONNELL LLC PROPERTY
ISOCONCENTRATION MAP OF TOTAL VOCs IN SOIL AND PROPOSED SAMPLING LOCATIONS

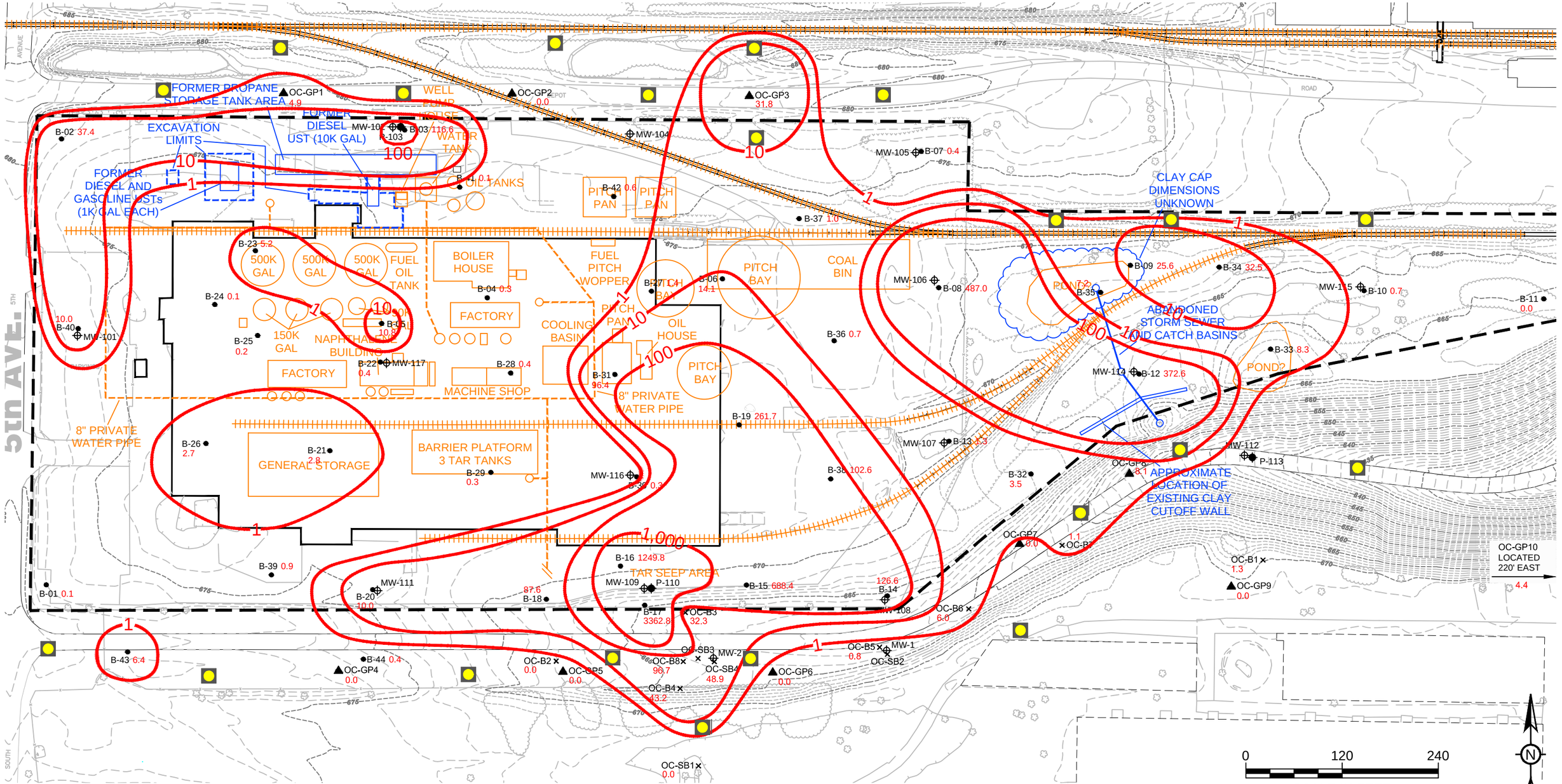
LOCATION: OAK CREEK, WISCONSIN

TETRA TECH

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2201220
DATE	12/6/12

FIGURE: 9

S:\CAD\BEAZER\WABASH\10-16-12\FIGURE 12A - VOCS PLUME MAP.DWG



EXPLANATION

- MW-101 — WATER TABLE WELL
- P-103 — NESTED PIEZOMETER
- B-01 — SOIL BORING
- OC-SB1 — SOIL BORING (CITY OF OAK CREEK)
- OC-GP1 — GEOPROBE (CITY OF OAK CREEK)
- APPROXIMATE PROPERTY BOUNDARY
- 10 — B(a)P EQUIVALENTS MAXIMUM CONCENTRATION AT BOREHOLE LOCATION (mg/Kg)
- PROPOSED PAH SAMPLING (0-2' AND HIGHEST PID BELOW WATER TABLE)
- FORMER TAR PLANT STRUCTURES
- PAST REMEDIAL ACTIVITIES

TITLE: CONNELL LLC PROPERTY
ISOCONCENTRATION MAP OF BENZO(A)PYRENE EQUIVALENTS IN SOIL AND PROPOSED SAMPLING LOCATIONS

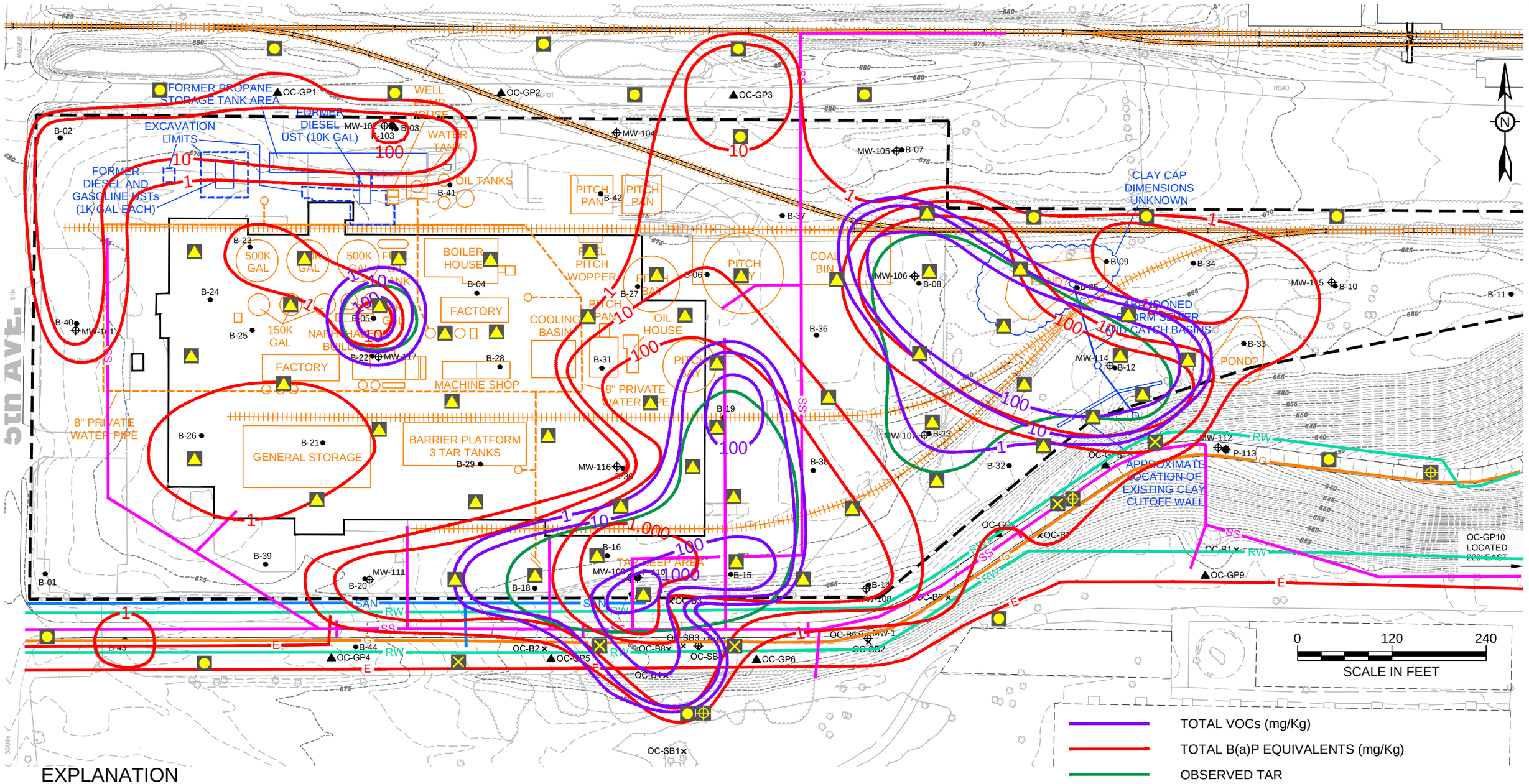
LOCATION: OAK CREEK, WISCONSIN

TETRA TECH

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2201220
DATE	12/6/12

FIGURE: 10

S:\CAD\BEAZER\WABASH\10-16-12\FIGURE 13A - BAP PLUME MAP.DWG



EXPLANATION

- MW-101 — WATER TABLE WELL
- P-103 — NESTED PIEZOMETER
- B-01 — SOIL BORING
- OC-SB1 — SOIL BORING (CITY OF OAK CREEK)
- OC-GP1 — GEOPROBE (CITY OF OAK CREEK)
- APPROXIMATE PROPERTY BOUNDARY
- SANITARY
- STORM SEWER
- ELECTRICAL
- NATURAL GAS
- RAW WATER
- FORMER TAR PLANT STRUCTURES
- PAST REMEDIAL ACTIVITIES

PROPOSED INVESTIGATION

- VOC, PAH, AND PCB SAMPLING (0-2' AND HIGHEST PID BELOW WATER TABLE)
- TarGOST® OR VISUAL TAR OBSERVATION (0-15')
- MONITORING WELL
- TarGOST® OR VISUAL TAR OBSERVATION (0-15') & VOC, PAH, AND PCB SAMPLING (0-2' AND HIGHEST PID BELOW WATER TABLE)

TITLE: CONNELL LLC PROPERTY
COMPOSITE ISOCONCENTRATION MAPS AND PROPOSED INVESTIGATION/SAMPLING LOCATIONS

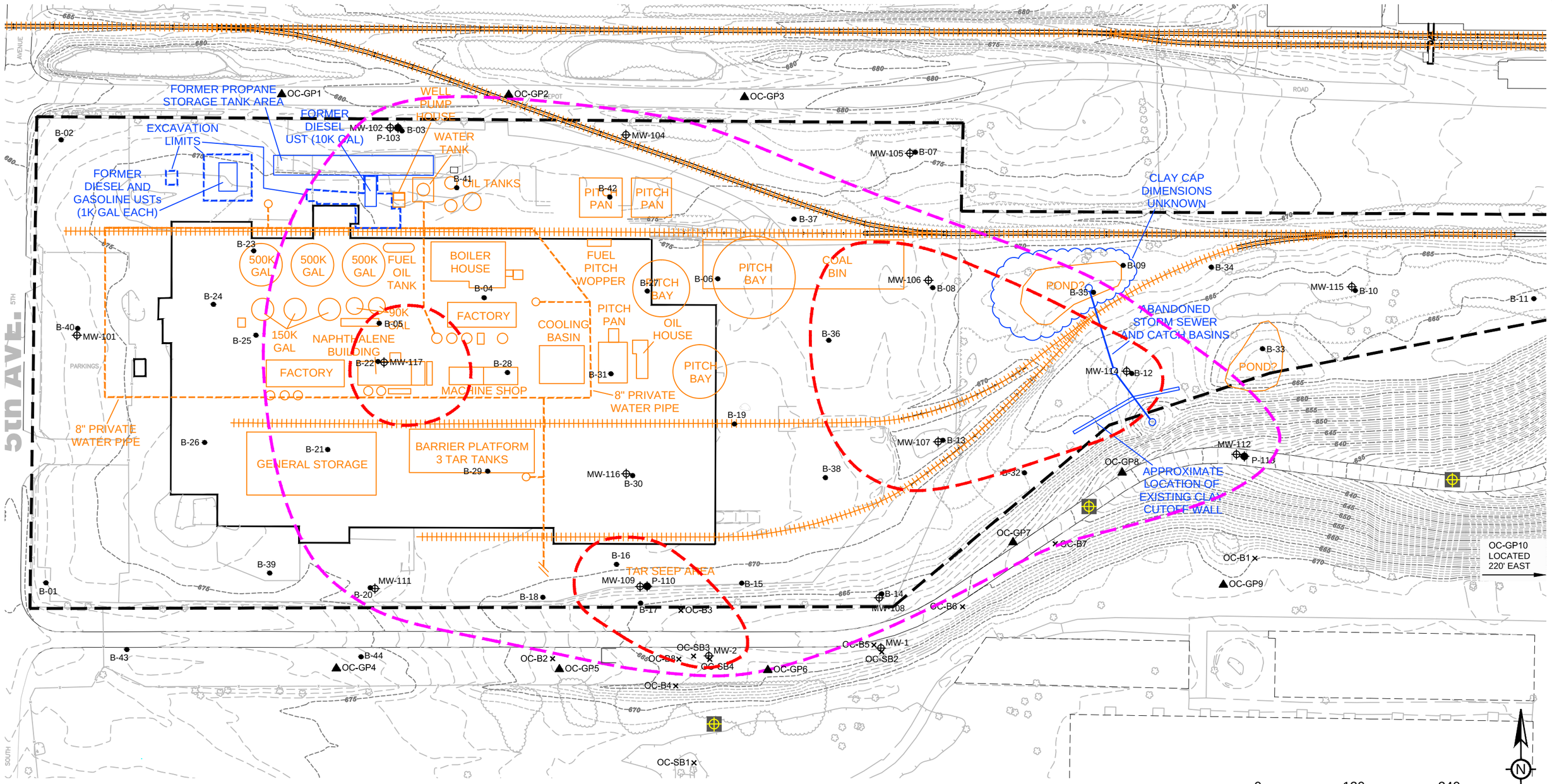
LOCATION: OAK CREEK, WISCONSIN

TETRA TECH

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2201220
DATE	11/20/12

FIGURE: 11

S:\CAD\BEAZER\WABASH\10-16-12\FIGURE 15 - SOIL DELINEATION COMPOSITE.DWG



EXPLANATION

MW-101	WATER TABLE WELL
P-103	NESTED PIEZOMETER
B-01	SOIL BORING
OC-SB1	SOIL BORING (CITY OF OAK CREEK)
OC-GP1	GEOPROBE (CITY OF OAK CREEK)
	APPROXIMATE PROPERTY BOUNDARY
	SVOC ABOVE ENFORCEMENT STANDARD
	VOC ABOVE ENFORCEMENT STANDARD
	PROPOSED MONITORING WELL
	FORMER TAR PLANT STRUCTURES
	PAST REMEDIAL ACTIVITIES

NOTE: WELLS MW-106, MW-109, AND MW-114 NOT SAMPLED DUE TO PRESENCE OF NAPL.

TITLE: CONNELL LLC PROPERTY

GROUNDWATER EXCEEDING NR140 ES AND PROPOSED WELL LOCATIONS

LOCATION: OAK CREEK, WISCONSIN

TETRA TECH

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2201220
DATE	11/13/12

FIGURE: 12

S:\CAD\BEAZER\WABASH\10-16-12\FIGURE 14.DWG

TABLES

Table 1. Summary of Soil VOC Analytical Results

	Non-Industrial Direct Contact	Groundwater Pathway	Units	B-01 0-2'	B-02 0-2'	B-03 0-2'	B-04 0-2'	B-05 0-2'	B-06 0-2'	B-07 0-2'	B-08 0-2'	B-09 0-2'	B-10 0-2'	B-12 0-2'	B-13 0-2'	B-14 0-2'	B-15 0-2'	B-15 4-6'	B-15 8-10'	B-16 0-2'	B-17 0-2'
1,1,1,2-Tetrachloroethane	2,630	53	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,1,1-Trichloroethane	677,000	14	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,1,2,2-Tetrachloroethane	754	0.16	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,1,2-Trichloroethane	1,470	3.2	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,1-Dichloroethane	600	480	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,1-Dichloroethene	333,000	5	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,1-Dichloropropene			ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,2,3-Trichlorobenzene	81,100		ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,2,3-Trichloropropane	91.3	52	ug/kg	<58	<56	<61	<59	<58	<58	<65	<64	<72	<58	<59	<60	<58	<57	<120	<250	<56	<57
1,2,4-Trichlorobenzene	115,000	410	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,2,4-Trimethylbenzene	92,200	1,394	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	49J	<30	<29	<29	73J	220J	<28	<29
1,2-Dibromo-3-chloropropane	7.67	0.2	ug/kg	<58	<56	<61	<59	<58	<58	<65	<64	<72	<58	<59	<60	<58	<57	<120	<250	<56	<57
1,2-Dibromoethane (EDB)	45.5	0.03	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,2-Dichlorobenzene	222,000	1170	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,2-Dichloroethane	600	2.8	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,2-Dichloropropane	1,260	3.3	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,3,5-Trimethylbenzene	64,900	1,379	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	32J	<30	<29	<29	<60	<120	<28	<29
1,3-Dichlorobenzene	341,000		ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,3-Dichloropropane	1,560,000	0.3	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
1,4-Dichlorobenzene	3,560	140	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
2,2-Dichloropropane			ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
2-Chlorotoluene			ug/kg	<58	<56	<61	<59	<58	<58	<65	<64	<72	<58	<59	<60	<58	<57	<120	<250	<56	<57
4-Chlorotoluene			ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Benzene	1,500	5.1	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	**240**	<30	<29	<29	<60	**750**	<28	<29
Bromobenzene	12,600		ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Bromochloromethane	4,240,000		ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Bromodichloromethane	383	0.3	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Bromoform	61,500	2.3	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Bromomethane	10,500	5.1	ug/kg	<120	<110	<120	<120	<120	<120	<130	<130	<140	<120	<120	<120	<120	<110	<240	<500	<110	<110
Carbon Tetrachloride	342	3.9	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Chlorobenzene	396,000		ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Chlorodibromomethane			ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Chloroethane			ug/kg	<58	<56	<61	<59	<58	<58	<65	<64	<72	<58	<59	<60	<58	<57	<120	<250	<56	<57
Chloroform	415	3.3	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Chloromethane	165,000	15.5	ug/kg	<58	<56	<61	<59	<58	<58	<65	<64	<72	<58	<59	<60	<58	<57	<120	<250	<56	<57
cis-1,2-Dichloroethene	782,000	41.2	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
cis-1,3-Dichloropropene	1,700,000	0.3	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Dibromomethane			ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Dichlorodifluoromethane	254,000	3080	ug/kg	<58	<56	<61	<59	<58	<58	<65	<64	<72	<58	<59	<60	<58	<57	<120	<250	<56	<57
Ethylbenzene	7,470	1,570	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	280J	<28	<29
Hexachlorobutadiene	6,222		ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Isopropyl Ether			ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Isopropylbenzene			ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Methyl tert-Butyl Ether	51,400	27	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Methylene Chloride	14,300	2.5	ug/kg	<58	<56	<61	<59	<58	<58	<65	<64	<72	<58	<59	<60	<58	<57	<120	<250	<56	<57
Naphthalene	5,150	658.7	ug/kg	<58	420	<61	<59	<58	<58	<65	390	<72	<58	***7500***	<60	**850**	<57	***10000***	***23000***	190	520
n-Butylbenzene	127,000		ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
n-Propylbenzene			ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
p-Isopropyltoluene	190,000		ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
sec-Butylbenzene	171,000		ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Styrene	1,000,000	220	ug/kg	<58	<56	<61	<59	<58	<58	<65	<64	<72	<58	<59	<60	<58	<57	<120	<250	<56	<57
tert-Butylbenzene	215,000		ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Tetrachloroethene	660	4.5	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Toluene	818,000	1,107	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	210	<30	<29	<29	<60	<120	<28	<29
trans-1,2-Dichloroethene	151,000	58.9	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
trans-1,3-Dichloropropene	1,660,000	0.3	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Trichloroethene	3,810	3.6	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Trichlorofluoromethane	1,080,000		ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Vinyl chloride	66.4	0.14	ug/kg	<29	<28	<30	<30	<29	<29	<33	<32	<36	<29	<29	<30	<29	<29	<60	<120	<28	<29
Xylenes, total	258,000	3,940	ug/kg	<88	<84	<91	<89	<88	<88	<98	<96	<110	<88	190J	<90	<87	<86	<180	770J	<84	<86

