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June 12, 2019  
File No. 20.0155935.01

Mr. Michael M. Schmoller, Advanced Hydrogeologist  
Wisconsin Department of Natural Resources  
3911 Fish Hatchery Road  
Fitchburg, Wisconsin 53711-5367

Re: PCB Soil Sampling and AOC Material Characterization Plan  
Former Trent Tube Plant No. 1  
2188 Church Street  
East Troy, Wisconsin  
BRRTS #02-65-531574

Dear Mr. Schmoller:

On April 17, 2019, representatives from EnPro Holdings, Inc. (EnPro), EnPro's environmental consultant, GZA GeoEnvironmental (GZA), EnPro's outside legal counsel, Husch Blackwell LLP (Husch), the Wisconsin Department of Natural Resources (WDNR), and the trustee for the property owner, Crucible Materials Environmental Restoration Trust (CMERT), met at the Village of East Troy offices to discuss the project status and remedial approach for the former Trent Tube Plant No. 1 site at 2188 Church Street in East Troy, Wisconsin ("Site"). At this meeting, GZA presented a visual summary of the soil and groundwater analytical results collected to date, information regarding the Site geology and hydrogeology, the Village of East Troy's conceptual development plan for the Site, and information pertaining to an approach to remediate the Site that would accommodate that development plan and supplement or replace the current groundwater extraction treatment system.

At the meeting, the WDNR indicated that a limited portion of the Site had been evaluated for polychlorinated biphenyls (PCBs) and requested that the PCB investigation be expanded across the remainder of the Site, including the Area of Consolidation (AOC). The WDNR also requested that samples be collected to further characterize the material in the AOC.

GZA, on behalf of EnPro, submits this PCB Soil Sampling and AOC Material Characterization Plan ("Sampling Plan") for WDNR's review and approval. This document presents a comprehensive grid sampling plan for the Site to identify potential PCB-affected soils and a plan to characterize the material in the AOC.

## PREVIOUS PCB INVESTIGATION AND POTENTIAL PCB SOURCE AREAS

On June 21, 2017, PCB soil samples (Borings 1 through 8) were collected and submitted for laboratory analysis for PCB Aroclors from eight locations in a limited area in the central portion of the former building, as approved by the WDNR. The boring locations are shown on Figure 1. The results of this previous soil sampling identified three areas (Borings 1, 4, and 6) in which the PCB Aroclor soil concentrations exceeded the Wisconsin Administrative Code (Wis. Adm. Code) NR 720 Residual Contaminant Level (RCL) for non-industrial direct contact. The Aroclor with the greatest number of detections was Aroclor 1254. On April 17, 2018, additional borings were advanced around these three sample locations in an attempt to delineate the extent of PCB-affected soils. The results of the analytical testing indicated that the delineation



was not completed in two of these areas (B-4 and B-6). Based on the discussions at the meeting held on April 17, 2019, the delineation of PCBs in these areas will be completed after a comprehensive Site evaluation for PCBs.

The potential source of PCBs previously identified in soils at the Site is unknown. Further, based on a review of Site information, there is no known source that contributed to the PCBs identified in the soil. The potential sources of PCBs at this Site may include the following:

- Oils, including hydraulic oils, historically used in the metal parts manufacturing process for corrosion protection and dust control. This potential is based on WDNR experience at other similar sites and is not based on the known presence of PCB-containing oils used on-Site.
- PCBs may have been present in the fill materials that were imported in the 1950s to construct the original building. The soil borings advanced at the Site have identified fill materials in the upper 5 to 10 feet of the soil column. The source of the fill materials is unknown and there is no information that the fill materials were tested at the time of placement.
- Potential electrical transformers were identified in two separate areas of the Site; one inside of the former building in the northwest corner and one outside of and near the southwest corner of the former building. The transformers are not currently present on-Site and it is unknown if these transformers were filled with PCB-containing oils.

As the source(s) and source(s) location(s) of PCBs at the Site are unknown, the WDNR has requested that PCBs in soils be evaluated across the Site using a grid-based soil sampling approach.

#### SAMPLING GRID APPROACH

The purpose of the grid sampling is to identify areas of PCB-affected soils from historic manufacturing operations. To establish a grid across the Site, the dimensions of the Site were input into Visual Sampling Plan Version 7.0 (VSP 7) software. The VSP 7 software is a tool that supports the development of a defensible sampling plan based on statistical sampling theory. The grid sampling area for the expanded PCB sampling across the Site, as shown on Figure 1, includes the area from Highway 120 on the west to the area east of the former channel and lagoon on the east, and from Church Street on the north to Honey Creek on the south.

The appropriate sampling rate for the expanded Site grid was calculated using VSP 7 based on the rate of sampling from previous sampling in the limited area. The limited area that was sampled covered an area of approximately 128,000 square feet (3 acres), as shown on Figure 1, and samples were collected at eight locations, or 16,000 square feet per location. The size and shape of this limited area were input into VSP 7. The software was used to determine the radius of a potential release that would result in the software estimating eight soil samples were appropriate for this at a 95% probability of detection of the potential release. The potential release radius that could be detected at 95% probability was determined to be 70 feet. This potential release radius was used to determine the grid spacing for the expanded PCB sampling grid. Using this radius to determine the expanded Site grid ensures that the remainder of the Site will be sampled at approximately the same rate as the original PCB sampling area.

The input parameters for VSP 7 for the expanded Site grid included the size and shape of the Site area (approximately 586,000 square feet or 13.5 acres) to be sampled, the use of a triangular grid, the 70-foot potential release radius, and a 95% probability of detecting the potential release. The appropriate grid spacing calculated for the expanded Site grid was calculated at approximately 135 feet.

The origin of the expanded Site grid was established to coincide with Boring 1 in the northwest corner of the former building and the expanded Site grid locations were identified using the 135-foot spacing. The expanded Site grid consists of 40 grid nodes or 14,560 square feet per node ( $\text{ft}^2/\text{node}$ ). Since eight of the grid node locations were



previously sampled, samples will be collected from 32 new grid nodes. Figure 2 shows the expanded grid across the Site and the soil sample grid locations.

The grid nodes that coincide or are close to the previous sample locations will not be sampled for PCBs during this investigation. As the southern and eastern boundaries of the Site are irregular in shape, sample points close to Honey Creek may require modification when the points are observed during fieldwork.

#### **SOIL SAMPLING PROCEDURE**

Prior to beginning field activities, the soil borings will be assigned global positioning system (GPS) coordinates and will be field-located using a Trimble® R1 unit capable of locating to approximately 1 to 2 feet. The location of each boring will be identified with a wooden stake marked with the label for the soil boring.

The grid nodes to be sampled will be evaluated to determine if the boring location requires adjustment based on the feasibility of advancing a soil boring, potential Site features being investigated, or previous remedial activities that have altered the area. This evaluation may result in boring location changes including, but not limited to, modifying the boring location, modifying the sample depth, or eliminating the boring location. The soil borings that could require modification include the following:

- Six soil borings located within the AOC may require modification of sampling depth due to fill materials placed in this area or modification of the boring location due to steep slopes on the north, south, and east sides of the AOC;
- Four soil borings located adjacent to Honey Creek may not be accessible due to the surface slope, slope stability, or vegetative growth along the creek and, therefore, may be moved or eliminated due to lack of accessibility; and
- One soil boring located on the west side of the Site along Highway 120 is in the right-of-way and will require modification to place it on-Site.

