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Project Manager

June 24, 2016

Mr. Bradley Benning
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**Subject: Final Site Assessment Report – Wagner Ware Site
EPA Contract No. EP-S5-13-01
Technical Direction Document No. S05-0001-1508-200.
Document Tracking No. 0905**

Dear Mr. Benning:

Tetra Tech Inc. (Tetra Tech) is submitting the final Site Assessment Report for the Wagner Ware Site. This final letter report summarizes sampling activities conducted on August 27, 2015, and October 21, 2015 and presents analytical results obtained through these sampling efforts. The site assessment was performed to assess and document site conditions and the potential for imminent and substantial threats to the public health or the environment in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Title 40 of the Code of Federal Regulations (40 CFR), Part 300.415(b)(2).

If you have any questions regarding this report, please call me at (513) 333-4813.

Sincerely,

A handwritten signature in black ink that reads 'Lauren Foster'.

Lauren Foster
Project Manager

Enclosure

cc: Kevin Scott, Tetra Tech Program Manager
TDD File

**FINAL SITE ASSESSMENT REPORT
WAGNER WARE SITE
SIDNEY, SHELBY COUNTY, OHIO**

Prepared for

U.S. Environmental Protection Agency
Emergency Response Branch
Region 5
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Chicago, IL 60606

Submitted by

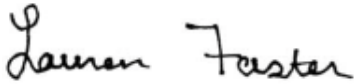
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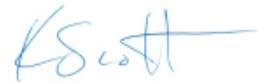
June 24, 2016

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1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) tasked Tetra Tech Inc. (Tetra Tech) to perform the following activities:

- Compile available Site information;
- Develop a site-specific Health and Safety Plan and a Sampling and Analysis Plan;
- Conduct a site reconnaissance;
- Provide photographic documentation of the Site;
- Procure analytical services from a laboratory;
- Collect liquid and solid (“bulk”) samples of unknown products;
- Field screen samples for pH and volatile organic compounds (VOCs);
- Validate laboratory analytical data;
- Evaluate potential threats posed by the Site to public health or the environment;
- Develop a site assessment report of completed activities

These activities were performed as part of an EPA site assessment for the Wagner Ware Site in Sidney, Shelby County, Ohio and were authorized under Superfund Technical Assessment and Response Team (START) Contract EP-S5-13-01, Technical Direction Document (TDD) No. S05-0001-1508-200. The site assessment was performed to assess and document site conditions and the potential for imminent and substantial threats to the public health or the environment in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Title 40 of the Code of Federal Regulations (40 CFR), Part 300.415(b)(2). The site assessment was triggered when Ohio Environmental Protection Agency (Ohio EPA) responded to a citizen complaint and found five large PCB transformers abandoned at the Wagner Ware facility.

This site assessment report documents sampling that took place at the Wagner Ware Site on August 27, 2015 and October 21, 2015. The report discusses the site description and site background in Section 2.0, describes sampling activities in Section 3.0, provides a summary of analytical results in Section 4.0, provides conclusions in Section 5.0, and includes references in Section 6.0. Site figures are provided in Appendix A, and tables are provided in Appendix B. Photographic documentation is provided in Appendix C. START field notes are provided in Appendix D. Data validation report and validated analytical data are provided in Appendix E and Appendix F.

2.0 SITE BACKGROUND

This section describes the site location, the site description, and the project.

2.1 SITE LOCATION

The Site is located at 440 Fair Road, situated in Sidney, Shelby County, Ohio 45365 (Appendix A, Figure 1). The Geographical coordinates for the Property include the following:

TABLE 1
GEOGRAPHICAL COORDINATES

North Central Corner	North 40° 16' 56.43" / West 84° 09' 41.59"
Northeast Corner	North 40° 16' 56.98" / West 84° 09' 40.61"
East Corner	North 40° 16' 53.01" / West 84° 09' 38.86"
South Central Corner	North 40° 16' 49.23" / West 84° 09' 43.26"
Southwest Corner	North 40° 16' 49.26" / West 84° 09' 44.73"
Northwest Corner	North 40° 16' 56.40" / West 84° 09' 44.87"

Residential properties are located within twenty feet of the Site to the north, south, and west. The site is bordered to the north by Culvert Street and residential homes. It is bordered to the east by industrial rail road tracks with residential homes beyond, to the south by Fair Road with residential homes beyond, and to the west by South Wilkinson Avenue with residential houses beyond (Appendix A, Figure 2). Commercial businesses are located within 850 feet east and north of the Site, and the closest residences are located within twenty feet east of the Site.

2.2 SITE DESCRIPTION

The approximately 5.74-acre property consists of two platted, unused alleys, and 27 platted lots. These platted lots are described as the following 26 parcels: 18-36-182-001 through 18-36-182-024, 18-36-327-001, and 18-36-327-002.

The Property is located on the northwest side of Fair Road developed with an approximately 160,000 square foot industrial building. The remainder of the Property is developed with paved and landscaped areas. The surrounding area is primarily residential, mostly single-family homes.

The Property was historically used for iron and aluminum cookware manufacturing and contained foundries dedicated to both types of activities. The Property was first developed for this use in the

late 1890s and cookware manufacturing continued until 1997. Limited portions of the Property were then used for polishing and grinding work between approximately 2002 and 2008 (SME 2011).

The 160,000-square foot industrial building consists of a series of interconnected buildings. For the site investigation, the buildings were referenced by a number key (Building 1 through 16) provided by the City of Sidney Fire Department (SFD) and referenced in the Phase I and Phase II reports for the property (SME 2011, SME 2013). The building number labels are depicted on Figure 2 in Appendix B. The buildings are slab on grade with no basements except for a crawl space beneath Building 2 and vary from one to three stories in height; the majority of the buildings are one story in height. The interconnected buildings are arranged around a central courtyard. A second, smaller, eastern courtyard is also enclosed by the buildings.

The central courtyard was observed to contain two fenced-in transformer pads. The northeastern transformer pad contained four transformers with lids removed and visible staining in the surrounding soil. The western transformer pad contained one intact transformer with PCB labeling and visible staining in the surrounding soil. The central courtyard was also observed to contain open bins lined with bags below dust trap machinery on the southwest portions of Building 10 and Building 3 exteriors.

In Building 2, several large, open vats were observed. The vats were reportedly used as anodizing (acid) tanks (SME 2013). Small containers of acid were observed near the anodizing tanks. Building 2 was also observed to contain a dip tank/wax conveyor area and furnace historically used in blacksmithing (SME 2013). Building 6 was historically known as the “Oil Storage Area” (SME 2013) and was observed to contain 55-gallon drums with staining on the floor around the drums. 55-gallon drums with unknown contents were also observed in Buildings 9, 11, and 15. Building 11 was observed to contain in-ground pits containing sand, concrete, and other debris, as well as piles of what appeared to be foundry sand. Building 12 was observed to contain a room labeled “Paint Thinner Room”, with unknown liquids in containers less than 5-gallons in size; piles of sand/debris were also noted in Building 12. Building 16 was observed to contain cupolas associated with the former foundry.

At the time of the site investigation, the Site did not have active water, heat, or electricity. Portions of the building roofs and walls were observed to have failed, multiple windows were broken, and the building contents were exposed to the elements. The building was in poor condition and the roof was partially collapsed in some areas and had numerous other openings, allowing water to enter waste

storage areas. Many of the windows were boarded up. There was evidence of trespassing and vandalism, as shown in the Photo Log (Appendix C).

Due to unsafe building conditions relating to structural integrity, some buildings and/or portions of buildings were not accessed during the site investigation. EPA coordinated with SFD to identify structurally sound areas of the building to access. The following areas were not accessed during the site investigation due to safety concerns: Building 4, Building 8, western portions of Buildings 11 and 12, northern portions of Building 3, and southern portions of Building 10.

On August 5, 2015, Ohio EPA Emergency Response responded to a citizen complaint of transformer oil dumped on site and the run-off entering the citizen's basement. Ohio EPA On-Scene Coordinator Bill Lohner responded to the complaint and found 5 large PCB transformers at the abandoned Wagner Ware facility. Four of the five transformers had the tops removed. Oil stained soil was observed under the transformers and migrated laterally several feet beyond the transformer pad. Oil was not migrating to the citizen's property on that day.

3.0 SITE ACTIVITIES

On August 27, 2015, EPA On-Scene Coordinator Steve Renninger, EPA's Superfund Technical Assessment and Response Team (START) contractor, Ohio EPA, and SFD conducted a site investigation of the Site. Additional on-site activities and sampling for the site investigation was conducted on October 21, 2015. At the time of the site inspection, the Site building was locked, but there was evidence of frequent trespassing with broken windows and vandalism. Additionally, the building was noted to be structurally impaired with fire and rain water damage entering the waste storage areas. Portions of several buildings were collapsed, including an exterior wall in Building 4, and portions of the roof in Buildings 8, 10, and 11.

During the Site investigation, EPA observed approximately ten 55-gallon drums and twenty containers (having a volume of 5 gallons or less) on Site (Appendix C). Drums and containers were located in numerous areas of the Site including Buildings 2, 6, 11, and 15 (Figure 2, Appendix A). Drums and containers were noted to be rusted and deteriorated, with contents spilled on the floor. Groups of smaller containers of waste were located on shelves and cabinets in Buildings 2, 6, and 12 (Figure 2, Appendix A).

Additionally, EPA noted two transformer pads with evidence of vandalism and stained soil. One transformer pad in the northeast portion of the courtyard contained four transformers with lids removed and oil staining in the surrounding soil. Another transformer pad in the western portion of the courtyard contained a single large, intact transformer labeled as PCB-contaminated electrical equipment and oil staining in the surrounding soil. Building 2 contained a large vat area containing approximately 3,000 gallons of acid and water mixture. Several vats were filled to capacity and the surrounding containment area was filled with rain water. Building 11 contained uncovered waste piles on the floor or pits in uncovered areas of the building. Waste piles contained foundry sand or slag material (see Photographic Documentation, Appendix C).

Field screening was conducted by EPA START and documented drums and containers with pH <2 and volatile organic compound (VOC) concentrations as high as 75,110 parts per billion (ppb). Twenty-eight samples were collected during the August 27, 2015 sampling event.

EPA and START returned to the site on October 21, 2015 to collect additional bulk solid samples from piles and open pits located in the courtyard area and inside the buildings for metals and radiation analysis. Based on field screening results, EPA START collected six additional samples for laboratory analysis on October 21, 2015.

Thirty-four total samples were collected from the Wagner Ware Site during site investigation activities for laboratory analysis. Sample descriptions, field screening results and laboratory analytical results are summarized in the August 27 and October 21, 2015 Site Investigation Results Tables located in Appendix B.

3.1 SAMPLING ACTIVITIES

On August 27 and October 21, 2015, Tetra Tech START and EPA conducted liquid and bulk sampling from various drums, transformers, containers, pits, vats, and surfaces in and around the Site. Further details on sampling activities and sample management activities are presented in Sections 3.1.1, 3.1.2., & 3.2. Tetra Tech START and EPA met on site on August 27, 2015, to determine if the Site poses imminent and substantial threats to the public health or the environment. Tetra Tech START and EPA conducted a site walkthrough prior to beginning sampling to identify final sampling locations. During the August 27, 2015 sampling event, Tetra Tech START and EPA identified and sampled twenty-eight (28)

locations/containers on the site. On October 21, 2015 an additional six samples were collected to bring the total number of samples collected to thirty-four (34). Sampling locations are shown in Appendix A, Figure 3. Tables 1 – 3 in Appendix B present the sample identifiers, field screening results, analytical results, matrices, container type, and sampling locations.

**TABLE 2
SAMPLE SUMMARY**

Sample Identifier	Matrix	Sampling Location
WW-01-SS-082715 WW-02-SS-082715 WW-03-SS-082715 WW-04-SS-082715 WW-05-SS-082715 WW-06-SS-082715 WW-07-SS-082715 WW-08-SS-082715	Soil	Surface soil samples collected from the electrical transformer areas located in central courtyard.
WW-09-LW-082715 WW-10-LW-082715 WW-11-LW-082715 WW-12-LW-082715 WW-13-LW-082715	Liquid	Liquid waste samples collected from electrical transformers in central courtyard
WW-14-LW-082715 WW-15-LW-082715 WW-16-LW-082715	Liquid	Liquid waste samples collected from suspected acid tanks in Building 2. Tanks were open and unsecured.
WW-17-LW-082715 WW-18-LW-082715 WW-19-LW-082715	Liquid	Liquid waste samples collected from unknown 55-gallon poly drums and large poly containers in Buildings 6 and 15.
WW-20-LW-082715 WW-21-LW-082715 WW-22-LW-082715 WW-23-LW-082715	Liquid	Liquid waste samples collected from various containers in Building 12.
WW-24-SW-082715 WW-25-SW-082715 WW-26-SW-082715 WW-27-SW-082715 WW-28-SW-082715 WW-29-SS-102115 WW-30-SS-102115 WW-31-SS-102115 WW-32-SS-102115 WW-33-SS-102115 WW-34-SS-102115	Solid	Solid Waste samples collected from various abandoned equipment, drums, pits, and surfaces in Buildings 2, 9, 11, 12, and 16

Sample Identifier	Matrix	Sampling Location
WW-34RAD-SS-102115	Solid	Radiation sample collected from in-ground pit

Notes:

WW-Wagner Ware site
SS – Surface Soil
LW – Liquid Waste
SW- Solid Waste
RAD- Radiation Emitting Waste

3.1.1 Surface Soil & Bulk Solid Samples

Transformer Area

A total of eight surface soil samples (WW-01-SS-082715 through WW-08-SS-082715) were collected from the Wagner Ware Site during the sampling event on August 27, 2015. Samples were collected from the central courtyard area of the site, adjacent to electrical transformer areas. Surface soil samples were collected from within both of the fenced transformer pads as well as outside of the fenced areas near the main walking path, where visible soil staining was observed.

Sample Collection Methods and Analysis

All surface soil samples were collected from surface soil immediately adjacent or down gradient to suspected PCB containing transformers. Samples were collected from ground surface to 6 inches below ground surface (bgs). Samples were collected using a dedicated, single-use, clean plastic scoop and transferred directly into laboratory cleaned and certified bottle ware for analysis of PCBs using EPA Method 8082. The samples were collected in accordance with Tetra Tech Standard Operating Procedure (SOP) No. 005-2, “Soil Sampling” (Tetra Tech 2009a). One of the samples (WW-04-SS-082715) collected was duplicated for laboratory quality control (QC).

Buildings 2, 9, 11, 12, 16 and Central Courtyard

Five bulk solid samples (WW-24-SW-082715 through WW-28-SW-082715) were collected at the Wagner Ware Site during the sampling event on August 27, 2015. In addition to the five samples collected on August 27, six samples (WW-29-SS-102115 through WW-34-SS-102115) were collected during a second sampling event on October 21, 2015. The bulk materials sampled in various locations were suspected of being waste from industrial processes previously conducted at the site.

Sample collection Methods and Analysis

Bulk solid samples WW-24-SW-082715 through WW-34RAD-SS-102115 were collected from various surfaces, containers, pits, and on-ground piles. Samples were collected using a dedicated, single-use, clean plastic scoop and transferred directly into laboratory cleaned and certified bottle ware for analysis of Toxicity Characteristic Leaching Procedure (TCLP) Metals & Total Metals analysis using EPA methods 1311 (TCLP), 6010C/7470 (total metals ICP), & 7470/7471 (Hg). Sample WW-34RAD-SS-102115 was collected on October 21, 2015 using the same methods stated previously and was submitted for Gamma Spectroscopy & Gross Alpha/Beta Radiation analysis. All samples were collected in accordance with Tetra Tech Standard Operating Procedure (SOP) No. 007-2, "Bulk Materials Sampling" (Tetra Tech 1999). Sample WW-24-SW-082715 was duplicated for laboratory QC purposes.

3.1.2 Liquid/Water Samples

Transformer Area

A total of five liquid waste samples (WW-09-LW-082715 through WW-13-LW-082715) were collected at the Wagner Ware Site during the sampling event on August 27, 2015 from the five (5) electrical transformers located onsite. Four of these transformers were located in the northeast transformer area and were observed to have been vandalized prior to the site inspection and were open to the elements allowing rainwater to accumulate and over flow the contents onto the ground. The intact transformer in the west transformer area was labeled as PCB-contaminated electrical equipment.

Sample Collection Methods and Analysis

Samples were collected from inside of each transformer using a dedicated single use coliwasa type sampler and the contents were transferred directly into laboratory cleaned and certified bottle ware for analysis of PCBs using EPA Method 8082. One transformer was intact and a sample of the liquid contents was collected directly from a drain port. The samples were collected in accordance with Tetra Tech SOP No. 008-2, "Containerized Liquid, Sludge, & Slurry Sampling" (Tetra Tech 2000). One of the samples (WW-09-LW-082715) was duplicated for laboratory QC.

Building 2

A total of three liquid waste samples (WW-14-LW-082715 through WW-16-LW-082715) were collected from several large open tanks/vats suspected to have been used previously as part of a metal coating process for cast iron & aluminum cookware.

Sample Collection Methods and Analysis

All three water/liquid waste samples were collected from the open vats, using a dedicated, single-use, polyurethane coliwasa sampler tube. The coliwasa was submerged directly into the water of the vats so that all depths of the vats could be sampled. Liquid in the vats was approximately 3-4 feet deep. Samples were transferred from the coliwasa tube directly into laboratory cleaned and certified bottle ware for pH analysis using EPA method 9040C. The samples were collected in accordance with Tetra Tech SOP No. 008-2, "Containerized Liquid, Sludge, & Slurry Sampling" (Tetra Tech 2000). One of the samples (WW-14-LW-082715) was duplicated for laboratory QC.