J: Result is <RL but >MDL; concentration is approximate

Italic : Value exceeds Non-Industrial Direct Contact Residual Cleanup Level

Bold: Value exceeds Groundwater Pathway Residual Cleanup Level

	Non-Industrial Direct Contact	Groundwater Pathway	Units	B-18 0-2'	B-19 0-2'	B-19 4-6'	B-19 8-10'	B-20 0-2'	B-21 0-2'	B-21 4-6'	B-21 8-10'	B-22 0-2'	B-22 4-6'	B-22 8-10'	B-23 0-2'	B-23 4-6'	B-23 8-10'	B-24 0-2'	B-25 0-2'	B-25 4-6'	B-25 8-10'
1,1,1,2-Tetrachloroethane	2,630	53	ug/kg	<30	<30	<28	<28	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,1,1-Trichloroethane	677,000	14	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,1,2,2-Tetrachloroethane	754	0.16	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,1,2-Trichloroethane	1,470	3.2	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,1-Dichloroethane	600	480	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,1-Dichloroethene	333,000	5	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,1-Dichloropropene			ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,2,3-Trichlorobenzene	81,100		ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,2,3-Trichloropropane	91.3	52	ug/kg	<59	<61	<56	<6400	<58	<56	<59	<60	<59	<59	<310	<61	<54	<65	<60	<60	<60	<59
1,2,4-Trichlorobenzene	115,000	410	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,2,4-Trimethylbenzene	92,200	1,394	ug/kg	<30	<30	<28	**9400J**	<29	<28	<30	<30	<30	<30	360J	<30	<27	<32	<30	<30	<30	<30
1,2-Dibromo-3-chloropropane	7.67	0.2	ug/kg	<59	<61	<56	<6400	<58	<56	<59	<60	<59	<59	<310	<61	<54	<65	<60	<60	<60	<59
1,2-Dibromoethane (EDB)	45.5	0.03	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,2-Dichlorobenzene	222,000	1170	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,2-Dichloroethane	600	2.8	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,2-Dichloropropane	1,260	3.3	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,3,5-Trimethylbenzene	64,900	1,379	ug/kg	<30	<30	<28	**5500J**	<29	<28	<30	<30	<30	<30	160J	<30	<27	<32	<30	<30	<30	<30
1,3-Dichlorobenzene	341,000		ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,3-Dichloropropane	1,560,000	0.3	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
1,4-Dichlorobenzene	3,560	140	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
2,2-Dichloropropane			ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
2-Chlorotoluene			ug/kg	<59	<61	<56	<6400	<58	<56	<59	<60	<59	<59	<310	<61	<54	<65	<60	<60	<60	<59
4-Chlorotoluene			ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Benzene	1,500	5.1	ug/kg	<30	<30	<28	***9700J***	<29	<28	<30	<30	<30	<30	**240J**	<30	<27	<32	<30	<30	<30	<30
Bromobenzene	12,600		ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Bromochloromethane	4,240,000		ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Bromodichloromethane	383	0.3	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Bromoform	61,500	2.3	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Bromomethane	10,500	5.1	ug/kg	<120	<120	<110	<13000	<120	<110	<120	<120	<120	<120	<610	<120	<110	<130	<120	<120	<120	<120
Carbon Tetrachloride	342	3.9	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Chlorobenzene	396,000		ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Chlorodibromomethane			ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Chloroethane			ug/kg	<59	<61	<56	<6400	<58	<56	<59	<60	<59	<59	<310	<61	<54	<65	<60	<60	<60	<59
Chloroform	415	3.3	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Chloromethane	165,000	15.5	ug/kg	<59	<61	<56	<6400	<58	<56	<59	<60	<59	<59	<310	<61	<54	<65	<60	<60	<60	<59
cis-1,2-Dichloroethene	782,000	41.2	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
cis-1,3-Dichloropropene	1,700,000	0.3	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Dibromomethane			ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Dichlorodifluoromethane	254,000	3080	ug/kg	<59	<61	<56	<6400	<58	<56	<59	<60	<59	<59	<310	<61	<54	<65	<60	<60	<60	<59
Ethylbenzene	7,470	1,570	ug/kg	<30	<30	<28	**7200J**	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Hexachlorobutadiene	6,222		ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Isopropyl Ether			ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Isopropylbenzene			ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Methyl tert-Butyl Ether	51,400	27	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Methylene Chloride	14,300	2.5	ug/kg	<59	<61	<56	<6400	<58	<56	<59	<60	<59	<59	<310	<61	<54	<65	<60	<60	<60	<59
Naphthalene	5,150	658.7	ug/kg	76J	320	71J	***750000***	**930**	<56	<59	<60	<59	<59	***53000***	<61	<54	540	<60	<60	<60	<59
n-Butylbenzene	127,000		ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
n-Propylbenzene			ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
p-Isopropyltoluene	190,000		ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
sec-Butylbenzene	171,000		ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Styrene	1,000,000	220	ug/kg	<59	<61	<56	<6400	<58	<56	<59	<60	<59	<59	<310	<61	<54	<65	<60	<60	<60	<59
tert-Butylbenzene	215,000		ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Tetrachloroethene	660	4.5	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Toluene	818,000	1,107	ug/kg	<30	<30	<28	**12000J**	<29	<28	<30	<30	<30	<30	290J	<30	<27	<32	<30	<30	<30	<30
trans-1,2-Dichloroethene	151,000	58.9	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
trans-1,3-Dichloropropene	1,660,000	0.3	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Trichloroethene	3,810	3.6	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Trichlorofluoromethane	1,080,000		ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Vinyl chloride	66.4	0.14	ug/kg	<30	<30	<28	<3200	<29	<28	<30	<30	<30	<30	<150	<30	<27	<32	<30	<30	<30	<30
Xylenes, total	258,000	3,940	ug/kg	<89	<91	<84	**33000J**	<87	<83	<89	<90	<89	<89	510J	<91	<82	<97	<90	<90	<90	<89

J: Result is <RL but >MDL; concentration is approximate

Italic : Value exceeds Non-Industrial Direct Contact Residual Cleanup Level

Bold: Value exceeds Groundwater Pathway Residual Cleanup Level

	Non-Industrial Direct Contact	Groundwater Pathway	Units	B-26 0-2'	B-27 0-2'	B-27 4-6'	B-27 8-10'	B-28 0-2'	B-28 4-6'	B-28 8-10'	B-29 0-2'	B-29 4-6'	B-29 8-10'	B-30 0-2'	B-30 4-6'	B-30 8-10'	B-31 0-2'	B-31 4-6'	B-31 8-10'	B-32 0-2'	B-33 0-2'
1,1,1,2-Tetrachloroethane	2,630	53	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,1,1-Trichloroethane	677,000	14	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,1,2,2-Tetrachloroethane	754	0.16	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,1,2-Trichloroethane	1,470	3.2	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,1-Dichloroethane	600	480	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,1-Dichloroethene	333,000	5	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,1-Dichloropropene			ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,2,3-Trichlorobenzene	81,100		ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,2,3-Trichloropropane	91.3	52	ug/kg	<58	<65	<58	<59	<59	<58	<58	<56	<58	<60	<58	<60	<60	<58	<61	<58	<58	<58
1,2,4-Trichlorobenzene	115,000	410	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,2,4-Trimethylbenzene	92,200	1,394	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	110J	<29	<29	<29
1,2-Dibromo-3-chloropropane	7.67	0.2	ug/kg	<58	<65	<58	<59	<59	<58	<58	<56	<58	<60	<58	<60	<60	<58	<61	<58	<58	<58
1,2-Dibromoethane (EDB)	45.5	0.03	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,2-Dichlorobenzene	222,000	1170	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,2-Dichloroethane	600	2.8	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,2-Dichloropropane	1,260	3.3	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,3,5-Trimethylbenzene	64,900	1,379	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,3-Dichlorobenzene	341,000		ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,3-Dichloropropane	1,560,000	0.3	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
1,4-Dichlorobenzene	3,560	140	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
2,2-Dichloropropane			ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
2-Chlorotoluene			ug/kg	<58	<65	<58	<59	<59	<58	<58	<56	<58	<60	<58	<60	<60	<58	<61	<58	<58	<58
4-Chlorotoluene			ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Benzene	1,500	5.1	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	**38J**	<29	<29	<29
Bromobenzene	12,600		ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Bromochloromethane	4,240,000		ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Bromodichloromethane	383	0.3	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Bromoform	61,500	2.3	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Bromomethane	10,500	5.1	ug/kg	<120	<130	<120	<120	<120	<120	<120	<110	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120
Carbon Tetrachloride	342	3.9	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Chlorobenzene	396,000		ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Chlorodibromomethane			ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Chloroethane			ug/kg	<58	<65	<58	<59	<59	<58	<58	<56	<58	<60	<58	<60	<60	<58	<61	<58	<58	<58
Chloroform	415	3.3	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Chloromethane	165,000	15.5	ug/kg	<58	<65	<58	<59	<59	<58	<58	<56	<58	<60	<58	<60	<60	<58	<61	<58	<58	<58
cis-1,2-Dichloroethene	782,000	41.2	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
cis-1,3-Dichloropropene	1,700,000	0.3	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Dibromomethane			ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Dichlorodifluoromethane	254,000	3080	ug/kg	<58	<65	<58	<59	<59	<58	<58	<56	<58	<60	<58	<60	<60	<58	<61	<58	<58	<58
Ethylbenzene	7,470	1,570	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	64J	<29	<29	<29
Hexachlorobutadiene	6,222		ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Isopropyl Ether			ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Isopropylbenzene			ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Methyl tert-Butyl Ether	51,400	27	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Methylene Chloride	14,300	2.5	ug/kg	<58	<65	<58	<59	<59	<58	<58	<56	<58	<60	<58	<60	<60	<58	<61	<58	<58	<58
Naphthalene	5,150	658.7	ug/kg	<58	<65	<58	<59	<59	<58	<58	<56	<58	<60	<58	<60	<60	<58	***20000***	380	200	210
n-Butylbenzene	127,000		ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
n-Propylbenzene			ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
p-Isopropyltoluene	190,000		ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
sec-Butylbenzene	171,000		ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Styrene	1,000,000	220	ug/kg	<58	<65	<58	<59	<59	<58	<58	<56	<58	<60	<58	<60	<60	<58	<61	<58	<58	<58
tert-Butylbenzene	215,000		ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Tetrachloroethene	660	4.5	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Toluene	818,000	1,107	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
trans-1,2-Dichloroethene	151,000	58.9	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
trans-1,3-Dichloropropene	1,660,000	0.3	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Trichloroethene	3,810	3.6	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Trichlorofluoromethane	1,080,000		ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Vinyl chloride	66.4	0.14	ug/kg	<29	<33	<29	<30	<30	<29	<29	<28	<29	<30	<29	<30	<30	<29	<30	<29	<29	<29
Xylenes, total	258,000	3,940	ug/kg	<87	<98	<88	<89	<89	<87	<87	<84	<87	<90	<87	<90	<90	<87	<91	<87	<87	<87

J: Result is <RL but >MDL; concentration is approximate

Italic : Value exceeds Non-Industrial Direct Contact Residual Cleanup Level

Bold: Value exceeds Groundwater Pathway Residual Cleanup Level

	Non-Industrial Direct Contact	Groundwater Pathway	Units	B-33 4-6'	B-33 8-10'	B-34 0-2'	B-35 0-2'	B-35 4-6'	B-35 8-10'	B-36 0-2'	B-37 0-2'	B-38 0-2'	B-39 0-2'	B-40 0-2'	B-41 0-2'	B-41 4-6'	B-41 8-10'	B-42 0-2'	B-42 4-6'	B-42 8-10'	B-43 0-2'
1,1,1,2-Tetrachloroethane	2,630	53	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,1,1-Trichloroethane	677,000	14	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,1,2,2-Tetrachloroethane	754	0.16	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,1,2-Trichloroethane	1,470	3.2	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,1-Dichloroethane	600	480	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,1-Dichloroethene	333,000	5	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,1-Dichloropropene			ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,2,3-Trichlorobenzene	81,100		ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,2,3-Trichloropropane	91.3	52	ug/kg	<58	<59	<59	<60	<58	<59	<54	<63	<56	<58	<62	<63	<60	<60	<74	<80	<59	<60
1,2,4-Trichlorobenzene	115,000	410	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,2,4-Trimethylbenzene	92,200	1,394	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	61J	<29	79J	<31	<30	<30	<37	<40	<30	<30
1,2-Dibromo-3-chloropropane	7.67	0.2	ug/kg	<58	<59	<59	<60	<58	<59	<54	<63	<56	<58	<62	<63	<60	<60	<74	<80	<59	<60
1,2-Dibromoethane (EDB)	45.5	0.03	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,2-Dichlorobenzene	222,000	1170	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,2-Dichloroethane	600	2.8	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,2-Dichloropropane	1,260	3.3	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,3,5-Trimethylbenzene	64,900	1,379	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,3-Dichlorobenzene	341,000		ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,3-Dichloropropane	1,560,000	0.3	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
1,4-Dichlorobenzene	3,560	140	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
2,2-Dichloropropane			ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
2-Chlorotoluene			ug/kg	<58	<59	<59	<60	<58	<59	<54	<63	<56	<58	<62	<63	<60	<60	<74	<80	<59	<60
4-Chlorotoluene			ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Benzene	1,500	5.1	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Bromobenzene	12,600		ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Bromochloromethane	4,240,000		ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Bromodichloromethane	383	0.3	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Bromoform	61,500	2.3	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Bromomethane	10,500	5.1	ug/kg	<120	<120	<120	<120	<120	<120	<110	<130	<110	<120	<120	<130	<120	<120	<150	<160	<120	<120
Carbon Tetrachloride	342	3.9	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Chlorobenzene	396,000		ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Chlorodibromomethane			ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Chloroethane			ug/kg	<58	<59	<59	<60	<58	<59	<54	<63	<56	<58	<62	<63	<60	<60	<74	<80	<59	<60
Chloroform	415	3.3	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Chloromethane	165,000	15.5	ug/kg	<58	<59	<59	<60	<58	<59	<54	<63	<56	<58	<62	<63	<60	<60	<74	<80	<59	<60
cis-1,2-Dichloroethene	782,000	41.2	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
cis-1,3-Dichloropropene	1,700,000	0.3	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Dibromomethane			ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Dichlorodifluoromethane	254,000	3080	ug/kg	<58	<59	<59	<60	<58	<59	<54	<63	<56	<58	<62	<63	<60	<60	<74	<80	<59	<60
Ethylbenzene	7,470	1,570	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	50J	<29	<31	<31	<30	<30	<37	<40	<30	<30
Hexachlorobutadiene	6,222		ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Isopropyl Ether			ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Isopropylbenzene			ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Methyl tert-Butyl Ether	51,400	27	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Methylene Chloride	14,300	2.5	ug/kg	<58	<59	<59	<60	<58	<59	<54	<63	<56	<58	<62	<63	<60	<60	<74	<80	<59	<60
Naphthalene	5,150	658.7	ug/kg	<58	<59	240	370	<58	<59	<54	<63	**1500**	<58	**2500**	<63	<60	<60	<74	<80	<59	140
n-Butylbenzene	127,000		ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	150	<31	<30	<30	<37	<40	<30	<30
n-Propylbenzene			ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
p-Isopropyltoluene	190,000		ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	54J	<31	<30	<30	<37	<40	<30	<30
sec-Butylbenzene	171,000		ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	52J	<31	<30	<30	<37	<40	<30	<30
Styrene	1,000,000	220	ug/kg	<58	<59	<59	<60	<58	<59	<54	<63	<56	<58	<62	<63	<60	<60	<74	<80	<59	<60
tert-Butylbenzene	215,000		ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Tetrachloroethene	660	4.5	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Toluene	818,000	1,107	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
trans-1,2-Dichloroethene	151,000	58.9	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
trans-1,3-Dichloropropene	1,660,000	0.3	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Trichloroethene	3,810	3.6	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Trichlorofluoromethane	1,080,000		ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Vinyl chloride	66.4	0.14	ug/kg	<29	<29	<29	<30	<29	<30	<27	<31	<28	<29	<31	<31	<30	<30	<37	<40	<30	<30
Xylenes, total	258,000	3,940	ug/kg	<87	<88	<88	<89	<87	<89	<82	<94	97J	<88	<93	<94	<89	<91	<110	<120	<89	<90

J: Result is <RL but >MDL; concentration is approximate

Italic : Value exceeds Non-Industrial Direct Contact Residual Cleanup Level

Bold: Value exceeds Groundwater Pathway Residual Cleanup Level

Table 1. Summary of Soil VOC Analytical Results

	Non-Industrial Direct Contact	Groundwater Pathway	Units	B-43 4-6'	B-43 8-10'	B-44 0-2'	B-44 4-6'	B-44 8-10'
1,1,1,2-Tetrachloroethane	2,630	53	ug/kg	<27	<30	<29	<29	<30
1,1,1-Trichloroethane	677,000	14	ug/kg	<27	<30	<29	<29	<30
1,1,2,2-Tetrachloroethane	754	0.16	ug/kg	<27	<30	<29	<29	<30
1,1,2-Trichloroethane	1,470	3.2	ug/kg	<27	<30	<29	<29	<30
1,1-Dichloroethane	600	480	ug/kg	<27	<30	<29	<29	<30
1,1-Dichloroethene	333,000	5	ug/kg	<27	<30	<29	<29	<30
1,1-Dichloropropene			ug/kg	<27	<30	<29	<29	<30
1,2,3-Trichlorobenzene	81,100		ug/kg	<27	<30	<29	<29	<30
1,2,3-Trichloropropane	91.3	52	ug/kg	<54	<61	<58	<57	<60
1,2,4-Trichlorobenzene	115,000	410	ug/kg	<27	<30	<29	<29	<30
1,2,4-Trimethylbenzene	92,200	1,394	ug/kg	<27	<30	<29	<29	<30
1,2-Dibromo-3-chloropropane	7.67	0.2	ug/kg	<54	<61	<58	<57	<60
1,2-Dibromoethane (EDB)	45.5	0.03	ug/kg	<27	<30	<29	<29	<30
1,2-Dichlorobenzene	222,000	1170	ug/kg	<27	<30	<29	<29	<30
1,2-Dichloroethane	600	2.8	ug/kg	<27	<30	<29	<29	<30
1,2-Dichloropropane	1,260	3.3	ug/kg	<27	<30	<29	<29	<30
1,3,5-Trimethylbenzene	64,900	1,379	ug/kg	<27	<30	<29	<29	<30
1,3-Dichlorobenzene	341,000		ug/kg	<27	<30	<29	<29	<30
1,3-Dichloropropane	1,560,000	0.3	ug/kg	<27	<30	<29	<29	<30
1,4-Dichlorobenzene	3,560	140	ug/kg	<27	<30	<29	<29	<30
2,2-Dichloropropane			ug/kg	<27	<30	<29	<29	<30
2-Chlorotoluene			ug/kg	<54	<61	<58	<57	<60
4-Chlorotoluene			ug/kg	<27	<30	<29	<29	<30
Benzene	1,500	5.1	ug/kg	<27	**47J**	<29	<29	<30
Bromobenzene	12,600		ug/kg	<27	<30	<29	<29	<30
Bromochloromethane	4,240,000		ug/kg	<27	<30	<29	<29	<30
Bromodichloromethane	383	0.3	ug/kg	<27	<30	<29	<29	<30
Bromoform	61,500	2.3	ug/kg	<27	<30	<29	<29	<30
Bromomethane	10,500	5.1	ug/kg	<110	<120	<120	<110	<120
Carbon Tetrachloride	342	3.9	ug/kg	<27	<30	<29	<29	<30
Chlorobenzene	396,000		ug/kg	<27	<30	<29	<29	<30
Chlorodibromomethane			ug/kg	<27	<30	<29	<29	<30
Chloroethane			ug/kg	<54	<61	<58	<57	<60
Chloroform	415	3.3	ug/kg	<27	<30	<29	<29	<30
Chloromethane	165,000	15.5	ug/kg	<54	<61	<58	<57	<60
cis-1,2-Dichloroethene	782,000	41.2	ug/kg	<27	<30	<29	<29	<30
cis-1,3-Dichloropropene	1,700,000	0.3	ug/kg	<27	<30	<29	<29	<30
Dibromomethane			ug/kg	<27	<30	<29	<29	<30
Dichlorodifluoromethane	254,000	3080	ug/kg	<54	<61	<58	<57	<60
Ethylbenzene	7,470	1,570	ug/kg	<27	<30	<29	<29	<30
Hexachlorobutadiene	6,222		ug/kg	<27	<30	<29	<29	<30
Isopropyl Ether			ug/kg	<27	<30	<29	<29	<30
Isopropylbenzene			ug/kg	<27	<30	<29	<29	<30
Methyl tert-Butyl Ether	51,400	27	ug/kg	<27	<30	<29	<29	<30
Methylene Chloride	14,300	2.5	ug/kg	<54	<61	<58	<57	<60
Naphthalene	5,150	658.7	ug/kg	<54	<61	<58	<57	<60
n-Butylbenzene	127,000		ug/kg	<27	<30	<29	<29	<30
n-Propylbenzene			ug/kg	<27	<30	<29	<29	<30
p-Isopropyltoluene	190,000		ug/kg	<27	<30	<29	<29	<30
sec-Butylbenzene	171,000		ug/kg	<27	<30	<29	<29	<30
Styrene	1,000,000	220	ug/kg	<54	<61	<58	<57	<60
tert-Butylbenzene	215,000		ug/kg	<27	<30	<29	<29	<30
Tetrachloroethene	660	4.5	ug/kg	<27	<30	<29	<29	<30
Toluene	818,000	1,107	ug/kg	<27	120	<29	<29	<30
trans-1,2-Dichloroethene	151,000	58.9	ug/kg	<27	<30	<29	<29	<30
trans-1,3-Dichloropropene	1,660,000	0.3	ug/kg	<27	<30	<29	<29	<30
Trichloroethene	3,810	3.6	ug/kg	<27	<30	<29	<29	<30
Trichlorofluoromethane	1,080,000		ug/kg	<27	<30	<29	<29	<30
Vinyl chloride	66.4	0.14	ug/kg	<27	<30	<29	<29	<30
Xylenes, total	258,000	3,940	ug/kg	<82	120J	<88	<86	<90