For boring locations that require modification, upon completion of sampling, the actual boring location will be identified using the Trimble® R1 unit and the new location will be manually entered into the database for the boring location.

#### PCB Sampling

At the grid node locations outside of the AOC, the borings will be advanced using direct-push technology to a maximum depth of 5 feet below ground surface (bgs). Soil samples will be collected continuously throughout the depth of the boring. Each soil core will be exposed by cutting the acetate liner. The soils will be inspected for visual and olfactory observations and each core will be photographed and field-screened for total volatile organic compounds (VOCs) using a photoionization detector (PID) equipped with a 10.6 eV lamp. The soil description will be recorded in accordance with the Unified Soil Classification System (USCS). The soil core will be divided into 2-foot sample intervals from the upper 4 feet of the soils recovered and a portion of the soils will be placed in Ziploc® bags marked with the boring number and sample depth.

Two soil samples will be collected from each soil boring (0 to 2 feet and 2 to 4 feet) and placed in laboratory-supplied sample containers for submittal to the laboratory for analysis of PCB Aroclors by United States Environmental Protection Agency (USEPA) Method 8082. The soil containers will be labeled with the sample ID, sample date, sample depth, and sample analysis prior to placement on ice in an insulated cooler. The samples will be shipped under chain-of-custody protocol to a WDNR-certified laboratory for analysis.

#### AOC Sampling

At the grid node locations within the AOC, the borings will be advanced through the material placed in the AOC. The AOC is constructed with a berm on the north, east, and south sides and fill materials inside of the berm. The material placed inside of the berm was covered with a geotextile fabric and 6 inches of clean topsoil. Limited hand-



excavated areas within the AOC appear to confirm this construction detail. The materials in the AOC were previously sampled by Avanti Consulting in December 2014. A summary of the soil analytical results and a figure showing the sample locations from the previous sampling event in December 2014, are included in Attachment 1. The maximum depth of sampling from 2014, 6 to 8 feet, will be used to estimate the depth of borings for these new sample locations.

For the six soil borings to be advanced in the AOC, the soil borings will be hand-excavated through the topsoil, cutting the geotextile fabric, to a depth of approximately 1 foot bgs. After this, each boring will be advanced using direct-push technology from approximately 1 foot bgs to the estimated depth of 6 to 8 feet, or as determined from the 2014 borings. Each boring will be advanced in 5-foot intervals and the soil core recovered from each boring will be exposed by cutting the acetate liner. The soil core will be photographed and field-screened for total VOCs using a PID equipped with a 10.6 eV lamp. The soil description will be recorded in accordance with the USCS. The soil core will be processed to collect three discrete soil samples for PCBs (0 to 2 feet, 2 to 4 feet, and 6 to 8 feet), one discrete soil sample for VOCs from 1 to 3 feet bgs, and one composite soil sample of the soil cores from 1 to 3 feet bgs and 6 to 8 feet bgs for polycyclic aromatic hydrocarbons (PAHs) and Resource Conservation and Recovery Act (RCRA) Metals. The samples will be placed into laboratory-supplied sample containers, placed on ice in an insulated cooler, and shipped to the laboratory for analysis. The samples will be analyzed for PCBs by USEPA Method 8082, VOCs by USEPA Method 8260, PAHs by USEPA Method 8270, and RCRA Metals by USEPA Method 6010.

#### Quality Assurance/Quality Control Sampling

Approximately 76 soil samples will be collected for laboratory analysis. As part of the soil sampling activities, duplicate soil samples will be collected from select borings and intervals at a rate of one quality assurance/quality control (QA/QC) sample for every 20 laboratory soil samples, or approximately four duplicate samples. Three of the duplicate samples will be collected from borings outside of the AOC and one duplicate sample will be collected from a boring within the AOC. The duplicate samples will be analyzed for the same parameters as the sample being duplicated. In addition, one field equipment blank will be collected from the direct-push metal drive shoe to ensure the decontamination procedure is not a source of cross-contamination. This sample will be analyzed for PCBs, VOCs, PAHs, and RCRA Metals.

To reduce the potential for cross-contamination, the direct-push equipment in contact with the sample (direct-push metal sampler drive shoe and tip) will be decontaminated between uses by washing it in a solution of water and non-phosphate detergent and rinsing it with clean, potable water. The direct-push sampler will be equipped with a new, clean, acetate liner prior to collection of the sample interval at each soil boring.

Field personnel handling the soil cores and samples will use a clean pair of disposable nitrile gloves between each sample. In addition, equipment that contacts the soil samples during collection will be decontaminated by washing it in a solution of water and non-phosphate detergent and rinsing it with clean, potable water.

If sample recovery is less than 75% of the total push depth or recovery is difficult due to the fill material encountered, the soil samples may be collected using a discrete sampling method to try to increase recovery. If discrete sampling techniques are used, additional borings may be required at each location.

Following sampling at each location, the borings will be properly abandoned in accordance with Wis. Adm. Code NR 141 requirements by filling the boring with bentonite chips from the bottom of the boring to the surface. The borings advanced in the AOC will be abandoned by filling the boring from the bottom of the boring to the depth of the geotextile fabric with bentonite chips. The geotextile fabric will be replaced over the bentonite chips and surface topsoil will be placed over the geotextile fabric. WDNR borehole abandonment forms will be completed for each of the soil borings.



## SOIL ANALYTICAL RESULTS

Upon receipt, the soil analytical results will be reviewed to validate the data. The data will then be electronically uploaded into the EQuIS project database and incorporated with the results from previous sampling events. The sample results will be highlighted to indicate the samples with concentrations that exceed the residual contaminant levels (RCLs) for industrial and non-industrial direct contact, and soil-to-groundwater pathway.

The soil samples with concentrations that exceed the RCLs will be identified and reviewed to determine if additional investigation is necessary. Additional Site investigation is not anticipated to be necessary for this phase of work. The grid established for the sampling is statistically-based and the size of the area can be determined. If there is an area of the Site that requires remediation, additional sampling may be completed to refine the limits of the remediation area. The soil samples collected from the AOC are not anticipated to require additional investigation because the materials are fill that was placed in the AOC and capped under the approval of the WDNR.

## PROJECT REPORTING

The results of this investigation will be compiled into tables and figures and submitted to the WDNR in a Supplemental Site Investigation Report. The report will include the results of previous sampling completed at the Site and will provide a comprehensive Site-wide review and interpretation of the PCB data to determine the appropriate actions necessary. The VOC, PAH, and RCRA Metals sample results for the borings from the AOC will be compared to the previous soil samples collected. With a comparison of the data, it may be possible to make an evaluation of the effectiveness of the phytoremediation system; however, the number of data points, both spatially and through time, is limited.