Buildings 6, 12, & 15

A total of seven liquid waste samples (WW-17-LW-082715 through WW-23-LW-082715) were collected from various containers, including 55-gallon drums, 1-gallon cans, & 5-gallon poly containers.

Sample Collection Methods and Analysis

Samples were collected directly from various containers either by use of a coliwasa sampling tube (WW-17-LW-082715 to WW-19-LW-082715) or by pouring the contents directly into laboratory cleaned and certified bottle ware. Samples WW-17-LW-082715 and WW-18-LW-082715 were submitted for pH analysis using EPA method 9040C. The remaining liquid waste samples were submitted for flashpoint analysis using EPA method 1010. The samples were collected in accordance with Tetra Tech SOP No. 008-2, "Containerized Liquid, Sludge, & Slurry Sampling" (Tetra Tech 2000). Sample WW-19-LW-082715 was duplicated for laboratory QC purposes.

3.2 SAMPLE MANAGEMENT

All samples were collected in accordance with Tetra Tech Standard Operating Procedures (SOPs) and the site-specific SAP (Tetra Tech 2015a) and HASP (Tetra Tech 2015b). Air monitoring was conducted in accordance with the site-specific HASP (Tetra Tech 2015b). Due to the unknown nature of the products, all samples from drums, vats, and containers were collected in Level B personal protective equipment

(PPE). All liquid and bulk material samples were collected directly from the original container and contents were poured or transferred directly into laboratory cleaned and certified bottle ware for analysis of pH, Flashpoint, TCLP and/or Total Metals, or Gamma Spectroscopy. The samples were collected in accordance with Tetra Tech SOP No. 007, "Bulk Materials Sampling" (Tetra Tech 1999), Tetra Tech SOP No. 008, "Containerized Liquid, Sludge, & Slurry Sampling" (Tetra Tech 2000), or Tetra Tech Standard Operating Procedure (SOP) No. 005, "Soil Sampling" (Tetra Tech 2009a). All multimedia samples collected from the sites, including quality assurance and quality control (QA/QC) samples, were shipped to the following laboratories:

- CT Laboratories in Baraboo, Wisconsin for PCBs, PH, Flashpoint, and TCLP Metals;
- ALS Environmental in Fort Collins, Colorado for Gamma Spectroscopy and Gross Alpha/Beta;

4.0 ANALYTICAL RESULTS

Tetra Tech reviewed all surface soil, bulk solid, and liquid waste sampling results. Results are summarized in the Data Summary Tables provided in Appendix B. The validated Level IV analytical data packages are provided in Appendix E, and the data validation report is provided in Appendix F. Few qualifications were required to be applied to the data, and the results may be used, as qualified, for any purpose. The required qualifications were largely a result of the nature and quantity of contamination on the site.

4.1 SURFACE SOIL & BULK SOLID RESULTS

The surface soil sampling results are discussed in the sections below. The surface soil and bulk solid analytical results are summarized in Appendix B, Tables 1 and 2.

4.1.1 PCBs in Surface Soil Samples

Transformer Area

Analytical results for the surface soil samples revealed elevated levels of the PCB Aroclor-1260 in all surface soil sampling locations in the vicinity of the electrical transformer areas in the central courtyard of the Wagner Ware Site. Aroclor-1260 levels ranged from a minimum of 759 micrograms per kilogram [$\mu\text{g/Kg}$] (WW-02-SS-082715) to a maximum of 6060 $\mu\text{g/Kg}$ (WW-01-SS-082715). All sampling locations exhibited levels of Aroclor-1260 greater than the USEPA Maximum Contaminant Level (MCL) of 220 $\mu\text{g/Kg}$.

4.1.2 TCLP Metals in Bulk Solid Samples

Buildings 2, 9, 11, 12, 16, and Central Courtyard

Analytical results did not indicate the presence of elevated TCLP Metals in any of the bulk solid samples collected at the Wagner Ware Site.

4.1.3 Gamma Spectroscopy & Gross Alpha/Beta Analysis Sample

Building 11

Analytical results did not indicate the presence of hazardous radioactive materials in samples collected at the Wagner Ware site.

4.2 LIQUID WASTE RESULTS

The liquid waste sampling results are discussed in the sections below. The liquid waste analytical results are summarized in Appendix B, Table 3.

4.2.1 PCBs in Liquid Waste Samples

Elevated levels of the PCB Aroclor-1260 were observed in analytical results for sample WW-13-LW-082715 at a level of 5190 µg/Kg. This sample location is an intact transformer located in the west transformer area of the central courtyard. PCBs were not detected in the liquid samples collected from the four open transformers located in the northeastern transformer area of the central courtyard.

4.2.2 pH Analysis in Liquid/Water Samples

Building 2 & 15

Analytical results indicated the presence of highly acidic &/or alkaline liquids at all sample locations in Buildings 2 and 15. Samples WW-14-LW-082715 through WW-16-LW-082715 from the in-ground vats located in Building 2 exhibited pH levels of 1.21 or lower. In Building 15, unknown drum sample WW-17-LW-082715 exhibited a pH of 13.6 and sample WW-18-LW-082715 exhibited a pH of 0.96. All liquid waste sample locations exceeded the Resource Conservation and Recovery Act (RCRA) characteristic for corrosivity of < 2.5 or > 12.5, and, according to 40 C.F.R. § 261.22, verifies the characteristic of a hazardous waste for corrosivity (D002).

4.2.3 Ignitability in Liquid/Water Samples

Buildings 6 & 12

Analytical results for flashpoint indicated the presence of flammable liquids in four samples collected from Buildings 6 and 12 of the Wagner Ware Site. Flashpoints observed in flammable liquids ranged from a minimum of 79⁰ Fahrenheit (F) (WW-22-LW-082715) to a maximum of 115.3⁰F (WW-19-LW-082715). Flashpoints below the RCRA characteristic for ignitability of 140⁰F were detected in samples WW-19-LW-082715, WW-20-LW-082715, WW-22-LW-082715, and WW-23-LW-082715, and, according to 40 C.F.R. § 261.21, verifies the characteristic of a hazardous waste for ignitability (D001).

5.0 CONCLUSIONS

Site assessment activities consisted of collecting surface soil samples, bulk solid samples, and containerized or partially contained liquid waste samples at the Wagner Ware site. These samples were submitted to subcontracted laboratories to be analyzed for PCBs, pH, Flashpoint, Metals (TCLP & total), & Gamma Spectroscopy (Radiation).

Transformer Area

Analytical results indicated elevated levels of PCBs in surface soil in the area surrounding five electrical transformers. Aroclor-1260 was detected at levels up to 27 times the regulatory limit. All surface soil samples collected in this area exhibited levels of Aroclor-1260 greater than the USEPA Maximum Contaminant Level (MCL) of 220 µg/Kg.

Liquid waste sample results indicated that the liquid found inside of the four open transformers located in the northeast transformer area did not contain PCBs. However, Aroclor-1260 results for sample WW-13-LW-082715 (5190 µg/Kg) indicated that the lone intact transformer in the western transformer area contains PCBs and is a potential source for future contamination.

Building 2

Analytical results indicated highly acidic ($\text{pH} < 2.5$) conditions in unknown liquid contained in several large open vats in Building 2. Results indicated pH values of 1.16 (WW-14-LW-082715), 1.17 (WW-15-LW-082715, & 1.21 (WW-16-LW-082715). All analytical results for this building exceed the RCRA characteristic for corrosivity of $\text{pH} < 2.5$ or > 12.5 , which, according to 40 C.F.R. § 261.22, verifies the characteristic of a hazardous waste for corrosivity (D002).

Building 15

Analytical results indicated highly corrosive ($\text{pH} < 2.5$ or > 12.5) conditions in unknown liquid contained in a 55-gallon drum and large (approximately 200-gallon) poly container in building 15. Results indicated pH values of 0.97 (WW-18-LW-082715), and 13.6 (WW-17-LW-082715). All analytical results for this building exceed the RCRA characteristic for corrosivity of $\text{pH} < 2.5$ or > 12.5 , which, according to 40 C.F.R. § 261.22, verifies the characteristic of a hazardous waste for corrosivity (D002).

Building 6- Used Oil Area

Analytical results indicated flammable liquids (flashpoint <140°F) are present in a 55-gallon drum container located in building 6. Results indicated a flashpoint value of 115.3°F for sample WW-19-LW-082715. All analytical results for this building exceed the RCRA characteristic for ignitability of flashpoint <140°F, which, according to 40 C.F.R. § 261.21, verifies the characteristic of a hazardous waste for ignitability (D001).

Building 12- Paint Thinner Room

Analytical results indicated flammable liquids (flashpoint <140°F) are present in a several small (\leq 5 gallon) containers located in building 12. Results indicated a flashpoint values of 110°F (WW-20-LW-082715), 79°F (WW-22-LW-082715), & 100°F (WW-23-LW-082715). Three of four analytical results for this building exceed the RCRA characteristic for ignitability of flashpoint <140°F, which, according to 40 C.F.R. § 261.21, verifies the characteristic of a hazardous waste for ignitability (D001).

The conditions at the Wagner Ware Site present a threat to the public health or welfare, and the environment, and meet the criteria for a time-critical removal action as provided for in the NCP, 40 C.F.R. § 300.415(b)(2). These criteria include, but are not limited to, the following:

A. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants

During the August 27, 2015 Site investigation, EPA observed approximately ten 55-gallon drums and twenty containers (having a volume of 5 gallons or less) on Site (Appendix C, Photo Documentation). Drums and containers were located in numerous areas of the Site including Buildings 2, 6, 11, and 15 (Figure 2, Appendix A). Drums and containers were noted to be rusted and deteriorated, with contents spilled on the floor. Groups of smaller containers of waste were located on shelves and cabinets in Buildings 2, 6, and 12 (Figure 2, Appendix A).

Additionally, EPA noted two transformer pads with evidence of vandalism and stained soil. One transformer pad contained four transformers with lids removed and oil staining in the surrounding soil.

Another transformer pad contained a large transformer with PCB labeling and stained soil. Building 2 contained a large vat area containing approximately 3,000 gallons of acid and water mixture. Several vats were filled to capacity and the surrounding containment area was filled with rain water.

Field screening was conducted by EPA START and documented drums and containers with pH <2 and volatile organic compound (VOC) concentrations as high as 75,100 ppb.

During the August 27, 2015 and October 21, 2015 site investigation, EPA documented abandoned chemical waste, including containers containing ignitable and corrosive hazardous waste at the Site.

Analytical results from liquid samples WW-19, -20, -22, and -23 documented liquid having flash points less than 140°F, which, according to 40 C.F.R. § 261.21, verifies the characteristic of a hazardous waste for ignitability (D001). A flashpoint was documented as low as 79°F in sample WW-22-LW-082715.

Analytical results from liquid samples WW-14, -15, and -16 (pH=1.16, 1.17, and 1.21), documented liquid waste having a pH level less than 2.0 standard units, which, according to 40 C.F.R. § 261.22, verifies the characteristic of a hazardous waste for corrosivity (D002). Analytical results from liquid sample WW-17 (pH=13.6), documented liquid waste having a pH level greater than 12.5 standard units, which, according to 40 C.F.R. § 261.22, verifies the characteristic of a hazardous waste for corrosivity (D002).

There is a potential for the migration of corrosive, ignitable, and PCB waste from deteriorated drums, containers, and transformers from leaking into the environment and on-site storm water drains.

Commercial businesses are located within 850 feet of the Site and residential locations are located within twenty feet of the Site. The Site has a history of trespassing that continues to occur.

There is potential exposure to nearby human receptors, including nearby commercial occupants and residents in their homes from the hazardous substances, pollutants, or contaminants on-site. Future trespassers could cause an accidental or intentional release of hazardous material and their contact with hazardous materials is also possible. The close proximity of residential and commercial areas to the abandoned Site greatly increases the likelihood of human health and environmental impacts should such an occurrence or release take place. Potential exposure could occur through each of these migration pathways and cause imminent endangerment to human health and the environment.

B. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release;

EPA confirmed the presence of a threat of release of hazardous substances, pollutants, or contaminants at the Site as defined by Section 101(14) of CERCLA, including the presence of corrosive (acid) and ignitable hazardous waste in drums and containers. Additionally, elevated levels of lead were documented in waste piles. EPA documented that approximately ten 55-gallon drums, 3,000 gallons of corrosive liquid and five leaking transformers are on Site. The Site buildings are in very poor condition; roofs are collapsed in several buildings; many windows are missing, broken or boarded; and there is evidence of break-in and vandalism.

C. Threat of fire or explosion

Analytical results from the EPA site investigation documented that material in drums and containers were flammable wastes and posed a threat of fire or explosion. EPA documented four samples having flashpoint results at or below 140 °F, which is the criteria for ignitability for a RCRA characteristic waste. Sample WW-22-LW-082715 was documented with a flashpoint as low as 79 °F. As such, these materials represent a threat of fire or explosion.

D. The availability of other appropriate Federal or state response mechanisms to respond to the release

Ohio EPA does not have the resources to respond to this Site. In a letter dated August 20, 2015, Ohio EPA formally requested assistance from EPA to determine if the Wagner Ware Site met the criteria for a removal action (Ohio EPA 2015).

6.0 REFERENCES

- Ohio EPA. 2015. Wagner Ware Site Request for U.S. EPA Removal Assistance. August.
- Soil and Materials Engineers, Inc. (SME). 2011. Phase I Property Assessment Report, “Former Wagner Manufacturing, 440 Fair Road, Sidney, Shelby County, Ohio.”
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- Tetra Tech Inc. 1999. Standard Operating Procedure No. 007, Revision 2, “Bulk Materials sampling.”
- Tetra Tech Inc. 2008. Standard Operating Procedure No. 024, Revision 1, “Recording of Notes in Field Logbooks.”
- Tetra Tech Inc. 2009a. Standard Operating Procedure No. 005, Revision 2, “Soil Sampling.”
- Tetra Tech Inc. 2009b. Standard Operating Procedure No. 009, Revision 4, “Surface Water Sampling.”
- Tetra Tech Inc. 2014. Quality Assurance Project Plan for START. April. Prepared for EPA under Contract No. EP-S5-13-01.
- Tetra Tech Inc. 2015a. Wagner Ware Abbreviated Sampling and Analysis Plan. August.
- Tetra Tech Inc. 2015b. Wagner Ware Health and Safety Plan. August.
- US Code of Federal Regulations. 2016. Title 40-Protection of Environment, Chapter I-Environmental Protection Agency, Subchapter I-Solid Wastes, Part 261-“Identification and Listing of Hazardous Waste”

APPENDIX A
SITE FIGURES

APPENDIX B
TABLES

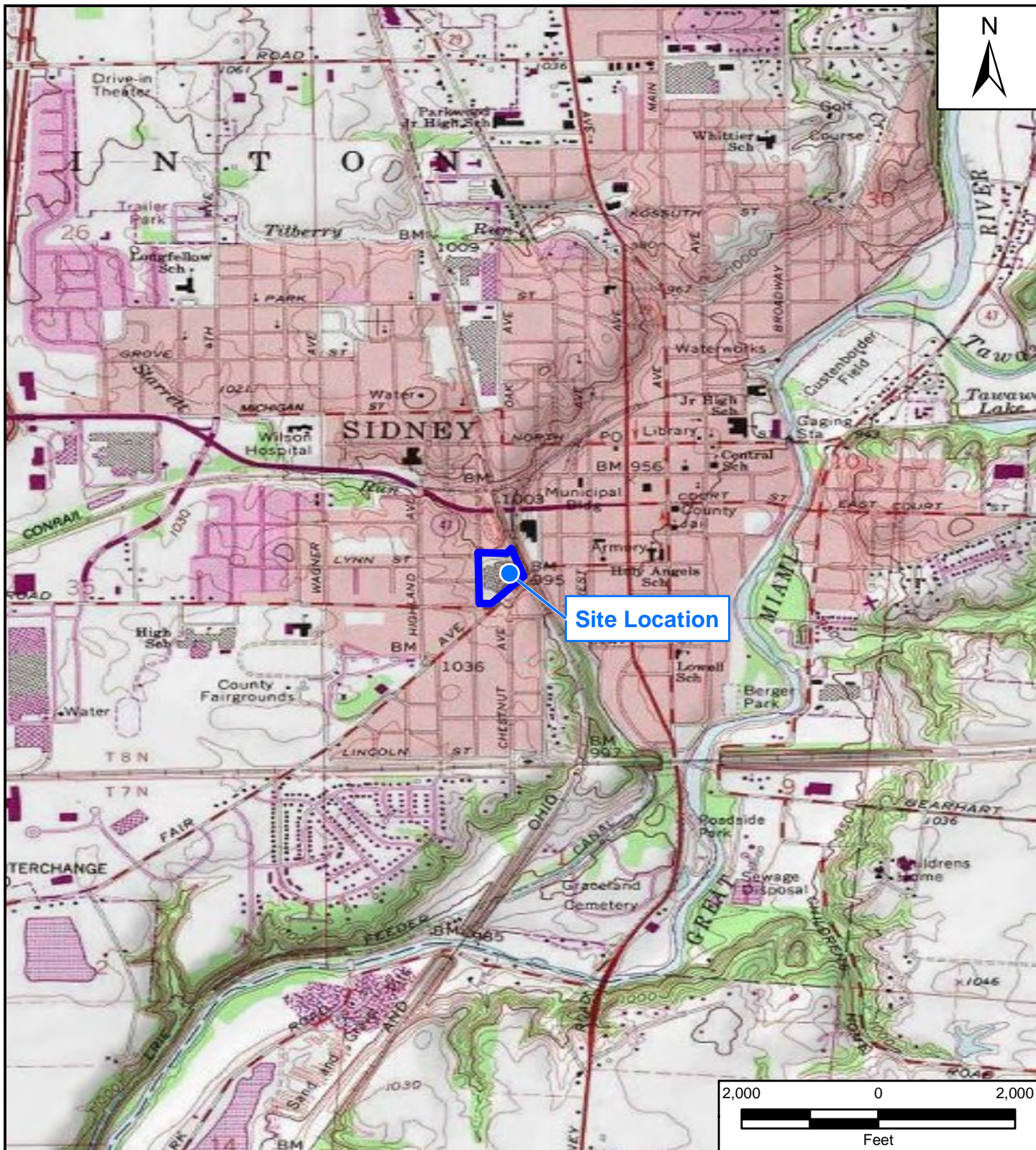
APPENDIX C
PHOTOGRAPHIC DOCUMENTATION

APPENDIX D
START FIELD NOTES

APPENDIX E
LABORATORY REPORTS

APPENDIX F
DATA VALIDATION REPORT

APPENDIX A
SITE FIGURES



Reference Map



Source: USGS 7.5-Minute Topographic Quadrangle Map
Sidney, OH 1982

Wagner Ware Site
440 Fair Road
Sidney, Shelby County, Ohio

Figure 1
Site Location Map



Prepared For: EPA

Prepared By: Tetra Tech, Inc.