J: Result is <RL but >MDL; concentration is approximate

Italic : Value exceeds Non-Industrial Direct Contact Residual Cleanup Level

Bold: Value exceeds Groundwater Pathway Residual Cleanup Level

	Non-Industrial	Groundwater		B-01	B-02	B-03	B-04	B-05	B-06	B-07	B-08	B-09	B-10	B-12	B-13	B-14	B-15	B-15	B-15	B-16	B-17	B-18	B-19
	Direct Contact	Pathway	Units	0-2'	0-2'	0-2'	0-2'	0-2'	0-2'	0-2'	0-2'	0-2'	0-2'	0-2'	0-2'	0-2'	0-2'	4-6'	8-10'	0-2'	0-2'	0-2'	0-2'
1-Methylnaphthalene	22.1		mg/kg	<0.019	NA	0.019J	<0.019	NA	0.078	<0.021	4.6	0.73	<0.019	5.9	NA	0.69	NA	NA	NA	0.42	14	0.12	0.55
1,2,4-Trichlorobenzene			mg/kg	NA	<0.20	NA	NA	<0.043	NA	NA	NA	NA	NA	NA	<0.043	NA	<0.043	<2.3	<2.3	NA	NA	NA	NA
1,2-Dichlorobenzene			mg/kg	NA	<0.20	NA	NA	<0.042	NA	NA	NA	NA	NA	NA	<0.042	NA	<0.042	<2.2	<2.2	NA	NA	NA	NA
1,3-Dichlorobenzene			mg/kg	NA	<0.19	NA	NA	<0.040	NA	NA	NA	NA	NA	NA	<0.040	NA	<0.040	<2.1	<2.2	NA	NA	NA	NA
1,4-Dichlorobenzene			mg/kg	NA	<0.19	NA	NA	<0.040	NA	NA	NA	NA	NA	NA	<0.040	NA	<0.040	<2.1	<2.2	NA	NA	NA	NA
2,4,5-Trichlorophenol			mg/kg	NA	<0.51	NA	NA	<0.11	NA	NA	NA	NA	NA	NA	<0.11	NA	<0.11	<5.7	<5.9	NA	NA	NA	NA
2,4,6-Trichlorophenol			mg/kg	NA	<0.23	NA	NA	<0.048	NA	NA	NA	NA	NA	NA	<0.048	NA	<0.048	<2.5	<2.6	NA	NA	NA	NA
2,4-Dichlorophenol			mg/kg	NA	<0.55	NA	NA	<0.12	NA	NA	NA	NA	NA	NA	<0.12	NA	<0.12	<6.1	<6.2	NA	NA	NA	NA
2,4-Dimethylphenol	1220		mg/kg	NA	<0.56	NA	NA	<0.12	NA	NA	NA	NA	NA	NA	<0.12	NA	<0.12	<6.3	<6.4	NA	NA	NA	NA
2,4-Dinitrophenol			mg/kg	NA	<0.92	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	<0.20	NA	<0.19	<10	<11	NA	NA	NA	NA
2,4-Dinitrotoluene			mg/kg	NA	<0.28	NA	NA	<0.059	NA	NA	NA	NA	NA	NA	<0.059	NA	<0.058	<3.1	<3.1	NA	NA	NA	NA
2,6-Dinitrotoluene			mg/kg	NA	<0.21	NA	NA	<0.045	NA	NA	NA	NA	NA	NA	<0.046	NA	<0.045	<2.4	<2.4	NA	NA	NA	NA
2-Chloronaphthalene			mg/kg	NA	<0.20	NA	NA	<0.043	NA	NA	NA	NA	NA	NA	<0.043	NA	<0.043	<2.3	<2.3	NA	NA	NA	NA
2-Chlorophenol			mg/kg	NA	<0.26	NA	NA	<0.055	NA	NA	NA	NA	NA	NA	<0.055	NA	<0.054	<2.9	<2.9	NA	NA	NA	NA
2-Methylnaphthalene	313		mg/kg	<0.049	0.36J	<0.050	<0.050	<0.050	<0.048	<0.056	4.6J	0.70J	<0.050	7.9	<0.050	0.77J	<0.049	43	4.8J	0.44	23	0.19	0.59
2-Methylphenol			mg/kg	NA	<0.24	NA	NA	<0.051	NA	NA	NA	NA	NA	NA	<0.051	NA	<0.051	<2.7	<2.7	NA	NA	NA	NA
2-Nitroaniline			mg/kg	NA	<0.32	NA	NA	<0.069	NA	NA	NA	NA	NA	NA	<0.069	NA	<0.069	<3.6	<3.7	NA	NA	NA	NA
2-Nitrophenol			mg/kg	NA	<0.28	NA	NA	<0.060	NA	NA	NA	NA	NA	NA	<0.060	NA	<0.060	<3.1	<3.2	NA	NA	NA	NA
3 & 4 Methylphenol			mg/kg	NA	<0.34	NA	NA	<0.072	NA	NA	NA	NA	NA	NA	<0.072	NA	<0.072	<3.8	<3.9	NA	NA	NA	NA
3,3'-Dichlorobenzidine			mg/kg	NA	<0.15	NA	NA	<0.032	NA	NA	NA	NA	NA	NA	<0.032	NA	<0.032	<1.7	<1.7	NA	NA	NA	NA
3-Nitroaniline			mg/kg	NA	<0.35	NA	NA	<0.074	NA	NA	NA	NA	NA	NA	<0.074	NA	<0.073	<3.9	<4.0	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol			mg/kg	NA	<0.44	NA	NA	<0.093	NA	NA	NA	NA	NA	NA	<0.093	NA	<0.092	<4.9	<5.0	NA	NA	NA	NA
4-Bromophenyl phenyl ether			mg/kg	NA	<0.20	NA	NA	<0.043	NA	NA	NA	NA	NA	NA	<0.043	NA	<0.043	<2.2	<2.3	NA	NA	NA	NA
4-Chloro-3-methylphenol			mg/kg	NA	<0.86	NA	NA	<0.18	NA	NA	NA	NA	NA	NA	<0.18*	NA	<0.18	<9.6	<9.8	NA	NA	NA	NA
4-Chloroaniline			mg/kg	NA	<0.55	NA	NA	<0.12	NA	NA	NA	NA	NA	NA	<0.12	NA	<0.12	<6.1	<6.2	NA	NA	NA	NA
4-Chlorophenyl phenyl ether			mg/kg	NA	<0.28	NA	NA	<0.060	NA	NA	NA	NA	NA	NA	<0.060	NA	<0.060	<3.2	<3.2	NA	NA	NA	NA
4-Nitroaniline			mg/kg	NA	<0.37	NA	NA	<0.078	NA	NA	NA	NA	NA	NA	<0.078	NA	<0.078	<4.1	<4.2	NA	NA	NA	NA
4-Nitrophenol			mg/kg	NA	<0.97	NA	NA	<0.21	NA	NA	NA	NA	NA	NA	<0.21	NA	<0.21	<11	<11	NA	NA	NA	NA
Acenaphthene	3440		mg/kg	0.013J	1.1	0.12	<0.011	<0.011	0.31	<0.013	24	0.91	0.020J	11	0.021J	1.4	0.019J	31	15	1.3	57	0.67	4.8
Acenaphthylene	487		mg/kg	<0.0087	0.26	0.014J	<0.0088	<0.0088	0.026J	<0.0099	<0.46	0.12J	0.031J	32	<0.0088	0.42	0.012J	23	8.7	0.66	13	0.11	0.059
Anthracene	17200	196	mg/kg	0.062	3.1	0.31	<0.0090	<0.0090	0.55	0.019J	64	1.9	0.12	150	0.14	3.8	0.055	56	53	4.2	**340**	5.6	2.5
Benzo[a]anthracene	0.15		mg/kg	0.057	*21*	*1.3*	0.028J	0.023J	*0.83*	0.13	*280*	*13*	*0.45*	*270*	*0.23*	*15*	*0.21*	*64*	*590*	*13*	*420*	*9.7*	*1.7*
Benzo[a]pyrene	0.02	0.47	mg/kg	*0.064*	***26***	***1.6***	*0.030J*	*0.026J*	***1***	*0.17*	***350***	***17***	*0.46*	***260***	*0.3*	***15***	*0.23*	***49***	***490***	***16***	***290***	***12***	***1.1***
Benzo[b]fluoranthene	0.15	0.48	mg/kg	0.072	***25***	***1.8***	0.035J	0.029J	***0.98***	*0.16*	***340***	***18***	***0.49***	***250***	*0.36*	***15***	*0.28*	***57***	***590***	***6.8***	***370***	***14***	***1.1***
Benzo[g,h,i]perylene			mg/kg	0.049	11	1.2	0.021J	0.021J	0.65	0.11	210	11	0.31	150	0.22	9.3	0.17	29	260	12	180	9	0.61
Benzo[k]fluoranthene	1.48		mg/kg	0.038	*21*	0.88	0.020J	0.012J	0.7	0.13	*260*	*9.7*	0.35	*35*	0.16	*10*	0.12	*28*	*390*	*3.8*	*150*	*4.9*	0.82
bis (2-chloroisopropyl) ether			mg/kg	NA	<0.20	NA	NA	<0.042	NA	NA	NA	NA	NA	NA	<0.042	NA	<0.042	<2.2	<2.3	NA	NA	NA	NA
Bis(2-chloroethoxy)methane			mg/kg	NA	<0.20	NA	NA	<0.042	NA	NA	NA	NA	NA	NA	<0.042	NA	<0.042	<2.2	<2.3	NA	NA	NA	NA
Bis(2-chloroethyl)ether			mg/kg	NA	<0.27	NA	NA	<0.057	NA	NA	NA	NA	NA	NA	<0.057	NA	<0.056	<3.0	<3.0	NA	NA	NA	NA
Bis(2-ethylhexyl) phthalate	34.7	2.88	mg/kg	NA	<0.24	NA	NA	0.069J	NA	NA	NA	NA	NA	NA	<0.051	NA	<0.050	<2.7	<2.7	NA	NA	NA	NA
Butyl benzyl phthalate			mg/kg	NA	<0.22	NA	NA	<0.048	NA	NA	NA	NA	NA	NA	<0.048	NA	<0.048	<2.5	<2.6	NA	NA	NA	NA
Carbazole			mg/kg	NA	1.6	NA	NA	<0.054	NA	NA	NA	NA	NA	NA	0.055J	NA	<0.054	31	29	NA	NA	NA	NA
Chrysene	14.8	0.14	mg/kg	0.085	***26***	**1.6**	0.031J	0.030J	**1**	**0.15**	***350***	***17***	**0.5**	***290***	**0.29**	***16***	**0.23**	***40***	***540***	**12**	***480***	**12**	**1.9**
Dibenz(a,h)anthracene	0.02		mg/kg	0.012J	*5.6*	*0.37*	<0.011	<0.011	*0.25*	*0.030J*	*57*	*4.4*	*0.1*	*46*	*0.073*	*4.1*	*0.06*	*7.9*	*63*	*1.8*	*56*	*3.6*	*0.18*
Dibenzofuran	78.2		mg/kg	NA	0.55J	NA	NA	<0.046	NA	NA	NA	NA	NA	NA	<0.046	NA	<0.046	53	10	NA	NA	NA	NA
Diethyl phthalate			mg/kg	NA	<0.30	NA	NA	<0.064	NA	NA	NA	NA	NA	NA	<0.064	NA	<0.063	<3.3	<3.4	NA	NA	NA	NA
Dimethyl phthalate			mg/kg	NA	<0.22	NA	NA	<0.048	NA	NA	NA	NA	NA	NA	<0.048	NA	<0.048	<2.5	<2.6	NA	NA	NA	NA
Di-n-butyl phthalate			mg/kg	NA	<0.23	NA	NA	<0.048	NA	NA	NA	NA	NA	NA	<0.048	NA	<0.048	<2.5	<2.6	NA	NA	NA	NA
Di-n-octyl phthalate			mg/kg	NA	<0.36	NA	NA	<0.078	NA	NA	NA	NA	NA	NA	<0.078	NA	<0.077	<4.1	<4.2	NA	NA	NA	NA
Fluoranthene	2290	88.77	mg/kg	0.1	41	1.9	0.035J	0.044	1.7	0.19	**550**	18	0.66	**490**	0.45	24	0.38	**260**	**940**	25	**730**	15	7.5
Fluorene	2290	14.79	mg/kg	0.022J	0.89	0.11	<0.0087	<0.0087	0.26	<0.0098	**21**	0.82	0.027J	**32**	0.032J	1.5	0.019J	**76**	**19**	1.3	**96**	0.95	3.1
Hexachlorobenzene			mg/kg	NA	<0.035	NA	NA	<0.0075	NA	NA	NA	NA	NA	NA	<0.0075	NA	<0.0075	<0.39	<0.40	NA	NA	NA	NA
Hexachlorobutadiene			mg/kg	NA	<0.24	NA	NA	<0.050	NA	NA	NA	NA	NA	NA	<0.050	NA	<0.050	<2.6	<2.7	NA	NA	NA	NA
Hexachlorocyclopentadiene			mg/kg	NA	<0.83	NA	NA	<0.18	NA	NA	NA	NA	NA	NA	<0.18	NA	<0.18	<9.3	<9.5	NA	NA	NA	NA
Hexachloroethane			mg/kg	NA	<0.19	NA	NA	<0.041	NA	NA	NA	NA	NA	NA	<0.041	NA	<0.041	<2.1	<2.2	NA	NA	NA	NA
Indeno[1,2,3-cd]pyrene	0.15		mg/kg	0.036J	*9.8*	*1*	0.017J	0.015J	*0.59*	0.099	*150*	*10*	*0.29*	*140*	*0.19*	*9*	0.14	*25*	*130*	*10*	*170*	*7.5*	*0.56*
Isophorone			mg/kg	NA	<0.20	NA	NA	<0.043	NA	NA	NA	NA	NA	NA	<0.043	NA	<0.042	<2.2	<2.3	NA	NA	NA	NA
Naphthalene	5.15	0.66	mg/kg	0.019J	**1.2**	0.034J	<0.0074	0.035J	0.026J	<0.0083	***16***	**1.6**	0.032J	***23***	0.079	**3.6**	0.012J	***140***	***14***	**1.2**	***37***	0.55	**0.7**
Nitrobenzene			mg/kg	NA	<0.056	NA	NA	<0.012	NA	NA	NA	NA	NA	NA	<0.012	NA	<0.012	<0.62	<0.64	NA	NA	NA	NA
N-Nitrosodimethylamine			mg/kg	NA	<2.0	NA	NA	<0.42	NA	NA	NA	NA	NA	NA	<0.42	NA	<0.42	<22	<22	NA	NA	NA	NA
N-Nitrosodi-n-propylamine			mg/kg	NA	<0.23	NA	NA	<0.049	NA	NA	NA	NA	NA	NA	<0.049	NA	<0.048	<2.5	<2.6	NA	NA	NA	NA
Pentachlorophenol			mg/kg	NA	<0.91	NA	NA	<0.19	NA	NA	NA	NA	NA	NA	<0.19	NA	<0.19	<10	<10	NA	NA	NA	NA
Phenanthrene	115		mg/kg	0.078	8.9	0.93	<0.016	<0.016	1.6	0.069	*290*	8.7	0.26	*200*	0.19	12	0.13	*320*	*140*	11	*540*	8	7.4
Phenol	18300	2.29	mg/kg	NA	<0.28	NA	NA	<0.061	NA	NA	NA	NA	NA	NA	<0.061	NA	<0.060	<3.2	<3.3	NA	NA	NA	NA
Pyrene	1720	54.1	mg/kg	0.089	38	1.9	0.035J	0.032J	1.4	0.18	**430**	17	0.56	**410**	0.32	19	0.28	**110**	**780**	19	**500**	12	5.1

Italic : Value exceeds Non-Industrial Direct Contact Residual Cleanup Level

Bold: Value exceeds Groundwater Pathway Residual Cleanup Level

J: Result is <RL but >MDL; concentration is approximate

	Non-Industrial	Groundwater		B-19	B-19	B-20	B-21	B-21	B-21	B-22	B-22	B-22	B-23	B-23	B-23	B-24	B-25	B-25	B-25	B-26	B-27	B-27	B-27
	Direct Contact	Pathway	Units	4-6'	8-10'	0-2'	0-2'	4-6'	8-10'	0-2'	4-6'	8-10'	0-2'	4-6'	8-10'	0-2'	0-2'	4-6'	8-10'	0-2'	0-2'	4-6'	8-10'
1-Methylnaphthalene	22.1		mg/kg	0.026J	*62*	0.066	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene			mg/kg	NA	NA	NA	<0.040	<0.044	<0.044	<0.043	<0.43	<0.045	<0.045	<0.039	<0.048	<0.045	<0.044	<0.043	<0.043	<0.041	<0.047	<0.044	<0.044
1,2-Dichlorobenzene			mg/kg	NA	NA	NA	<0.038	<0.042	<0.042	<0.042	<0.42	<0.044	<0.043	<0.037	<0.046	<0.043	<0.043	<0.042	<0.042	<0.040	<0.046	<0.042	<0.042
1,3-Dichlorobenzene			mg/kg	NA	NA	NA	<0.037	<0.041	<0.041	<0.040	<0.40	<0.042	<0.042	<0.036	<0.045	<0.041	<0.041	<0.040	<0.040	<0.038	<0.044	<0.041	<0.041
1,4-Dichlorobenzene			mg/kg	NA	NA	NA	<0.037	<0.041	<0.041	<0.040	<0.40	<0.042	<0.042	<0.036	<0.045	<0.041	<0.041	<0.040	<0.040	<0.038	<0.044	<0.041	<0.041
2,4,5-Trichlorophenol			mg/kg	NA	NA	NA	<0.10	<0.11	<0.11	<0.11	<1.1	<0.11	<0.11	<0.097	<0.12	<0.11	<0.11	<0.11	<0.11	<0.10	<0.12	<0.11	<0.11
2,4,6-Trichlorophenol			mg/kg	NA	NA	NA	<0.044	<0.049	<0.048	<0.048	<0.48	<0.050	<0.050	<0.043	<0.053	<0.049	<0.049	<0.048	<0.048	<0.046	<0.053	<0.048	<0.049
2,4-Dichlorophenol			mg/kg	NA	NA	NA	<0.11	<0.12	<0.12	<0.12	<1.2	<0.12	<0.12	<0.10	<0.13	<0.12	<0.12	<0.12	<0.12	<0.11	<0.13	<0.12	<0.12
2,4-Dimethylphenol	1220		mg/kg	NA	NA	NA	<0.11	<0.12	<0.12	<0.12	<1.2	33	<0.12	<0.11	<0.13	<0.12	<0.12	<0.12	<0.12	<0.11	<0.13	<0.12	<0.12
2,4-Dinitrophenol			mg/kg	NA	NA	NA	<0.18	<0.20	<0.20	<0.20	<2.0	<0.20	<0.20	<0.17	<0.22	<0.20	<0.20	<0.20	<0.20	<0.19	<0.21*	<0.20*	<0.20*
2,4-Dinitrotoluene			mg/kg	NA	NA	NA	<0.054	<0.060	<0.059	<0.059	<0.59	<0.061	<0.061	<0.052	<0.065	<0.060	<0.060	<0.059	<0.059	<0.056	<0.064	<0.059	<0.060
2,6-Dinitrotoluene			mg/kg	NA	NA	NA	<0.042	<0.046	<0.046	<0.045	<0.45	<0.048	<0.047	<0.040	<0.050	<0.047	<0.046	<0.046	<0.045	<0.043	<0.050	<0.046	<0.046
2-Chloronaphthalene			mg/kg	NA	NA	NA	<0.039	<0.044	<0.043	<0.043	<0.43	<0.045	<0.045	<0.038	<0.048	<0.044	<0.044	<0.043	<0.043	<0.041	<0.047	<0.043	<0.044
2-Chlorophenol			mg/kg	NA	NA	NA	<0.050	<0.056	<0.055	<0.055	<0.55	<0.057	<0.057	<0.049	<0.061	<0.056	<0.056	<0.055	<0.055	<0.052	<0.060	<0.055	<0.056
2-Methylnaphthalene	313		mg/kg	<0.046	150	0.093J	<0.045	<0.050	<0.050	<0.050	<0.50	11	<0.051	<0.044	0.28	<0.051	<0.051	<0.050	<0.050	<0.047	<0.054	<0.050	<0.050
2-Methylphenol			mg/kg	NA	NA	NA	<0.047	<0.052	<0.051	<0.051	<0.51	36	<0.053	<0.045	<0.056	<0.052	<0.052	<0.051	<0.051	<0.048	<0.056	<0.051	<0.052
2-Nitroaniline			mg/kg	NA	NA	NA	<0.063	<0.070	<0.069	<0.069	<0.69	<0.072	<0.071	<0.061	<0.076	<0.071	<0.070	<0.069	<0.069	<0.065	<0.075	<0.069	<0.070
2-Nitrophenol			mg/kg	NA	NA	NA	<0.055	<0.061	<0.060	<0.060	<0.60	<0.063	<0.062	<0.053	<0.066	<0.062	<0.061	<0.060	<0.060	<0.057	<0.066	<0.060	<0.061
3 & 4 Methylphenol			mg/kg	NA	NA	NA	<0.066	<0.074	<0.073	<0.072	<0.72	150	<0.075	<0.064	<0.080	<0.074	<0.074	<0.073	<0.072	<0.069	<0.079	<0.073	<0.074
3,3'-Dichlorobenzidine			mg/kg	NA	NA	NA	<0.029	<0.032	<0.032	<0.032	<0.32	<0.033	<0.033	<0.028	<0.035	<0.033	<0.033	<0.032	<0.032	<0.030	<0.035	<0.032	<0.032
3-Nitroaniline			mg/kg	NA	NA	NA	<0.068	<0.075	<0.074	<0.074	<0.74	<0.077	<0.076	<0.066	<0.082	<0.076	<0.075	<0.074	<0.074	<0.070	<0.081	<0.074	<0.075
4,6-Dinitro-2-methylphenol			mg/kg	NA	NA	NA	<0.085	<0.094	<0.094	<0.093	<0.93	<0.097	<0.096	<0.083	<0.10	<0.095	<0.095	<0.093	<0.093	<0.088	<0.10	<0.094	<0.094
4-Bromophenyl phenyl ether			mg/kg	NA	NA	NA	<0.039	<0.043	<0.043	<0.043	<0.43	<0.045	<0.044	<0.038	<0.047	<0.044	<0.044	<0.043	<0.043	<0.041	<0.047	<0.043	<0.043
4-Chloro-3-methylphenol			mg/kg	NA	NA	NA	<0.17	<0.19	<0.18	<0.18	<1.8	<0.19	<0.19	<0.16	<0.20	<0.19	<0.19	<0.18	<0.18	<0.17	<0.20	<0.18	<0.19
4-Chloroaniline			mg/kg	NA	NA	NA	<0.11	<0.12	<0.12	<0.12	<1.2	<0.12	<0.12	<0.10	<0.13	<0.12	<0.12	<0.12	<0.12	<0.11	<0.13	<0.12	<0.12
4-Chlorophenyl phenyl ether			mg/kg	NA	NA	NA	<0.055	<0.061	<0.061	<0.060	<0.60	<0.063	<0.062	<0.054	<0.067	<0.062	<0.062	<0.060	<0.060	<0.057	<0.066	<0.061	<0.061
4-Nitroaniline			mg/kg	NA	NA	NA	<0.072	<0.080	<0.079	<0.078	<0.78	<0.082	<0.081	<0.070	<0.087	<0.081	<0.080	<0.079	<0.078	<0.075	<0.086	<0.079	<0.080
4-Nitrophenol			mg/kg	NA	NA	NA	<0.19	<0.21	<0.21	<0.21	<2.1	<0.22	<0.21	<0.18	<0.23	<0.21	<0.21	<0.21	<0.21	<0.20	<0.23	<0.21	<0.21
Acenaphthene	3440		mg/kg	0.18	67	0.5	<0.010	0.21	<0.012	0.04	<0.11	0.62	<0.012	<0.010	0.89	0.026J	<0.012	<0.011	0.020J	0.048	0.030J	<0.012	<0.012
Acenaphthylene	487		mg/kg	<0.0082	17	0.71	<0.0081	0.066	<0.0089	<0.0088	<0.088	<0.0092	<0.0091	<0.0078	0.35	<0.0090	<0.0090	<0.0088	<0.0088	0.088	<0.0096	<0.0089	<0.0089
Anthracene	17200	196	mg/kg	0.29	**680**	3.4	0.0088J	0.67	<0.0091	0.071	<0.090	0.12	<0.0093	<0.0080	2.2	0.027J	<0.0092	<0.0090	0.027J	0.25	0.073	<0.0091	<0.0091
Benzo[a]anthracene	0.15		mg/kg	*0.33*	*190*	*6.3*	0.06	*2.2*	<0.0081	*0.2*	<0.080	0.035J	0.015J	0.049	*6.2*	0.055	<0.0082	0.025J	0.11	*1.8*	*0.84*	0.0098J	<0.0081
Benzo[a]pyrene	0.02	0.47	mg/kg	*0.3*	***160***	***6.9***	*0.069*	***1.8***	0.013J	*0.29*	<0.070	*0.023J*	*0.019J*	*0.067*	***2.7***	*0.073*	<0.0071	*0.031J*	*0.14*	***1.6***	***0.96***	0.012J	<0.0071
Benzo[b]fluoranthene	0.15	0.48	mg/kg	*0.31*	***260***	***11***	0.077	***2.1***	0.012J	*0.34*	<0.074	0.026J	0.020J	0.079	***6.9***	0.077	<0.0076	0.033J	0.14	***1.8***	***1.1***	0.012J	<0.0075
Benzo[g,h,i]perylene			mg/kg	0.18	110	4.6	0.061	1.3	0.028J	0.23	<0.13	0.017J	0.019J	0.049	1.9	0.069	<0.013	0.027J	0.1	1.4	0.58	0.013J	<0.013
Benzo[k]fluoranthene	1.48		mg/kg	0.19	*22*	*1.7*	0.038	1.1	<0.0092	0.15	<0.091	0.018J	0.015J	0.034	1.3	0.052	<0.0093	0.022J	0.1	1.3	0.62	<0.0092	<0.0093
bis (2-chloroisopropyl) ether			mg/kg	NA	NA	NA	<0.039	<0.043	<0.043	<0.042	<0.42	<0.044	<0.044	<0.038	<0.047	<0.044	<0.043	<0.043	<0.042	<0.040	<0.046	<0.043	<0.043
Bis(2-chloroethoxy)methane			mg/kg	NA	NA	NA	<0.039	<0.043	<0.043	<0.042	<0.42	<0.044	<0.044	<0.038	<0.047	<0.043	<0.043	<0.042	<0.042	<0.040	<0.046	<0.043	<0.043
Bis(2-chloroethyl)ether			mg/kg	NA	NA	NA	<0.052	<0.058	<0.057	<0.057	<0.57	<0.059	<0.059	<0.050	<0.063	<0.058	<0.058	<0.057	<0.057	<0.054	<0.062	<0.057	<0.058
Bis(2-ethylhexyl) phthalate	34.7	2.88	mg/kg	NA	NA	NA	0.046J	<0.051	<0.051	<0.051	1.6J	<0.053	<0.052	<0.045	<0.056	<0.052	0.053J	<0.051	<0.051	<0.048	<0.055	<0.051	<0.051
Butyl benzyl phthalate			mg/kg	NA	NA	NA	<0.044	<0.049	<0.048	<0.048	<0.48	<0.050	<0.050	<0.043	<0.053	<0.049	<0.049	<0.048	<0.048	<0.046	<0.052	<0.048	<0.049
Carbazole			mg/kg	NA	NA	NA	<0.049	0.26	<0.054	<0.054	<0.54	0.72	<0.056	<0.048	0.71	<0.055	<0.055	<0.054	<0.054	0.090J	0.069J	<0.054	<0.055
Chrysene	14.8	0.14	mg/kg	**0.33**	***170***	**7.6**	0.064	**1.9**	0.013J	**0.22**	<0.086	0.04	0.027J	0.075	**6.5**	0.079	<0.0088	0.035J	0.13	**2.1**	**0.95**	0.011J	<0.0088
Dibenz(a,h)anthracene	0.02		mg/kg	*0.052*	*47*	*0.91*	*0.025J*	*0.51*	<0.011	*0.071*	<0.11	<0.011	<0.011	*0.022J*	*0.96*	0.014J	<0.011	0.013J	*0.024J*	*0.62*	*0.22*	<0.011	<0.011
Dibenzofuran	78.2		mg/kg	NA	NA	NA	<0.042	0.11J	<0.046	<0.046	<0.46	0.69	<0.048	<0.041	0.38	<0.047	<0.047	<0.046	<0.046	<0.044	<0.050	<0.046	<0.047
Diethyl phthalate			mg/kg	NA	NA	NA	<0.058	<0.065	<0.064	<0.064	<0.64	<0.067	<0.066	<0.057	<0.071	<0.066	<0.065	<0.064	<0.064	<0.061	<0.070	<0.064	<0.065
Dimethyl phthalate			mg/kg	NA	NA	NA	<0.044	<0.049	<0.048	<0.048	<0.48	<0.050	<0.049	<0.043	<0.053	<0.049	<0.049	<0.048	<0.048	<0.045	<0.052	<0.048	<0.049
Di-n-butyl phthalate			mg/kg	NA	NA	NA	<0.044	<0.049	<0.049	<0.048	<0.48	<0.050	<0.050	<0.043	<0.053	<0.050	<0.049	<0.048	<0.048	<0.046	<0.053	<0.049	<0.049
Di-n-octyl phthalate			mg/kg	NA	NA	NA	<0.071	<0.079	<0.078	<0.078	<0.78	<0.081	<0.080	<0.069	<0.086	<0.080	<0.079	<0.078	<0.077	<0.074	<0.085	<0.078	<0.079
Fluoranthene	2290	88.77	mg/kg	0.95	**390**	14	0.085	5.1	<0.016	0.43	<0.16	0.12	0.022J	0.075	14	0.12	<0.016	0.047	0.2	2.1	1.2	<0.016	<0.016
Fluorene	2290	14.79	mg/kg	0.17	**130**	0.45	<0.0080	0.22	<0.0088	0.039	<0.087	0.35	<0.0090	<0.0077	1.3	0.017J	<0.0089	<0.0087	<0.0087	0.04	<0.0095	<0.0088	<0.0088
Hexachlorobenzene			mg/kg	NA	NA	NA	<0.0069	<0.0077	<0.0076	<0.0075	<0.075	<0.0079	<0.0078	<0.0067	<0.0083	<0.0077	<0.0077	<0.0076	<0.0075	<0.0072	<0.0082	<0.0076	<0.0076
Hexachlorobutadiene			mg/kg	NA	NA	NA	<0.046	<0.051	<0.050	<0.050	<0.50	<0.052	<0.052	<0.045	<0.055	<0.051	<0.051	<0.050	<0.050	<0.048	<0.055	<0.050	<0.051
Hexachlorocyclopentadiene			mg/kg	NA	NA	NA	<0.16	<0.18	<0.18	<0.18	<1.8	<0.19	<0.18	<0.16	<0.20	<0.18	<0.18	<0.18	<0.18	<0.17	<0.19	<0.18	<0.18
Hexachloroethane			mg/kg	NA	NA	NA	<0.037	<0.041	<0.041	<0.041	<0.41	<0.043	<0.042	<0.036	<0.045	<0.042	<0.042	<0.041	<0.041	<0.039	<0.045	<0.041	<0.041
Indeno[1,2,3-cd]pyrene	0.15		mg/kg	*0.16*	*93*	*4.2*	0.049	*1*	0.021J	*0.18*	<0.13	0.013J	0.014J	0.04	*1.7*	0.058	<0.013	0.022J	0.089	*1.3*	*0.5*	<0.013	<0.013
Isophorone			mg/kg	NA	NA	NA	<0.039	<0.043	<0.043	<0.043	<0.43	<0.045	<0.044	<0.038	<0.047	<0.044	<0.044	<0.043	<0.043	<0.041	<0.047	<0.043	<0.043
Naphthalene	5.15	0.66	mg/kg	0.068	***890***	**0.85**	<0.0068	0.08	<0.0074	0.027J	<0.074	***68***	<0.0076	0.089	***6.9***	<0.0076	<0.0075	<0.0074	0.017J	0.073	0.0095J	<0.0074	<0.0075
Nitrobenzene			mg/kg	NA	NA	NA	<0.011	<0.012	<0.012	<0.012	<0.12	<0.012	<0.012	<0.011	<0.013	<0.012	<0.012	<0.012	<0.012	<0.011	<0.013	<0.012	<0.012
N-Nitrosodimethylamine			mg/kg	NA	NA	NA	<0.38	<0.42	<0.42	<0.42	<4.2	<0.44	<0.43	<0.37	<0.46	<0.43	<0.43	<0.42	<0.42	<0.40	<0.46	<0.42	<0.42
N-Nitrosodi-n-propylamine			mg/kg	NA	NA	NA	<0.045	<0.049	<0.049	<0.049	<0.49	<0.051	<0.050	<0.043	<0.054	<0.050	<0.050	<0.049	<0.049	<0.046	<0.053	<0.049	<0.049
Pentachlorophenol			mg/kg	NA	NA	NA	<0.18	<0.20	<0.20	<0.19	<1.9	<0.20	<0.20	<0.17	<0.22	<0.20	<0.20	<0.20	<0.19	<0.19	<0.21	<0.20	<0.20
Phenanthrene	115		mg/kg	0.91	*480*	1.4	0.026J	2	<0.016	0.29	<0.16	0.61	<0.017	0.024J	6.8	0.064	<0.016	<0.016	0.1	0.56	0.3	<0.016	<0.016
Phenol	18300	2.29	mg/kg	NA	NA	NA	<0.056	<0.062	<0.061	<0.061	<0.60	**83**	<0.063	<0.054	<0.067	<0.062	<0.062	<0.061	<0.060	<0.058	<0.066	<0.061	<0.062
Pyrene	1720	54.1	mg/kg	0.68	**300**	10	0.065	2.9	<0.014	0.29	<0.14	0.079	0.019J	0.059	11	0.091	<0.014	0.034J	0.15	1.7	0.93	<0.014	<0.014