If you have any questions regarding this information, please contact me at (262) 754-2578 or by email at kevin.hedinger@gza.com.

Sincerely,

**GZA GeoEnvironmental, Inc.**

A handwritten signature in blue ink that appears to read "K. M. Hedinger".

Kevin M. Hedinger  
Senior Hydrogeologist

A handwritten signature in blue ink that appears to read "James F. Drought".

James F. Drought, P.H.  
Principal Hydrogeologist

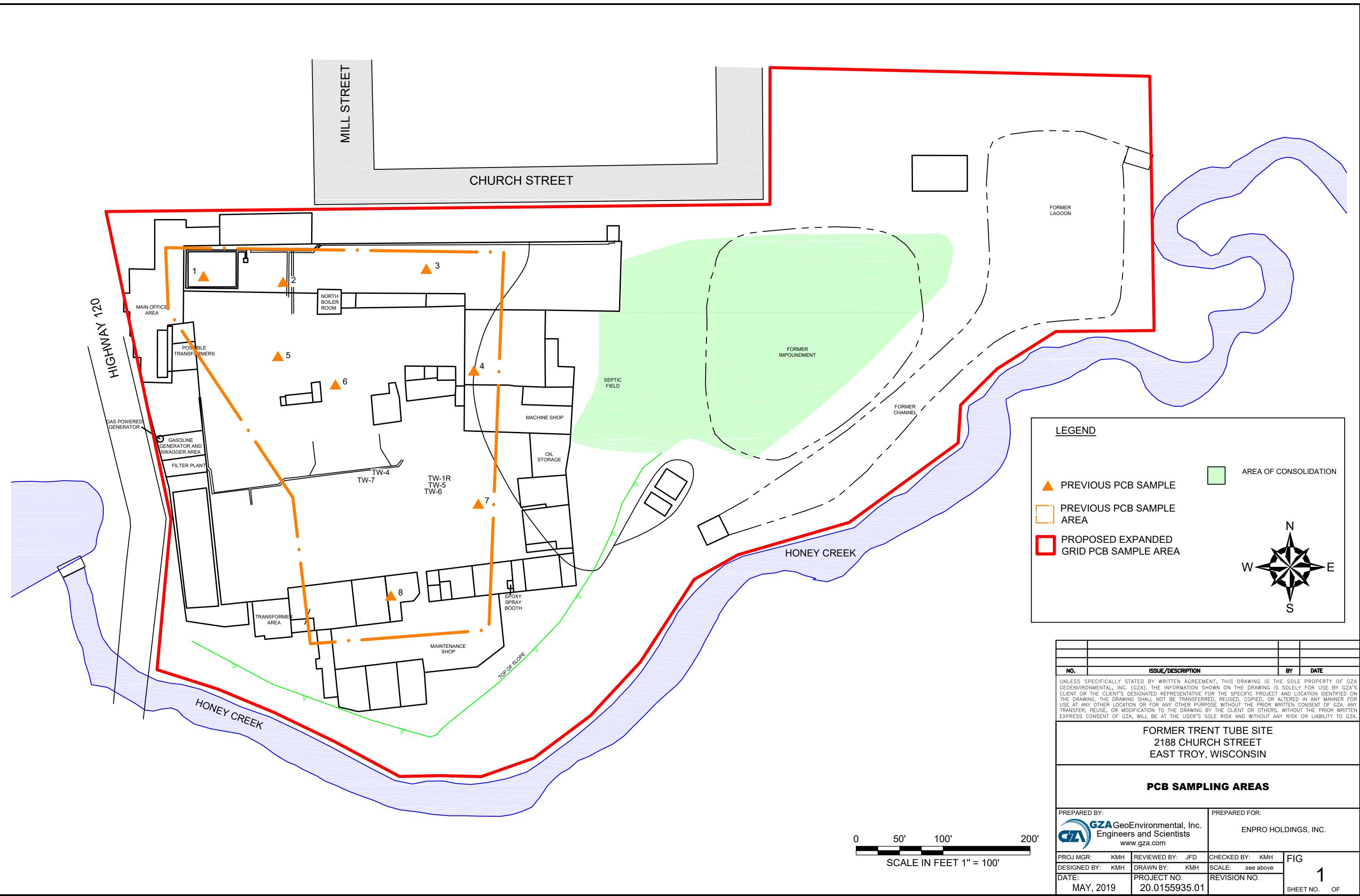
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FINAL 20.0155935.01 PCB Soil Sampling and AOC Matl Characterization Plan\_Trent Tube 6-12-19.docx

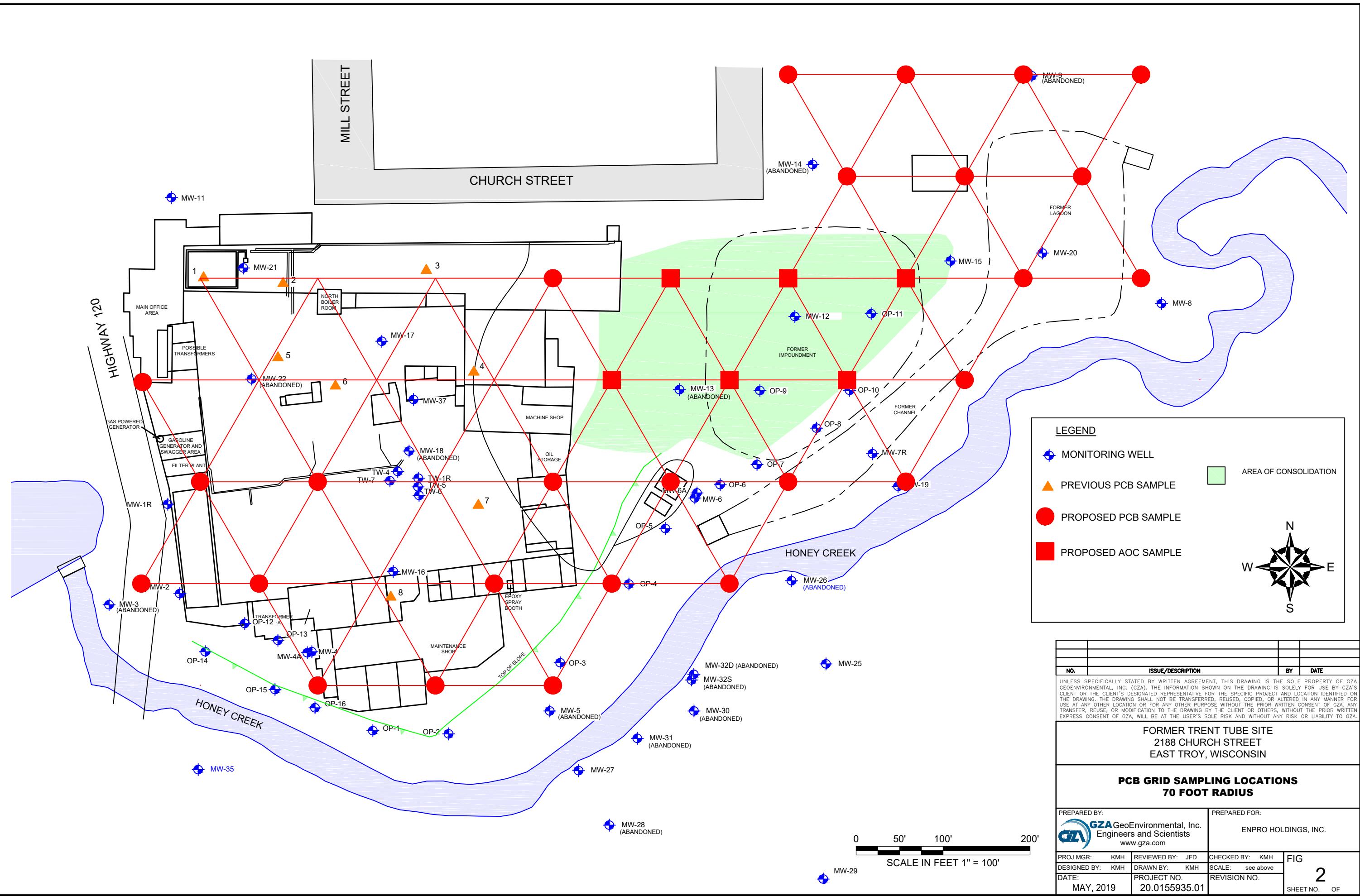
Attachments: Figures 1 and 2  
December 2014 Soil Analytical Results