- Legend**
- Site Boundary
 - B1 Building Number

Wagner Ware Site
440 Fair Road
Sidney, Shelby County, Ohio

Figure 2
Site Layout Map

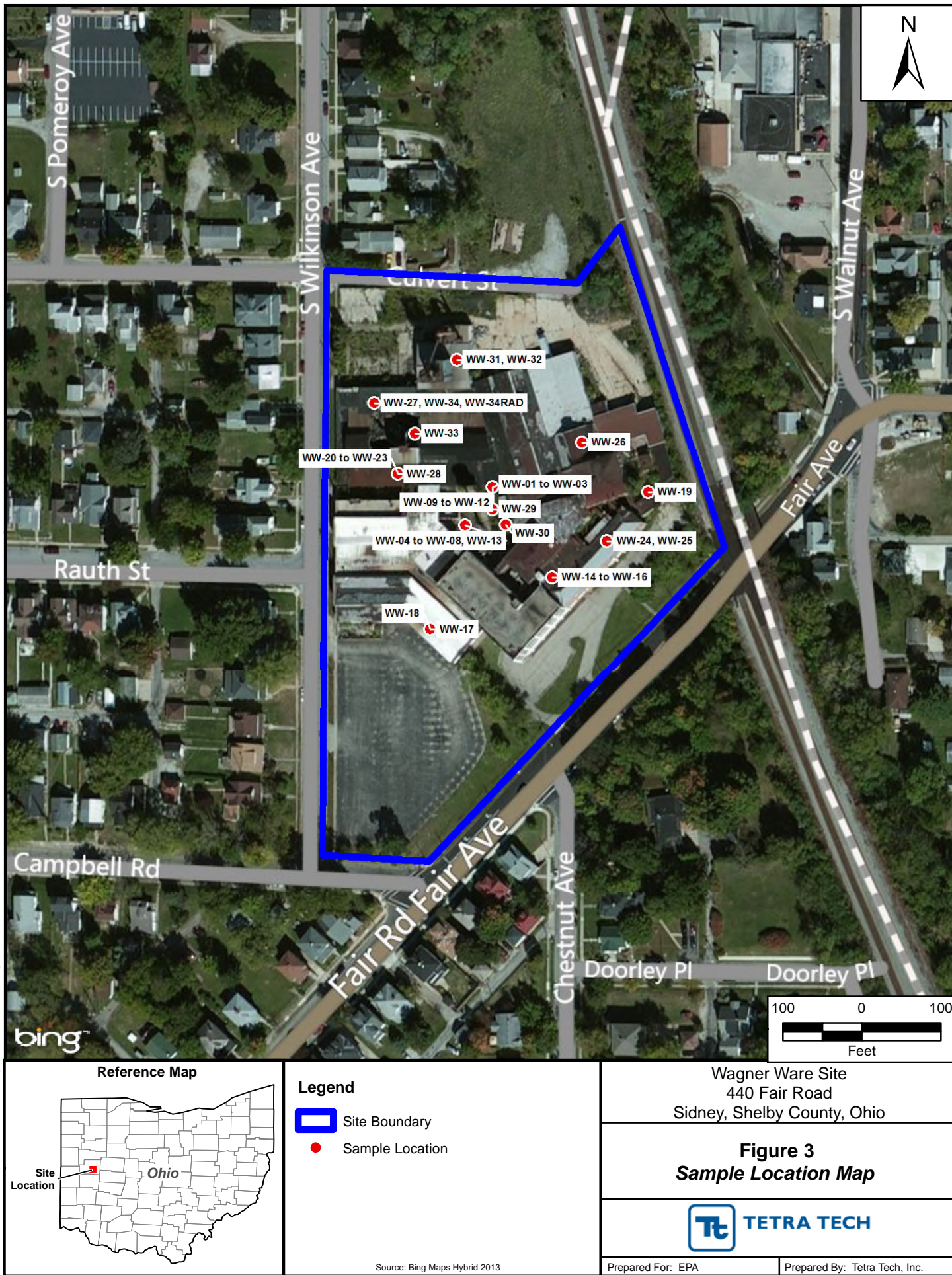


Prepared For: EPA

Prepared By: Tetra Tech, Inc.

Source: Bing Maps Hybrid 2013

Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree



APPENDIX B
TABLES

TABLE 1
SURFACE SOIL SAMPLE RESULTS
WAGNER WARE SITE

Sample Designation		WW-01-SS-082715	WW-02-SS-082715	WW-03-SS-082715	WW-04-SS-082715	WW-05-SS-082715	WW-06-SS-082715	WW-07-SS-082715	WW-08-SS-082715
Sample Parameter	Regulatory Limit								
Ignitability *	140° (°F)	NA	NA	NA	NA	NA	NA	NA	NA
pH†	2	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	220 µg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1242	220 µg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1221	140 µg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1262	220 µg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1232	140 µg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1254	220 µg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016	3900 µg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1268	220 µg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1260	220 µg/kg	6060	759	1610	3770	4340	1040	2630	1340
TCLP Mercury	0.2 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Arsenic	5 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Barium	100 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Cadmium	1 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Chromium	5 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Lead	5 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Selenium	1 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Silver	5 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Arsenic ICP		NA	NA	NA	NA	NA	NA	NA	NA
Total Cadmium ICP		NA	NA	NA	NA	NA	NA	NA	NA
Total Chromium ICP		NA	NA	NA	NA	NA	NA	NA	NA
Total Lead ICP	400 mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Total Barium ICP	15000 mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Spectroscopy Results									
Ac-228		NA	NA	NA	NA	NA	NA	NA	NA
Bi-214		NA	NA	NA	NA	NA	NA	NA	NA
Pb-212		NA	NA	NA	NA	NA	NA	NA	NA
Pb-214		NA	NA	NA	NA	NA	NA	NA	NA
Tl-208		NA	NA	NA	NA	NA	NA	NA	NA
Gross Alpha		NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta		NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Parameter									
pH	S.U.	NA	NA	NA	NA	NA	NA	NA	NA
PID Reading‡	ppb	NA	NA	NA	NA	NA	NA	NA	NA
XRF	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Other Information									
Sample Description		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Container Type		NA	NA	NA	NA	NA	NA	NA	NA
Container Location		NE Transformer Pad NE of Transformer 1	NE Transformer Pad South side of Transformer 2	NE Transformer Pad Under Transformer 4	Courtyard outside transformer fences - Main path	Courtyard outside transformer fences - West of main path	Courtyard, West Transformer Area, within fence	Courtyard, West Transformer Area, within fence	Courtyard, West Transformer Area - within fence
Additional comments									

PID readings in parts per billion (ppb)

NA = Not Analyzed

ND = Not detected

* - Flashpoint < 140° meets characteristics for ignitability for RCRA

† - RCRA Characteristics for corrosivity are pH <2.5 or >12.5

TCLP = Toxicity Characteristic Leaching Procedure

‡ - Results were obtained using a RAE Systems MultiRAE unit

Indicates sample exceeded regulatory limit

pH limit set according to EPA 40 C.F.R. § 261.21

Ignitability limit set according to EPA 40 C.F.R. § 261.22

Total Lead ICP limit set according to EPA 40 C.F.R. § 261.23

PCBs limit set according to EPA MCLs

TABLE 1
SURFACE SOIL SAMPLE RESULTS
WAGNER WARE SITE

Sample Designation		WW-29-SS-102115	WW-30-SS-102115	WW-31-SS-102115	WW-32-SS-102115	WW-33-SS-102115	WW-34-SS-102115	WW-34RAD-SS-102115
Sample Parameter	Regulatory Limit							
Ignitability *	140° (°F)	NA	NA	NA	NA	NA	NA	NA
pH†	2	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	220 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	220 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	140 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1262	220 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	140 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	220 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	3900 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1268	220 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	220 µg/kg	NA	NA	NA	NA	NA	NA	NA
TCLP Mercury	0.2 mg/L	ND	ND	0.00012	ND	ND	ND	NA
TCLP Arsenic	5 mg/L	0.0041 J	0.015 J	0.012 J	0.0089 J	ND	0.02 J	NA
TCLP Barium	100 mg/L	0.26	0.11	0.085	0.043	0.072	1	NA
TCLP Cadmium	1 mg/L	ND	ND	0.0029 B	0.00065 JB	0.025 M	0.00063 JB	NA
TCLP Chromium	5 mg/L	ND	ND	0.063	0.00096 J	0.00095	0.0014 J	NA
TCLP Lead	5 mg/L	0.088	0.096	0.045	0.0047	0.019	0.0042	NA
TCLP Selenium	1 mg/L	0.025 B	0.032 B	0.022 B	ND	0.0089 JB	0.022 J	NA
TCLP Silver	5 mg/L	0.0052	0.0048	0.008	ND	ND	ND	NA
Ttotal Arsenic ICP		NA	NA	NA	NA	NA	NA	NA
Total Cadmium ICP		NA	NA	NA	NA	NA	NA	NA
Total Chromium ICP		NA	NA	NA	NA	NA	NA	NA
Total Lead ICP	400 mg/kg	NA	NA	NA	NA	NA	NA	NA
Total Barium ICP	15000 mg/kg	NA	NA	NA	NA	NA	NA	NA
Gamma Spectroscopy Results								
Ac-228		NA	NA	NA	NA	NA	NA	2.13 (+/- 0.96)
Bi-214		NA	NA	NA	NA	NA	NA	2.58 (+/- 0.93)
Pb-212		NA	NA	NA	NA	NA	NA	2.38 (+/- 0.59)
Pb-214		NA	NA	NA	NA	NA	NA	2.6 (+/- 0.64)
Tl-208		NA	NA	NA	NA	NA	NA	0.87 (+/- 0.47)
Gross Alpha		NA	NA	NA	NA	NA	NA	8.1 (+/- 2.5)
Gross Beta		NA	NA	NA	NA	NA	NA	7.2 (+/- 1.8)
Field Screening Parameter								
pH	S.U.	NA	NA	NA	NA	NA	NA	NA
PID Reading‡	ppb	NA	NA	NA	NA	NA	NA	NA
XRF	mg/kg	NA	NA	NA	NA	NA	NA	Cr 1191, Pb 156
Other Information								
Sample Description		Solid	Solid	Solid	Solid	Solid	Solid	Solid
Container Type		Open bin/bag	Open bin/bag	Open pipe	Open pipe	Floor	In-ground pit	In-ground pit
Container Location		Courtyard adjacent to dust traps	Courtyard adjacent to dust traps	Building 16	Building 16	Building 12	Building 11	Building 11
Additional comments		Bin/bag below dust trap machinery	Bin/bag below dust trap machinery	Grey dust from inside of open pipe	Dust from inside of open pipe	Soil/debris on floor	From same location as WW-27-WW-082715	Same location as WW-27

PID readings in parts per billion (ppb)

NA = Not Analyzed

ND = Not detected

* - Flashpoint < 140° meets characteristics for ignitability for RCRA

† - RCRA Characteristics for corrosivity are pH <2.5 or >12.5

TCLP = Toxicity Characteristic Leaching Procedure

‡ - Results were obtained using a RAE Systems MultiRAE unit

Indicates sample exceeded regulatory limit

pH limit set according to EPA 40 C.F.R. § 261.21

Ignitability limit set according to EPA 40 C.F.R. § 261.22

Total Lead ICP limit set according to EPA 40 C.F.R. § 261.23

PCBs limit set according to EPA MCLs

**TABLE 2
BULK SOIL SAMPLE RESULTS
WAGNER WARE SITE**

Sample Designation		WW-24-SW-082715	WW-25-SW-082715	WW-26-SW-082715	WW-27-SW-082715	WW-28-SW-082715
Sample Parameter	Regulatory Limit					
Ignitability *	140° (°F)	NA	NA	NA	NA	NA
pH†	2	NA	NA	NA	NA	NA
Aroclor-1248	220 µg/kg	NA	NA	NA	NA	NA
Aroclor-1242	220 µg/kg	NA	NA	NA	NA	NA
Aroclor-1221	140 µg/kg	NA	NA	NA	NA	NA
Aroclor-1262	220 µg/kg	NA	NA	NA	NA	NA
Aroclor-1232	140 µg/kg	NA	NA	NA	NA	NA
Aroclor-1254	220 µg/kg	NA	NA	NA	NA	NA
Aroclor-1016	3900 µg/kg	NA	NA	NA	NA	NA
Aroclor-1268	220 µg/kg	NA	NA	NA	NA	NA
Aroclor-1260	220 µg/kg	NA	NA	NA	NA	NA
TCLP Mercury	0.2 mg/L	0.00005	ND	0.00005	ND	ND
TCLP Arsenic	5 mg/L	0.014	0.0096	0.022	0.019	ND
TCLP Barium	100 mg/L	0.35	0.19	0.0095	0.5	0.11
TCLP Cadmium	1 mg/L	0.005	0.00092	ND	ND	0.00063
TCLP Chromium	5 mg/L	0.021	0.0022	0.015	0.04	0.012
TCLP Lead	5 mg/L	0.075	ND	0.04	0.0015	0.13
TCLP Selenium	1 mg/L	0.00027	ND	ND	ND	0.0023
TCLP Silver	5 mg/L	ND	ND	0.0021	ND	ND
Ttotal Arsenic ICP		NA	NA	3.4	NA	NA
Total Cadmium ICP		0.44	NA	NA	NA	NA
Total Chromium ICP		NA	NA	NA	145	NA
Total Lead ICP	400 mg/kg	NA	NA	NA	NA	125
Total Barium ICP	15000 mg/kg	NA	NA	NA	3310	NA
Gamma Spectroscopy Results						
Ac-228		NA	NA	NA	NA	NA
Bi-214		NA	NA	NA	NA	NA
Pb-212		NA	NA	NA	NA	NA
Pb-214		NA	NA	NA	NA	NA
Tl-208		NA	NA	NA	NA	NA
Gross Alpha		NA	NA	NA	NA	NA
Gross Beta		NA	NA	NA	NA	NA
Field Screening Parameter						
pH	S.U.	NA	NA	NA	NA	NA
PID Reading‡	ppb	NA	NA	NA	NA	NA
XRF	mg/kg	Pb 201	Cr 213	Ca 9137, Cs detected	Cr 1191, Pb 156	Cr 137
Other Information						
Sample Description		Solid	Solid	Solid	Solid	Solid
Container Type		Dip tank/wax conveyer	Conveyor/Wax area Furnace	55-gal poly drum	In-ground pit	On-ground pile
Container Location		Building 5	Building 5	Building 9	Building 11	Building 12
Additional comments					Composite sample from 2 aliquots	Grey Pile only

PID readings in parts per billion (ppb)