Italic : Value exceeds Non-Industrial Direct Contact Residual Cleanup Level

Bold: Value exceeds Groundwater Pathway Residual Cleanup Level

J: Result is <RL but >MDL; concentration is approximate

	Non-Industrial	Groundwater		B-28	B-28	B-28	B-29	B-29	B-29	B-30	B-30	B-30	B-31	B-31	B-31	B-32	B-33	B-33	B-33	B-34	B-35	B-35	B-35
	Direct Contact	Pathway	Units	0-2'	4-6'	8-10'	0-2'	4-6'	8-10'	0-2'	4-6'	8-10'	0-2'	4-6'	8-10'	0-2'	0-2'	4-6'	8-10'	0-2'	0-2'	4-6'	8-10'
1-Methylnaphthalene	22.1		mg/kg	<0.019	<0.019	<0.018	<0.018	<0.018	<0.020	<0.018	<0.020	<0.020	<0.019	2.2	<0.95	0.045	0.19	<0.019	<0.018	0.53	NA	NA	NA
1,2,4-Trichlorobenzene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.043	<0.042	<0.043
1,2-Dichlorobenzene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.041	<0.041	<0.041
1,3-Dichlorobenzene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.040	<0.039	<0.040
1,4-Dichlorobenzene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.040	<0.039	<0.040
2,4,5-Trichlorophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.11	<0.11	<0.11
2,4,6-Trichlorophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.047	<0.047	<0.047
2,4-Dichlorophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.11	<0.11	<0.12
2,4-Dimethylphenol	1220		mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.12	<0.12	<0.12
2,4-Dinitrophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.19	<0.19	<0.19
2,4-Dinitrotoluene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.058	<0.057	<0.058
2,6-Dinitrotoluene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.045	<0.044	<0.045
2-Chloronaphthalene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.042	<0.042	<0.043
2-Chlorophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.054	<0.053	<0.054
2-Methylnaphthalene	313		mg/kg	<0.049	<0.049	<0.047	<0.047	<0.048	<0.052	<0.048	<0.052	<0.051	<0.050	1.9	<2.5	<0.050	<0.25	<0.049	<0.048	0.49J	<0.049	<0.048	<0.049
2-Methylphenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.050	<0.049	<0.050
2-Nitroaniline			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.068	<0.067	<0.068
2-Nitrophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.059	<0.058	<0.059
3 & 4 Methylphenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.071	<0.070	<0.072
3,3'-Dichlorobenzidine			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.031	<0.031	<0.032
3-Nitroaniline			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.073	<0.072	<0.073
4,6-Dinitro-2-methylphenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.091	<0.090	<0.092
4-Bromophenyl phenyl ether			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.042	<0.042	<0.042
4-Chloro-3-methylphenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.18*	<0.18*	<0.18*
4-Chloroaniline			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.11	<0.11	<0.12
4-Chlorophenyl phenyl ether			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.059	<0.059	<0.060
4-Nitroaniline			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.077	<0.076	<0.078
4-Nitrophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.20	<0.20	<0.20
Acenaphthene	3440		mg/kg	<0.011	<0.011	<0.011	<0.011	<0.011	0.12	<0.011	<0.012	0.039	0.029J	2.2	5.4	0.079	0.25	<0.011	<0.011	3.8	0.16	<0.011	<0.011
Acenaphthylene	487		mg/kg	<0.0086	<0.0086	<0.0083	<0.0083	<0.0085	<0.0091	0.0089J	<0.0091	<0.0091	0.16	2.3	<0.44	0.16	0.61	<0.0088	<0.0085	0.13J	0.010J	<0.0085	<0.0087
Anthracene	17200	196	mg/kg	0.035J	<0.0088	<0.0085	<0.0085	<0.0087	0.2	0.021J	<0.0093	0.014J	0.19	90	13	0.44	1.8	0.031J	0.034J	14	0.39	<0.0088	<0.0089
Benzo[a]anthracene	0.15		mg/kg	*0.23*	<0.0079	0.018J	0.0083J	0.033J	*0.22*	*0.2*	0.0091J	0.038J	*0.68*	*24*	*67*	*2.1*	*4.2*	*0.15*	0.021J	*26*	*3.5*	0.1	<0.0079
Benzo[a]pyrene	0.02	0.47	mg/kg	*0.25*	0.0095J	*0.023J*	0.012J	*0.045*	*0.18*	*0.22*	0.0094J	*0.046*	***1.6***	***22***	***72***	***2.2***	***5.6***	*0.23*	*0.029J*	***21***	***4.9***	*0.12*	<0.0069
Benzo[b]fluoranthene	0.15	0.48	mg/kg	*0.28*	0.011J	0.026J	0.013J	0.05	*0.17*	*0.26*	0.013J	0.046	***2***	***19***	***79***	***2.3***	***5.4***	*0.24*	0.031J	***22***	***5***	*0.16*	<0.0073
Benzo[g,h,i]perylene			mg/kg	0.16	<0.013	0.017J	<0.012	0.034J	0.1	0.15	<0.013	0.037J	1.4	11	45	1.6	3.8	0.16	0.016J	12	3.4	0.096	<0.013
Benzo[k]fluoranthene	1.48		mg/kg	0.17	<0.0089	0.015J	0.011J	0.039	0.15	0.14	<0.0095	0.038J	1.3	*15*	*42*	*1.5*	*4.2*	0.15	0.018J	*13*	*2.8*	0.062	<0.0090
bis (2-chloroisopropyl) ether			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.042	<0.041	<0.042
Bis(2-chloroethoxy)methane			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.042	<0.041	<0.042
Bis(2-chloroethyl)ether			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.056	<0.055	<0.056
Bis(2-ethylhexyl) phthalate	34.7	2.88	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.050	<0.049	<0.050
Butyl benzyl phthalate			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.047	<0.047	<0.047
Carbazole			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.29	<0.052	<0.053
Chrysene	14.8	0.14	mg/kg	**0.26**	<0.0085	0.022J	0.012J	0.05	**0.23**	**0.21**	0.0099J	0.041	**1**	***25***	***72***	**2.5**	**5.1**	**0.21**	0.022J	***24***	**4.2**	0.12	<0.0085
Dibenz(a,h)anthracene	0.02		mg/kg	*0.047*	<0.010	<0.010	<0.010	<0.010	*0.032J*	*0.044*	<0.011	*0.016J*	*0.49*	*1.6*	*8.9*	*0.71*	*1.3*	*0.042*	<0.010	*5.4*	*1.2*	*0.031J*	<0.011
Dibenzofuran	78.2		mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.067J	<0.045	<0.045
Diethyl phthalate			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.063	<0.062	<0.063
Dimethyl phthalate			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.047	<0.046	<0.047
Di-n-butyl phthalate			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.047	<0.047	<0.048
Di-n-octyl phthalate			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.076	<0.076	<0.077
Fluoranthene	2290	88.77	mg/kg	0.35	<0.015	0.024J	<0.015	0.064	0.66	0.23	<0.016	0.048	0.99	68	**110**	2.5	7.7	0.21	0.045	61	4.2	0.15	<0.015
Fluorene	2290	14.79	mg/kg	0.014J	<0.0085	<0.0083	<0.0082	<0.0084	0.12	<0.0085	<0.0090	0.034J	0.034J	**19**	5.3	0.088	0.69	<0.0087	0.010J	5.5	0.13	<0.0085	<0.0086
Hexachlorobenzene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0074	<0.0073	<0.0074
Hexachlorobutadiene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.049	<0.049	<0.050
Hexachlorocyclopentadiene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.17	<0.17	<0.18
Hexachloroethane			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.040	<0.040	<0.040
Indeno[1,2,3-cd]pyrene	0.15		mg/kg	*0.15*	<0.013	0.012J	<0.012	0.027J	0.1	0.13	<0.013	0.032J	*1.3*	*11*	*41*	*1.4*	*3.5*	0.14	<0.013	*12*	*2.2*	0.082	<0.013
Isophorone			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.042	<0.041	<0.042
Naphthalene	5.15	0.66	mg/kg	<0.0072	<0.0072	<0.0070	<0.0069	<0.0071	0.033J	<0.0072	<0.0077	0.064	<0.0074	***21***	**3.5**	0.13	0.54	<0.0073	<0.0071	**1.1**	0.13	<0.0072	<0.0073
Nitrobenzene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.012	<0.012	<0.012
N-Nitrosodimethylamine			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.41	<0.41	<0.41
N-Nitrosodi-n-propylamine			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.048	<0.047	<0.048
Pentachlorophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.19	<0.19	<0.19
Phenanthrene	115		mg/kg	0.12	<0.016	<0.015	<0.015	0.021J	0.65	0.047	<0.017	0.022J	0.26	82	49	1	4.2	0.07	0.039	45	1.4	0.029J	<0.016
Phenol	18300	2.29	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.060	<0.059	<0.060
Pyrene	1720	54.1	mg/kg	0.34	<0.014	0.021J	<0.013	0.067	0.45	0.23	<0.014	0.042	1	45	**98**	2.1	6	0.19	0.034J	46	4.1	0.12	<0.014

Italic : Value exceeds Non-Industrial Direct Contact Residual Cleanup Level

Bold: Value exceeds Groundwater Pathway Residual Cleanup Level

J: Result is <RL but >MDL; concentration is approximate

	Non-Industrial	Groundwater		B-36	B-37	B-38	B-39	B-40	B-41	B-41	B-41	B-42	B-42	B-42	B-43	B-43	B-43	B-44	B-44	B-44
	Direct Contact	Pathway	Units	0-2'	0-2'	0-2'	0-2'	0-2'	0-2'	4-6'	8-10'	0-2'	4-6'	8-10'	0-2'	4-6'	8-10'	0-2'	4-6'	8-10'
1-Methylnaphthalene	22.1		mg/kg	<0.017	<0.020	3.9	<0.019	7.2	<0.020	<0.019	<0.019	<0.024	<0.026	<0.019	0.043	<0.017	<0.019	NA	NA	NA
1,2,4-Trichlorobenzene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.041	<0.041	<0.043
1,2-Dichlorobenzene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.040	<0.039	<0.041
1,3-Dichlorobenzene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.038	<0.038	<0.040
1,4-Dichlorobenzene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.038	<0.038	<0.040
2,4,5-Trichlorophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	<0.10	<0.11
2,4,6-Trichlorophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.046	<0.045	<0.047
2,4-Dichlorophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.11	<0.11	<0.12
2,4-Dimethylphenol	1220		mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.11	<0.11	<0.12
2,4-Dinitrophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.19	<0.18	<0.19
2,4-Dinitrotoluene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.056	<0.055	<0.058
2,6-Dinitrotoluene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.043	<0.043	<0.045
2-Chloronaphthalene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.041	<0.041	<0.043
2-Chlorophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.052	<0.052	<0.054
2-Methylnaphthalene	313		mg/kg	<0.046	<0.051	2.5	<0.050	2.6	<0.052	<0.050	<0.050	<0.062	<0.067	<0.050	0.064J	<0.044	<0.051	<0.047	<0.047	<0.049
2-Methylphenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.048	<0.048	<0.050
2-Nitroaniline			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.066	<0.065	<0.068
2-Nitrophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.057	<0.057	<0.059
3 & 4 Methylphenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.069	<0.068	<0.072
3,3'-Dichlorobenzidine			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.030	<0.030	<0.032
3-Nitroaniline			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.070	<0.070	<0.073
4,6-Dinitro-2-methylphenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.088	<0.088	<0.092
4-Bromophenyl phenyl ether			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.041	<0.040	<0.042
4-Chloro-3-methylphenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.17	<0.17	<0.18
4-Chloroaniline			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.11	<0.11	<0.12
4-Chlorophenyl phenyl ether			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.057	<0.057	<0.060
4-Nitroaniline			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.075	<0.074	<0.078
4-Nitrophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.20	<0.19	<0.20
Acenaphthene	3440		mg/kg	0.016J	0.016J	8.3	0.023J	3.1	<0.012	<0.011	<0.012	<0.014	<0.016	<0.012	0.14	0.017J	0.024J	0.013J	<0.011	<0.011
Acenaphthylene	487		mg/kg	<0.0081	<0.0091	0.88	0.099	0.17	<0.0092	<0.0088	<0.0089	<0.011	<0.012	<0.0089	0.085	0.025J	0.061	<0.0084	<0.0083	<0.0087
Anthracene	17200	196	mg/kg	0.068	0.035J	20	0.23	6.2	<0.0095	<0.0090	<0.0091	0.038J	<0.012	<0.0091	0.31	0.043	0.069	0.027J	<0.0085	<0.0089
Benzo[a]anthracene	0.15		mg/kg	*0.33*	*0.5*	*55*	*0.52*	*7.3*	0.010J	<0.0080	<0.0081	*0.25*	<0.011	<0.0081	*3.8*	*0.6*	*0.49*	*0.25*	<0.0076	<0.0079
Benzo[a]pyrene	0.02	0.47	mg/kg	*0.46*	***0.7***	***73***	***0.6***	***6.8***	*0.016J*	*0.047*	<0.0070	*0.39*	*0.032J*	*0.022J*	***3.7***	***0.89***	***0.61***	*0.32*	<0.0066	<0.0069
Benzo[b]fluoranthene	0.15	0.48	mg/kg	***0.54***	***0.68***	***85***	***0.62***	***8***	0.014J	0.038	<0.0075	*0.43*	0.027J	0.015J	***7.7***	***1.2***	***0.98***	*0.36*	<0.0070	<0.0073
Benzo[g,h,i]perylene			mg/kg	0.49	0.51	48	0.35	4.4	0.017J	0.026J	<0.013	0.28	0.028J	0.024J	4.2	0.66	0.53	0.24	<0.012	<0.013
Benzo[k]fluoranthene	1.48		mg/kg	0.32	0.51	32	0.41	*3.2*	0.011J	0.030J	<0.0092	0.26	0.014J	0.016J	0.64	0.23	0.11	0.2	<0.0086	<0.0090
bis (2-chloroisopropyl) ether			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.040	<0.040	<0.042
Bis(2-chloroethoxy)methane			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.040	<0.040	<0.042
Bis(2-chloroethyl)ether			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.054	<0.054	<0.056
Bis(2-ethylhexyl) phthalate	34.7	2.88	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.048	<0.048	<0.050
Butyl benzyl phthalate			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.046	<0.045	<0.047
Carbazole			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.051	<0.051	<0.053
Chrysene	14.8	0.14	mg/kg	**0.48**	**0.61**	***57***	**0.55**	**6.3**	0.013J	<0.0086	0.012J	**0.37**	<0.012	<0.0087	**4**	**0.68**	**0.53**	**0.3**	<0.0082	<0.0085
Dibenz(a,h)anthracene	0.02		mg/kg	*0.12*	*0.15*	*11*	*0.12*	*1.2*	<0.011	0.011J	<0.011	*0.12*	<0.015	<0.011	*1.3*	*0.27*	0.11	*0.065*	<0.010	<0.011
Dibenzofuran	78.2		mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.044	<0.043	<0.045
Diethyl phthalate			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.061	<0.060	<0.063
Dimethyl phthalate			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.045	<0.045	<0.047
Di-n-butyl phthalate			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.046	<0.046	<0.048
Di-n-octyl phthalate			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.074	<0.073	<0.077
Fluoranthene	2290	88.77	mg/kg	0.49	0.61	**89**	1.1	23	<0.016	<0.016	<0.016	0.37	<0.021	<0.016	4.7	0.72	0.9	0.37	<0.015	<0.015
Fluorene	2290	14.79	mg/kg	0.030J	<0.0090	11	0.041	3	<0.0092	<0.0087	<0.0088	<0.011	<0.012	<0.0088	0.082	0.012J	0.019J	0.011J	<0.0082	<0.0086
Hexachlorobenzene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0072	<0.0071	<0.0074
Hexachlorobutadiene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.048	<0.047	<0.050
Hexachlorocyclopentadiene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.17	<0.17	<0.18
Hexachloroethane			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.039	<0.038	<0.040
Indeno[1,2,3-cd]pyrene	0.15		mg/kg	*0.44*	*0.45*	*42*	*0.35*	*4.1*	<0.014	0.022J	<0.013	*0.25*	0.023J	0.019J	*2.7*	*0.55*	*0.45*	*0.21*	<0.012	<0.013
Isophorone			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.041	<0.040	<0.042
Naphthalene	5.15	0.66	mg/kg	0.0080J	<0.0076	***10***	0.011J	**1.6**	<0.0078	<0.0074	<0.0074	<0.0093	<0.010	<0.0075	0.11	0.025J	0.036J	0.0081J	<0.0070	<0.0073
Nitrobenzene			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.011	<0.011	<0.012
N-Nitrosodimethylamine			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.40	<0.39	<0.41
N-Nitrosodi-n-propylamine			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.046	<0.046	<0.048
Pentachlorophenol			mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.19	<0.18	<0.19
Phenanthrene	115		mg/kg	0.2	0.13	51	0.26	19	<0.017	<0.016	<0.016	0.12	<0.022	<0.016	1.2	0.17	0.33	0.14	<0.015	<0.016
Phenol	18300	2.29	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.058	<0.057	<0.060
Pyrene	1720	54.1	mg/kg	0.47	0.56	**72**	0.9	14	<0.015	<0.014	<0.014	0.42	<0.019	<0.014	4.6	0.62	0.65	0.29	<0.013	<0.014