cc: Benne Hutson, EnPro Industries, Inc.  
Phillip Bower, Husch Blackwell LLP



## FIGURES







**ATTACHMENT 1**

**December 2014 Soil Analytical Results**

## **ATTACHMENT 2**

### **PAH Results**

## 1 - Total Chromium

## 2 - Soluble Salts

### 3 - Elemental Mercury

#### 4 - Background Threshold Value (BT<sub>V</sub>) for Arsenic

**ATTACHMENT 2**  
**RCRA Metals Results**

Sample Name	Lab ID	Collection Date/Time	Metals (mg/Kg)								
			Arsenic	Barium	Cadmium	Chromium <sup>1</sup>	Lead	Nickel <sup>2</sup>	Selenium	Silver	Mercury <sup>3</sup>
		NR 720.9 DC RCLs	3.00	100,000	985	N/A	800	22,500	5,840	5,840	3.13
		BTV	8	364	1	44	52	31	NS	NS	NS
		STGW	0.584	164.8	0.752	360000	27	13.0612	0.52	0.8491	0.208
MU1-1A-(2-4)	490-64991-1	10/28/2014	4.18	26.4	0.447	8.74	6.34	8.08	< 1.32	< 0.658	< 0.0389
MU1-1A-(6-8)	490-64991-2	10/28/2014	< 1.69	38.0	0.526	178	11.8	123	1.99	< 0.940	0.146
MU1-1B-(2-4)	490-64991-3	10/28/2014	3.91	17.0	0.318	9.28	4.66	10.2	< 1.14	< 0.568	< 0.0346
MU1-1B-(6-8)	490-64991-4	10/28/2014	2.38	37.7	0.490	73.8	33.3	56.0	< 1.22	< 0.612	0.0887
MU1-2A-(2-4)	490-64991-5	10/28/2014	4.73	15.7	0.362	13.3	4.77	13.4	< 1.07	< 0.533	< 0.0313
MU1-2A-(6-8)	490-64991-6	10/28/2014	< 1.01	33.2	0.359	235	40.7	146	< 1.12	< 0.561	0.0498
MU1-2B-(2-4)	490-64991-7	10/28/2014	1.97	19.8	0.349	15.1	5.02	14.5	< 1.03	< 0.513	< 0.0312
MU1-2B-(4-6)	490-64991-8	10/28/2014	3.65	72.2	0.353	28.9	11.2	24.1	< 1.18	< 0.589	< 0.0354
MU1-2C-(2-4)	490-64991-9	10/28/2014	< 0.950	11.3	0.295	7.74	3.63	9.75	< 1.06	< 0.528	< 0.0314
MU1-2C-(4-6)	490-64991-10	10/28/2014	1.63	29.8	0.407	178	13.5	117	< 1.13	< 0.566	< 0.0348
MU1-2D-(2-4)	490-64991-11	10/28/2014	2.70	18.7	0.395	11.3	4.39	8.18	< 1.10	< 0.548	0.0409
MU1-2D-(6-8)	490-64991-12	10/28/2014	2.60	27.2	0.336	246	257	182	< 1.12	< 0.560	< 0.0341
MU1-2E-(2-4)	490-64991-13	10/28/2014	4.29	24.3	0.418	11.0	10.5	14.7	< 1.16	< 0.580	< 0.0351
MU1-2E-(6-8)	490-64991-14	10/28/2014	3.60	44.3	0.440	21.9	12.6	28.7	< 1.29	< 0.647	< 0.0394
MU1-3A-(2-4)	490-64991-15	10/28/2014	3.87	35.6	0.399	13.3	11.0	15.6	< 1.17	< 0.586	< 0.0357
MU1-3A-(6-8)	490-64991-16	10/28/2014	4.26	88.8	0.195	24.9	12.1	23.2	< 1.22	< 0.609	< 0.0362
MU1-3B-(0-2)	490-64991-17	10/28/2014	2.21	16.0	0.415	34.0	12.2	22.2	< 1.09	< 0.547	< 0.0331
MU1-3B-(6-8)	490-64991-18	10/28/2014	3.12	45.9	0.377	329	21.0	207	< 1.35	< 0.673	< 0.0410
MU1-3C-(2-4)	490-64991-19	10/28/2014	2.10	25.3	0.388	11.4	5.64	8.74	< 1.14	< 0.571	< 0.0348
MU1-3C-(6-8)	490-64991-20	10/28/2014	2.63	35.7	0.693	32.3	22.3	29.8	< 1.15	< 0.577	0.136
MU1-3D-(0-2)	490-64991-21	10/28/2014	2.35	31.5	0.329	12.2	7.02	11.6	< 1.10	< 0.549	< 0.0330
MU1-3D-(6-8)	490-64991-22	10/28/2014	< 0.952	30.3	0.317	705	44.6	463	< 1.06	< 0.529	0.0376
Trip Blank 1	490-64991-23	10/28/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Blank 2	490-64991-24	10/28/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA

1 - Total Chromium

2 - Soluble Salts

3 - Elemental Mercury

4 - Background Threshold Value (BTV) for Arsenic

**Attachment 2**  
**Summary of Soil Analytical Results- Area of Consolidation**  
**Former Trent Tube Plant No. 1**  
**2188 Church Street**  
**East Troy, Wisconsin**