NA = Not Analyzed

ND = Not detected

* - Flashpoint < 140° meets characteristics for ignitability for RCRA

† - RCRA Characteristics for corrosivity are pH <2.5 or >12.5

TCLP = Toxicity Characteristic Leaching Procedure

‡ - Results were obtained using a RAE Systems MultiRAE unit

Indicates sample exceeded regulatory limit

pH limit set according to EPA 40 C.F.R. § 261.21

Ignitability limit set according to EPA 40 C.F.R. § 261.22

Total Lead ICP limit set according to EPA 40 C.F.R. § 261.23

PCBs limit set according to EPA MCLs

TABLE 3
LIQUID WASTE SAMPLING RESULTS
WAGNER WARE SITE

Sample Designation		WW-09-LW-082715	WW-10-LW-082715	WW-11-LW-082715	WW-12-LW-082715	WW-13-LW-082715	WW-14-LW-082715	WW-15-LW-082715	WW-16-LW-082715
Sample Parameter	Regulatory Limit								
Ignitability *	140° (°F)	NA	NA	NA	NA	NA	NA	NA	NA
pH†	2	NA	NA	NA	NA	NA	1.16	1.17	1.21
Aroclor-1248	220 µg/kg	ND	ND	ND	ND	ND	NA	NA	NA
Aroclor-1242	220 µg/kg	ND	ND	ND	ND	ND	NA	NA	NA
Aroclor-1221	140 µg/kg	ND	ND	ND	ND	ND	NA	NA	NA
Aroclor-1262	220 µg/kg	ND	ND	ND	ND	ND	NA	NA	NA
Aroclor-1232	140 µg/kg	ND	ND	ND	ND	ND	NA	NA	NA
Aroclor-1254	220 µg/kg	ND	ND	ND	ND	ND	NA	NA	NA
Aroclor-1016	3900 µg/kg	ND	ND	ND	ND	ND	NA	NA	NA
Aroclor-1268	220 µg/kg	ND	ND	ND	ND	ND	NA	NA	NA
Aroclor-1260	220 µg/kg	ND	ND	ND	ND	5190	NA	NA	NA
TCLP Mercury	0.2 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Arsenic	5 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Barium	100 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Cadmium	1 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Chromium	5 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Lead	5 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Selenium	1 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Silver	5 mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Ttotal Arsenic ICP		NA	NA	NA	NA	NA	NA	NA	NA
Total Cadmium ICP		NA	NA	NA	NA	NA	NA	NA	NA
Total Chromium ICP		NA	NA	NA	NA	NA	NA	NA	NA
Total Lead ICP	400 mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Total Barium ICP	15000 mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Spectroscopy Results									
Ac-228		NA	NA	NA	NA	NA	NA	NA	NA
Bi-214		NA	NA	NA	NA	NA	NA	NA	NA
Pb-212		NA	NA	NA	NA	NA	NA	NA	NA
Pb-214		NA	NA	NA	NA	NA	NA	NA	NA
Tl-208		NA	NA	NA	NA	NA	NA	NA	NA
Gross Alpha		NA	NA	NA	NA	NA	NA	NA	NA
Gross Beta		NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Parameter									
pH	S.U.	NA	NA	NA	NA	NA	1	1	1
PID Reading‡	ppb	NA	NA	NA	NA	NA	14920	NA	75110
XRF	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Other Information									
Sample Description		Rust stained liquid	Clear Liquid	Clear Liquid	Clear Liquid	Clear Oily Liquid	Liquid	Liquid	Liquid
Container Type		Transformer	Transformer	Transformer	Transformer	Transformer	Open Vat	Open Vat	Open Vat
Container Location		NE Transformer Area - Transformer 1	NE Transformer Area - Transformer 2	NE Transformer Area - Transformer 3	NE Transformer Area - Transformer 4	W Transformer Area - Transformer 5	Building 2	Building 2	Building 2
Additional comments		Open Transformer	Open Transformer	Open Transformer	Open Transformer	Intact Transformer	Large open vat	Large open vat	Large open vat

PID readings in parts per billion (ppb)

NA = Not Analyzed

ND = Not detected

* - Flashpoint < 140° meets characteristics for ignitability for RCRA

† - RCRA Characteristics for corrosivity are pH <2.5 or >12.5

TCLP = Toxicity Characteristic Leaching Procedure

‡ - Results were obtained using a RAE Systems MultiRAE unit

Indicates sample exceeded regulatory limit

pH limit set according to EPA 40 C.F.R. § 261.21

Ignitability limit set according to EPA 40 C.F.R. § 261.22

Total Lead ICP limit set according to EPA 40 C.F.R. § 261.23

PCBs limit set according to EPA MCLs

TABLE 3
LIQUID WASTE SAMPLING RESULTS
WAGNER WARE SITE

Sample Designation		WW-17-LW-082715	WW-18-LW-082715	WW-19-LW-082715	WW-20-LW-082715	WW-21-LW-082715	WW-22-LW-082715	WW-23-LW-082715
Sample Parameter	Regulatory Limit							
Ignitability *	140° (°F)	NA	NA	115.3°	110°	>140°	79°	100°
pH†	2	13.6	0.97	NA	NA	NA	NA	NA
Aroclor-1248	220 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	220 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	140 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1262	220 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	140 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	220 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	3900 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1268	220 µg/kg	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	220 µg/kg	NA	NA	NA	NA	NA	NA	NA
TCLP Mercury	0.2 mg/L	NA	NA	NA	NA	NA	NA	NA
TCLP Arsenic	5 mg/L	NA	NA	NA	NA	NA	NA	NA
TCLP Barium	100 mg/L	NA	NA	NA	NA	NA	NA	NA
TCLP Cadmium	1 mg/L	NA	NA	NA	NA	NA	NA	NA
TCLP Chromium	5 mg/L	NA	NA	NA	NA	NA	NA	NA
TCLP Lead	5 mg/L	NA	NA	NA	NA	NA	NA	NA
TCLP Selenium	1 mg/L	NA	NA	NA	NA	NA	NA	NA
TCLP Silver	5 mg/L	NA	NA	NA	NA	NA	NA	NA
Total Arsenic ICP		NA	NA	NA	NA	NA	NA	NA
Total Cadmium ICP		NA	NA	NA	NA	NA	NA	NA
Total Chromium ICP		NA	NA	NA	NA	NA	NA	NA
Total Lead ICP	400 mg/kg	NA	NA	NA	NA	NA	NA	NA
Total Barium ICP	15000 mg/kg	NA	NA	NA	NA	NA	NA	NA
Gamma Spectroscopy Results								
Ac-228		NA	NA	NA	NA	NA	NA	NA
Bi-214		NA	NA	NA	NA	NA	NA	NA
Pb-212		NA	NA	NA	NA	NA	NA	NA
Pb-214		NA	NA	NA	NA	NA	NA	NA
Tl-208		NA	NA	NA	NA	NA	NA	NA
Gross Alpha		NA	NA	NA	NA	NA	NA	NA
Gross Beta		NA	NA	NA	NA	NA	NA	NA
Field Screening Parameter								
pH	S.U.	13.5	0	NA	NA	NA	NA	NA
PID Reading‡	ppb	4820	1420	4820	29,800	302	399	277
XRF	mg/kg	NA	NA	NA	NA	NA	NA	NA
Other Information								
Sample Description		Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Container Type		55-gallon Poly drum	Large poly container	55-gal poly	1-gal poly	5-gal metal	5-gal metal	1-gal poly
Container Location		Building 15	Building 15	Building 6 - Used Oil Area	Building 12 - paint thinner room	Building 12 - paint thinner room	Building 12 - paint thinner room	Building 12 - paint thinner room
Additional comments				Citrosolve Drum				

PID readings in parts per billion (ppb)

NA = Not Analyzed

ND = Not detected

* - Flashpoint < 140° meets characteristics for ignitability for RCRA

† - RCRA Characteristics for corrosivity are pH <2.5 or >12.5

TCLP = Toxicity Characteristic Leaching Procedure

‡ - Results were obtained using a RAE Systems MultiRAE unit

Indicates sample exceeded regulatory limit

pH limit set according to EPA 40 C.F.R. § 261.21

Ignitability limit set according to EPA 40 C.F.R. § 261.22

Total Lead ICP limit set according to EPA 40 C.F.R. § 261.23

PCBs limit set according to EPA MCLs

APPENDIX C
PHOTOGRAPHIC DOCUMENTATION



Photographic Documentation

Client: U.S. EPA Region 5

Prepared by: Tetra Tech, Inc.

Site Name: Wagner Ware Site

TDD Number: S05-0001-1508-200

Location: 440 Fair Road, Sidney, Shelby County, OH

Dates: August 27th, 2015; October 21st, 2015

Photograph No. 1

Photographer: Lauren Foster

Description: Wagner Ware Exterior on Fair Avenue



Photograph No. 2

Photographer: Brandon Helm

Description: Proximity of residential properties, directly across street from Wagner Ware facility on right





Photographic Documentation

Client: U.S. EPA Region 5

Prepared by: Tetra Tech, Inc.

Site Name: Wagner Ware Site

TDD Number: S05-0001-1508-200

Location: 440 Fair Road, Sidney, Shelby County, OH

Dates: August 27th, 2015; October 21st, 2015

Photograph No. 3

Photographer: Brandon Helm

Description: Evidence of vandalism on-site



Photograph No. 4

Photographer: Lauren Foster

Description: Limited access to portions of the site due to structural integrity issues, safety concerns





Photographic Documentation

Client: U.S. EPA Region 5

Prepared by: Tetra Tech, Inc.

Site Name: Wagner Ware Site

TDD Number: S05-0001-1508-200

Location: 440 Fair Road, Sidney, Shelby County, OH

Dates: August 27th, 2015; October 21st, 2015

Photograph No. 5

Photographer: Brandon Helm

Description: Courtyard NE
Transformer Pad
WW-01, -02, -03



Photograph No. 6

Photographer: Brandon Helm

Description: Courtyard – outside
transformer areas
WW-04, -05





Photographic Documentation

Client: U.S. EPA Region 5

Prepared by: Tetra Tech, Inc.

Site Name: Wagner Ware Site

TDD Number: S05-0001-1508-200

Location: 440 Fair Road, Sidney, Shelby County, OH

Dates: August 27th, 2015; October 21st, 2015

Photograph No. 7

Photographer: Brandon Helm

Description: Courtyard W
Transformer Pad
WW-06, -07, -08



Photograph No. 8

Photographer: Brandon Helm

Description: Courtyard NE
Transformer (#1-4)
WW-09, -10, -11, -12





Photographic Documentation

Client: U.S. EPA Region 5

Prepared by: Tetra Tech, Inc.

Site Name: Wagner Ware Site

TDD Number: S05-0001-1508-200

Location: 440 Fair Road, Sidney, Shelby County, OH

Dates: August 27th, 2015; October 21st, 2015

Photograph No. 9

Photographer: Brandon Helm

Description: Courtyard West
Transformer (#5)
WW-13



Photograph No. 10

Photographer: Brandon Helm

Description: Building 2 acid tanks
WW-14, -15, -16





Photographic Documentation

Client: U.S. EPA Region 5

Prepared by: Tetra Tech, Inc.

Site Name: Wagner Ware Site

TDD Number: S05-0001-1508-200

Location: 440 Fair Road, Sidney, Shelby County, OH

Dates: August 27th, 2015; October 21st, 2015

Photograph No. 11

Photographer: Brandon Helm

Description: Building 15 unknown drums
WW-17, -18



Photograph No. 12

Photographer: Brandon Helm

Description: Building 6 Oil room
WW-19





Photographic Documentation

Client: U.S. EPA Region 5

Prepared by: Tetra Tech, Inc.

Site Name: Wagner Ware Site

TDD Number: S05-0001-1508-200

Location: 440 Fair Road, Sidney, Shelby County, OH

Dates: August 27th, 2015; October 21st, 2015

Photograph No. 13

Photographer: Brandon Helm

Description: Building 12 Paint thinner room
WW-20, -21, -22, -23



Photograph No. 14

Photographer: Brandon Helm

Description: Building 2 wax conveyor area furnace
WW-24





Photographic Documentation

Client: U.S. EPA Region 5

Prepared by: Tetra Tech, Inc.

Site Name: Wagner Ware Site

TDD Number: S05-0001-1508-200

Location: 440 Fair Road, Sidney, Shelby County, OH

Dates: August 27th, 2015; October 21st, 2015

Photograph No. 15

Photographer: Brandon Helm

Description: Building 2 dip tank/waxing conveyor
WW-25



Photograph No. 16

Photographer: Brandon Helm

Description: Building 11 drums
WW-26





Photographic Documentation

Client: U.S. EPA Region 5

Prepared by: Tetra Tech, Inc.

Site Name: Wagner Ware Site

TDD Number: S05-0001-1508-200

Location: 440 Fair Road, Sidney, Shelby County, OH

Dates: August 27th, 2015; October 21st, 2015

Photograph No. 17

Photographer: Brandon Helm

Description: Building 11 Pits
WW-27, WW-34



Photograph No. 18

Photographer: Brandon Helm

Description: Building 12 Sand Piles
WW-28





Photographic Documentation

Client: U.S. EPA Region 5

Prepared by: Tetra Tech, Inc.

Site Name: Wagner Ware Site

TDD Number: S05-0001-1508-200

Location: 440 Fair Road, Sidney, Shelby County, OH

Dates: August 27th, 2015; October 21st, 2015

Photograph No. 19

Photographer: Lauren Foster

Description: Dust trap bin in central courtyard
WW-29



Photograph No. 20

Photographer: Lauren Foster

Description: Dust trap bin in central courtyard, WW-30





Photographic Documentation

Client: U.S. EPA Region 5

Prepared by: Tetra Tech, Inc.

Site Name: Wagner Ware Site

TDD Number: S05-0001-1508-200

Location: 440 Fair Road, Sidney, Shelby County, OH

Dates: August 27th, 2015; October 21st, 2015

Photograph No. 21

Photographer: Lauren Foster

Description: Building 16 open pipe
WW-31, -32



Photograph No. 22

Photographer: Lauren Foster

Description: Building 12 soil/debris
on floor
WW-33





Photographic Documentation

Client: U.S. EPA Region 5

Prepared by: Tetra Tech, Inc.

Site Name: Wagner Ware Site

TDD Number: S05-0001-1508-200

Location: 440 Fair Road, Sidney, Shelby County, OH

Dates: August 27th, 2015; October 21st, 2015

Photograph No. 23

Photographer: Lauren Foster

Description: Building 11 pit
WW-34 (RAD)



APPENDIX D
START FIELD NOTES

Tuesday, August 11, 2015

10:30: START (L. Foster + B. Helmer) arrives at Wayne Wares Facility, 440 Fair Avenue, Sidney, OH. Weather: Sunny, 80°F, wind S by WSW.

J. Penninger (US EPA), J. Schmitt (US EPA), B. Lohrer (Ohio EPA) also on site.

11:00: Ernie Powers (owner, Wayne Facility / Master Vision Polishing) arrives on site.

Signs Access Agreement for EPA to conduct site investigation.

11:30: Lieutenant W. Frey (Sidney Fire Dept) arrives on site. START conducts health & safety briefing for teams, reviewing buddy systems, overhead and tripping hazards, and potential biological hazards in buildings. W. Frey notes that portions of building are collapsing and not all areas are accessible. L. Foster + B. Helmer calibrate Matheson - see instrument calibration logs.

11:45: START, USEPA, ODEPA, SPD enter Wayne Wares Facility for new procedure to transform area in central courtyard through rest of buildings. Building 4, 10, and 8 are not accessible (see site layout figure).

Jim Testa 8/11/15

Tuesday, August 11, 2015

Down Phase I / Phase II reports.

11:50: Potential sample locations identified - sample from each of 5 transformers located in courtyard. Sample soil in 2-3 locations with staining near transformers. 4 Transformers open, rest of rainwater, appear undisturbed.

13:30: START, USEPA, ODEPA, SPD exit Facility. Potential sample areas identified include: acid tanks in Bldg 2 & 3, drip tank in Bldg 2, drum/containers in Used Oil Room in Bldg 6, solid drum contents in Bldgs 5, 9, 11. Solid waste/sol from two in-ground pits in Bldg 11, Containers in Park Thruway Room in Bldg 12, piles of possible debris and in Bldg 12 unknown drum samples in Bldg 15. See photolog for photo details, see proposed sample summary table for locational information. Site in very poor condition overall, exposed to elements, frequent vandals, many structural issues.

14:45: START continue into gallery, locate closest residence to Facility (~20 ft) ->

Jim Testa 8/11/15 *Rite in the Rain*

Tuesday, August 11, 2015

14:00: SFD, OERRA, S. Small (US EPA), B. Helmer (H. START) offsite. L. Foster (H. START) and S. Pennington to Cory Mangia office to get copy of Phase I and other background reports to develop SAP.

14:15: L. Foster and S. Pennington offsite, Wagon Facility was secured and locked prior to departure.

L
Foster

8/11/15

THURSDAY, August 27, 2015

08:00: H. START arrive at Wagon Wagon Facility, 440 Fur Ave, Sidney OH. B. Helmer, K. Tobias, and L. Foster on site to conduct sampling for site investigation. Weather: Sunny, 62°F, Wind 7 mph SW.

S. Pennington (US EPA) also on site. Begin calibrating instruments (Mettler P20, SAM-935) - see calibration log sheet.

Begin getting up sample information.

08:15: S. Small (US EPA) and B. Helmer (Ohio EPA) on-site, with XRF to field screen.

08:30: Chief C. Haller (SFD) plus 15-man crew arrive on site. 15-man crew present for safety briefing.

START provides safety briefing (via review of HAZOP) and plan for the day:

START, USEPA, Ohio EPA, - C. Haller (SFD) conduct initial walkthrough on level D to locate sample locations. Then B. Helmer and K. Tobias drop out on level B (after initial monitoring) and begin collecting unknown samples identified in SAP. L. Foster and S. Pennington observe sampling and ensure sample custody, timing the level B entry.

L
Foster

Rite in the Rain

Thursday, August 27, 2015

08:30: and processing samples. J. Sewell and B. Lohm will field screen through all facility, and XRF to target metals samples. All teams in communication via radio. B. Lohm & K. Tobin downgrade to Level C after unknown sample collection is complete to post-medical monitoring, assist with additional sample collection, documentation, and handling of DOW. Upon collection of all samples, exit facility, complete sample processing in staging area in parking lot.

Addition of Tapes: Slips, Tapes, & Falls, poor structural integrity, Level B entry, heat stress, opening and sampling unknown containers, communication with partner and other teams. All work to be completed in accordance with IHAAP and SARP.

09:00: Dress out in modified Level D and begin walkthrough of site. Locate sample locations and stage sampling equipment.

10:00: Complete walkthrough. B. Lohm & K. Tobin to medical monitoring. L. Fajor & S. Ramirez assist in staging area. J. Sewell & B. Lohm to the Tank

Thursday, August 27, 2015 7

re-enter building with XRF

11:30: B. Lohm & K. Tobin in Level B, on air. L. Fajor & S. Ramirez in Level C - all re-enter bldg.

Begin unknown sample collection, field screening, and documentation. See sample log sheets for sample info. See photo log for photo documentation.