Italic : Value exceeds Non-Industrial Direct Contact Residual Cleanup Level

Bold: Value exceeds Groundwater Pathway Residual Cleanup Level

J: Result is <RL but >MDL; concentration is approximate

	WDNR NR140		Units	MW-1	MW-2	MW-101	MW-102	P-103	P-103 Dup	MW-104	MW-105	MW-106	MW-107	MW-108	MW-109	P-110	MW-111	MW-112	P-113	MW-114	MW-115	MW-116	MW-117
	PAL	ES		12/29/11	12/28/11	12/22/11	12/21/11	12/22/11	12/22/11	12/21/11	12/21/11		12/22/11	12/28/11		12/21/11	12/21/11	12/21/11	12/21/11		12/21/11	12/21/11	12/28/11
1,1,1,2-Tetrachloroethane	7	70	ug/L	<0.25	<0.50	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	NS	<25	<0.25	NS	<5.0	<0.25	<0.25	<0.25	NS	<0.25	<0.25	<20
1,1,1-Trichloroethane	40	200	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
1,1,2,2-Tetrachloroethane	0.02	0.2	ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
1,1,2-Trichloroethane	0.5	5	ug/L	<0.25	<0.50	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	NS	<25	<0.25	NS	<5.0	<0.25	<0.25	<0.25	NS	<0.25	<0.25	<20
1,1-Dichloroethane	85	850	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
1,1-Dichloroethene	0.7	7	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
1,1-Dichloropropene			ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
1,2,3-Trichlorobenzene			ug/L	<0.25	<0.50	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	NS	<25	<0.25	NS	<5.0	<0.25	<0.25	<0.25	NS	<0.25	<0.25	<20
1,2,3-Trichloropropane	12	60	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
1,2,4-Trichlorobenzene	14	70	ug/L	<0.25	<0.50	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	NS	<25	<0.25	NS	<5.0	<0.25	<0.25	<0.25	NS	<0.25	<0.25	<20
1,2,4-Trimethylbenzene	96	480	ug/L	<0.20	*210*	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	*310*	1.5 J	NS	22	<0.20	<0.20	<0.20	NS	<0.20	<0.20	**520**
1,2-Dibromo-3-Chloropropane	0.02	0.2	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
1,2-Dibromoethane (EDB)	0.005	0.05	ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
1,2-Dichlorobenzene	60	600	ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
1,2-Dichloroethane	0.5	5	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
1,2-Dichloropropane	0.5	5	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
1,3,5-Trimethylbenzene	96	480	ug/L	<0.20	34	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	*140*	0.55 J	NS	13	<0.20	<0.20	<0.20	NS	<0.20	<0.20	*220*
1,3-Dichlorobenzene	125	1250	ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
1,3-Dichloropropane	0.02	0.2	ug/L	<0.25	<0.50	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	NS	<25	<0.25	NS	<5.0	<0.25	<0.25	<0.25	NS	<0.25	<0.25	<20
1,4-Dichlorobenzene	15	75	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
2,2-Dichloropropane			ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
2-Chlorotoluene			ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
4-Chlorotoluene			ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
Benzene	0.5	5	ug/L	<0.20	**110**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	**2200**	<0.20	NS	**6.8**	<0.20	<0.20	<0.20	NS	<0.20	<0.20	**3800**
Bromobenzene			ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
Bromochloromethane			ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
Bromodichloromethane	0.06	0.6	ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
Bromoform	0.44	4.4	ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
Bromomethane	1	10	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
Carbon tetrachloride	0.5	5	ug/L	<0.80	<1.6	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	NS	<80	<0.80	NS	<16	<0.80	<0.80	<0.80	NS	<0.80	<0.80	<64
Chlorobenzene			ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
Chlorodibromomethane			ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
Chloroethane	80	400	ug/L	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	<100	<1.0	NS	<20	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<80
Chloroform	0.6	6	ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	0.21	<0.20	0.22	NS	<0.20	<0.20	<16
Chloromethane	0.3	3	ug/L	<0.30	<0.60	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	NS	<30	<0.30	NS	<6.0	<0.30	<0.30	<0.30	NS	<0.30	<0.30	<24
cis-1,2-Dichloroethene	7	70	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
cis-1,3-Dichloropropene			ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
Dibromomethane			ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
Dichlorodifluoromethane	200	1000	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
Ethylbenzene	140	700	ug/L	<0.50	*180*	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	*580*	0.62 J	NS	11	<0.50	<0.50	<0.50	NS	<0.50	<0.50	*410*
Hexachlorobutadiene			ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
Isopropyl ether			ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
Isopropylbenzene			ug/L	<0.20	18	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	27	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	24 J
Methyl tert-butyl ether	12	60	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
Methylene Chloride	0.5	5	ug/L	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	<100	<1.0	NS	<20	<1.0	<1.0	<1.0	NS	<1.0	<1.0	<80
Naphthalene	10	100	ug/L	0.43 J	**5800**	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	NS	**17000**	*63*	NS	**3000**	0.37	<0.25	<0.25	NS	<0.25	0.45	**26000**
n-Butylbenzene			ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
N-Propylbenzene			ug/L	<0.50	6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
p-Isopropyltoluene			ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	94	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
sec-Butylbenzene			ug/L	<0.25	<0.50	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	NS	<25	<0.25	NS	<5.0	<0.25	<0.25	<0.25	NS	<0.25	<0.25	<20
Styrene	10	100	ug/L	<0.50	*14*	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	110 J
tert-Butylbenzene			ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
Tetrachloroethene	0.5	5	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
Toluene	200	1000	ug/L	<0.50	53	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	*540*	<0.50	NS	17	<0.50	<0.50	<0.50	NS	<0.50	<0.50	**3300**
trans-1,2-Dichloroethene	20	100	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
trans-1,3-Dichloropropene			ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
Trichloroethene	0.5	5	ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
Trichlorofluoromethane			ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<50	<0.50	NS	<10	<0.50	<0.50	<0.50	NS	<0.50	<0.50	<40
Vinyl chloride	0.02	0.2	ug/L	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<20	<0.20	NS	<4.0	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<16
Xylenes, Total	1000	10000	ug/L	<0.50	470	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NS	*2400*	1.0 J	NS	44	<0.50	<0.50	<0.50	NS	<0.50	<0.50	*2300*
Total VOCs			ug/L	0.43	6895	0	0	0	0	0	0	NS	23291	66.7	NS	3114	0.58	0	0	NS	0	0	36684

Italic : Value exceeds NR140 Preventive Action Limit

Bold: Value exceeds NR140 Enforcement Standard

J: Result is <RL but >MDL; concentration is approximate

Table 4. Summary of Groundwater SVOC Analytical Results

	WDNR NR140		Units	MW-1	MW-2	MW-101	MW-102	P-103	P-103 Dup	MW-104	MW-105	MW-106	MW-107	MW-108	MW-109	P-110	MW-111	MW-112	P-113	MW-114	MW-115	MW-116	MW-117
	PAL	ES		12/28/11	12/28/11	12/22/11	12/20/11	12/22/11	12/22/11	12/20/11	12/20/11		12/22/11	12/28/11		12/20/11	12/20/11	12/20/11	12/20/11		12/20/11	12/20/11	12/28/11
1-Methylnaphthalene			ug/L	<0.93	230	<0.93	NA	NA	NA	<0.93	<0.93	NS	700	5.2	NS	NA	<0.93	<0.93	<0.93	NS	<0.93	<0.93	1900
1,2,4-Trichlorobenzene	14	70	ug/L	NA	NA	NA	<0.28	<0.28	<0.28	NA	NA	NS	NA	NA	NS	<2.8	NA	NA	NA	NS	NA	NA	NA
1,2-Dichlorobenzene	60	600	ug/L	NA	NA	NA	<0.27	<0.27	<0.27	NA	NA	NS	NA	NA	NS	<2.7	NA	NA	NA	NS	NA	NA	NA
1,3-Dichlorobenzene	125	1250	ug/L	NA	NA	NA	<0.23	<0.23	<0.23	NA	NA	NS	NA	NA	NS	<2.3	NA	NA	NA	NS	NA	NA	NA
1,4-Dichlorobenzene	15	75	ug/L	NA	NA	NA	<0.25	<0.25	<0.25	NA	NA	NS	NA	NA	NS	<2.5	NA	NA	NA	NS	NA	NA	NA
2,2'-oxybis[1-chloropropane]			ug/L	NA	NA	NA	<0.28	<0.28	<0.28	NA	NA	NS	NA	NA	NS	<2.8	NA	NA	NA	NS	NA	NA	NA
2,4,5-Trichlorophenol	5	50	ug/L	NA	NA	NA	<2.1	<2.1	<2.1	NA	NA	NS	NA	NA	NS	<21	NA	NA	NA	NS	NA	NA	NA
2,4,6-Trichlorophenol			ug/L	NA	NA	NA	<1.0	<1.0	<1.0	NA	NA	NS	NA	NA	NS	<10	NA	NA	NA	NS	NA	NA	NA
2,4-Dichlorophenol			ug/L	NA	NA	NA	<2.1	<2.1	<2.1	NA	NA	NS	NA	NA	NS	<21	NA	NA	NA	NS	NA	NA	NA
2,4-Dimethylphenol			ug/L	NA	NA	NA	<3.1	<3.1	<3.1	NA	NA	NS	NA	NA	NS	31 J	NA	NA	NA	NS	NA	NA	NA
2,4-Dinitrophenol			ug/L	NA	NA	NA	<6.9	<6.9	<6.9	NA	NA	NS	NA	NA	NS	<69	NA	NA	NA	NS	NA	NA	NA
2,4-Dinitrotoluene	0.005	0.05	ug/L	NA	NA	NA	<0.28	<0.28	<0.28	NA	NA	NS	NA	NA	NS	<2.8	NA	NA	NA	NS	NA	NA	NA
2,6-Dinitrotoluene	0.005	0.05	ug/L	NA	NA	NA	<0.11	<0.11	<0.11	NA	NA	NS	NA	NA	NS	<1.1	NA	NA	NA	NS	NA	NA	NA
2-Chloronaphthalene			ug/L	NA	NA	NA	<0.32	<0.32	<0.32	NA	NA	NS	NA	NA	NS	<3.2	NA	NA	NA	NS	NA	NA	NA
2-Chlorophenol			ug/L	NA	NA	NA	<0.75	<0.75	<0.75	NA	NA	NS	NA	NA	NS	<7.5	NA	NA	NA	NS	NA	NA	NA
2-Methylnaphthalene			ug/L	<0.12	39	<0.12	<0.12	<0.12	0.42 J	<0.12	<0.12	NS	1300	0.23 J	NS	380	0.64	<0.12	<0.12	NS	<0.12	<0.12	3600
2-Methylphenol			ug/L	NA	NA	NA	<0.29	<0.29	<0.29	NA	NA	NS	NA	NA	NS	14 J	NA	NA	NA	NS	NA	NA	NA
2-Nitroaniline			ug/L	NA	NA	NA	<1.0	<1.0	<1.0	NA	NA	NS	NA	NA	NS	<10	NA	NA	NA	NS	NA	NA	NA
2-Nitrophenol			ug/L	NA	NA	NA	<2.0	<2.0	<2.0	NA	NA	NS	NA	NA	NS	<20	NA	NA	NA	NS	NA	NA	NA
3 & 4 Methylphenol			ug/L	NA	NA	NA	<0.41	<0.41	0.74 J	NA	NA	NS	NA	NA	NS	26	NA	NA	NA	NS	NA	NA	NA
3,3'-Dichlorobenzidine			ug/L	NA	NA	NA	<0.88	<0.88	<0.88	NA	NA	NS	NA	NA	NS	<8.8	NA	NA	NA	NS	NA	NA	NA
3-Nitroaniline			ug/L	NA	NA	NA	<2.1	<2.1	<2.1	NA	NA	NS	NA	NA	NS	<21	NA	NA	NA	NS	NA	NA	NA
4,6-Dinitro-2-methylphenol			ug/L	NA	NA	NA	<4.6	<4.6	<4.6	NA	NA	NS	NA	NA	NS	<46	NA	NA	NA	NS	NA	NA	NA
4-Bromophenyl phenyl ether			ug/L	NA	NA	NA	<0.85	<0.85	<0.85	NA	NA	NS	NA	NA	NS	<8.5	NA	NA	NA	NS	NA	NA	NA
4-Chloro-3-methylphenol			ug/L	NA	NA	NA	<2.1	<2.1	<2.1	NA	NA	NS	NA	NA	NS	<21	NA	NA	NA	NS	NA	NA	NA
4-Chloroaniline			ug/L	NA	NA	NA	<2.0	<2.0	<2.0	NA	NA	NS	NA	NA	NS	<20	NA	NA	NA	NS	NA	NA	NA
4-Chlorophenyl phenyl ether			ug/L	NA	NA	NA	<0.76	<0.76	<0.76	NA	NA	NS	NA	NA	NS	<7.6	NA	NA	NA	NS	NA	NA	NA
4-Nitroaniline			ug/L	NA	NA	NA	<3.7	<3.7	<3.7	NA	NA	NS	NA	NA	NS	<37	NA	NA	NA	NS	NA	NA	NA
4-Nitrophenol			ug/L	NA	NA	NA	<2.2	<2.2	<2.2	NA	NA	NS	NA	NA	NS	<22	NA	NA	NA	NS	NA	NA	NA
Acenaphthene			ug/L	<0.34	70	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	NS	240	8.2	NS	160	0.65 J	<0.34	1.3	NS	<0.34	<0.34	500
Acenaphthylene			ug/L	<0.30	14	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	NS	14	<0.30	NS	65	<0.30	<0.30	<0.30	NS	<0.30	<0.30	<150
Anthracene	600	3000	ug/L	<0.30	2.3	<0.30	0.54 J	<0.30	<0.30	<0.30	<0.30	NS	17	0.53 J	NS	99	0.40 J	<0.30	<0.30	NS	<0.30	<0.30	<150
Benzo[a]anthracene			ug/L	0.12 J	1	<0.041	7.4	0.3	0.11 J	0.18 J	<0.041	NS	<0.41	0.36	NS	15	0.31	0.51	0.14 J	NS	0.16 J	0.12 J	45 J
Benzo[a]pyrene	0.02	0.2	ug/L	*0.13 J*	**0.6**	<0.052	**5.1**	**0.42**	*0.14 J*	**0.24**	<0.052	NS	<0.52	**0.31**	NS	**12**	**0.25**	**0.32**	<0.052	NS	<0.052	*0.096 J*	**30 J**
Benzo[b]fluoranthene	0.02	0.2	ug/L	*0.16 J*	**0.85**	<0.054	**13**	**0.55**	*0.17 J*	**0.36**	<0.054	NS	<0.54	**0.38**	NS	**15**	**0.36**	**0.54**	<0.054	NS	*0.14 J*	*0.097 J*	**34 J**
Benzo[g,h,i]perylene			ug/L	<0.39	<0.39	<0.39	6.5	<0.39	<0.39	<0.39	<0.39	NS	<3.9	<0.39	NS	5.7 J	<0.39	<0.39	<0.39	NS	<0.39	<0.39	<200
Benzo[k]fluoranthene			ug/L	<0.069	0.35	<0.069	6	0.2	<0.069	0.11 J	<0.069	NS	<0.69	0.18 J	NS	3.9	0.17 J	0.25	<0.069	NS	<0.069	<0.069	<35
Benzoic acid			ug/L	NA	NA	NA	<4.3	<4.3	<4.3	NA	NA	NS	NA	NA	NS	<43	NA	NA	NA	NS	NA	NA	NA
Benzyl alcohol			ug/L	NA	NA	NA	<2.9	<2.9	<2.9	NA	NA	NS	NA	NA	NS	<29	NA	NA	NA	NS	NA	NA	NA
Bis(2-chloroethoxy)methane			ug/L	NA	NA	NA	<0.28	<0.28	<0.28	NA	NA	NS	NA	NA	NS	<2.8	NA	NA	NA	NS	NA	NA	NA
Bis(2-chloroethyl)ether			ug/L	NA	NA	NA	<0.33	<0.33	<0.33	NA	NA	NS	NA	NA	NS	<3.3	NA	NA	NA	NS	NA	NA	NA
Bis(2-ethylhexyl) phthalate	0.6	6	ug/L	NA	NA	NA	<2.3	4.0 J	<2.3	NA	NA	NS	NA	NA	NS	<23	NA	NA	NA	NS	NA	NA	NA
Butyl benzyl phthalate			ug/L	NA	NA	NA	<0.25	<0.25	<0.25	NA	NA	NS	NA	NA	NS	<2.5	NA	NA	NA	NS	NA	NA	NA
Carbazole			ug/L	NA	NA	NA	<0.93	<0.93	<0.93	NA	NA	NS	NA	NA	NS	250	NA	NA	NA	NS	NA	NA	NA
Chrysene	0.02	0.2	ug/L	<0.13	**0.82**	<0.13	**8.6**	**0.39 J**	*0.13 J*	**0.22 J**	<0.13	NS	<1.3	**0.29 J**	NS	**27**	**0.32 J**	**0.43 J**	*0.13 J*	NS	**0.22 J**	*0.13 J*	<65
Dibenz(a,h)anthracene			ug/L	<0.060	0.12 J	<0.060	3.1	0.14 J	<0.060	<0.060	<0.060	NS	<0.60	<0.060	NS	2.5 J	<0.060	<0.060	<0.060	NS	<0.060	<0.060	<30
Dibenzofuran			ug/L	NA	NA	NA	<0.33	<0.33	<0.33	NA	NA	NS	NA	NA	NS	130	NA	NA	NA	NS	NA	NA	NA
Diethyl phthalate			ug/L	NA	NA	NA	<0.41	<0.41	<0.41	NA	NA	NS	NA	NA	NS	<4.1	NA	NA	NA	NS	NA	NA	NA
Dimethyl phthalate			ug/L	NA	NA	NA	<0.36	<0.36	<0.36	NA	NA	NS	NA	NA	NS	<3.6	NA	NA	NA	NS	NA	NA	NA
Di-n-butyl phthalate	20	100	ug/L	NA	NA	NA	<0.75	<0.75	<0.75	NA	NA	NS	NA	NA	NS	<7.5	NA	NA	NA	NS	NA	NA	NA
Di-n-octyl phthalate			ug/L	NA	NA	NA	<2.3	<2.3	<2.3	NA	NA	NS	NA	NA	NS	<23	NA	NA	NA	NS	NA	NA	NA
Fluoranthene	80	400	ug/L	<0.30	7	<0.30	9	0.46 J	<0.30	0.37 J	<0.30	NS	19	1.3	NS	82	1.1	1.3	2	NS	2	2.2	*180 J*
Fluorene	80	400	ug/L	<0.36	26	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	NS	120	3.3	NS	160	0.72 J	<0.36	0.46 J	NS	<0.36	<0.36	*360 J*
Hexachlorobenzene	0.1	1	ug/L	NA	NA	NA	<0.13	<0.13	<0.13	NA	NA	NS	NA	NA	NS	<1.3	NA	NA	NA	NS	NA	NA	NA
Hexachlorobutadiene			ug/L	NA	NA	NA	<1.0	<1.0	<1.0	NA	NA	NS	NA	NA	NS	<10	NA	NA	NA	NS	NA	NA	NA
Hexachlorocyclopentadiene			ug/L	NA	NA	NA	<3.2	<3.2	<3.2	NA	NA	NS	NA	NA	NS	<32	NA	NA	NA	NS	NA	NA	NA
Hexachloroethane			ug/L	NA	NA	NA	<0.91	<0.91	<0.91	NA	NA	NS	NA	NA	NS	<9.1	NA	NA	NA	NS	NA	NA	NA
Indeno[1,2,3-cd]pyrene			ug/L	<0.079	0.29	<0.079	5.6	0.21	<0.079	0.17 J	<0.079	NS	<0.79	0.17 J	NS	5.7	0.15 J	0.21	<0.079	NS	<0.079	<0.079	<39
Isophorone			ug/L	NA	NA	NA	<0.27	<0.27	<0.27	NA	NA	NS	NA	NA	NS	<2.7	NA	NA	NA	NS	NA	NA	NA
Naphthalene	10	100	ug/L	<0.28	**2900**	<0.28	<0.28	0.30 J	7.6	0.29	1.7	NS	**14000**	*26*	NS	**4700**	*15*	<0.28	0.80 J	NS	1.4	1.1	**20000**
Nitrobenzene			ug/L	NA	NA	NA	<0.42	<0.42	<0.42	NA	NA	NS	NA	NA	NS	<4.2	NA	NA	NA	NS	NA	NA	NA
N-Nitrosodi-n-propylamine			ug/L	NA	NA	NA	<0.13	<0.13	<0.13	NA	NA	NS	NA	NA	NS	<1.3	NA	NA	NA	NS	NA	NA	NA
N-Nitrosodiphenylamine			ug/L	NA	NA	NA	<0.32	<0.32	<0.32	NA	NA	NS	NA	NA	NS	<3.2	NA	NA	NA	NS	NA	NA	NA
Pentachlorophenol	0.1	1	ug/L	NA	NA	NA	<5.2	<5.2	<5.2	NA	NA	NS	NA	NA	NS	<52	NA	NA	NA	NS	NA	NA	NA
Phenanthrene			ug/L	<0.33	32	<0.33	2.3	<0.33	<0.33	<0.33	<0.33	NS	110	0.75 J	NS	240	1	<0.33	<0.33	NS	<0.33	<0.33	480
Phenol	1200	6000	ug/L	NA	NA	NA	<0.34	<0.34	<0.34	NA	NA	NS	NA	NA	NS	<3.4	NA	NA	NA	NS	NA	NA	NA
Pyrene	50	250	ug/L	<0.45	4	<0.45	7.8	<0.45	<0.45	<0.45	<0.45	NS	11	0.96	NS	48	0.64 J	2	1.3	NS	1.5	1.9	<220