Sample Name	Lab ID	Collection Date/Time	Volatile (mg/Kg)																		
			Acetone	Benzene	Bromobenzene	Bromoform	Bromochloromethane	Bromomethane	2-Butanone (MEK)	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	1,2-Dibromo-3-Chloropropane	2-Chlorotoluene
		Industrial DC RCLs	100,000	7.07	679	906	113	43	28,400	108	145	183	738	4.03	761	N/A	N/A	1.98	669	0.092	907
		Non-Industrial DC RCL	63,400	1.6	342	216	25.4	9.6	28,400	108	145	183	738	0.916	370	N/A	N/A	0.454	159	0.008	907
		STGW	3.6766	0.01	NS	NS	0.0023	0.0051	1.661	NS	NS	NS	0.5919	0.0039	NS	NS	0.2266	0.0033	0.0155	0.0002	NS
MU1-1A-(2-4)	490-64991-1	10/28/2014	0.270	0.00266	< 0.000654	< 0.000499	< 0.000499	< 0.00109	0.0612	< 0.000890	0.0116	0.00169	0.00433	< 0.000608	< 0.000608	< 0.000309	< 0.00173	< 0.000608	< 0.000608	< 0.000636	< 0.000808
MU1-1A-(6-8)	490-64991-2	10/28/2014	1.01	0.00351	< 0.00112	< 0.000857	< 0.000857	< 0.00187	0.205	< 0.00153	< 0.00104	< 0.00140	0.0105	< 0.00104	< 0.00104	< 0.000530	< 0.00296	< 0.00104	< 0.00104	< 0.00109	< 0.00139
MU1-1B-(2-4)	490-64991-3	10/28/2014	0.204	< 0.000545	< 0.000586	< 0.000448	< 0.000448	< 0.000977	0.0547	0.0752	0.00945	0.00156	0.00547	< 0.000545	< 0.000545	< 0.000277	< 0.00155	< 0.000545	< 0.000545	< 0.000570	< 0.000724
MU1-1B-(6-8)	490-64991-4	10/28/2014	1.16	0.00210	< 0.000647	< 0.000494	< 0.000494	< 0.00108	0.226	0.239	0.0153	< 0.000808	0.00707	< 0.000602	< 0.000602	< 0.000305	0.0114	< 0.000602	< 0.000602	< 0.000629	< 0.000799
MU1-2A-(2-4)	490-64991-5	10/28/2014	0.0752	0.00278	< 0.000764	< 0.000584	< 0.000584	< 0.00127	0.0196	< 0.00104	0.00109	< 0.000955	< 0.00382	< 0.000711	< 0.000711	< 0.000361	< 0.00202	< 0.000711	< 0.000711	< 0.000743	< 0.000944
MU1-2A-(6-8)	490-64991-6	10/28/2014	0.250	0.00216	< 0.000613	< 0.000468	< 0.000468	< 0.00102	0.0482	< 0.000834	< 0.000570	< 0.000766	< 0.00307	< 0.000570	< 0.000570	< 0.000290	0.00205	< 0.000570	< 0.000570	< 0.000596	< 0.000758
MU1-2B-(2-4)	490-64991-7	10/28/2014	< 0.0318	0.00121	< 0.000573	< 0.000438	< 0.000438	< 0.000955	0.00610	< 0.000780	< 0.000533	< 0.000717	< 0.00287	< 0.000533	< 0.000533	< 0.000271	< 0.00151	0.000533	< 0.000533	< 0.000557	< 0.000709
MU1-2B-(4-6)	490-64991-8	10/28/2014	0.150	0.00312	< 0.000615	< 0.000470	< 0.000470	< 0.00103	0.0295	< 0.000838	0.00330	< 0.000769	0.00330	< 0.000573	< 0.000573	< 0.000291	< 0.00162	< 0.000573	< 0.000573	< 0.000598	< 0.000761
MU1-2C-(2-4)	490-64991-9	10/28/2014	0.129	0.00246	< 0.000539	< 0.000412	< 0.000412	< 0.000899	0.0233	< 0.000734	< 0.000502	< 0.000674	0.00569	< 0.000502	< 0.000502	< 0.000255	< 0.00142	< 0.000502	< 0.000502	< 0.000524	< 0.000666
MU1-2C-(4-6)	490-64991-10	10/28/2014	0.0581	0.000810	< 0.000552	< 0.000421	< 0.000421	< 0.000919	< 0.00391	0.00787	0.00291	< 0.000690	< 0.00276	< 0.000513	< 0.000513	< 0.000260	< 0.00146	< 0.000513	< 0.000513	< 0.000536	< 0.000682
MU1-2D-(2-4)	490-64991-11	10/28/2014	0.0699	0.00278	< 0.000563	< 0.000430	< 0.000430	< 0.000939	< 0.00399	0.00132	< 0.000524	< 0.000704	0.00586	< 0.000524	< 0.000524	< 0.000266	< 0.00149	< 0.000524	< 0.000524	< 0.000547	< 0.000696
MU1-2D-(6-8)	490-64991-12	10/28/2014	0.189	0.00187	< 0.000572	< 0.000437	< 0.000437	< 0.000953	0.0295	0.0100	0.00183	< 0.000715	< 0.00286	< 0.000532	< 0.000532	< 0.000270	0.00218	< 0.000532	0.000560	< 0.000556	0.000814
MU1-2E-(2-4)	490-64991-13	10/28/2014	0.0748	0.00200	< 0.000605	< 0.000462	< 0.000462	< 0.00101	0.0117	< 0.000824	< 0.000563	< 0.000757	0.00411	< 0.000563	< 0.000563	< 0.000286	< 0.00160	0.000603	< 0.000563	< 0.000589	< 0.000748
MU1-2E-(6-8)	490-64991-14	10/28/2014	0.792	0.00224	< 0.000670	< 0.000512	< 0.000512	< 0.00112	0.134	0.0471	0.0211	0.00360	0.0243	< 0.000624	< 0.000624	< 0.000316	< 0.00177	< 0.000624	< 0.000624	< 0.000652	< 0.000828
MU1-3A-(2-4)	490-64991-15	10/28/2014	0.328	0.00200	< 0.000555	< 0.000424	< 0.000424	< 0.000924	0.0604	0.0667	0.0110	0.00230	0.00375	< 0.000516	< 0.000516	< 0.000262	< 0.00146	< 0.000516	0.000553	< 0.000539	< 0.000686
MU1-3A-(6-8)	490-64991-16	10/28/2014	< 2.25	< 0.0382	< 0.0404	< 0.0314	< 0.0314	< 0.0674	< 0.292	0.414	< 0.0382	< 0.0561	< 0.202	< 0.0382	< 0.0382	< 0.0191	< 0.107	< 0.0382	< 0.0382	< 0.0393	< 0.0516
MU1-3B-(0-2)	490-64991-17	10/28/2014	0.0524	0.00380	< 0.000578	< 0.000442	< 0.000442	< 0.000964	0.0125	< 0.000787	< 0.000538	< 0.000723	0.00756	< 0.000538	< 0.000538	< 0.000273	< 0.00153	< 0.000538	< 0.000538	< 0.000562	< 0.000715
MU1-3B-(6-8)	490-64991-18	10/28/2014	0.159	0.00134	< 0.000651	< 0.000497	< 0.000497	< 0.00108	0.0140	0.00267	< 0.000605	< 0.000813	0.00544	< 0.000605	< 0.000605	< 0.000307	< 0.00172	< 0.000605	< 0.000605	< 0.000633	< 0.000804
MU1-3C-(2-4)	490-64991-19	10/28/2014	< 3.89	< 0.0661	< 0.0700	< 0.0544	< 0.0544	< 0.117	< 0.505	0.475	0.0893	< 0.0972	< 0.350	< 0.0661	< 0.0661	< 0.0330	< 0.185	< 0.0661	< 0.0661	<	