13:05: Complete sampling of unknowns - B. Lohm & K. Tobin to post medical monitoring. All teams exit building for lunch break in staging area.

13:45: All teams re-enter facility, resume sample collection in Level C (soil samples, both solids). See sample log sheets for details.

15:30: Complete sample collection. All teams exit facility and remove DOW from Building. Debated at day whether OS2 Personnel. START continues to process samples and pack equipment.

16:15: B. Lohm & J. Sewell, and S. Ramirez off-site.

17:30: Sample processing and packing complete. All samples to be shipped to CT Labs in Baraboo, WI. K. Tobin off-site to buy ice.

Jim Tank

Rite in the Rain

Thursday, August 27, 2015

17:40: L. Foster off-site to upload sample documentation. B. Helin and R. Dobra to FedEx to relinquish samples. AM demands to Cincinnati, OH.

Jam

Foster

8/27/15

Jam Foster

Wednesday, October 21, 2015

12:00: L. Foster (LT START) and C. Tipton (CT START) arrive at Wayne Wane Facility, 7410 Fair Ave, Sidney, OH. Weather: 70°F. Sunny, Wind 10 mph W. Begin unloading equipment in preparation to collect additional metals samples. Calibrate MultiRa, Standardize DPF - see calibration log sheets. Prepare sampling supplies.

12:30: H-S briefing - topics include overhead/trapping hazards in buildings, ladder system, and emergency contact procedures. LF + CT discuss our modified Level 10 and begin field survey bulk materials inside Building.

13:30: End building Potential Workers include dust bags in courtyard, in-ground pit in Bldg 11 (the Rack), and dust/debris in Bldg 12 and 13.

14:00: S. Penney (USEPA) and S. LeMay (EPA) arrive on-site. START holds another safety briefing. LF + CT will re-enter in Level C and collect samples. S. LeMay and S. Penney will be field survey and providing safety support for additional samples.

Jam Foster

Rite in the Rain

WEDNESDAY, OCTOBER 21, 2015

14:10: LF, CT, SR, SL all enter facility.

LF & CT begin sample collection. LF primarily documenting and CT primary samples. See sample log sheets for sample locations and additional details.

15:35: All exit facility, with 6 additional samples collected and all data out of buildings. See sample log and photo log. CT & LF begin processing samples.

15:45: S. Penney and Z. LeMay all site.

16:30: CT & LF finish processing samples and load eq. CT and LF dissolution from site to return to Cincinnati. Sample packages and shipping to be completed in Cincinnati. Bogen Wan Facility locked and secured upon leaving.

Jim Zerk

10/21/15

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Surface Soil

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-01-58-082715

Sample Location Description: NE Transformer Pad; NE of Transformer 1

Sample Collection Date: 8/27/15

Sample Collection Time: 14:07

Sample collected by: B. Hahn / L. Tobias

Sample Information:

Container	Preservative	Holding Time	Analysis
802	400		PCBs

Property Owner Information:

MasterVision Plating B. Hahn

Sample Comments:

stained surface
soil near
open transformer
0-6" deep

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Surface Soil

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-02-SS-082715

Sample Location Description: NE Transform Pad, South of Transformer 2

Sample Collection Date: 8/27/15

Sample Collection Time: 14:10

Sample collected by: BLA, KTS

Sample Information:

Container	Preservative	Holding Time	Analysis
802	Y ^u		MB ₃

Property Owner Information:

MasterVision Plating

Sample Comments:

thick soil
adjacent open transformer

Sample Location Map:

Field Sample Collection Sheet

[US EPA Region 5 / START]

[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Surface Soil

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-03-SS-082715

Sample Location Description: NE Transformer Pad, under transformer 4

Sample Collection Date: 8/27/15

Sample Collection Time: 14:13

Sample collected by: BIT - LT

Sample Information:

Container	Preservative	Holding Time	Analysis
802	400		VRB

Property Owner Information:

MasterVision Plating

Sample Comments:

Stained soil
under open
transformer

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Surface Soil

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-04-85-082715

Sample Location Description: Courtyard outside transformer fences - Main Path

Sample Collection Date: 8/27/15

Sample Collection Time: 14:16

Sample collected by: Bit + LT

Sample Information:

Container	Preservative	Holding Time	Analysis
802	400		PCBs

Property Owner Information:

MasterVision Plating

Sample Comments:

Surface soil 0-6" by
staked soil on main
path through courtyard
near NE Transformer Pad

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Surface Soil

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-05-SS-082715

Sample Location Description: Courtyard outside Transformer fences, west of main path

Sample Collection Date: 8/27/15

Sample Collection Time: 14:15

Sample collected by: BLK - ILS

Sample Information:

Container	Preservative	Holding Time	Analysis
822	yes		PCB ₃

Property Owner Information:

MasterVision Plating

Sample Comments:

0-6" by
stained soil
west of main path
through courtyard
between the two
transformer pads

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Surface Soil

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-06-SS-082715

Sample Location Description: Cougar, W transfer area

Sample Collection Date: 8 / 27 / 15

Sample Collection Time: 14 : 22

Sample collected by: BA - IGT

Sample Information:

Container	Preservative	Holding Time	Analysis
802	400		VB3

Property Owner Information:

MasterVision Plating

Sample Comments:

0-6" by
within fence
area of waste
Transfer pad

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Surface Soil

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-07-SS-082705

Sample Location Description: County rd, west transfer area

Sample Collection Date: 8/27/15

Sample Collection Time: 14:17

Sample collected by: BH - KLT

Sample Information:

Container	Preservative	Holding Time	Analysis
802	402		PL3,

Property Owner Information:

MasterVision Plating

Sample Comments:

0-6"

In forest area around
west transfer pad

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Surface Soil

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-08-65-082715

Sample Location Description: Cowyard, West Transformer Area

Sample Collection Date: 8/27/15

Sample Collection Time: 14:19

Sample collected by: BLH - JLT

Sample Information:

Container	Preservative	Holding Time	Analysis
8oz	400		PUB

Property Owner Information:

MasterVision Plating

Sample Comments:

0-6"
with fence over by
west transformer pad

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-09-LW-082715

Sample Location Description: NE Transfer Area - Transfer 1

Sample Collection Date: 8/27/15

Sample Collection Time: 13:50

Sample collected by: BLH-WT

Sample Information:

Container	Preservative	Holding Time	Analysis
802	412		PLB ₁

Property Owner Information:

MasterVision Plating

Sample Comments:

Open Transfer
Pink-colored liquid
Entrain-most transfer

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-10-LW-082715

Sample Location Description: NE Transformer Area - Transformer 2

Sample Collection Date: 8/27/15

Sample Collection Time: 13:57

Sample collected by: DIT-UT

Sample Information:

Container	Preservative	Holding Time	Analysis
802	YOC		PB ₂

Property Owner Information:

MasterVision Plating

Sample Comments:

Open transformer
Clear liquid
on eastern portion of pad

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-11-LW-082715

Sample Location Description: NE Transformer Area - Transformer 3

Sample Collection Date: 8/27/15

Sample Collection Time: 14:00

Sample collected by: BUT-KF

Sample Information:

Container	Preservative	Holding Time	Analysis
802	700		MB ₃

Property Owner Information:

MasterVision Plating

Sample Comments:

Open transformer
on west portion of pad
clear liquid

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-12-LW-084715

Sample Location Description: NE Transformer Area - Transformer 4

Sample Collection Date: 8 / 27 / 15

Sample Collection Time: 14:03

Sample collected by: Bill Lut

Sample Information:

Container	Preservative	Holding Time	Analysis
822	no		PCB ₇

Property Owner Information:

MasterVision Plating

Sample Comments:

Open Transformer
Western-most on NE pad
Clear liquid sample

Sample Location Map:

Field Sample Collection Sheet

[US EPA Region 5 / START]

[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-13-LW-082715

Sample Location Description: West Transformer, Transformer 5

Sample Collection Date: 8/27/18

Sample Collection Time: 13:55

Sample collected by: BA, LT

Sample Information:

Container	Preservative	Holding Time	Analysis
802	902		PUB

Property Owner Information:

MasterVision Plating

Sample Comments:

In tank transformer
only one on west pad
labeled as "PUB-contaminated
electrical equipment"
clear oily liquid

Sample Location Map:

Field Sample Collection Sheet

[US EPA Region 5 / START]

[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-14-LW-082713

Sample Location Description: Building 2 Unit

Sample Collection Date: 8/27/15

Sample Collection Time: 12:53

Sample collected by: BH-105

Sample Information:

Container	Preservative	Holding Time	Analysis
250 mL	YU		pH

Property Owner Information:

MasterVision Plating

Sample Comments:

Open Unit in B.2
Field sampling -
pH = 1
PID = 14920 vrb

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-15-LW-082715

Sample Location Description: Big 2 Unit

Sample Collection Date: 8/27/15

Sample Collection Time: 12:48

Sample collected by: BW - US

Sample Information:

Container	Preservative	Holding Time	Analysis
250 ml	40%		VIA

Property Owner Information:

MasterVision Plating

Sample Comments:

Open Unit in Big 2

Field sampling -
pH = 9

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-16-LW-082715

Sample Location Description: Bldg 2 Open Unit

Sample Collection Date: 8/22/15

Sample Collection Time: 12:45

Sample collected by: Bit-LT

Sample Information:

Container	Preservative	Holding Time	Analysis
250 ml	40%		✓ 14

Property Owner Information:

MasterVision Plating

Sample Comments:

Open Unit in Bldg 2

Field Summary:

Plt = 1

PSD = 75, 110 ppb

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-17-LW-084215

Sample Location Description: Bldg 15

Sample Collection Date: 8/27/15

Sample Collection Time: 12:05

Sample collected by: Blk, LUT

Sample Information:

Container	Preservative	Holding Time	Analysis
250 mL	4°C		PLA

Property Owner Information:

MasterVision Plating

Sample Comments:

75-gallon poly drum
unknown contents

Field screening:

pH = 13.5

PDO = 4820 ppb

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-18-LW-082715

Sample Location Description: Bldg 15

Sample Collection Date: 8/27/15

Sample Collection Time: 12:15

Sample collected by: Blat, LST

Sample Information:

Container	Preservative	Holding Time	Analysis
250 mL	Yes		pl4

Property Owner Information:

MasterVision Plating

Sample Comments:

Larger poly container in
Bldg 15 - contents unknown

Field Sampling:

pl4 = 0

VAD = 1420 ppb

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-19-LW-082715

Sample Location Description: Bldg 6 - Used Oil Area

Sample Collection Date: 8/27/15

Sample Collection Time: 13:00

Sample collected by: B4-KT

Sample Information:

Container	Preservative	Holding Time	Analysis
250ml	YOL		Plasmapone

Property Owner Information:

MasterVision Plating

Sample Comments:

55-gallon drum labeled
"Citrosolve" in Bldg 6 Used
Oil Area.

PAD = 4,820 ppb

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-40-LW-082715

Sample Location Description: Bldg 12 - Paint Thinner Room

Sample Collection Date: 8/27/15

Sample Collection Time: 11:53

Sample collected by: BK-125

Sample Information:

Container	Preservative	Holding Time	Analysis
250 mL	40%		Plasma - out

Property Owner Information:

MasterVision Plating

Sample Comments:

1-gal poly container in
Bldg 12 - Paint Thinner Room

PDD: 29, 800 mls

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-4-LW-082715

Sample Location Description: Bldg 12 - Paint Thinner Room

Sample Collection Date: 8/27/15

Sample Collection Time: 11:55

Sample collected by: Bit - CF

Sample Information:

Container	Preservative	Holding Time	Analysis
250mL	4°C		Plankton

Property Owner Information:

MasterVision Plating

Sample Comments:

5 gal metal container
in Bldg 12 Paint Thinner Room
PBT = 302 m/s

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-12-LW-082715

Sample Location Description: Bldg 12 - Paint thinner Room

Sample Collection Date: 8/27/15

Sample Collection Time: 11:58

Sample collected by: BAH-105

Sample Information:

Container	Preservative	Holding Time	Analysis
250 ml	400		Fluoridant

Property Owner Information:

MasterVision Plating

Sample Comments:

Bldg 12 - Paint Thinner Room
5-gallon metal container
PID = 399 mb

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Liquid Waste

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-23-LW-082715

Sample Location Description: Bldg 12 Paint Thinner Room

Sample Collection Date: 8/27/15

Sample Collection Time: 12:00

Sample collected by: Bldg 12

Sample Information:

Container	Preservative	Holding Time	Analysis
250 mL	4°C		Fluorimetry

Property Owner Information:

MasterVision Plating

Sample Comments:

1-gallon poly container in
Bldg 12 Paint Thinner Room
PID = 277 ppb

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Solid/Bulk Materials

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-24-SW-082215

Sample Location Description: Blk 2 Dig tank area

Sample Collection Date: 8/22/15

Sample Collection Time: 14:40

Sample collected by: Bill CWT

Sample Information:

Container	Preservative	Holding Time	Analysis
80g	40g		TEEP metals

Property Owner Information:

MasterVision Plating

Sample Comments:

Blk 2 was covered
dig tank area
gravel material with toques to
die br

XRF: Vb detected

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Solid/Bulk Materials

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-25-SL-082715

Sample Location Description: Bldg 2 Wagon Conveyor Area

Sample Collection Date: 8/22/15

Sample Collection Time: 14:45

Sample collected by: BIT-HS

Sample Information:

Container	Preservative	Holding Time	Analysis
802	40%		TCAP metals

Property Owner Information:

MasterVision Plating

Sample Comments:

B2 Wagon Conveyor Furnace Area.

Grounds material, named in color

XRF = Chromium detected

Sample Location Map:

Field Sample Collection Sheet

[US EPA Region 5 / START]

[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Solid/Bulk Materials

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-26-SW-082715
WW-16-SW-082715 CP

Sample Location Description: Bldg 9

Sample Collection Date: 8/27/15

Sample Collection Time: 15:00

Sample collected by: BIT CLK

Sample Information:

Container	Preservative	Holding Time	Analysis
802	4°C		ALP metals

Property Owner Information:

MasterVision Plating

Sample Comments:

55-gallon poly drum in
Bldg 9
dark br granular material
XRF = detector C

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Solid/Bulk Materials

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-27-SW-092715

Sample Location Description: Blg 11 Pit

Sample Collection Date: 8/27/15

Sample Collection Time: 15:22

Sample collected by: BLA-KT

Sample Information:

Container	Preservative	Holding Time	Analysis
502	YU		TECP metals

Property Owner Information:

MasterVision Plating

Sample Comments:

In grass pit in Bldg 11
west pit sampled
Composite of 2 aliquots
from 0-10" top of
pit surface
Soil-like 12 hr w/ ground
and debris
XRF: detected Cr, Mo

Sample Location Map:

Field Sample Collection Sheet

[US EPA Region 5 / START]

[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Solid/Bulk Materials

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-28-SW-082715

Sample Location Description: Bldg 12 Pile

Sample Collection Date: 8/27/15

Sample Collection Time: 15:15

Sample collected by: BIT - KAT

Sample Information:

Container	Preservative	Holding Time	Analysis
802	Y02		TEEP MUDS

Property Owner Information:

MasterVision Plating

Sample Comments:

Pile on ground as B.12 -
gray, fine material
XRF = detected Cu

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Solid/Bulk Materials

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-29-SS-102115

Sample Location Description: Country road adjacent B.W. extension

Sample Collection Date: 10/21/15

Sample Collection Time: 14:45

Sample collected by: CTC/LF

Sample Information:

Container	Preservative	Holding Time	Analysis
802	400		TELP Method

Property Owner Information:

MasterVision Plating

Sample Comments:

Bin/box below desk.
Map on B.W. extension
in central courtyard

Sample Location Map:

Field Sample Collection Sheet

[US EPA Region 5 / START]

[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Solid/Bulk Materials

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-30-55-102115

Sample Location Description: Central Cemetery adjacent B.3

Sample Collection Date: 20/12/15

Sample Collection Time: 14:50

Sample collected by: CT x LF

Sample Information:

Container	Preservative	Holding Time	Analysis
802	400		TECP metals

Property Owner Information:

MasterVision Plating

Sample Comments:

Bm / Bag outside door traps on
B.3 entrance in central
cemetery.