Italic : Value exceeds NR140 Preventive Action Limit
Bold: Value exceeds NR140 Enforcement Standard
J: Result is <RL but >MDL; concentration is approximate

APPENDIX A
PREVIOUS SITE INVESTIGATION BOREHOLE AND WELL CONSTRUCTION LOGS

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-01-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	676.8 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,176 N, 2,575,418 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	TOPSOIL, brown, damp CRUSHED LIMESTONE FILL, gray, dry CLAY, grayish brown, damp, moderately hard	CL			0						
			2											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-02-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	677.8 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,731 N, 2,575,437 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	GRAVEL FILL, gray, dry										
				CLAY, reddish brown to 1.25, then grayish brown, damp, moderately hard	CL			0						
			2											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: 262-792-1282
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Fax: 262-792-1310

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion 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.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-03-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	678.2 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,743 N, 2,575,864 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	TOPSOIL, brown, damp CRUSHED LIMESTONE FILL, gray, dry CLAY, reddish brown, damp, moderately hard	CL			0						
			2											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-04-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.7 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,533 N, 2,575,968 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	CONCRETE, six inches										
			2	SILTY CLAY, reddish brown, loamy, damp, soft	CL-ML			0						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

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	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

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SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-05-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/8/2011	11/8/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.9 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,501 N, 2,575,836 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				CONCRETE, six inches										
1 CS	24 24		1	FINE SAND, light brown, soft, damp to moist	SP			0						
			2											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

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	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Fax: 262-792-1310

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SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-06-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.3 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,557 N, 2,576,260 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	CRUSHED LIMESTONE FILL, gray, dry SAND AND GRAVEL WITH CLAY FILL, dark gray, soft, damp				1.8						
			2	GRAVEL FILL, gray, dense, damp, petroleum smell at 1.1 feet SILTY CLAY, grayish brown, moderately hard, damp, greenish gray from 1.5-2 feet	CL									

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-07-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.7 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,716 N, 2,576,508 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	WOOD CHIPS, brown										
				CLAY, brown, soft, damp	CL			0						
			2											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

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SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-08-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	671.3 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,546 N, 2,576,530 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	WOOD CHIPS, brown										
				CLAY, brown, soft, damp	CL			0						
			2	TAR, black, hardened at bottom, brittle										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

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Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-09-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	668.0 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,574 N, 2,576,769 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		0	TOPSOIL, brown, damp	OL									
			1	FOUNDRY SAND, black, dry, soft				0						
			2	SILTY CLAY, brownish gray, moderately soft, damp	CL-ML									

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Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-10-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	664.8 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,542 N, 2,577,060 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1 2	SILTY CLAY, grayish brown, moderately soft, damp	CL-ML			0						

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Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

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Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-12-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	662.4 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,440 N, 2,576,776 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	TOPSOIL, brown, damp, soft	OL									
				SILTY CLAY, grayish brown, soft, damp	CL-ML			0						
			2	TAR, black, sticky										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-13-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	669.3 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,355 N, 2,576,543 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	CLAY AND GRAVEL, brown, damp, hard	CLG									
				CLAY, grayish brown, damp, moderately soft	CL			0						
			2	TAR, black, sticky										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-14-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	663.9 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,162 N, 2,576,466 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	CLAY, grayish brown, soft, damp	CL									
				WOOD CHIPS, brown										
				CLAY, grayish brown, soft, damp	CL			0						
			2											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: 262-792-1282
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-15-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	669.0 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,175 N, 2,576,291 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	GRAVEL AND CLAY FILL, light gray, damp, soft										
			1	SILTY CLAY FILL, reddish brown, greenish gray at 4 feet, damp, moderately hard, some black tar from 7-7.5 feet, smells like creosote at 7.5 feet				0						
			2											
			3					0						
			4											
			5					0						
			6											
			7					0						
			8	WOOD, smells like creosote										
			9	SILTY CLAY, greenish gray, hard, damp, slight creosote odor	CL-ML			50.8						
			10											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
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Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-16-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	670.0 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,199 N, 2,576,134 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	ASPHALT GRAVEL WITH CLAY FILL, yellowish gray, damp, moderately soft				0						
			2	CRUSHED LIMESTONE GRAVEL FILL, damp, dense SILTY CLAY, grayish brown, damp, moderately hard, slight creosote smell	CL-ML									

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-17-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	665.8 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,150 N, 2,576,164 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	CLAY, brown, damp, moderately hard, smells like creosote at 1'	CL			0						
			2											

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Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-18-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	669.4 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,158 N, 2,576,041 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		0	CLAY AND GRAVEL FILL, grayish brown, damp, soft										
			1	FINE SAND FILL, black, dry, loose				0						
				CLAY, brown, damp, hard	CL									
			2											

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SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-19-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	670.4 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,375 N, 2,576,281 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	CONCRETE, six inches										
			1	GRAVEL WITH CLAY FILL, dark gray, moist, soft				0						
				WOOD CHIPS										
			2	CRUSHED LIMESTONE GRAVEL FILL, dry										
			3	CLAY FILL, reddish brown, damp, moderately hard				0						
			4											
			5	SAND WITH GRAVEL AND SILT FILL, wet, loose				0						
			6											
			7					0						
			8											
			9					375						
			10	CLAY, dark gray, damp, hard, slight odor	CL									

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SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-20-11

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.4 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,170 N, 2,575,825 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	CONCRETE										
			2	SILTY CLAY, reddish brown, brownish gray at 1 foot, loamy, moderately soft, damp	CL-ML			0						

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SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-21

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/8/2011	11/8/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.6 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,343 N, 2,575,771 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	CONCRETE, six inches										
			1	SANDY GRAVEL WITH CLAY FILL, brown, moist, soft										
		0	2											
			3											
			4	GRAVEL FILL, gray crushed limestone, damp										
		0	4											
			5	SAND WITH CLAY, brown, moist to wet, soft	SW-SC									
		0	6											
			7	CLAY, gray, moist, moderately tough										
		0	8		CL									
			9											
		0	10											

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SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-22

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/8/2011	11/8/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.7 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,452 N, 2,575,838 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	CONCRETE, six inches										
				FINE SAND, brown, damp, soft	SP			0						
			2	SANDY CLAY, brown, moist, soft	CLS									
			3	SILTY CLAY, light brown, moderately soft, damp	CL-ML			0						
			4											
			5	CLAY, light gray, soft, damp	CL			0						
			6	CLAY, gray, moderately hard, damp, little gravel, smells like creosote at 9'										
			7					0						
			8		CL									
			9					76.5						
			10											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: 262-792-1282
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-23

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/8/2011	11/8/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.6 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,592 N, 2,575,678 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	CONCRETE, six inches										
			1	FINE SAND, light brown, damp, soft	SP			0						
			2											
			3	CLAY, reddish brown at 2-3', gray at 3 feet, damp, moderately soft, slight creosote odor	CL			0						
			4											
			5					0						
			6	CLAY, gray, stiff, damp	CL									
			7					0						
			8											
			9					0						
			10											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-24

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/8/2011	11/8/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.7 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,525 N, 2,575,628 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1 2	CONCRETE, six inches SILTY CLAY, gray, moderately soft, damp	CL-ML			0						

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	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Fax: 262-792-1310

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SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-25

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/8/2011	11/8/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.7 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,486 N, 2,575,681 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	CONCRETE, six inches										
				FINE SAND, tan, soft, damp	SP									
			1	SILTY CLAY, brown to 2', greenish gray to 5', gray to 10', hard, damp				0						
			2											
			3					0						
			4											
			5					0						
			6		CL-ML									
			7					0						
			8											
			9					0						
			10											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
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SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-26

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/8/2011	11/8/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.7 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,352 N, 2,575,617 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1 2	CONCRETE, six inches FINE SAND, tan, dry, soft CLAY, brown, hard, damp, trace gravel	SP CL			0						

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Signature	Firm	
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SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-27

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.7 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,542 N, 2,576,172 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	CONCRETE, six inches										
			1	CLAYEY FINE SAND, brown, damp,soft	SC			0						
			2											
			3	FINE TO COARSE SAND WITH CLAY, brown, soft, damp	SW-SC			0						
			4											
			5	FINE SAND, brown, soft, damp	SP			0						
			6											
			7					0						
			8	SILTY CLAY, brown, hard, damp	CL-ML			0						
			9											
			10											

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Signature	Firm	Tel: 262-792-1282
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Fax: 262-792-1310

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SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-28

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.6 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,440 N, 2,575,997 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	CONCRETE, six inches										
			1	SILTY CLAY, reddish brown, some gray mottling, loamy, soft, damp	CL-ML			0						
			2											
			3	SILTY CLAY, dark gray, moderately hard, damp				0						
			4											
			5					0						
			6											
			7		CL-ML			0						
			8											
			9					0						
			10											

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SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-29

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.6 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,316 N, 2,575,972 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	CONCRETE, six inches										
			0	FINE SAND, reddish brown, damp, soft	SP									
			1	SILTY CLAY, reddish brown, moderately soft, damp, loamy				0						
			2											
			3		CL-ML			0						
			4											
			5					0						
			6	CLAY, brownish gray, damp, moderately soft, slight naphthalene odor										
			7		CL			0						
			8	CLAY, dark gray, damp, loderately soft, strong naphthalene odor	CL									
			9	CLAY, reddish brown, moderately hard, moist				0						
			10		CL									

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-30

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.6 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,312 N, 2,576,147 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	CONCRETE, six inches										
			1	SILTY CLAY, reddish brown, moderately soft, damp, loamy texture, brownish gray at 3 feet				0						
			2											
			3					0						
			4		CL-ML									
			5					0						
			6											
			7					0						
			8	SILTY CLAY, reddish brown, moderately hard, damp	CL-ML									
			9	CLAY, gray, soft, damp	CL			0						
				SILT, gray, moderately hard, dry	ML									
			10	SILTY CLAY, reddish brown, hard, moist	CL-ML									

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: 262-792-1282
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-31

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.6 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,438 N, 2,576,127 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	CONCRETE, six inches										
			1	SILTY CLAY, grayish brown, gray at 3 feet, hard, damp creosote odor at 3 feet	CL-ML			237						
			2											
			3					3.7						
			4											
			5					3.9						
			6											
			7					1.2						
			8	CLAY, reddish brown, brown at 9 feet, moderately soft, moist, gravel seam in clay at 9.75 feet	CL									
			9					0						
			10											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

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	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-32

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	666.9 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,314 N, 2,576,645 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1 2	SILTY CLAY, brownish gray, soft, damp, loamy	CL-ML			0						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-33

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	666.4 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,469 N, 2,576,944 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	TOPSOIL, brown, soft, damp	OL									
			1	SILTY CLAY, brown, moderately hard, damp	CL-ML			0						
			3	SILTY CLAY, reddish brown, moderately hard, damp	CL-ML			0						
			5	SILT, reddish brown, soft, damp	ML			0						
			7					0						
			9					0						
			10											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-34

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/9/2011	11/9/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	668.4 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,572 N, 2,576,879 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	SILTY CLAY, grayish brown, damp, moderately soft	CL-ML			0						
			2											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-35

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	667.4 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,540 N, 2,576,732 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	TOPSOIL, brown, damp, soft	OL									
			2	SILTY CLAY, grayish brown, moderately hard, damp	CL-ML			0						
			3	FINE TO COARSE SAND, light tan, soft, dry				0						
			4											
			5					0						
			6		SW									
			7											
			8											
			9					0						
			10											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-36

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	672.3 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,480 N, 2,576,400 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		0	CONCRETE, six inches										
			1	CRUSHED LIMESTONE GRAVEL, dry				4.3						
			2	SAND AND GRAVEL WITH CLAY FILL, loose, moist to wet										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-37

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	673.9 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,632 N, 2,576,356 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24			CLAY AND SAND FILL, dark gray, soft, moist to wet										
			1	CRUSHED LIMESTONE GRAVEL MIXED WITH CLAY FILL, moist, gray and brown	CL			0						
			2	CLAY, reddish brown, damp, hard										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-38

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	671.4 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,308 N, 2,576,395 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1	CONCRETE, six inches										
				CRUSHED LIMESTONE GRAVEL FILL, dry, wet at 1.25 feet, light gray, dark gray at 1.25 feet				0						
			2	GRAVEL MIXED WITH CLAY AND SAND FILL, brown, damp, loose										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-39

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	674.2 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,188 N, 2,575,698 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	2 24		1	CRUSHED STONE FILL, gray, dry										
				CLAY, brown, damp, moderately hard, dark gray at 1.75'	CL			0						
			2											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: 262-792-1282
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Fax: 262-792-1310

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion 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.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-40

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	676.2 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,495 N, 2,575,458 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 24		1 2	ASPHALT GRAVEL AND CLAY, dark brown, soft CLAY, gray, moderately hard, damp, black at 1.5', gas smell	CL			16.9						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-41

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	676.2 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,671 N, 2,575,933 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	CRUSHED LIMESTONE GRAVEL FILL, dry, light gray										
			1	CLAY, grayish brown, damp, moderately soft	CL			0						
			2											
			3	CLAY WITH FINE SAND, greenish gray to reddish brown, soft, damp to wet	CL									
			3	CLAY, reddish brown, damp, moderately hard				0						
			4											
			5					0						
			6		CL									
			7					0						
			8											
			9					0						
			10	SILTY CLAY, yellowish brown, damp, moderately hard	CL-ML									

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
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SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-42

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	676.6 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,659 N, 2,576,128 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	FINE SAND, grayish brown, dry, soft	SP									
			2	FILL MATERIAL, light blue, grainy in appearance, soft				0						
			3											
			4	SAND AND GRAVEL, dark gray, soft, dry	SP									
			5	CLAY, reddish brown, moderately soft, damp				0						
			6											
			7		CL			0						
			8											
			9					0						
			10											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel:
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	262-792-1282 Fax: 262-792-1310

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion 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.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-43

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	678.2 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,092 N, 2,575,519 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	TOPSOIL, brown, damp	OL									
				CRUSHED STONE FILL, light gray, dry				0						
			2	CLAY, reddish brown, damp, moderately hard	CL									
			3					0						
			4	FINE TO MEDIUM SAND, reddish brown, damp, soft	SW									
			5					0						
			6											
			7	FINE TO MEDIUM SAND, black stained, damp, soft	SW			0						
			8	CLAY, reddish brown, damp, moderately hard	CL									
			9					0						
			10											

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Signature	Firm	Tel:
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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	B-44

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dustin Harvey Onsite Environmental	11/10/2011	11/10/2011	vibratory

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	675.8 Feet MSL	4.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,083 N, 2,575,813 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	TOPSOIL, brown, damp	OL									
			1	SILTY CLAY, grayish brown, moderately soft, damp to moist				0						
			2											
			3					0						
			4											
			5		CL-ML			0						
			6											
			7					0						
			8											
			9					0						
			10											

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Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-101

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-101	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,486 N, 2,575,457 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	36 60		0	ASPHALT										
				SAND AND GRAVEL, dark brown, dry				0						
			2	SILTY CLAY, grayish brown, moderately soft, wet	CL-ML									
			4	CLAY, dark gray, moderaltely soft, moist, petroleum smell	CL			0						
2 CS	48 60		6	SILTY CLAY, reddish brown, some light gray mottling, moderately soft, moist				0						
			8		CL-ML			0						
			10					0						
3 CS	60 60			SILTY CLAY, grayish brown, hard, moist				0						
			12		CL-ML			0						
			14					0						
4 CS	60 60		16	CLAY, grayish brown, moderately soft, moist				0						
			18		CL			0						
			20					0						

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-102

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-102	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,747 N, 2,575,853 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	see P-103 boring										
			2											
			4											
			6											
			8											
			10											
			12											
			14											
			16											
			18											
			20											

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Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-104

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-104	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,738 N, 2,576,145 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	36 60		0–2	TOPSOIL, brown, damp GRAVEL AND CLAY, mixed, reddish brown, soft	OL CLG			0						
			2–4	TOPSOIL, brown damp, soft SILTY CLAY, grayish brown with some gray mottling, tough, damp	OL			0						
2 CS	24 60		4–6		CL-ML			0						
			6–8					0						
			8–10					0						
3 CS	60 60		10–12	CLAY, gray, moderately soft, damp				0						
			12–14					0						
4 CS	60 60		14–16		CL			0						
			16–18					0						
			18–20					0						

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Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-105

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-105	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,715 N, 2,576,505 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	36 60		0	TOPSOIL, dark brown, soft, damp	OL			0						
			2	SILTY CLAY, grayish brown with some gray mottling, tough, damp				0						
			4					0						
2 CS	60 60		6		CL-ML			0						
			8					0						
			10					0						
3 CS	60 60		12	CLAY, light gray, moderately soft, moist				0						
			14					0						
4 CS	60 60		16		CL			0						
			18					0						
			20					0						

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	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Fax: 262-792-1310

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Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-106

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-106	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,555 N, 2,576,525 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	36 60		0–2	TOPSOIL, brown, soft, damp	OL			0						
				CLAY, dark gray, soft, damp	CL			0						
			4	SAND AND TAR, black fine sand mixed with tar, soft, damp	SP			0						
2 CS	36 60		6	SILTY CLAY, grayish brown, hard, damp, creosote odor				0						
			8					0						
3 CS	24 60		10		CL-ML			0						
			12					0						
			14					0						
4 CS	24 60		16	CLAY, light gray, moderately soft, damp, no odor	CL			0						
			18					0						
			20					0						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-107

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-107	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,353 N, 2,576,537 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	36 60		0	CLAY, gray, wet, soft	CL			88.8						
			2	GRAVEL, crushed gray limestone, dry, soft	GP			22.9						
				CLAY, reddish brown, hard, damp	CL									
			4	CLAY AND TAR, greenish gray clay mixed with tar, soft, moist	CL			204						
2 CS	36 60		6	CLAY, greenish gray, soft, moist, strong odor to 9'	CL			560						
			8					186						
3 CS	36 60		10	SILTY CLAY, grayish brown, moderately soft, moist	CL-ML			18.1						
			12					13.6						
			14											
4 CS	48 60		16	SILTY CLAY, gray, moderately soft, moist, no odor	CL-ML			178						
			18					9.6						
			20					6.9						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: 262-792-1282
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Fax: 262-792-1310

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SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-108

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-108	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,157 N, 2,576,463 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 60		0	TOPSOIL, brown, soft, damp	OL			0						
			2	SILTY CLAY, grayish brown, damp, stiff	CL-ML			10.8						
			4											
2 CS	60 60		6	FINE TO COARSE SAND, tan, soft, damp, creosote odor	SW			17.9						
				CLAY, gray, moderately soft, damp	CL			42.2						
			8	GRAVEL AND SAND WITH CLAY, soft, moist	GPS			24.6						
3 CS	60 60		10	CLAY, gray, moderately soft, moist				5.7						
			12					13.5						
			14		CL									
4 CS	60 60		16					4.9						
			18					11.2						
			20					36.7						

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SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-109

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-109	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,171 N, 2,576,165 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	see P-110 boring log										
			2											
			4											
			6											
			8											
			10											
			12											
			14											
			16											
			18											
			20											

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Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

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SOIL BORING LOG INFORMATION

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-111

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-111	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,168 N, 2,575,831 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 60		2	ASPHALT GRAVEL, crushed gray limestone CLAY, dark gray, damp, moderatley hard, creosote odor	GP CL			0 12.1						
			4	SILTY CLAY, grayish brown, damp, hard, no odor	CL-ML									
2 CS	36 60		6					1.1						
			8	SILTY SAND, tan, moist, soft				0						
			10		CL-ML			0						
3 CS	24 60		12					0						
				SILTY CLAY, reddish brown, soft, moist	CL-ML									
			14	SILTY CLAY, gray,stiff, moist	CL-ML			0						
4 CS	12 60		16	CLAY, gray, moist, moderately soft				0						
			18		CL			0						
			20					0						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-112

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-112	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,337 N, 2,576,915 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			2 4 6 8 10 12 14 16 18 20	see P-113 boring log										

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SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-114

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-114	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,441 N, 2,576,773 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	36 60		2	SILTY CLAY, dark brown, hard, damp	CL			0						
			4					0						
				CLAY, black, moderately hard, damp, creosote odor	CL									
2 CS	36 60		6	CLAY, black, moderately hard, damp, sheen, tar odor	CL			212						
			8	CLAY, greenish gray, moderately hard, moist, tar in fractures				662						
				SILTY CLAY, gray, hard, moist, slight odor				389						
3 CS	36 60		10		CL-ML									
			12					139						
			14					25.1						
4 CS	36 60		16	CLAY, gray, moist, soft	CL			20.7						
			18					152						
								96.8						
			20											

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Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-115

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-115	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,548 N, 2,577,055 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	36 60		2	SILTY CLAY, brownish gray, hard, damp				0						
			4		CL-ML			0						
2 CS	36 60		6					0						
			8					16.9						
				SILTY CLAY, gray, stiff, moist, trace gravel										
3 CS	48 60		10					0						
			12					0						
			14		CL-ML			0						
4 CS	60 60		16					0						
			18					0						
			20					0						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

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SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-116

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-116	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,312 N, 2,576,146 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	12 60		0	CONCRETE, six inches										
			2	SILTY CLAY, reddish brown, damp, moderately hard	CL-ML			0						
			4					0						
2 CS	36 60		6					0						
			8	CLAY, greenish gray, damp, moderately hard	CL			0						
			10	CLAY, reddish brown, very stiff, moist	CL			0						
3 CS	60 60		12	CLAY, grayish brown, very stiff, moist	CL			0						
			14					0						
4 CS	60 60		16	SILTY CLAY, grayish brown, moderately hard, moist	CL-ML			0						
			18					0						
			20					0						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

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SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	MW-117

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-117	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,452 N, 2,575,842 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 60		0	CONCRETE, six inches										
			2	CLAY, reddish brown, moderately soft, damp, loamy	CL			0						
			4					5.1						
2 CS	24 60		6					0						
			8	CLAY, gray, hard, moist, creosote odor	CL			8.8						
			10					99.6						
3 CS	48 60		12					0						
			14					7.5						
4 CS	60 60		16	CLAY, gray, moderatley soft, moist, sticky	CL			404						
			18					7.2						
			20					2.6						

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SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	P-103

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		P-103	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,746 N, 2,575,858 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 60		0–2	SILTY CLAY, reddish brown, moderately soft, moist				0						
			2–4					0						
2 CS	36 60		4–6		CL-ML			0						
			6–8					0						
3 CS	36 60		8–10					0						
			10–12					0						
			12–14	SILTY CLAY, gray, moderately hard, moist				0						
4 CS	48 60		14–16		CL-ML			0						
			16–18					0						
			18–20					0						
5 CS	120 120		20–22	SILTY CLAY, gray moderately soft, damp, trace sand and gravel	CL-ML									
			22–24											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Tel: 262-792-1282 Fax: 262-792-1310