**Attachment 2**  
**Summary of Soil Analytical Results- Area of Consolidation**  
**Former Trent Tube Plant No. 1**  
**2188 Church Street**  
**East Troy, Wisconsin**

Sample Name	Lab ID	Collection Date/Time	Volatile organic compounds (mg/Kg)																		
			4-Chlorotoluene	1,2-Dibromoethane (EDB)	Dibromomethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorobromomethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	1,3-Dichloropropane	2,2-Dichloropropane	1,1-Dichloropropene	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene
		Industrial DC RCLs	253	0.221	143	376	297	16.4	N/A	530	22.2	2.87	1,190	2,340	1,850	15	1,490	191	N/A	1,210	1,510
		Non-Industrial DC RCL	253	0.05	34	376	297	3.74	N/A	126	5.06	0.652	320	156	1,560	3.4	1,490	191	N/A	1,210	1,510
		STGW	NS	0.0000282	NS	1.168	1.1528	0.144	NS	3.0863	0.4834	0.0028	0.005	0.0412	0.0626	0.0033	NS	NS	NS	0.0003	0.0003
MU1-1A-(2-4)	490-64991-1	10/28/2014	< 0.000763	< 0.000908	< 0.000508	< 0.000309	< 0.000608	< 0.000608	< 0.000499	< 0.000908	< 0.000608	< 0.000608	< 0.000518	0.00635	< 0.000608	< 0.000853	< 0.000853	< 0.000608	< 0.000463	< 0.000608	< 0.000608
MU1-1A-(6-8)	490-64991-2	10/28/2014	< 0.00131	< 0.00156	< 0.000872	< 0.000530	< 0.00104	< 0.00104	< 0.000857	< 0.00156	0.00894	< 0.00104	< 0.000888	0.0351	0.00397	< 0.00146	< 0.00146	< 0.00104	< 0.000795	< 0.00104	< 0.00104
MU1-1B-(2-4)	490-64991-3	10/28/2014	< 0.000684	< 0.000814	< 0.000456	< 0.000277	< 0.000545	< 0.000545	< 0.000448	< 0.000814	< 0.000545	< 0.000545	< 0.000464	0.00896	< 0.000545	< 0.000765	< 0.000765	< 0.000545	< 0.000415	< 0.000545	< 0.000545
MU1-1B-(6-8)	490-64991-4	10/28/2014	< 0.000754	< 0.000898	< 0.000503	< 0.000305	< 0.000602	0.00408	< 0.000494	< 0.000898	0.0628	< 0.000602	0.000617	0.0692	0.00823	< 0.000844	< 0.000844	< 0.000602	< 0.000458	< 0.000602	< 0.000602
MU1-2A-(2-4)	490-64991-5	10/28/2014	< 0.000891	< 0.00106	< 0.000594	< 0.000361	< 0.000711	< 0.000711	< 0.000584	< 0.00106	0.0103	< 0.000711	< 0.000605	0.00549	< 0.000711	< 0.000997	< 0.000997	< 0.000711	< 0.000541	< 0.000711	< 0.000711
MU1-2A-(6-8)	490-64991-6	10/28/2014	< 0.000715	< 0.000851	< 0.000477	< 0.000290	< 0.000570	< 0.000570	< 0.000468	< 0.000851	0.0164	< 0.000570	0.000773	0.127	0.00881	< 0.000800	< 0.000800	< 0.000570	< 0.000434	< 0.000570	< 0.000570
MU1-2B-(2-4)	490-64991-7	10/28/2014	< 0.000669	< 0.000796	< 0.000446	< 0.000271	< 0.000533	< 0.000533	< 0.000438	< 0.000796	0.00186	< 0.000533	< 0.000454	0.0384	0.00228	< 0.000748	< 0.000748	< 0.000533	< 0.000406	< 0.000533	< 0.000533
MU1-2B-(4-6)	490-64991-8	10/28/2014	< 0.000718	< 0.000855	< 0.000479	< 0.000291	< 0.000573	< 0.000573	< 0.000470	< 0.000855	0.000866	< 0.000573	< 0.000487	0.0130	0.000676	< 0.000803	< 0.000803	< 0.000573	< 0.000436	< 0.000573	< 0.000573
MU1-2C-(2-4)	490-64991-9	10/28/2014	< 0.000629	< 0.000749	< 0.000419	< 0.000255	< 0.000502	< 0.000502	< 0.000412	< 0.000749	< 0.000502	< 0.000502	< 0.000427	0.00864	0.000701	< 0.000704	< 0.000704	< 0.000502	< 0.000382	< 0.000502	< 0.000502
MU1-2C-(4-6)	490-64991-10	10/28/2014	< 0.000644	< 0.000766	< 0.000429	< 0.000260	< 0.000513	< 0.000513	< 0.000421	< 0.000766	0.0113	< 0.000513	0.00150	0.223	0.0125	< 0.000720	< 0.000720	< 0.000513	< 0.000391	< 0.000513	< 0.000513
MU1-2D-(2-4)	490-64991-11	10/28/2014	< 0.000657	< 0.000782	< 0.000438	< 0.000266	< 0.000524	< 0.000524	< 0.000430	< 0.000782	< 0.000524	< 0.000524	< 0.000446	0.579	0.0117	< 0.000735	< 0.000735	< 0.000524	< 0.000399	< 0.000524	< 0.000524
MU1-2D-(6-8)	490-64991-12	10/28/2014	< 0.000667	< 0.000794	< 0.000445	< 0.000270	< 0.000532	< 0.000532	< 0.000437	< 0.000794	0.0207	< 0.000532	0.00180	0.0762	0.00884	< 0.000746	< 0.000746	< 0.000532	< 0.000405	< 0.000532	< 0.000532
MU1-2E-(2-4)	490-64991-13	10/28/2014	< 0.000706	< 0.000841	< 0.000471	< 0.000286	< 0.000563	< 0.000563	< 0.000462	< 0.000841	< 0.000563	< 0.000563	< 0.000479	0.0177	0.000651	< 0.000790	< 0.000790	< 0.000563	< 0.000429	< 0.000563	< 0.000563
MU1-2E-(6-8)	490-64991-14	10/28/2014	< 0.000782	< 0.000931	< 0.000521	< 0.000316	< 0.000624	< 0.000624	< 0.000512	< 0.000931	0.00729	< 0.000624	0.000625	0.0424	0.00681	< 0.000875	< 0.000875	< 0.000624	< 0.000475	< 0.000624	< 0.000624
MU1-3A-(2-4)	490-64991-15	10/28/2014	< 0.000647	< 0.000770	< 0.000431	< 0.000262	< 0.000516	0.00127	< 0.000424	< 0.000770	< 0.000516	< 0.000516	< 0.000439	0.00890	0.000554	< 0.000724	< 0.000724	< 0.000516	< 0.000393	< 0.000516	< 0.000516
MU1-3A-(6-8)	490-64991-16	10/28/2014	< 0.0471	< 0.0561	< 0.0314	< 0.0191	0.0409	< 0.0528	< 0.0314	< 0.0561	< 0.0376	< 0.0376	< 0.0326	< 0.0382	< 0.0382	< 0.0528	< 0.0528	< 0.0382	< 0.0292	< 0.0382	< 0.0382
MU1-3B-(0-2)	490-64991-17	10/28/2014	< 0.000675	< 0.000803	< 0.000450	< 0.000273	< 0.000538	< 0.000538	< 0.000442	< 0.000803	0.000740	< 0.000538	< 0.000458	0.0176	0.00115	< 0.000755	< 0.000755	< 0.000538	< 0.000410	< 0.000538	< 0.000538
MU1-3B-(6-8)	490-64991-18	10/28/2014	< 0.000759	< 0.000904	< 0.000506	< 0.000307	< 0.000605	< 0.000605	< 0.000497	< 0.000904	0.0151	< 0.000605	< 0.000515	0.0246	0.00438	< 0.000850	< 0.000850				