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Solid/Bulk Materials

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-31-SS-102115

Sample Location Description: Big 16 open pipe

Sample Collection Date: 10/21/15

Sample Collection Time: 15:00

Sample collected by: CT LF

Sample Information:

Container	Preservative	Holding Time	Analysis
802	Y ⁰⁰		TCLP Metals

Property Owner Information:

MasterVision Plating

Sample Comments:

Open pipe in Bille (w/pipe cover)
Grey dust-like fine material

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Solid/Bulk Materials

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-32-SS-102115

Sample Location Description: Bldg 14 open pipe

Sample Collection Date: 10/24/15

Sample Collection Time: 15:45

Sample collected by: CT, CF

Sample Information:

Container	Preservative	Holding Time	Analysis
802		4°C	TLCP metals

Property Owner Information:

MasterVision Plating

Sample Comments:

Open pipe in Bldg 14 (cupola area)
Rust-brown colored dust from
open pipe

Sample Location Map:

Field Sample Collection Sheet
[US EPA Region 5 / START]
[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Solid/Bulk Materials

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-33-SS-102115

Sample Location Description: Bldg 12 Plaster

Sample Collection Date: 10/21/15

Sample Collection Time: 16:15

Sample collected by: CT, CF

Sample Information:

Container	Preservative	Holding Time	Analysis
802	yes		TRP metals

Property Owner Information:

MasterVision Plating

Sample Comments:

Dirt/dust/debris located on
floor of B.12
not a pile on floor,
but assumed processing-
related debris
varied in color & size
mostly tan, fine to med

Sample Location Map:

Field Sample Collection Sheet

[US EPA Region 5 / START]

[Cincinnati, OH]

Project Number: 103X90260001S051508200

Matrix: Solid/Bulk Materials

Project ID: S05-0001-1508-200

Project Manager: Lauren Foster

Site Name: Wagner Ware Site

Site Location: 440 Fair Ave Sidney, Shelby Co, OH

Site ID: C58H

Sample Number: WW-34-SS-102115 / WW-34-RAD-102115

Sample Location Description: Big 11 pit

Sample Collection Date: 10/21/15

Sample Collection Time: 15:25

Sample collected by: CT, LP

Sample Information:

Container	Preservative	Holding Time	Analysis
802	400		TCU metals
802			Gamma spec

Property Owner Information:

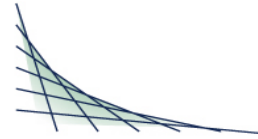
MasterVision Plating

Sample Comments:

In ground pit in Big 11
grab sample collected
from 2-2.5' bgs in pit
based on Rad surveying 3x background.
Sampled for metals plus gamma spec

Sample Location Map:

APPENDIX E
LABORATORY REPORTS



ANALYTICAL REPORT

This report at a minimum contains the following information:

- Analytical Report of Test Results
- Description of QC Qualifiers
- Chain of Custody (copy)
- Quality Control Summary
- Case Narrative (if applicable)
- Correspondence with Client (if applicable)

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for parameters where accreditation is required or available, unless otherwise noted in the case narrative.



ANALYTICAL REPORT

TETRA TECH
 BRANDON HELM
 250 W COURT STREET
 SUITE 200W
 CINCINNATI, OH 45202

Project Name: WAGNER WARE SITE
 Project Phase:
 Contract #: 2833
 Project #: 0001/S05-0001-1508-2
 Folder #: 113571
 Purchase Order #: 1111200

Page 1 of 17
 Arrival Temperature: 3.3
 Report Date: 9/10/2015
 Date Received: 8/28/2015
 Reprint Date: 9/10/2015

CT LAB#: 625897 Sample Description: WW-20-LW-082715 Client Sample #:
 Sampled: 8/27/2015 1153

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Flashpoint	110	Deg. F					1.00			9/1/15 15:36 JJF	EPA 1010	^
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CT LAB#: 625901 Sample Description: WW-21-LW-082715 Client Sample #:
 Sampled: 8/27/2015 1155

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Flashpoint	>140.0	Deg. F					1.00			9/1/15 15:36 JJF	EPA 1010	^
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CT LAB#: 625902 Sample Description: WW-22-LW-082715 Client Sample #:
 Sampled: 8/27/2015 1158

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Flashpoint	79	Deg. F					1.00			9/1/15 15:36 JJF	EPA 1010	^
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Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 625903	Sample Description: WW-23-LW-082715	Client Sample #:	Sampled: 8/27/2015 1200
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Flashpoint	100	Deg. F					1.00			9/1/15 15:36	JJF	EPA 1010	^
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CT LAB#: 625905	Sample Description: WW-17-LW-082715	Client Sample #:	Sampled: 8/27/2015 1205
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

pH	13.60	S.U.					1.00	X		8/31/15 13:00	LJS	EPA 9045D	^
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CT LAB#: 625906	Sample Description: WW-18-LW-082715	Client Sample #:	Sampled: 8/27/2015 1215
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

pH	0.97	S.U.					1.00	X		8/31/15 13:00	LJS	EPA 9045D	^
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CT LAB#: 625907	Sample Description: WW-16-LW-082715	Client Sample #:	Sampled: 8/27/2015 1245
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

pH	1.21	S.U.					1.00	X		8/31/15 13:00	LJS	EPA 9045D	^
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CT LAB#: 625908	Sample Description: WW-15-LW-082715	Client Sample #:	Sampled: 8/27/2015 1248
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

pH	1.17	S.U.					1.00	X		8/31/15 13:00	LJS	EPA 9045D ^
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CT LAB#: 625909	Sample Description: WW-14-LW-082715	Client Sample #:	Sampled: 8/27/2015 1253
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

pH	1.16	S.U.					1.00	X		8/31/15 13:00	LJS	EPA 9045D ^
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CT LAB#: 625910	Sample Description: WW-19-LW-082715	Client Sample #:	Sampled: 8/27/2015 1300
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Flashpoint	115.3	Deg. F					1.00			9/1/15 15:36	JJF	EPA 1010 ^
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CT LAB#: 625911	Sample Description: WW-09-LW-082715	Client Sample #:	Sampled: 8/27/2015 1350
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Organic Results

Aroclor-1016	<43	ug/kg	43	170	260	260	1.00	U	9/2/2015 11:15	9/8/15 14:16	SRT	EPA 8082A
Aroclor-1221	<61	ug/kg	61	170	260	260	1.00	U	9/2/2015 11:15	9/8/15 14:16	SRT	EPA 8082A
Aroclor-1232	<78	ug/kg	78	170	260	260	1.00	U	9/2/2015 11:15	9/8/15 14:16	SRT	EPA 8082A
Aroclor-1242	<61	ug/kg	61	170	260	260	1.00	U	9/2/2015 11:15	9/8/15 14:16	SRT	EPA 8082A

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 625911	Sample Description: WW-09-LW-082715	Client Sample #:	Sampled: 8/27/2015 1350
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Aroclor-1248	<61	ug/kg	61	170	260	260	1.00	U	9/2/2015 11:15	9/8/15 14:16	SRT	EPA 8082A
Aroclor-1254	<78	ug/kg	78	170	260	260	1.00	U	9/2/2015 11:15	9/8/15 14:16	SRT	EPA 8082A
Aroclor-1260	<52	ug/kg	52	170	260	260	1.00	U	9/2/2015 11:15	9/8/15 14:16	SRT	EPA 8082A
Aroclor-1262	<61	ug/kg	61	170	260	260	1.00	U	9/2/2015 11:15	9/8/15 14:16	SRT	EPA 8082A
Aroclor-1268	<43	ug/kg	43	170	260	260	1.00	U	9/2/2015 11:15	9/8/15 14:16	SRT	EPA 8082A
Surr: DCBP	117	% Recovery	60			125	1.00		9/2/2015 11:15	9/8/15 14:16	SRT	EPA 8082A

CT LAB#: 625912	Sample Description: WW-13-LW-082715	Client Sample #:	Sampled: 8/27/2015 1355
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results												
Aroclor-1016	<94	ug/kg	94	380	570	570	2.00	U	9/2/2015 11:15	9/9/15 11:46	SRT	EPA 8082A
Aroclor-1221	<130	ug/kg	130	380	570	570	2.00	U	9/2/2015 11:15	9/9/15 11:46	SRT	EPA 8082A
Aroclor-1232	<170	ug/kg	170	380	570	570	2.00	U	9/2/2015 11:15	9/9/15 11:46	SRT	EPA 8082A
Aroclor-1242	<130	ug/kg	130	380	570	570	2.00	U	9/2/2015 11:15	9/9/15 11:46	SRT	EPA 8082A
Aroclor-1248	<130	ug/kg	130	380	570	570	2.00	U	9/2/2015 11:15	9/9/15 11:46	SRT	EPA 8082A
Aroclor-1254	<170	ug/kg	170	380	570	570	2.00	U	9/2/2015 11:15	9/9/15 11:46	SRT	EPA 8082A
Aroclor-1260	5190	ug/kg	110	380	570	570	2.00		9/2/2015 11:15	9/9/15 11:46	SRT	EPA 8082A
Aroclor-1262	<130	ug/kg	130	380	570	570	2.00	U	9/2/2015 11:15	9/9/15 11:46	SRT	EPA 8082A
Aroclor-1268	<94	ug/kg	94	380	570	570	2.00	U	9/2/2015 11:15	9/9/15 11:46	SRT	EPA 8082A
Surr: DCBP	86	% Recovery	60			125	2.00		9/2/2015 11:15	9/9/15 11:46	SRT	EPA 8082A

CT LAB#: 625913	Sample Description: WW-10-LW-082715	Client Sample #:	Sampled: 8/27/2015 1357
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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CT LAB#: 625913 Sample Description: WW-10-LW-082715 Client Sample #: Sampled: 8/27/2015 1357

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results												
Aroclor-1016	<46	ug/kg	46	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 14:59	SRT	EPA 8082A
Aroclor-1221	<64	ug/kg	64	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 14:59	SRT	EPA 8082A
Aroclor-1232	<83	ug/kg	83	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 14:59	SRT	EPA 8082A
Aroclor-1242	<64	ug/kg	64	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 14:59	SRT	EPA 8082A
Aroclor-1248	<64	ug/kg	64	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 14:59	SRT	EPA 8082A
Aroclor-1254	<83	ug/kg	83	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 14:59	SRT	EPA 8082A
Aroclor-1260	<55	ug/kg	55	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 14:59	SRT	EPA 8082A
Aroclor-1262	<64	ug/kg	64	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 14:59	SRT	EPA 8082A
Aroclor-1268	<46	ug/kg	46	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 14:59	SRT	EPA 8082A
Surr: DCBP	75	% Recovery	60			125	1.00		9/2/2015 11:15	9/8/15 14:59	SRT	EPA 8082A

CT LAB#: 625914 Sample Description: WW-11-LW-082715 Client Sample #: Sampled: 8/27/2015 1400

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results												
Aroclor-1016	<47	ug/kg	47	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:21	SRT	EPA 8082A
Aroclor-1221	<66	ug/kg	66	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:21	SRT	EPA 8082A
Aroclor-1232	<85	ug/kg	85	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:21	SRT	EPA 8082A
Aroclor-1242	<66	ug/kg	66	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:21	SRT	EPA 8082A
Aroclor-1248	<66	ug/kg	66	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:21	SRT	EPA 8082A
Aroclor-1254	<85	ug/kg	85	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:21	SRT	EPA 8082A
Aroclor-1260	<57	ug/kg	57	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:21	SRT	EPA 8082A
Aroclor-1262	<66	ug/kg	66	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:21	SRT	EPA 8082A
Aroclor-1268	<47	ug/kg	47	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:21	SRT	EPA 8082A
Surr: DCBP	119	% Recovery	60			125	1.00		9/2/2015 11:15	9/8/15 15:21	SRT	EPA 8082A

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 625914	Sample Description: WW-11-LW-082715	Client Sample #:	Sampled: 8/27/2015 1400
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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CT LAB#: 625915	Sample Description: WW-12-LW-082715	Client Sample #:	Sampled: 8/27/2015 1403
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Organic Results

Aroclor-1016	<47	ug/kg	47	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:42	SRT	EPA 8082A
Aroclor-1221	<65	ug/kg	65	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:42	SRT	EPA 8082A
Aroclor-1232	<84	ug/kg	84	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:42	SRT	EPA 8082A
Aroclor-1242	<65	ug/kg	65	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:42	SRT	EPA 8082A
Aroclor-1248	<65	ug/kg	65	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:42	SRT	EPA 8082A
Aroclor-1254	<84	ug/kg	84	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:42	SRT	EPA 8082A
Aroclor-1260	<56	ug/kg	56	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:42	SRT	EPA 8082A
Aroclor-1262	<65	ug/kg	65	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:42	SRT	EPA 8082A
Aroclor-1268	<47	ug/kg	47	190	280	280	1.00	U	9/2/2015 11:15	9/8/15 15:42	SRT	EPA 8082A
Surr: DCBP	128	% Recovery	60			125	1.00	S	9/2/2015 11:15	9/8/15 15:42	SRT	EPA 8082A

CT LAB#: 625916	Sample Description: WW-01-SS-082715	Client Sample #:	Sampled: 8/27/2015 1407
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Solids, Percent	60.5	%	0.1	0.1	0.1	0.1	1.00			8/28/15 14:40	ABS	EPA 8000C
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Organic Results

Aroclor-1016	<79	ug/kg	79	320	480	480	1.00	U	8/31/2015 13:30	9/8/15 16:25	SRT	EPA 8082A ^
Aroclor-1221	<110	ug/kg	110	320	480	480	1.00	U	8/31/2015 13:30	9/8/15 16:25	SRT	EPA 8082A ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 625916	Sample Description: WW-01-SS-082715	Client Sample #:	Sampled: 8/27/2015 1407
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Aroclor-1232	<140	ug/kg	140	320	480	480	1.00	U	8/31/2015 13:30	9/8/15 16:25	SRT	EPA 8082A ^
Aroclor-1242	<110	ug/kg	110	320	480	480	1.00	U	8/31/2015 13:30	9/8/15 16:25	SRT	EPA 8082A ^
Aroclor-1248	<110	ug/kg	110	320	480	480	1.00	U	8/31/2015 13:30	9/8/15 16:25	SRT	EPA 8082A ^
Aroclor-1254	<140	ug/kg	140	320	480	480	1.00	U	8/31/2015 13:30	9/8/15 16:25	SRT	EPA 8082A ^
Aroclor-1260	6060	ug/kg	95	320	480	480	1.00		8/31/2015 13:30	9/8/15 16:25	SRT	EPA 8082A ^
Aroclor-1262	<110	ug/kg	110	320	480	480	1.00	U	8/31/2015 13:30	9/8/15 16:25	SRT	EPA 8082A ^
Aroclor-1268	<79	ug/kg	79	320	480	480	1.00	U	8/31/2015 13:30	9/8/15 16:25	SRT	EPA 8082A ^
Surr: DCBP	90	% Recovery	60			125	1.00		8/31/2015 13:30	9/8/15 16:25	SRT	EPA 8082A

CT LAB#: 625917	Sample Description: WW-02-SS-082715	Client Sample #:	Sampled: 8/27/2015 1410
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Solids, Percent	67.2	%	0.1	0.1	0.1	0.1	1.00			8/28/15 14:40	ABS	EPA 8000C
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Organic Results

Aroclor-1016	<73	ug/kg	73	290	440	440	1.00	U	8/31/2015 13:30	9/8/15 16:47	SRT	EPA 8082A ^
Aroclor-1221	<100	ug/kg	100	290	440	440	1.00	U	8/31/2015 13:30	9/8/15 16:47	SRT	EPA 8082A ^
Aroclor-1232	<130	ug/kg	130	290	440	440	1.00	U	8/31/2015 13:30	9/8/15 16:47	SRT	EPA 8082A ^
Aroclor-1242	<100	ug/kg	100	290	440	440	1.00	U	8/31/2015 13:30	9/8/15 16:47	SRT	EPA 8082A ^
Aroclor-1248	<100	ug/kg	100	290	440	440	1.00	U	8/31/2015 13:30	9/8/15 16:47	SRT	EPA 8082A ^
Aroclor-1254	<130	ug/kg	130	290	440	440	1.00	U	8/31/2015 13:30	9/8/15 16:47	SRT	EPA 8082A ^
Aroclor-1260	759	ug/kg	88	290	440	440	1.00		8/31/2015 13:30	9/8/15 16:47	SRT	EPA 8082A ^
Aroclor-1262	<100	ug/kg	100	290	440	440	1.00	U	8/31/2015 13:30	9/8/15 16:47	SRT	EPA 8082A ^
Aroclor-1268	<73	ug/kg	73	290	440	440	1.00	U	8/31/2015 13:30	9/8/15 16:47	SRT	EPA 8082A ^
Surr: DCBP	61	% Recovery	60			125	1.00		8/31/2015 13:30	9/8/15 16:47	SRT	EPA 8082A

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 625918	Sample Description: WW-03-SS-082715	Client Sample #:	Sampled: 8/27/2015 1413
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	70.1	%	0.1	0.1	0.1	0.1	1.00			8/28/15 14:40	ABS	EPA 8000C
Organic Results												
Aroclor-1016	<62	ug/kg	62	250	370	370	1.00	U	8/31/2015 13:30	9/8/15 17:08	SRT	EPA 8082A ^
Aroclor-1221	<87	ug/kg	87	250	370	370	1.00	U	8/31/2015 13:30	9/8/15 17:08	SRT	EPA 8082A ^
Aroclor-1232	<110	ug/kg	110	250	370	370	1.00	U	8/31/2015 13:30	9/8/15 17:08	SRT	EPA 8082A ^
Aroclor-1242	<87	ug/kg	87	250	370	370	1.00	U	8/31/2015 13:30	9/8/15 17:08	SRT	EPA 8082A ^
Aroclor-1248	<87	ug/kg	87	250	370	370	1.00	U	8/31/2015 13:30	9/8/15 17:08	SRT	EPA 8082A ^
Aroclor-1254	<110	ug/kg	110	250	370	370	1.00	U	8/31/2015 13:30	9/8/15 17:08	SRT	EPA 8082A ^
Aroclor-1260	1610	ug/kg	74	250	370	370	1.00		8/31/2015 13:30	9/8/15 17:08	SRT	EPA 8082A ^
Aroclor-1262	<87	ug/kg	87	250	370	370	1.00	U	8/31/2015 13:30	9/8/15 17:08	SRT	EPA 8082A ^
Aroclor-1268	<62	ug/kg	62	250	370	370	1.00	U	8/31/2015 13:30	9/8/15 17:08	SRT	EPA 8082A ^
Surr: DCBP	77	% Recovery	60			125	1.00		8/31/2015 13:30	9/8/15 17:08	SRT	EPA 8082A