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SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number P-103 Use only as an attachment to Form 4400-122. Page 2 of 2

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			26	SILTY CLAY, gray moderately soft, damp, trace sand and gravel *(continued)*										
			28											
6 CS	120 120		30					0						
			32											
			34											
			36											
			38		CL-ML									
7 CS	120 120		40					0						
			42											
			44											
			46											
			48											
			50					0						

State of Wisconsin
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SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	P-110

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		P-110	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,171 N, 2,576,169 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 60		0–2	CLAY, brown, damp, moderately hard	CL			0						
			2–4					0						
2 CS	24 60		4–6					0						
			6–8	TAR AND GRAVEL, strong odor	GP			12.5						
3 CS	36 60		8–10											
			10–12	TAR AND SILT, strong odor CLAY, olive gray, moist, hard, strong odor	ML CL			1130						
			12–14					395						
4 CS	12 60		14–16					425						
			16–18	CLAY, grayish brown, moist, soft, less odor	CL			382						
			18–20					112						
5 CS	120 120		20–22	CLAY, brownish gray, moist, moderately soft	CL									
			22–24											

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Signature	Firm	
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SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number P-110 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			26	CLAY, brownish gray, moist, moderately soft *(continued)*	CL									
			28											
6 CS	120 120		30	CLAY, gray, moderately soft, moist, sticky				61.8						
			32											
			34											
			36											
			38											
7 CS	120 120		40		CL			14.6						
			42											
			44											
			46											
			48											
			50					1.4						

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SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Wabash Alloy Oak Creek	NA	P-113

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radtke Boart Longyear			rotosonic

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		P-113	Feet MSL	Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 327,336 N, 2,576,919 E Ⓢ/C/N
1/4 of 1/4 of Section , T N, R
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
241553761	41		Oak Creek

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	24 60		0	TOPSOIL, brown, soft, damp	OL			0						
			2	SILTY CLAY, dark brown, hard, damp				0						
			4		CL-ML			0						
2 CS	36 60		6					0						
			8	SILTY CLAY, dark gray, moderately hard, moist				0						
3 CS	60 60		10					0						
			12					0						
			14					0						
4 CS	60 60		16		CL-ML			0						
			18					0						
5 CS	120 120		20					0						
			22											
			24											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: 262-792-1282
	Tetra Tech 175 N. Corporate Dr. Brookfield, WI 53045	Fax: 262-792-1310

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SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number P-113 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample 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	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			26	SILTY CLAY, dark gray, moderately hard, moist *(continued)*										
			28		CL-ML									
6 CS	120 120		30	SILTY CLAY, gray, stiff, moist				0						
			32											
			34											
			36											
			38											
7 CS	120 120		40		CL-ML			0						
			42											
			44											
			46											
			48											
			50					0						

APPENDIX B
TarGOST® TECHNOLOGY DESCRIPTION

Tar-specific Green Optical Screening Tool (TarGOST): Laboratory Calibration of Florescence to PPM Tar and Subsequent Field Testing

Randy St. Germain
Dakota Technologies, Inc. (DTI)
USA

Allen Peterson
New York State Electric & Gas Corporation (NYSEG)
USA

ABSTRACT

This report summarizes the laboratory calibration and subsequent field testing of the TarGOST system at the Geneva, N.Y. and Manchester, N.H. MGP sites. DTI's ROST system was modified to allow TarGOST measurements to be conducted. These modifications and the general spectroscopic approach involved in TarGOST measurements are explained. A calibration study prior to the field work was conducted in order to demonstrate TarGOST's quantitative behavior on site soil and tar. The results of the lab study are discussed. The field deployment and resulting data are described for the two sites; and a brief commentary is included on some of the TarGOST logs generated.

TARGOST TECHNOLOGY DESCRIPTION

The TarGOST is an adaptation of the Rapid Optical Screening Tool (ROST) that DTI developed under United States Air Force funding in the early 1990's. The basic ROST platform is relatively mature and well tested, with hundreds of petroleum, oil, and lubricant (POL) release sites having been delineated since 1994 across the United States, Europe and Japan.

Several minor but important modifications were made to DTI's ROST system that effectively changed the ROST system into a TarGOST system. The ROST system typically employs a 290 nm or 308 nm laser for UV excitation of 2-4 ring PAHs in fuels/oils while TarGOST employs a green laser that excites the larger PAHs. The ROST cabinet was modified to house the small green laser and a second excitation source launch fiber was added to allow easy change between UV and green excitation. ROST's 320 nm long-pass cutoff filter was replaced with an orange passing long-pass cutoff filter that blocks the majority of the green light, but allows the longer wavelength fluorescence to pass through into the monochromator. The spectrometer (also known as a monochromator) position is changed via software to monitor green-red spectrum, instead of the traditional 300-500 nm spectrum (UV-blue) for ROST.

A schematic of the TarGOST system is shown in Figure 1. The TarGOST system, while perhaps sounding exotic, is simply a time-resolved front-face fluorometer that is fiber optically coupled to a sapphire-windowed probe. The probe is shoved into the ground by Geoprobe style rig or a cone penetrometer test (CPT) vehicle and fluorescence measurements are made directly on the soil surface that passes by against the sapphire window as the rod is advanced. Pulsed laser excitation light and any subsequent fluorescence travel to and from the sapphire window via two 40m optical fibers that are strung through the rod string. In the case of cone-penetrometer test (CPT) delivery, the window is approximately 12 inches above the tip and sleeve sensors that generate geotechnical data describing the soil type. The Geoprobe version has no sensors, just the window approximately 6 inches from the tip.

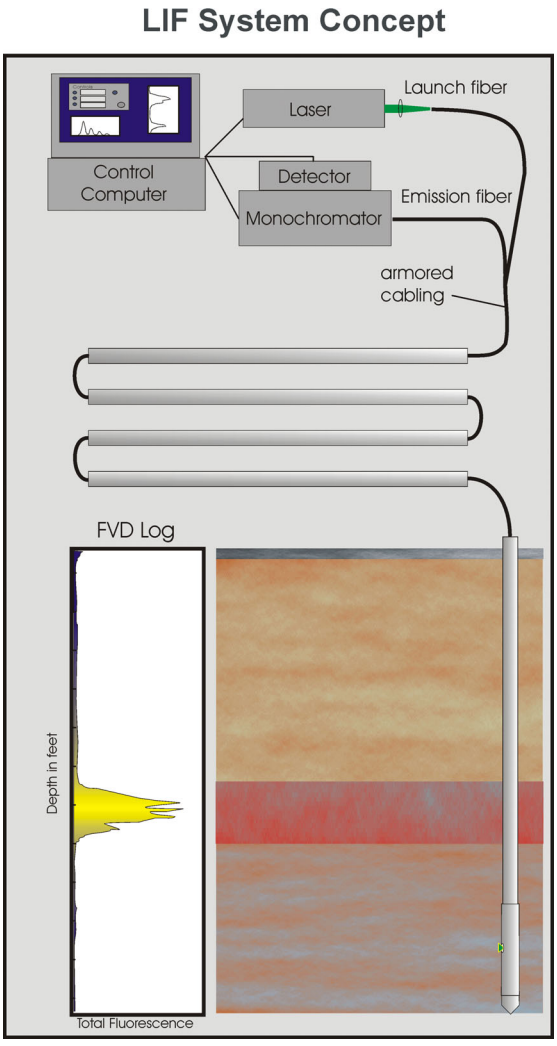

Figure 1. TarGOST Overview

As the rod is advanced into the subsurface the very fast (10 nanosecond (ns) in duration) pulses of laser light are delivered by one of the two optical fibers to a mirror in the probe that reflects the light out the window. Figure 2 is helps explain the process that occurs just outside the window every time the laser fires. As seen in column 1, it is difficult if not impossible to discern between tar and clean soil based simply on color or appearance to the human eye as any tar will be mixed with water, mud, cloudiness, etc. that exist in front of the window as it is advanced. Column 2 depicts what happens outside the window when a pulse of green light exits the window and strikes whatever soil/tar is present. Most of the green laser light is simply reflected by the soil. If coal tar product is present, the PAHs that exist in the coal tar absorb some of the light and are driven into an electronically excited state. This phenomenon of tar absorbing the light is represented by the small dark areas in image in the lower row of column 2. The image shows subtly darker regions where the green light is being absorbed to a greater degree than surrounding soil. The 3rd column depicts what it looks like outside the window when the excited-state PAHs begin to return to the ground state (this takes less than 10 ns). Many of them emit orange-red fluorescence (longer wavelength than the excitation light) as a way of shedding the excess energy absorbed during the laser excitation. A portion of this fluorescence and some of the reflected excitation laser light are collected by the mirror and returned to the surface via the collection fiber optic.

A spectrometer in the TarGOST system disperses the collected light into a "rainbow" across the back plane of the spectrometer. A long-pass cutoff filter in the entrance of the spectrometer blocks the majority of the relatively intense laser light being scattered into the detector off the soil in front of the downhole window. Four fiber optic fibers are located in the backplane of the spectrometer. One fiber collects a small portion of the scattered laser light (very intense relative to fluorescence), while the other three fibers capture any fluorescence due to coal tar presence or other fluorophores. The four fibers differ in length (2, 12, 22, 32 meters), and each delivers its collected light to a photomultiplier tube (PMT) at a fixed delayed time interval (~50 ns). The result of this is a "train" of time-delayed photon packets all arriving at the same PMT. The PMT converts this "train" of light into a current pulse that is monitored by a fast digital storage oscilloscope. The signal generated is called a waveform. The laser light is observed in the first channel (left-most) and the three fluorescence pulses are observed in the following three channels.

These waveforms, shown in column 4 of Figure 2, depict in 2 dimensional form what is visually/optically occurring outside the window. If the soil is clean of coal tar, the laser scatter channel (leftmost) is far more intense than the fluorescence channels. If coal tar exists, the amount of scattered laser light decreases (due to absorbance by the PAHs) and the fluorescence channels begin to dominate. The more coal tar present, the lower the scatter channel gets and the higher the three fluorescence channels get. The area under the three fluorescence channels of the waveform is determined and is divided by the area under the laser scatter channel. This is called scatter correction. It is necessary because at very high concentrations the fluorescence does not continue to scale with concentration due to energy transfer, photon cycling, and other processes that "quench" the fluorescence in high coal tar concentration soils. Fortuitously, the laser

scatter intensity is relatively unaffected by coal tars at low concentrations, so the laser scatter correction only begins to influence signal levels when concentrations begin to get into the region where the quenching (non-linearity of fluorescence response) occurs. This way the scatter corrected fluorescence readings scale relatively well across a wide range of concentrations from a limit of detection (LOD) of 250-500 ppm to pure coal tar. TarGOST is designed to respond to the highly impacted soils, not low level staining or dissolved phase. This makes it ideal for delineating source term areas of coal tar.

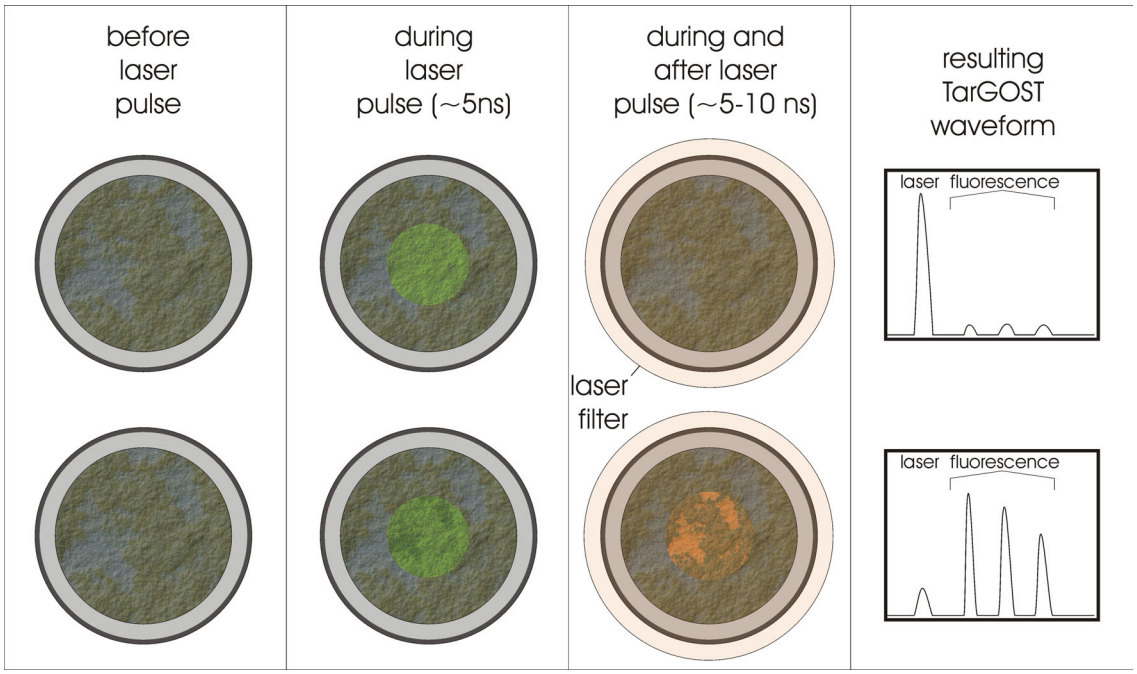

Figure 2. TarGOST window concept – top row is clean soil – bottom row is contaminated with tar

To normalize for energy drift of the laser and subtle optical alignment changes, it is necessary to calibrate the system prior to each sounding. This is accomplished by placing a reference emitter (RE) material on the window that scatters and fluoresces at levels that are in the same range as moderately coal tar contaminated soils. The RE is placed on the window and a scatter corrected fluorescence calculation is made as described previously. All subsequent downhole (or laboratory) measurements made are then normalized by this RE value, providing an apples-to-apples comparison (normalized) format for viewing the data regardless of where or when the data was acquired and what the laser energy and optical alignment was at the time.

Figure 3 portrays the relationship between what's happening outside the window visually during logging (left side) with the waveforms that are being generated on the oscilloscope, stored, and plotted vs. depth (right side). As the probe is pushed into the ground (at 2cm/sec) the oscilloscope is constantly queried for waveforms by control software. These waveforms are matched to the current depth that is being sent to the TarGOST system from the CPT system or Geoprobe push platform via serial

communication. The depth is corrected for the window height difference from the CPT or Geoprobe tip. The scatter and fluorescence area calculations are made and are normalized to the RE value. These values are displayed vs. depth in the Fluorescence vs. Depth (FVD) log that is seen at the left of each field log. The fluorescence is presented as a percentage of the RE waveform acquired immediately prior to each sounding. The raw waveforms are also stored for later viewing and presentation and are shown in the field logs at the right as individual panel plots. The technician chooses (rather arbitrarily) depths of interest to examine/display the raw waveforms.

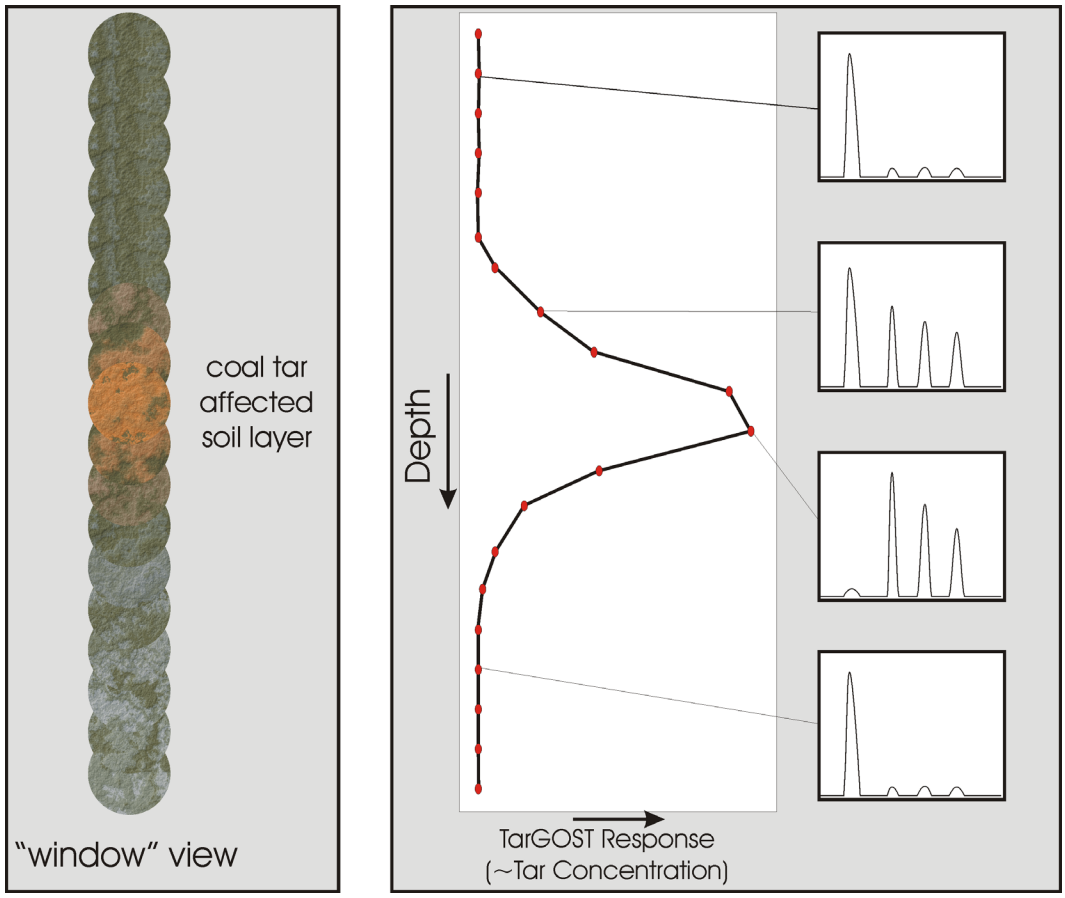

Figure 3. TarGOST subsurface sequence of events

Color-coding of the FVD is accomplished by "mixing" the Blue, Red, and Green channels and applying the resulting color (RGB ratio) to the area under the curve on the FVD. This makes the interpretation of the logs easier to see "at-a-glance" instead of having to rely solely on the waveforms to understand the qualitative nature of the waveforms. This color-coding scheme results in the color blue representing clean soil; yellow, green, or white signals indicate the presence of fluorescing materials such as coal tar and creosote. Crushed limestone fill was once observed to fluoresce at low levels (up to 20%RE) but this fell well below the levels observed when significant coal tars are present, so the likelihood of false positives is low. Also, the waveform from tar was

distinctively different than that of the limestone fill, allowing recognition of the limestone as a very low "false positive". The colorized log resulting from the RGB scheme is almost always different as well, allowing recognition of limestone signature "at-a-glance".

The standard "deliverables" that can be expected from a TarGOST investigation are:

1. Colorized Fluorescence vs. Depth Logs printed on paper in real time in the field.
2. Colorized Fluorescence vs. Depth Logs in JPG format created in real time in the field.
3. ASCII files containing Depth, Total Fluorescence (% RE), and Channel Ratio information.

The electronic data are typically written to CD in the field and given to the site geologist/consultant before departure.

LABORATORY CALIBRATION PRIOR TO FIELD MEASUREMENTS

Procedure. Coal tar products taken from existing monitoring wells at the Manchester N.H. MGP site were added to 30 to 40 grams of clean sifted site soil. Both were placed in Teflon sample jars to prevent migration/absorption of tar into the jar. A 0.0001 g scale was used to determine amount of tar added. A decade series was made of the two tars with approximately 100000, 10000, 1000, and 100ppm as targets. Less than 1 drop would have been necessary to achieve 100 ppm target, so these concentrations ended up in the 300 ppm range because one drop was added. The sample jars were capped immediately after adding the tar to the soil. The tar/soil dilutions were shaken for 30 minutes on a vibratory paint shaker to ensure homogenization. Minimal clumping was observed in the series. Those showing any clumping or significant heterogeneity were hand mixed and stirred to break up the clumps and were then re-shaken until high visual homogeneity was achieved.

The TarGOST system was set up to emulate actual push conditions, so the same hardware, fiber optics, and software used in the field were used for the lab measurements with the exception of sapphire-windowed cups that were used. These cups have the same tolerances/dimensions as a Fugro LIF CPT sub or Geoprobe shock protected optical compartment (SPOC), so the results achieved are identical to that achieved with field equipment. This cup device is pictured in Figure 4. The laser beam (several mm across) strikes the window off-center, so that hand-rotation of the cup during measurements causes an annulus of soil to be exposed to the laser beam. This averages more soil surface and allows the TarGOST to average a larger surface, improving the statistics of the relatively small amount of soil being measured. This emulates the motion of the probe being inserted past the soil in-situ. The series of soils were placed in the cup or cups and these were inserted into the emulator while the software acquired data. The software was paused during sample changes, cleaning of cups with water and acetone,

etc. Neat product (1,000,000 ppm) was also applied to emulate complete saturation, along with clean site soil (0ppm).

Figure 4. Sapphire-windowed sample cups with fiber optic attached. Parabolic mirror inside emulator turns beam into cup.

Lab Measurement Results. The raw data are shown in Figures 5 to 8. Two different scalings of the fluorescence response axis are shown for each response log so that both the low and upper concentrations can be seen in detail. The raw waveforms were converted to a percentage (%) of the reference emitter (sometimes labeled as Total Fluorescence Intensity) and these values were exported to ascii data for input into and an Excel spreadsheet (attached). The linearity, responsivity, and estimated LODs were calculated in Excel. The calibration curves of Total Fluorescence Intensity (% RE) vs. Concentration are shown in Figures 9 and 10. The response of the mixtures vs. concentration have a slope of ~.0045. To estimate concentration from the field data one simply needs to multiply the %RE times the slope by (1 / .0045) or 222. The estimated LOD for the lab studies was 3*standard deviation of the background. Calculations based on the lab data result in a LOD of between 230 to 250 ppm. It should be remembered that these were controlled conditions using a consistent soil and coal tar samples. A LOD of 500 ppm is more safely assumed when deploying TarGOST under the heterogeneous conditions experienced in the subsurface environment.

As can be seen in the graphs and figures, the linearity of TarGOST across the wide dynamic range used was excellent for these coal tar products. We were very pleased with the results and have rarely seen better performance from any field-screening tool, especially in light of the relatively large range of concentrations measured, especially on the extremely heavy end (pure coal tar product). It should be noted that field soil samples that appear to contain tar-like material (TLM) instead of oil-like material (OLM) did not fluoresce as well as the OLM product recovered from monitoring wells. This might

result in light staining of OLM being confused with relatively higher concentrations of TLM because of the less fluorescent nature of the TLM.