**Attachment 2**  
**Summary of Soil Analytical Results- Area of Consolidation**  
**Former Trent Tube Plant No. 1**  
**2188 Church Street**  
**East Troy, Wisconsin**

Sample Name	Lab ID	Volatile (mg/Kg)		Collection Date/Time	Ethylbenzene	Hexachlorobutadiene	2-Hexanone	Isopropylbenzene	p-Isopropyltoluene	Methyl tert-butyl ether	Methylene Chloride	Naphthalene	4-Methyl-2-pentanone(MIBK)	N-Propylbenzene	Styrene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	Tetrachloroethene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichlorofluoromethane
		Industrial DC RCLs	35.4	7.19	1,760	268	162	282	1,150	24.1	3,360	N/A	867	12.3	3.6	145	818	934	113	640	7.01	8.41	1,230		
		Non-Industrial DC RCL	8.02	1.63	237	268	162	63.8	61.8	5.52	3,360	N/A	867	2.78	0.81	33	818	62.6	24.0	640	1.59	1.30	1,230		
		STGW	1.57	NS	NS	NS	NS	0.027	0.0026	0.6582	0.2252	NS	0.22	0.0534	0.0002	0.0045	1.1072	NS	0.408	0.1402	0.0032	0.0036	NS		
MU1-1A-(2-4)	490-64991-1	10/28/2014	0.00992	< 0.00104	< 0.0152	0.00608	0.0176	< 0.000872	< 0.000781	20.4	< 0.0154	0.0123	< 0.000999	< 0.000608	< 0.000908	< 0.000663	0.0111	< 0.000345	< 0.000608	< 0.000835	< 0.00127	0.00756	< 0.000908		
MU1-1A-(6-8)	490-64991-2	10/28/2014	< 0.00104	< 0.00178	< 0.0260	< 0.000639	< 0.00104	< 0.00150	< 0.00134	0.00471	< 0.0265	< 0.00104	< 0.00171	< 0.00104	< 0.00156	< 0.00114	0.00663	< 0.000592	< 0.00104	0.00405	< 0.00218	0.0595	< 0.00156		
MU1-1B-(2-4)	490-64991-3	10/28/2014	0.0173	< 0.000928	< 0.0136	0.00644	0.0171	< 0.000781	< 0.000700	58.4	< 0.0138	0.0117	< 0.000895	< 0.000545	< 0.000814	< 0.000594	0.0225	0.000462	< 0.000545	< 0.000749	< 0.00114	0.00646	< 0.000814		
MU1-1B-(6-8)	490-64991-4	10/28/2014	0.0318	< 0.00102	< 0.0150	0.00638	0.0529	< 0.000862	< 0.000772	65.6	< 0.0153	0.0241	< 0.000988	< 0.000602	< 0.000898	0.00138	0.0684	0.000517	< 0.000602	0.00304	< 0.00126	0.0443	< 0.000898		
MU1-2A-(2-4)	490-64991-5	10/28/2014	0.00246	< 0.00121	< 0.0177	0.000795	0.00120	< 0.00102	< 0.000912	0.0201	< 0.0180	0.000996	< 0.00117	< 0.000711	< 0.00106	0.00303	0.00577	< 0.000403	< 0.000711	< 0.000976	< 0.00149	0.0881	< 0.00106		
MU1-2A-(6-8)	490-64991-6	10/28/2014	0.00120	< 0.000971	< 0.0142	< 0.000349	< 0.000570	< 0.000817	< 0.000732	0.0386	< 0.0145	< 0.000570	< 0.000937	< 0.000570	< 0.000851	0.00166	0.00310	< 0.000324	< 0.000570	0.00316	< 0.00119	0.306	< 0.000851		
MU1-2B-(2-4)	490-64991-7	10/28/2014	0.00107	< 0.000908	< 0.0133	< 0.000326	< 0.000533	< 0.000764	< 0.000685	0.0303	< 0.0135	< 0.000533	< 0.000876	< 0.000533	< 0.000796	0.00146	0.00253	< 0.000303	< 0.000533	0.00487	< 0.00111	0.0856	< 0.000796		
MU1-2B-(4-6)	490-64991-8	10/28/2014	0.00460	< 0.000974	< 0.0143	0.00204	0.00557	< 0.000821	< 0.000735	14.3	< 0.0145	0.00307	< 0.000940	< 0.000573	< 0.000855	< 0.000624	0.00920	< 0.000325	< 0.000573	0.00188	< 0.00120	0.0152	< 0.000855		
MU1-2C-(2-4)	490-64991-9	10/28/2014	0.00193	< 0.000854	< 0.0125	< 0.000307	< 0.000502	< 0.000719	< 0.000644	0.00477	< 0.0127	< 0.000502	< 0.000824	< 0.000502	< 0.000749	< 0.000547	0.00495	< 0.000285	< 0.000502	0.000842	< 0.00105	0.0233	< 0.000749		
MU1-2C-(4-6)	490-64991-10	10/28/2014	0.00208	< 0.000873	< 0.0128	0.00147	0.00212	< 0.000736	< 0.000659	0.196	< 0.0130	0.00171	< 0.000843	< 0.000513	< 0.000766	< 0.00470	0.00229	< 0.000291	< 0.000513	0.0147	< 0.00107	0.125	< 0.000766		
MU1-2D-(2-4)	490-64991-11	10/28/2014	0.00220	< 0.000892	< 0.0131	< 0.000321	0.000697	< 0.000751	< 0.000673	< 0.00133	< 0.0133	0.000691	< 0.000860	< 0.000524	< 0.000782	0.000689	0.00502	< 0.000297	< 0.000524	< 0.000720	< 0.00109	0.0170	< 0.000782		
MU1-2D-(6-8)	490-64991-12	10/28/2014	0.00143	< 0.000905	< 0.0133	0.000437	0.00277	< 0.000762	< 0.000683	0.241	< 0.0135	0.000941	< 0.000873	< 0.000532	< 0.000794	0.00122	0.00323	< 0.000302	< 0.000532	0.00149	< 0.00111	0.189	< 0.000794		
MU1-2E-(2-4)	490-64991-13	10/28/2014	0.00160	< 0.000958	< 0.0140	< 0.000345	0.000747	< 0.000807	< 0.000723	0.00918	< 0.0143	0.000657	< 0.000925	< 0.000563	< 0.000841	0.00107	0.00321	< 0.000319	< 0.000563	< 0.000773	< 0.00118	0.0793	< 0.000841		
MU1-2E-(6-8)	490-64991-14	10/28/2014	0.00365	< 0.00106	< 0.0155	0.00605	0.0215	< 0.000894	< 0.000801	7.22	< 0.0158	0.0137	< 0.00102	< 0.000624	< 0.000931	0.000903	0.00618	0.000599	< 0.000624	0.00111	< 0.00130	0.165	< 0.000483		
MU1-3A-(2-4)	490-64991-15	10/28/2014	0.0164	< 0.000878	< 0.0129	0.00559	0.0203	< 0.000739	< 0.000662	55.4	< 0.0131	0.0157	< 0.000847	< 0.000516	< 0.000770	< 0.00876	0.0149	< 0.000293	< 0.000516	< 0.000709	0.00114	0.0129	< 0.000770		
MU1-3A-(6-8)	490-64991-16	10/28/2014	< 0.0382	< 0.0617	< 0.943	0.0519	0.159	< 0.0561	< 0.0561	22.3	< 0.954	< 0.0382	< 0.0617	< 0.0376	< 0.0561	< 0.0382	0.160	< 0.0213	< 0.0376	< 0.0516</td					