CT LAB#: 625919	Sample Description: WW-05-SS-082715	Client Sample #:	Sampled: 8/27/2015 1415
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	50.6	%	0.1	0.1	0.1	0.1	1.00	Y		8/28/15 14:40	ABS	EPA 8000C
Organic Results												
Aroclor-1016	<98	ug/kg	98	390	590	590	1.00	U	8/31/2015 13:30	9/8/15 17:30	SRT	EPA 8082A ^
Aroclor-1221	<140	ug/kg	140	390	590	590	1.00	U	8/31/2015 13:30	9/8/15 17:30	SRT	EPA 8082A ^
Aroclor-1232	<180	ug/kg	180	390	590	590	1.00	U	8/31/2015 13:30	9/8/15 17:30	SRT	EPA 8082A ^
Aroclor-1242	<140	ug/kg	140	390	590	590	1.00	U	8/31/2015 13:30	9/8/15 17:30	SRT	EPA 8082A ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 625919	Sample Description: WW-05-SS-082715	Client Sample #:	Sampled: 8/27/2015 1415
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Aroclor-1248	<140	ug/kg	140	390	590	590	1.00	U	8/31/2015 13:30	9/8/15 17:30	SRT	EPA 8082A ^
Aroclor-1254	<180	ug/kg	180	390	590	590	1.00	U	8/31/2015 13:30	9/8/15 17:30	SRT	EPA 8082A ^
Aroclor-1260	4340	ug/kg	120	390	590	590	1.00	M	8/31/2015 13:30	9/8/15 17:30	SRT	EPA 8082A ^
Aroclor-1262	<140	ug/kg	140	390	590	590	1.00	U	8/31/2015 13:30	9/8/15 17:30	SRT	EPA 8082A ^
Aroclor-1268	<98	ug/kg	98	390	590	590	1.00	U	8/31/2015 13:30	9/8/15 17:30	SRT	EPA 8082A ^
Surr: DCBP	65	% Recovery	60			125	1.00		8/31/2015 13:30	9/8/15 17:30	SRT	EPA 8082A

CT LAB#: 625920	Sample Description: WW-04-SS-082715	Client Sample #:	Sampled: 8/27/2015 1416
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	79.5	%	0.1	0.1	0.1	0.1	1.00			8/28/15 14:40	ABS	EPA 8000C
Organic Results												
Aroclor-1016	<59	ug/kg	59	240	350	350	1.00	U	8/31/2015 13:30	9/8/15 18:34	SRT	EPA 8082A ^
Aroclor-1221	<82	ug/kg	82	240	350	350	1.00	U	8/31/2015 13:30	9/8/15 18:34	SRT	EPA 8082A ^
Aroclor-1232	<110	ug/kg	110	240	350	350	1.00	U	8/31/2015 13:30	9/8/15 18:34	SRT	EPA 8082A ^
Aroclor-1242	<82	ug/kg	82	240	350	350	1.00	U	8/31/2015 13:30	9/8/15 18:34	SRT	EPA 8082A ^
Aroclor-1248	<82	ug/kg	82	240	350	350	1.00	U	8/31/2015 13:30	9/8/15 18:34	SRT	EPA 8082A ^
Aroclor-1254	<110	ug/kg	110	240	350	350	1.00	U	8/31/2015 13:30	9/8/15 18:34	SRT	EPA 8082A ^
Aroclor-1260	3770	ug/kg	71	240	350	350	1.00		8/31/2015 13:30	9/8/15 18:34	SRT	EPA 8082A ^
Aroclor-1262	<82	ug/kg	82	240	350	350	1.00	U	8/31/2015 13:30	9/8/15 18:34	SRT	EPA 8082A ^
Aroclor-1268	<59	ug/kg	59	240	350	350	1.00	U	8/31/2015 13:30	9/8/15 18:34	SRT	EPA 8082A ^
Surr: DCBP	83	% Recovery	60			125	1.00		8/31/2015 13:30	9/8/15 18:34	SRT	EPA 8082A

CT LAB#: 625921	Sample Description: WW-07-SS-082715	Client Sample #:	Sampled: 8/27/2015 1417
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	60.9	%	0.1	0.1	0.1	0.1	1.00			8/28/15 14:40	ABS	EPA 8000C
Organic Results												
Aroclor-1016	<76	ug/kg	76	300	460	460	1.00	U	8/31/2015 13:30	9/8/15 18:56	SRT	EPA 8082A ^
Aroclor-1221	<110	ug/kg	110	300	460	460	1.00	U	8/31/2015 13:30	9/8/15 18:56	SRT	EPA 8082A ^
Aroclor-1232	<140	ug/kg	140	300	460	460	1.00	U	8/31/2015 13:30	9/8/15 18:56	SRT	EPA 8082A ^
Aroclor-1242	<110	ug/kg	110	300	460	460	1.00	U	8/31/2015 13:30	9/8/15 18:56	SRT	EPA 8082A ^
Aroclor-1248	<110	ug/kg	110	300	460	460	1.00	U	8/31/2015 13:30	9/8/15 18:56	SRT	EPA 8082A ^
Aroclor-1254	<140	ug/kg	140	300	460	460	1.00	U	8/31/2015 13:30	9/8/15 18:56	SRT	EPA 8082A ^
Aroclor-1260	2630	ug/kg	91	300	460	460	1.00		8/31/2015 13:30	9/8/15 18:56	SRT	EPA 8082A ^
Aroclor-1262	<110	ug/kg	110	300	460	460	1.00	U	8/31/2015 13:30	9/8/15 18:56	SRT	EPA 8082A ^
Aroclor-1268	<76	ug/kg	76	300	460	460	1.00	U	8/31/2015 13:30	9/8/15 18:56	SRT	EPA 8082A ^
Surr: DCBP	60	% Recovery	60			125	1.00		8/31/2015 13:30	9/8/15 18:56	SRT	EPA 8082A

CT LAB#: 625922	Sample Description: WW-08-SS-082715	Client Sample #:	Sampled: 8/27/2015 1419
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	76.1	%	0.1	0.1	0.1	0.1	1.00			8/28/15 14:40	ABS	EPA 8000C
Organic Results												
Aroclor-1016	<60	ug/kg	60	240	360	360	1.00	U	8/31/2015 13:30	9/8/15 19:17	SRT	EPA 8082A ^
Aroclor-1221	<84	ug/kg	84	240	360	360	1.00	U	8/31/2015 13:30	9/8/15 19:17	SRT	EPA 8082A ^
Aroclor-1232	<110	ug/kg	110	240	360	360	1.00	U	8/31/2015 13:30	9/8/15 19:17	SRT	EPA 8082A ^
Aroclor-1242	<84	ug/kg	84	240	360	360	1.00	U	8/31/2015 13:30	9/8/15 19:17	SRT	EPA 8082A ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 625922	Sample Description: WW-08-SS-082715	Client Sample #:	Sampled: 8/27/2015 1419
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Aroclor-1248	<84	ug/kg	84	240	360	360	1.00	U	8/31/2015 13:30	9/8/15 19:17	SRT	EPA 8082A ^
Aroclor-1254	<110	ug/kg	110	240	360	360	1.00	U	8/31/2015 13:30	9/8/15 19:17	SRT	EPA 8082A ^
Aroclor-1260	1340	ug/kg	72	240	360	360	1.00		8/31/2015 13:30	9/8/15 19:17	SRT	EPA 8082A ^
Aroclor-1262	<84	ug/kg	84	240	360	360	1.00	U	8/31/2015 13:30	9/8/15 19:17	SRT	EPA 8082A ^
Aroclor-1268	<60	ug/kg	60	240	360	360	1.00	U	8/31/2015 13:30	9/8/15 19:17	SRT	EPA 8082A ^
Surr: DCBP	104	% Recovery	60			125	1.00		8/31/2015 13:30	9/8/15 19:17	SRT	EPA 8082A

CT LAB#: 625923	Sample Description: WW-06-SS-082715	Client Sample #:	Sampled: 8/27/2015 1422
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	79.7	%	0.1	0.1	0.1	0.1	1.00			8/28/15 14:40	ABS	EPA 8000C
Organic Results												
Aroclor-1016	<57	ug/kg	57	230	340	340	1.00	U	8/31/2015 13:30	9/9/15 11:24		EPA 8082A ^
Aroclor-1221	<80	ug/kg	80	230	340	340	1.00	U	8/31/2015 13:30	9/9/15 11:24		EPA 8082A ^
Aroclor-1232	<100	ug/kg	100	230	340	340	1.00	U	8/31/2015 13:30	9/9/15 11:24		EPA 8082A ^
Aroclor-1242	<80	ug/kg	80	230	340	340	1.00	U	8/31/2015 13:30	9/9/15 11:24		EPA 8082A ^
Aroclor-1248	<80	ug/kg	80	230	340	340	1.00	U	8/31/2015 13:30	9/9/15 11:24		EPA 8082A ^
Aroclor-1254	<100	ug/kg	100	230	340	340	1.00	U	8/31/2015 13:30	9/9/15 11:24		EPA 8082A ^
Aroclor-1260	1040	ug/kg	68	230	340	340	1.00		8/31/2015 13:30	9/9/15 11:24		EPA 8082A ^
Aroclor-1262	<80	ug/kg	80	230	340	340	1.00	U	8/31/2015 13:30	9/9/15 11:24		EPA 8082A ^
Aroclor-1268	<57	ug/kg	57	230	340	340	1.00	U	8/31/2015 13:30	9/9/15 11:24		EPA 8082A ^
Surr: DCBP	57	% Recovery	60			125	1.00	S	8/31/2015 13:30	9/9/15 11:24		EPA 8082A

CT LAB#: 625924	Sample Description: WW-24-SW-082715	Client Sample #:	Sampled: 8/27/2015 1440
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
TCLP Arsenic	0.014	mg/L	0.0040	0.012	0.024	0.024	1.00	J	9/2/2015 07:00	9/3/15 11:24	NAH	EPA 6010C ^
TCLP Barium	0.35	mg/L	0.00029	0.00090	0.0018	0.0018	1.00		9/2/2015 07:00	9/3/15 11:24	NAH	EPA 6010C ^
TCLP Cadmium	0.0050	mg/L	0.00030	0.0010	0.0020	0.0020	1.00		9/2/2015 07:00	9/3/15 11:24	NAH	EPA 6010C ^
TCLP Chromium	0.021	mg/L	0.00060	0.0020	0.0040	0.0040	1.00		9/2/2015 07:00	9/3/15 11:24	NAH	EPA 6010C ^
TCLP Lead	0.075	mg/L	0.0014	0.0020	0.0040	0.0040	1.00		9/2/2015 07:00	9/3/15 11:24	NAH	EPA 6010C ^
TCLP Selenium	0.0027	mg/L	0.0022	0.0065	0.013	0.013	1.00	J B	9/2/2015 07:00	9/3/15 11:24	NAH	EPA 6010C ^
TCLP Silver	<0.00070	mg/L	0.00070	0.0020	0.0040	0.0040	1.00	U	9/2/2015 07:00	9/3/15 11:24	NAH	EPA 6010C ^
TCLP Mercury	0.000050	mg/L	0.000030	0.000060	0.00012	0.00012	1.00	J	9/2/2015 07:00	9/4/15 09:20	LJF	EPA 7470A

CT LAB#: 625925	Sample Description: WW-25-SW-082715	Client Sample #:	Sampled: 8/27/2015 1445
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
TCLP Arsenic	0.0096	mg/L	0.0040	0.012	0.024	0.024	1.00	J	9/2/2015 07:00	9/3/15 11:29	NAH	EPA 6010C ^
TCLP Barium	0.19	mg/L	0.00029	0.00090	0.0018	0.0018	1.00		9/2/2015 07:00	9/3/15 11:29	NAH	EPA 6010C ^
TCLP Cadmium	0.00092	mg/L	0.00030	0.0010	0.0020	0.0020	1.00	J	9/2/2015 07:00	9/3/15 11:29	NAH	EPA 6010C ^
TCLP Chromium	0.0022	mg/L	0.00060	0.0020	0.0040	0.0040	1.00	J B	9/2/2015 07:00	9/3/15 11:29	NAH	EPA 6010C ^
TCLP Lead	<0.0014	mg/L	0.0014	0.0020	0.0040	0.0040	1.00	U	9/2/2015 07:00	9/3/15 11:29	NAH	EPA 6010C ^
TCLP Selenium	<0.0022	mg/L	0.0022	0.0065	0.013	0.013	1.00	U	9/2/2015 07:00	9/3/15 11:29	NAH	EPA 6010C ^
TCLP Silver	<0.00070	mg/L	0.00070	0.0020	0.0040	0.0040	1.00	U	9/2/2015 07:00	9/3/15 11:29	NAH	EPA 6010C ^
TCLP Mercury	<0.000030	mg/L	0.000030	0.000060	0.00012	0.00012	1.00	U M	9/2/2015 07:00	9/4/15 09:21	LJF	EPA 7470A

CT LAB#: 625926	Sample Description: WW-26-SW-082715	Client Sample #:	Sampled: 8/27/2015 1500
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
TCLP Arsenic	0.022	mg/L	0.0040	0.012	0.024	0.024	1.00	J	9/2/2015 07:00	9/3/15 12:09	NAH	EPA 6010C ^
TCLP Barium	0.0095	mg/L	0.00029	0.00090	0.0018	0.0018	1.00		9/2/2015 07:00	9/3/15 12:09	NAH	EPA 6010C ^
TCLP Cadmium	<0.00030	mg/L	0.00030	0.0010	0.0020	0.0020	1.00	U	9/2/2015 07:00	9/3/15 12:09	NAH	EPA 6010C ^
TCLP Chromium	0.015	mg/L	0.00060	0.0020	0.0040	0.0040	1.00		9/2/2015 07:00	9/3/15 12:09	NAH	EPA 6010C ^
TCLP Lead	0.040	mg/L	0.0014	0.0020	0.0040	0.0040	1.00		9/2/2015 07:00	9/3/15 12:09	NAH	EPA 6010C ^
TCLP Selenium	<0.0022	mg/L	0.0022	0.0065	0.013	0.013	1.00	U	9/2/2015 07:00	9/3/15 12:09	NAH	EPA 6010C ^
TCLP Silver	0.0021	mg/L	0.00070	0.0020	0.0040	0.0040	1.00	J	9/2/2015 07:00	9/3/15 12:09	NAH	EPA 6010C ^
TCLP Mercury	0.000050	mg/L	0.000030	0.000060	0.00012	0.00012	1.00	J	9/2/2015 07:00	9/4/15 09:33	LJF	EPA 7470A

CT LAB#: 625927	Sample Description: WW-28-SW-082715	Client Sample #:	Sampled: 8/27/2015 1515
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
TCLP Arsenic	<0.0040	mg/L	0.0040	0.012	0.024	0.024	1.00	U	9/2/2015 07:00	9/3/15 12:14	NAH	EPA 6010C ^
TCLP Barium	0.11	mg/L	0.00029	0.00090	0.0018	0.0018	1.00		9/2/2015 07:00	9/3/15 12:14	NAH	EPA 6010C ^
TCLP Cadmium	0.00063	mg/L	0.00030	0.0010	0.0020	0.0020	1.00	J	9/2/2015 07:00	9/3/15 12:14	NAH	EPA 6010C ^
TCLP Chromium	0.012	mg/L	0.00060	0.0020	0.0040	0.0040	1.00		9/2/2015 07:00	9/3/15 12:14	NAH	EPA 6010C ^
TCLP Lead	0.13	mg/L	0.0014	0.0020	0.0040	0.0040	1.00		9/2/2015 07:00	9/3/15 12:14	NAH	EPA 6010C ^
TCLP Selenium	0.0023	mg/L	0.0022	0.0065	0.013	0.013	1.00	J B	9/2/2015 07:00	9/3/15 12:14	NAH	EPA 6010C ^
TCLP Silver	<0.00070	mg/L	0.00070	0.0020	0.0040	0.0040	1.00	U	9/2/2015 07:00	9/3/15 12:14	NAH	EPA 6010C ^
TCLP Mercury	<0.000030	mg/L	0.000030	0.000060	0.00012	0.00012	1.00	U	9/2/2015 07:00	9/4/15 09:39	LJF	EPA 7470A

CT LAB#: 625928	Sample Description: WW-27-WW-082715	Client Sample #:	Sampled: 8/27/2015 1522
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
TCLP Arsenic	0.019	mg/L	0.0040	0.012	0.024	0.024	1.00	J	9/2/2015 07:00	9/3/15 12:18	NAH	EPA 6010C ^
TCLP Barium	0.50	mg/L	0.00029	0.00090	0.0018	0.0018	1.00		9/2/2015 07:00	9/3/15 12:18	NAH	EPA 6010C ^
TCLP Cadmium	<0.00030	mg/L	0.00030	0.0010	0.0020	0.0020	1.00	U	9/2/2015 07:00	9/3/15 12:18	NAH	EPA 6010C ^
TCLP Chromium	0.040	mg/L	0.00060	0.0020	0.0040	0.0040	1.00		9/2/2015 07:00	9/3/15 12:18	NAH	EPA 6010C ^
TCLP Lead	0.0015	mg/L	0.0014	0.0020	0.0040	0.0040	1.00	J	9/2/2015 07:00	9/3/15 12:18	NAH	EPA 6010C ^
TCLP Selenium	<0.0022	mg/L	0.0022	0.0065	0.013	0.013	1.00	U	9/2/2015 07:00	9/3/15 12:18	NAH	EPA 6010C ^
TCLP Silver	<0.00070	mg/L	0.00070	0.0020	0.0040	0.0040	1.00	U	9/2/2015 07:00	9/3/15 12:18	NAH	EPA 6010C ^
TCLP Mercury	<0.000030	mg/L	0.000030	0.000060	0.00012	0.00012	1.00	U	9/2/2015 07:00	9/4/15 09:41	LJF	EPA 7470A