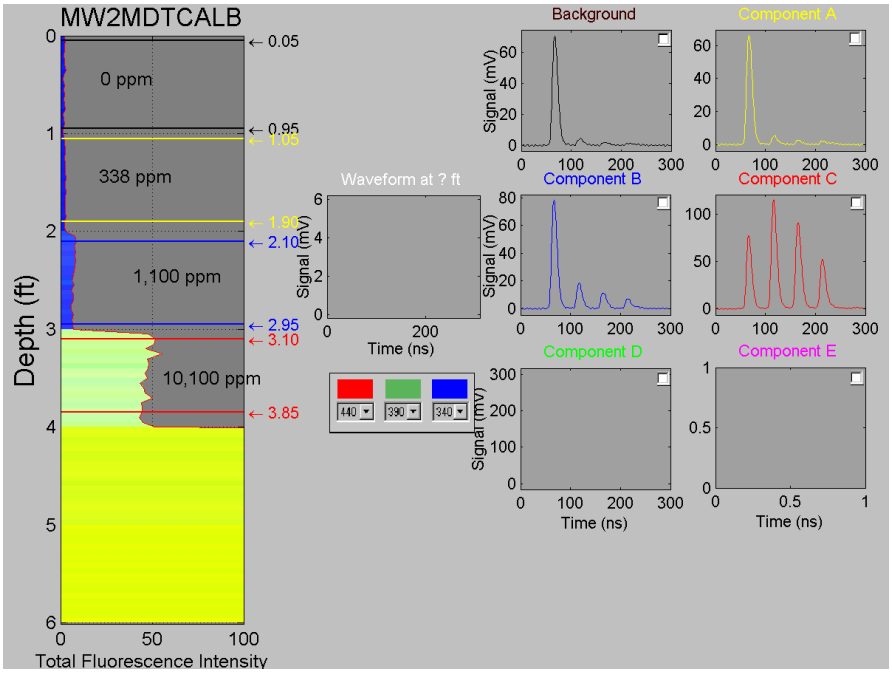

Figure 5. MW-2M sample series zoomed in for inspection of small signals.

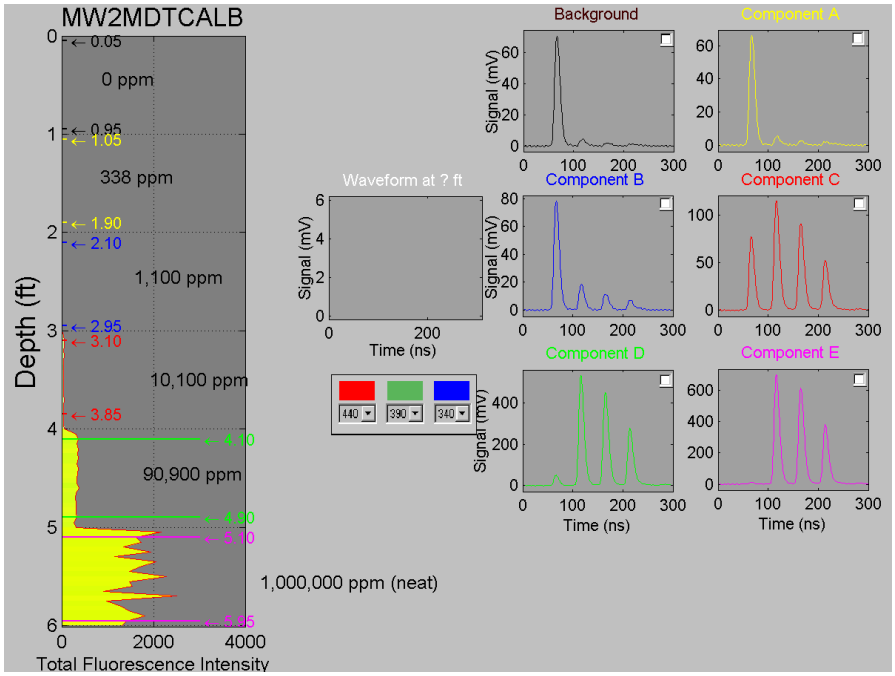

Figure 6. MW-2M sample series.

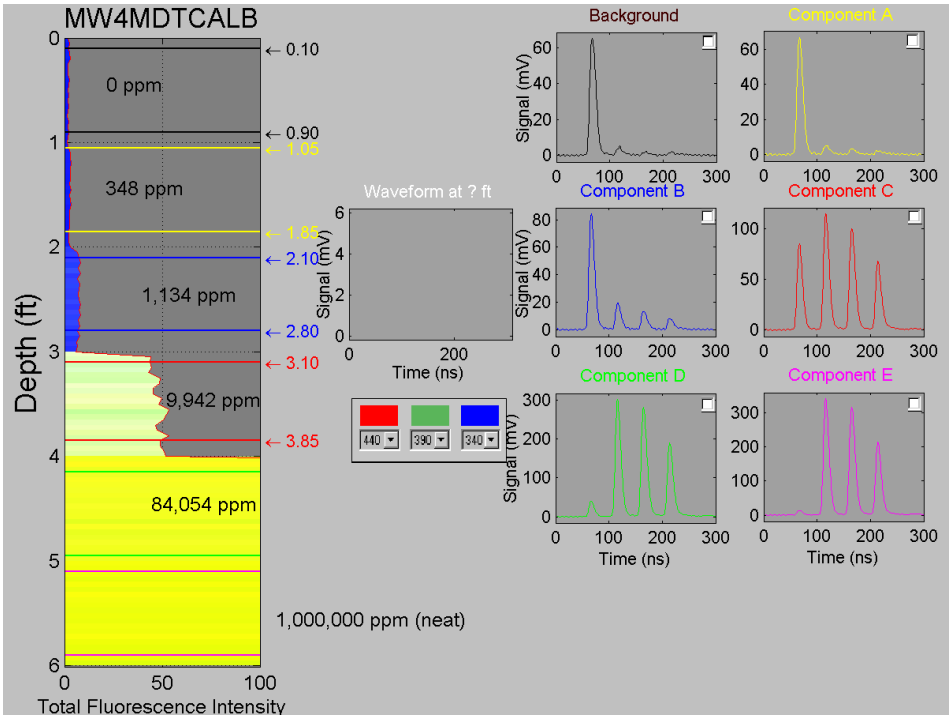

Figure 7. MW-4M sample series zoomed in for inspection of small signals.

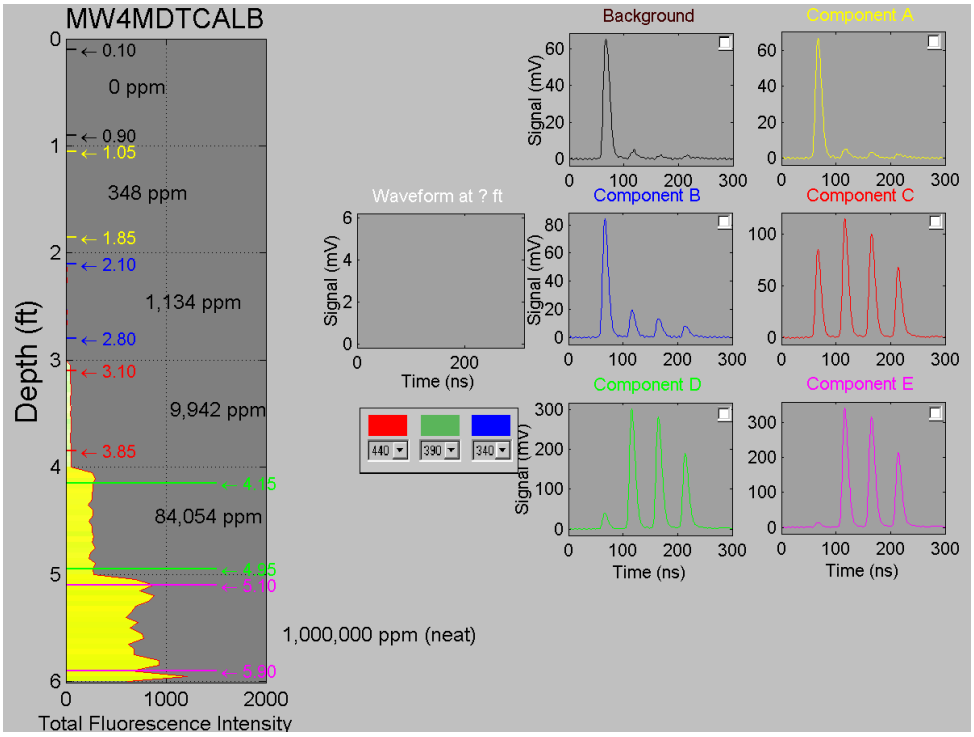

Figure 8. MW-4M sample series.

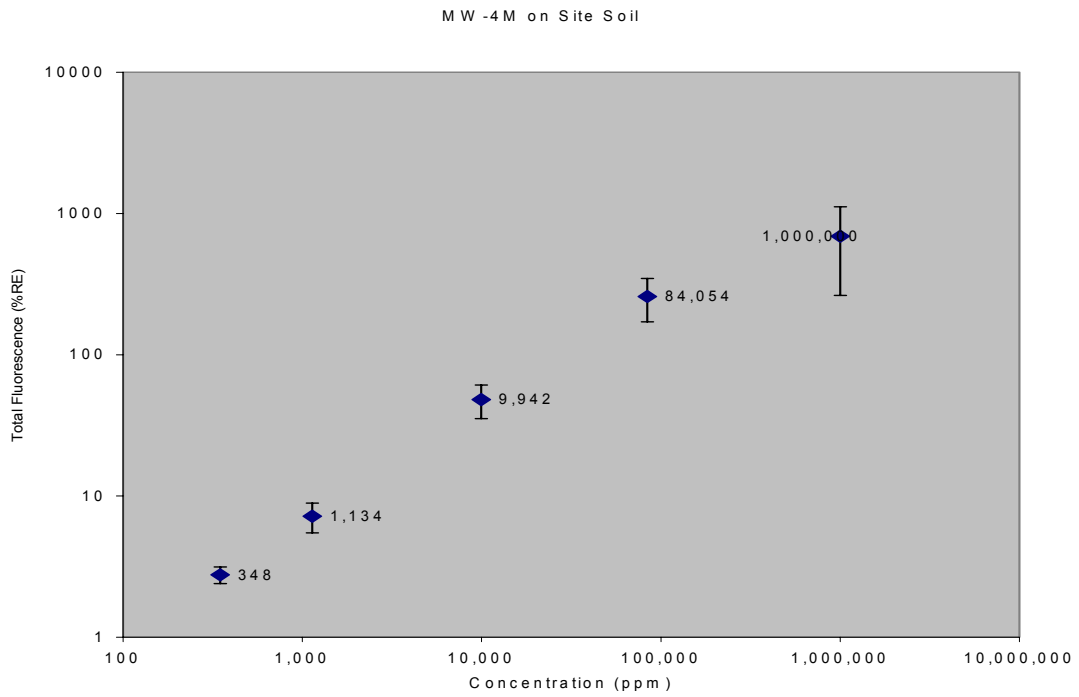

Figure 9. Calibration curve for MW-4M

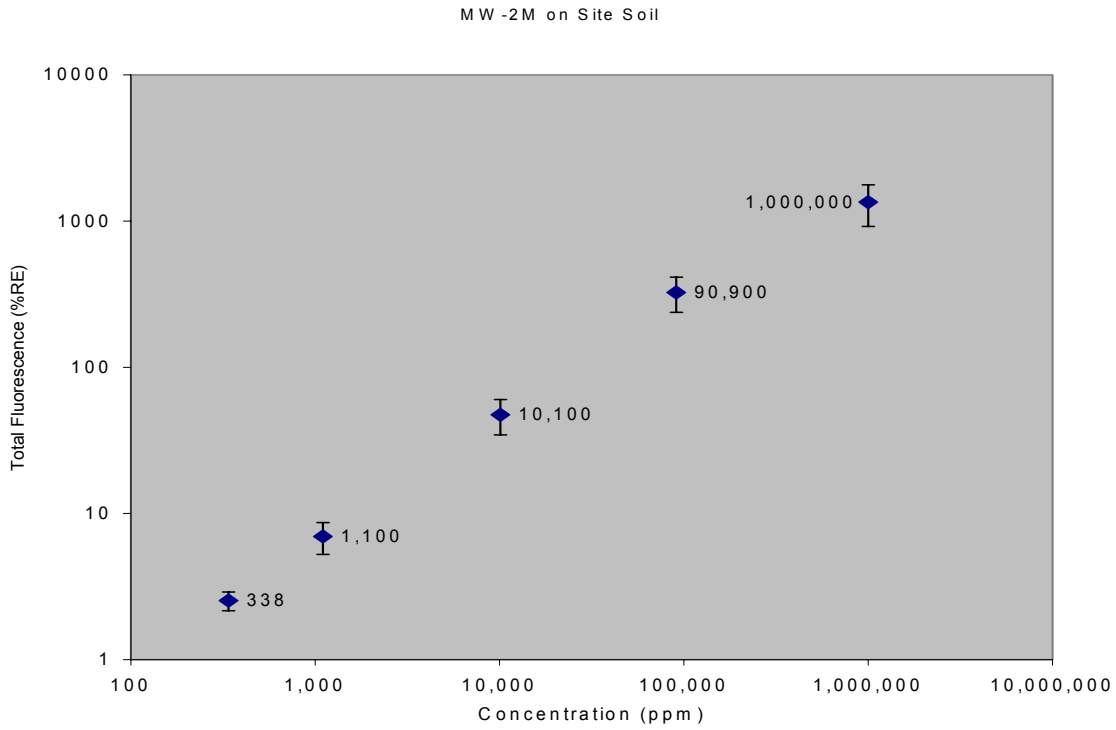

Figure 10. Calibration curve for MW-2M

FIELD OPERATION – MANCHESTER, NH

The TarGOST system was integrated into the Fugro CPT truck for field deployment to the Manchester N.H. MGP site on May 16 – May 19, 2003. Depth information was transferred from the CPT system to the TarGOST via RS-232 data string. Prior to each push the sapphire window was cleaned and background signal levels were checked to insure the optics within the CPT sub-system were clean and uncontaminated with lint, dust, or coal tar from leaking windows. The active sensing region of the probe/window was cleaned of any residual OLM with paper towels and cleaner. This was rarely necessary due to the efficiency of the rod wiper system built into the CPT rod delivery extraction system. After assuring that background signals were low, the RE was placed on the clean window and the reference waveform was acquired. The probe was lowered through the guide sleeve of the CPT floor to the ground surface. Once positioned, a file name was chosen and active data logging ensued. The system was observed logging waveforms and the rods were advanced until refusal was encountered (obstructions) or the field geologist determined adequate depth had been achieved. Immediately following the termination of logging the log waveforms were examined, several waveforms of interest were chosen for display and the field log was printed to color computer. JPG images were also generated immediately following the paper printout and both paper and electronic images of the data were supplied to the field geologist in charge.

FIELD RESULTS – MANCHESTER, NH

No significant problems were observed during the logging of the TarGOST data. Calibration procedures were followed consistently throughout the exercise and no data quality issues were experienced with the exception of unstable triggering of the oscilloscope during CPT001 and CPT02. Adjustments were made after these two pushes and the triggering was stable during the remainder of the investigation. The system performed as expected based on the previous laboratory calibration. The coal tar product from this site fluoresced quite well, as do most coal tar samples from sites previously measured with TarGOST. When pushing through clean soils the laser scatter (leftmost channel) dominated, indicating that the clean soil was reflecting the laser light with little absorbance/fluorescence occurring due to lack of coal tar present. When moderate staining of coal tar was encountered the laser reflection channel changed little but the fluorescence channels registered increased signal area. When substantial amounts of OLM coal tar were encountered (>5,000 - 10,000 ppm) the laser channel began to decrease and the fluorescence channels increased dramatically. Signals less than 50% are likely stained OLM or possibly significant levels of the less fluorescent TLM.

Manchester Production Summary.

	Monday (May 16)	Tuesday (May 17)	Wednesday (May 18)	Thursday (May 19)	Friday (May 20)	**Total**
# locations	4	15	13	9	-	41
# feet	80	476	308	270	-	1134

Figure 11 illustrates how the relatively high-density TarGOST data logs can be plotted in transect form to create a picture of how the NAPL is distributed along a riverbank. The TarGOST-CPT system acquired the data shown in Figure 11 in a single work day with zero sample handling and no geologist-induced subjectivity.

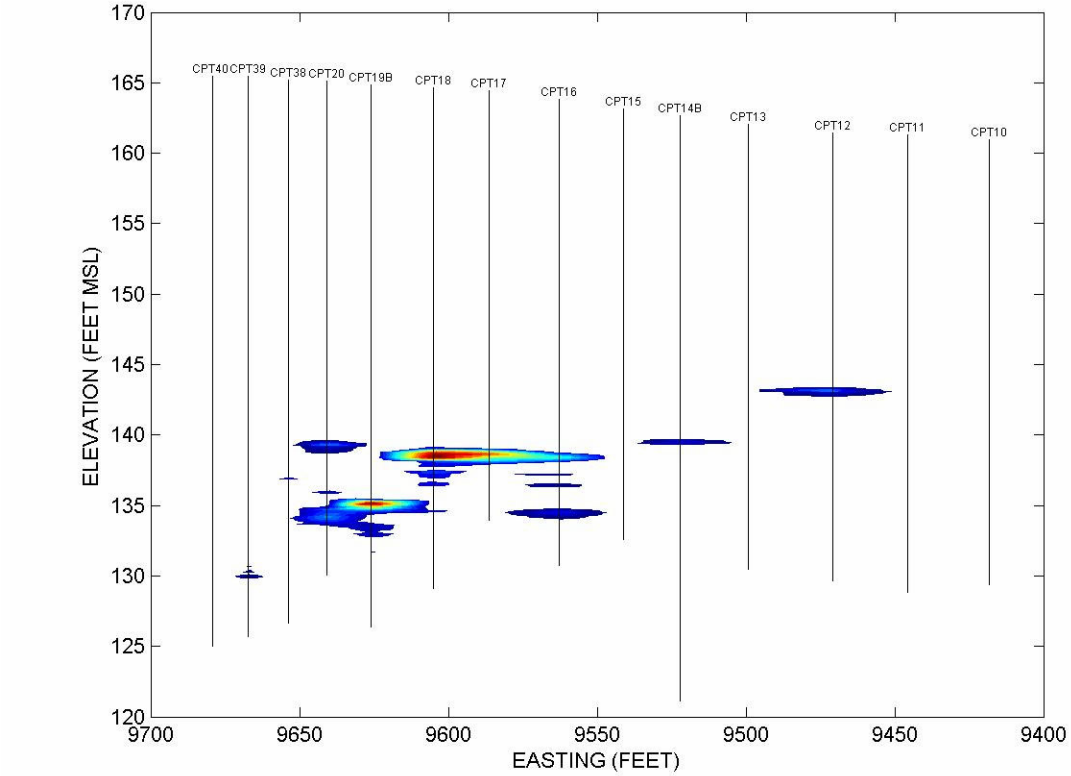

Figure 11. Transect data from TarGOST logs acquired at the Manchester N.H. MGP site.

The comparison between TarGOST logs and the relatively coarse/crude drilling logs is difficult to accomplish graphically. However, other investigators did conduct independent confirmatory core sampling near the TarGOST pushes, including some of those shown in figure 11 and determined that the TarGOST data are reliable [1]. They stated "The correlation between the visual observations in the soil boring samples and the TarGOST results was very good." We have reviewed that data and agree.

FIELD OPERATION – GENEVA, NY

DTI mobilized their Geoprobe mounted TarGOST system to Geneva, NY and conducted TarGOST testing over the period of June 1 – June 6, 2003. An earlier attempt to field the TarGOST in Geneva was interrupted by a major ice storm that crippled the Geneva area for several days and created busy conditions at the Geneva facility.

Prior to mobilizing a plan was made for DTI to receive "blind" logging results of traditional investigation boreholes that were done the fall/winter season of 2002. DTI

received the logs and, while there was less coal tar than desired, it was decided in discussions with NYSEG that DTI would focus on areas of high contamination and perhaps do some 'wildcatting" to search for more coal tar than had been found by the previous traditional investigation.

As it turns out, there was very little if any NAPL available for mapping via TarGOST at any of the previous boring locations. The geologist doing the logging did note some locations were significantly impacted, but TarGOST struggled to see signals beyond it's approximate LOD of 500 ppm. This is perhaps indicative of the subjective nature of geologists logging the borings as opposed to a standardized method or "machine vision" such as TarGOST. It is difficult to quantify descriptions such as "impacted" or "affected" or "sheen". The historical average of 300 feet was not achieved. The "wildcatting" in areas not previously investigated didn't yield any undiscovered coal tar.

In spite of the site challenges, TarGOST was found not to indicate any significant false positives and TarGOST did confirm that limited (if any) significant NAPL contamination existed at the Geneva site. The only boreholes that indicated a possible presence of even light coal tar staining were TGHSSB7 and TGHSSB11. DTI did some sampling at locations where earlier investigations indicated possible NAPL but we could not locate any significantly tar-affected soils. Of course there was the usual odor, possible tiny droplets of NAPL (not substantiated by any lab or field technique beyond visual), wood chips, and unusual blue mineralogy (Prussian Blue), but no significant NAPL contamination was ever located. The amount of laser excitation energy was increased in an attempt to lower the limit of detection, but this only resulted in raising the background levels and giving the logs an unusual look and color ration and less stable background.

Geneva Production Summary.

	Monday (May 16)	Tuesday (May 17)	Wednesday (May 18)	Thursday (May 19)	Friday (May 20)	**Total**
# locations	4	15	13	9	-	41
# feet	80	476	308	270	-	1134

CONCLUSION

TarGOST was demonstrated to be a productive and reliable indicator of coal tar NAPL (and/or its absence) at the two sites described. The quantitative behavior of TarGOST on Manchester's tar dilution sets were excellent with little, if any, room for improvement.

(Postscript: In addition to the Geneva and Manchester sites, TarGOST has also been deployed for projects in Oelwein, IA, Waterbury, CT, and Hammond, IN. Oelwein saw particularly high production, with 91 locations being surveyed in just 5 days with a total of 2,577 ft for an average daily production of 515 ft per day. The Waterbury site saw production of 61 pushes over 5 days with a total of 1183 ft for an average production

of 237 ft per day. Excessive rubble and debris caused 2 window sub assemblies to be broken off and lost at depth as well, slowing production considerably.)

These projects are considered to be highly successful, with clients remarking that the correlation between previous or post investigations is excellent. In all cases TarGOST yielded information on coal tar distribution previously unknown to site owners. Like ROST, production of TarGOST has averaged from 250 to 500 feet daily with a two man crew, making the TarGOST faster than any other known method of NAPL delineation, with far higher data density (approximately 10 readings per foot). Integration of electronic TarGOST data into GIS and other graphics systems is relatively easy and is not as prone to subjective interpretation, since the system is calibrated prior to each boring and simply cannot be manipulated or influenced by human subjectivity.

REFERENCES CITED

[1] Ferland, F., St. Germain, R., Haederle, P., Ostrye, D., and Perlow, J. (1994). Rapid Delineation of OLM/TLM in Soil Using the Tar-Specific Green Optical Screening Tool (TarGOST). *Proceedings Natural Gas Technologies II:Ingenuity & Innovation Feb. 8-11, Phoenix, Az.*

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