**Attachment 2**  
**Summary of Soil Analytical Results- Area of Consolidation**  
**Former Trent Tube Plant No. 1**  
**2188 Church Street**  
**East Troy, Wisconsin**

Volatile (mg/Kg)							
Sample Name	Lab ID	Collection Date/Time	1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl chloride	Xylenes, Total
		Industrial DC RCLs	0.109	219	182	2.08	260
		Non-Industrial DC RCL	0.005	219	182	0.067	260
		STGW	0.0519	1.3787		0.0001	3.96
MU1-1A-(2-4)	490-64991-1	10/28/2014	< 0.000499	0.147	0.0390	0.00122	0.0498
MU1-1A-(6-8)	490-64991-2	10/28/2014	< 0.000857	0.00351	< 0.00117	0.00749	< 0.00104
MU1-1B-(2-4)	490-64991-3	10/28/2014	< 0.000448	0.183	0.0451	0.00128	0.0787
MU1-1B-(6-8)	490-64991-4	10/28/2014	0.00797	0.484	0.124	0.0213	0.173
MU1-2A-(2-4)	490-64991-5	10/28/2014	0.00348	0.00851	0.00142	< 0.00117	0.00596
MU1-2A-(6-8)	490-64991-6	10/28/2014	< 0.000468	0.00221	0.000641	0.0704	0.00299
MU1-2B-(2-4)	490-64991-7	10/28/2014	< 0.000438	0.00119	< 0.000597	< 0.000876	0.00224
MU1-2B-(4-6)	490-64991-8	10/28/2014	0.00423	0.0469	0.0112	< 0.000940	0.0189
MU1-2C-(2-4)	490-64991-9	10/28/2014	< 0.000412	0.00162	< 0.000562	< 0.000824	0.00363
MU1-2C-(4-6)	490-64991-10	10/28/2014	0.00829	0.0160	0.00119	0.0239	0.00781
MU1-2D-(2-4)	490-64991-11	10/28/2014	< 0.000430	0.00519	0.00184	0.00558	0.00560
MU1-2D-(6-8)	490-64991-12	10/28/2014	< 0.000437	0.0123	0.000856	2.55	0.00536
MU1-2E-(2-4)	490-64991-13	10/28/2014	0.00274	0.00234	0.00102	< 0.000925	0.00367
MU1-2E-(6-8)	490-64991-14	10/28/2014	0.140	0.130	0.0513	0.0202	0.0183
MU1-3A-(2-4)	490-64991-15	10/28/2014	< 0.000424	0.209	0.0581	0.00297	0.0745
MU1-3A-(6-8)	490-64991-16	10/28/2014	0.0915	0.538	0.140	< 0.0617	0.0710
MU1-3B-(0-2)	490-64991-17	10/28/2014	< 0.000442	0.00177	0.000714	< 0.000883	0.00379
MU1-3B-(6-8)	490-64991-18	10/28/2014	< 0.000497	0.00195	< 0.000678	0.00528	0.00338
MU1-3C-(2-4)	490-64991-19	10/28/2014	< 0.0544	0.542	0.195	< 0.107	0.0964
MU1-3C-(6-8)	490-64991-20	10/28/2014	< 0.000613	0.0370	0.0144	< 0.00123	0.0536
MU1-3D-(0-2)	490-64991-21	10/28/2014	< 0.000449	0.000832	< 0.000612	< 0.000897	0.00238
MU1-3D-(6-8)	490-64991-22	10/28/2014	< 0.000418	0.000882	< 0.000570	0.0648	0.00200
Trip Blank 1	490-64991-23	10/28/2014	< 0.000550	< 0.00100	< 0.000750	< 0.00110	< 0.000670
Trip Blank 2	490-64991-24	10/28/2014	< 0.000550	< 0.00100	< 0.000750	< 0.00110	< 0.000670

Exceeds Soil to Groundwater RCL

Exceeds Non-Industrial Direct Contact RCL

1 - Total Chromium

2 - Soluble Salts

3 - Elemental Mercury

4 - Background Threshold Value (BTM) for Arsenic

- 2005-2006 - berm constructed of clean fill material upland of the GETS to consolidate impacted soils excavated during various remedial actions; WDNR-approved Soil Management Plan (2003)
- AOC covers approximately 49,000 square feet
- Impacted soil inside the berm covered with geotextile fabric and 6 inches of clean topsoil; elevation of 835 feet
- Cover approved as a cap
- Condition of WDNR approval was that full-scale phytoremediation system be installed in the AOC to supplement existing remedial action
- Phytoremediation system installed on May 23, 2006 (661 trees; 595 hybrid poplars and 66 willow trees)
- Phytoremediation system operated for 3 years
- In 2008, phytoremediation system was removed to facilitate placement of impacted sediment excavated from Honey Creek
- Spring 2012 site-wide phytoremediation was installed as final remedial closure strategy for management units MU-1 through MU-4
- Phytoremediation Monitoring and Maintenance Plan (what year; need to review)
  - Surface slope toward infiltration basin within the berm area
- October 9, 2014 Phytoremediation system evaluation performed; soil samples from management units
  - Geoprobe borings advanced using Geoprobe
  - Cores collected from 1-3 feet and 6-8 feet
  - 1-3 is below top soil and 6-8 feet which is the approximate base of the AOC
  - VOCs collected from each interval; after VOC collection rest fo core mixed and composite sample collected