CT LAB#: 625944	Sample Description: WW-FD-082715-01	Client Sample #:	Sampled: 8/27/2015 0000
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
pH	1.16	S.U.					1.00	X		8/31/15 13:00	LJS	EPA 9045D ^

CT LAB#: 625945	Sample Description: WW-FD-082715-02	Client Sample #:	Sampled: 8/27/2015 0000
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Flashpoint	113	Deg. F					1.00			9/1/15 15:36	JJF	EPA 1010 ^

CT LAB#: 625947 Sample Description: WW-FD-082715-03 Client Sample #: Sampled: 8/27/2015 0000

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results												
Aroclor-1016	<46	ug/kg	46	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 16:04	SRT	EPA 8082A
Aroclor-1221	<64	ug/kg	64	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 16:04	SRT	EPA 8082A
Aroclor-1232	<83	ug/kg	83	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 16:04	SRT	EPA 8082A
Aroclor-1242	<64	ug/kg	64	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 16:04	SRT	EPA 8082A
Aroclor-1248	<64	ug/kg	64	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 16:04	SRT	EPA 8082A
Aroclor-1254	<83	ug/kg	83	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 16:04	SRT	EPA 8082A
Aroclor-1260	<55	ug/kg	55	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 16:04	SRT	EPA 8082A
Aroclor-1262	<64	ug/kg	64	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 16:04	SRT	EPA 8082A
Aroclor-1268	<46	ug/kg	46	180	280	280	1.00	U	9/2/2015 11:15	9/8/15 16:04	SRT	EPA 8082A
Surr: DCBP	125	% Recovery	60			125	1.00		9/2/2015 11:15	9/8/15 16:04	SRT	EPA 8082A

CT LAB#: 625948 Sample Description: WW-FD-082715-04 Client Sample #: Sampled: 8/27/2015 0000

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	87.6	%	0.1	0.1	0.1	0.1	1.00			8/28/15 14:40	ABS	EPA 8000C
Organic Results												
Aroclor-1016	<57	ug/kg	57	230	340	340	1.00	U	8/31/2015 13:30	9/8/15 20:00	SRT	EPA 8082A ^
Aroclor-1221	<79	ug/kg	79	230	340	340	1.00	U	8/31/2015 13:30	9/8/15 20:00	SRT	EPA 8082A ^
Aroclor-1232	<100	ug/kg	100	230	340	340	1.00	U	8/31/2015 13:30	9/8/15 20:00	SRT	EPA 8082A ^
Aroclor-1242	<79	ug/kg	79	230	340	340	1.00	U	8/31/2015 13:30	9/8/15 20:00	SRT	EPA 8082A ^
Aroclor-1248	<79	ug/kg	79	230	340	340	1.00	U	8/31/2015 13:30	9/8/15 20:00	SRT	EPA 8082A ^
Aroclor-1254	<100	ug/kg	100	230	340	340	1.00	U	8/31/2015 13:30	9/8/15 20:00	SRT	EPA 8082A ^
Aroclor-1260	3420	ug/kg	68	230	340	340	1.00		8/31/2015 13:30	9/8/15 20:00	SRT	EPA 8082A ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 625948	Sample Description: WW-FD-082715-04	Client Sample #:	Sampled: 8/27/2015 0000
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Aroclor-1262	<79	ug/kg	79	230	340	340	1.00	U	8/31/2015 13:30	9/8/15 20:00	SRT	EPA 8082A ^
Aroclor-1268	<57	ug/kg	57	230	340	340	1.00	U	8/31/2015 13:30	9/8/15 20:00	SRT	EPA 8082A ^
Surr: DCBP	79	% Recovery	60			125	1.00		8/31/2015 13:30	9/8/15 20:00	SRT	EPA 8082A

CT LAB#: 625966	Sample Description: WW-FD-082715-05	Client Sample #:	Sampled: 8/27/2015 0000
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
TCLP Arsenic	0.018	mg/L	0.0040	0.012	0.024	0.024	1.00	J	9/2/2015 07:00	9/3/15 12:22	NAH	EPA 6010C ^
TCLP Barium	0.29	mg/L	0.00029	0.00090	0.0018	0.0018	1.00		9/2/2015 07:00	9/3/15 12:22	NAH	EPA 6010C ^
TCLP Cadmium	0.0049	mg/L	0.00030	0.0010	0.0020	0.0020	1.00		9/2/2015 07:00	9/3/15 12:22	NAH	EPA 6010C ^
TCLP Chromium	0.018	mg/L	0.00060	0.0020	0.0040	0.0040	1.00		9/2/2015 07:00	9/3/15 12:22	NAH	EPA 6010C ^
TCLP Lead	0.098	mg/L	0.0014	0.0020	0.0040	0.0040	1.00		9/2/2015 07:00	9/3/15 12:22	NAH	EPA 6010C ^
TCLP Selenium	<0.0022	mg/L	0.0022	0.0065	0.013	0.013	1.00	U	9/2/2015 07:00	9/3/15 12:22	NAH	EPA 6010C ^
TCLP Silver	<0.00070	mg/L	0.00070	0.0020	0.0040	0.0040	1.00	U	9/2/2015 07:00	9/3/15 12:22	NAH	EPA 6010C ^
TCLP Mercury	0.000080	mg/L	0.000030	0.000060	0.00012	0.00012	1.00	J	9/2/2015 07:00	9/4/15 09:43	LJF	EPA 7470A

Notes:

^ Indicates the laboratory is NELAP accredited for this analyte by the indicated matrix and method. DL (detection limit), LOD (limit of detection), loq (limit of quantitation) as defined by most recent DOD QSM version.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

Submitted by: Pat M. Letterer
Project Manager
608-356-2760

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for the parameters where accreditation is required or available, unless noted in the case narrative.

QC Qualifiers		Current CT Laboratories Certifications
Code	Description	
B	Analyte detected in the associated Method Blank.	<p>Kansas NELAP ID# E-10368 Kentucky ID# 0023 ISO/IEC 17025-2005 A2LA Cert # 3806.01 North Carolina ID# 674 Wisconsin (WDNR) Chemistry ID# 157066030 Wisconsin (DATCP) Bacteriology ID# 105-289 DoD-ELAP A2LA 3806.01 GA EPD Stipulation ID E871111, Expires Annually Louisiana ID # 115843 Virginia ID# 7608 Illinois NELAP ID # 002413 Wisconsin (WOSB) ID# WI-5499-WBE Maryland ID# 344</p>
C	Toxicity present in BOD sample.	
D	Diluted Out.	
E	Safe, No Total Coliform detected.	
F	Unsafe, Total Coliform detected, no E. Coli detected.	
G	Unsafe, Total Coliform detected and E. Coli detected.	
H	Holding time exceeded.	
I	BOD incubator temperature was outside acceptance limits during test period.	
J	Estimated value.	
L	Significant peaks were detected outside the chromatographic window.	
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.	
N	Insufficient BOD oxygen depletion.	
O	Complete BOD oxygen depletion.	
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.	
Q	Laboratory Control Sample outside acceptance limits.	
R	See Narrative at end of report.	
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.	
T	Sample received with improper preservation or temperature.	
U	Analyte concentration was below detection limit.	
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.	
W	Sample amount received was below program minimum.	
X	Analyte exceeded calibration range.	
Y	Replicate/Duplicate precision outside acceptance limits.	
Z	Specified calibration criteria was not met.	

Company: Tetra Tech
 Project Contact: Brandon Helm
 Telephone: 513-532-4289
 Project Name: Wagner Ware Site
 Project #: 0001/S05-0001-1508-200
 Location: Sidney, Shelby County,
 Ohio
 Sampled By: B. Helm & K. Tobias

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
 608-356-2760 Fax 608-356-2766
 www.ctlaboratories.com

Report To: Brandon Helm
 EMAIL: Brandon.helm@tetrattech.com
 Company: Tetra Tech
 Address: 250 W Court Street, Suite
 200W, Cincinnati, OH 45202

Folder #: 113571

Company: TETRA TECH

Project: WAGNER WARE SITE

Logged By: JLS PM: PM

am:

RCRA SDWA NPDES

Waste

Superfund

Invoice To:*
 EMAIL: rindy.mortensen@tetrattech.com
 Company: Tetra Tech
 Address: 1 S Wacker Drive, Chicago IL
 60606

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

ANALYSES REQUESTED

Turnaround Time
 Normal RUSH*

Date Needed: _____

Rush analysis requires prior CT
 Laboratories' approval

Surcharges:

24 hr 200%

2-3 days 100%

4-9 days 50%

Matrix:
 GW - groundwater SW - surface water WW - wastewater DW - drinking water
 S - soil/sediment SL - sludge A - air M - misc/waste

Filtered? Y/N

PCBs

pH

Flashpoint

TCLP Metals

Total # Containers

Designated MS/MSD

CT Lab ID #

Lab use only

Collection		Matrix	Grab/ Comp	Sample ID Description	Filtered? Y/N	Fill in Spaces with Bottles per Test																Total # Containers	Designated MS/MSD	CT Lab ID # Lab use only
Date	Time																							
8/27/15	11:53	M	G	WW-20-LW-082715	N				1													1		625897
8/27/15	11:55	M	G	WW-21-LW-082715	N				1													1		625801
8/27/15	11:58	M	G	WW-22-LW-082715	N				1													1		" 902
8/27/15	12:00	M	G	WW-23-LW-082715	N				1													1		903
8/27/15	12:05	M	G	WW-17-LW-082715	N			1														1		905
8/27/15	12:15	M	G	WW-18-LW-082715	N			1														1		906
8/27/15	12:45	M	G	WW-16-LW-082715	N			1														1		907
8/27/15	12:48	M	G	WW-15-LW-082715	N			1														1		908
8/27/15	12:53	M	G	WW-14-LW-082715	N			1														1		909
8/27/15	13:00	M	G	WW-19-LW-082715	N				1													1		910
8/27/15	13:50	M	G	WW-09-LW-082715	N	1																1		911
8/27/15	13:55	M	G	WW-13-LW-082715	N	1																1		912

Relinquished By:

Date/Time

8/29/15 1800

Received By:

Date/Time

Received by:

Date/Time

Received for Laboratory by:

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Date/Time

Lab Use Only

Ice Present Yes No

Temperature 3.3, 0.4

Cooler # 5513, 5354

8/28/15 0940 JY ABS

Company: Tetra Tech
 Project Contact: Brandon Helm
 Telephone: 513-532-4289
 Project Name: Wagner Ware Site
 Project #: 0001/S05-0001-1508-200
 Location: Sidney, Shelby County,
 Ohio
 Sampled By: B. Helm & K. Tobias

CT LABORATORIES

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 www.ctlaboratories.com

Lab Use Only
 Place Header Sticker Here:

Program:
 QSM RCRA SDWA NPDES
 Solid Waste
 Other Superfund
 PO #

Report To: Brandon Helm
 EMAIL: Brandon.helm@tetrattech.com
 Company: Tetra Tech
 Address: 250 W Court Street, Suite
 200W, Cincinnati, OH 45202
 Invoice To:
 EMAIL:
 rindy.mortensen@tetrattech.com
 Company: Tetra Tech
 Address: 1 S Wacker Drive, Chicago IL
 60606

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

ANALYSES REQUESTED

Turnaround Time
Normal RUSH*
 Date Needed: _____

Rush analysis requires prior
 CT Laboratories' approval

Surcharges:
 24 hr 200%
 2-3 days 100%
 4-9 days 50%

Matrix:
 GW - groundwater SW - surface water WW - wastewater DW - drinking water
 S - soil/sediment SL - sludge A - air M - misc/waste

Collection		Matrix	Grab/ Comp	Sample ID Description		Fill in Spaces with Bottles per Test																		CT Lab ID # <small>Lab use only</small>	
Date	Time																								
8/27/15	13:57	M	G	WW-10-LW-082715	N	3															3	X	625 913		
8/27/15	14:00	M	G	WW-11-LW-082715	N	1															1		" 914		
8/27/15	14:03	M	G	WW-12-LW-082715	N	1															1		915		
8/27/15	14:07	S	G	WW-01-SS-082715	N	1															1		916		
8/27/15	14:10	S	G	WW-02-SS-082715	N	1															1		917		
8/27/15	14:13	S	G	WW-03-SS-082715	N	1															1		918		
8/27/15	14:15	S	G	WW-05-SS-082715	N	1															1	X	919		
8/27/15	14:16	S	G	WW-04-SS-082715	N	1															1		920		
8/27/15	14:17	S	G	WW-07-SS-082715	N	1															1		921		
8/27/15	14:19	S	G	WW-08-SS-082715	N	1															1		922		
8/27/15	14:22	S	G	WW-06-SS-082715	N	1															1		923		
8/27/15	14:40	M	G	WW-24-SW-082715	N				1												1		924		

Relinquished By:

Date/Time

8/27/15 1800

Received By:

Date/Time

Received by:

Date/Time

Received for Laboratory by:

Date/Time

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Lab Use Only

Ice Present Yes NoTemperature 3.3, 0.4Cooler # SS13, 5394

8/28/15 0940 JS for AAS

Company: Tetra Tech
 Project Contact: Brandon Helm
 Telephone: 513-532-4289
 Project Name: Wagner Ware Site
 Project #: 0001/S05-0001-1508-200
 Location: Sidney, Shelby County,
 Ohio
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Report To: Brandon Helm
 EMAIL: Brandon.helm@tetrattech.com
 Company: Tetra Tech
 Address: 250 W Court Street, Suite
 200W, Cincinnati, OH 45202
 Invoice To:*
 EMAIL:
 rindy.mortensen@tetrattech.com
 Company: Tetra Tech
 Address: 1 S Wacker Drive, Chicago IL
 60606

Lab Use Only
 Place Header Sticker Here:

Program:
 QSM RCRA SDWA NPDES
 Solid Waste
 Other Superfund
 PO #

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

ANALYSES REQUESTED

Turnaround Time
 Normal RUSH*
 Date Needed: _____

Rush analysis requires prior
 CT Laboratories' approval

Surcharges:
 24 hr 200%
 2-3 days 100%
 4-9 days 50%

Matrix:
 GW - groundwater SW - surface water WW - wastewater DW - drinking water
 S - soil/sediment SL - sludge A - air M - misc/waste

Collection		Matrix	Grab/Comp	Sample ID Description		Fill in Spaces with Bottles per Test																CT Lab ID # <small>Lab use only</small>	
Date	Time																						
8/27/15	14:45	M	G	WW-25-SW-082715	N				1									1	X	625 925			
8/27/15	15:00	M	G	WW-26-SW-082715	N				1									1		" 926			
8/27/15	15:15	M	G	WW-28-SW-082715	N				1									1		927			
8/27/15	15:22	M	C	WW-27-SW-082715	N				1									1		928			
8/27/15	00:00	QC	G	WW-FD-082715-01	N		1											1		929			
8/27/15	00:00	QC	G	WW-FD-082715-02	N			1										1		945			
8/27/15	00:00	QC	G	WW-FD-082715-03	N	1												1		947			
8/27/15	00:00	QC	G	WW-FD-082715-04	N	1												1		948			
8/27/15	00:00	QC	G	WW-FD-082715-05	N				1									1		966			

Relinquished By:

Date/Time

8/27/15 1800

Received By:

Date/Time

Received by:

Date/Time

Received for Laboratory by:
 113571 - Page 21 of 47

Date/Time

8/28/15 1310

Lab Use Only

Ice Present ☒ Yes ☐ No

Temperature 3.3, 0.4

Cooler # 5513, 5514

8/28/15 0940 JS for AOS

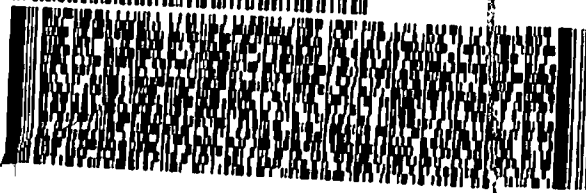
Ice Present YES NO
Temperature 3.3°C
IR Gun # 10
Initials ABS
Date 8/28/15 Time 9:40
Cooler #: 5394

Cooler Receipt Form

ORIGIN ID: DAYA (513) 241-0149
TETRA TECH EM INC GOVT
250 W COURT ST STE 200W
CINCINNATI, OH 452021072
UNITED STATES US

SHIP DATE: 27AUG15
ACT WT: 57.8 LB
CAD: /OFFC1601
DIMS: 26x14x14 IN
BILL SENDER

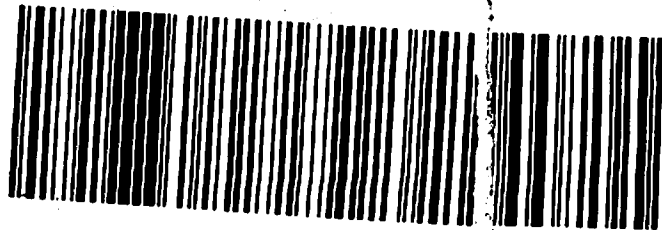
TO
CT LABORATORIES
1230 LANGE CT
BARABOO WI 53913
(808) 366-2760 REF:
SKU: DEPT:



2 of 2
MPS# 7812 3292 9604
0681
Metr# 8212 1940 9594

X1 MSNA

FRI - 28 AUG 9:00A
FIRST OVERNIGHT
AHS
53913
WI-US MSN



QUALITY SEAL
DATE: 8/27/15
SIGNATURE: [Signature]
QEC
Quality Environmental Containers
800-255-3950 • 304-255-9860

Ally Environmental Containers
1-255-3950 • 304-255-3900

QC SUMMARY REPORT

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Duplicate

Analytical Run #:	118238	Analysis Date:	8/28/2015	Prep Batch #:	Matrix:	SOIL
CTLab #:	626304	Analysis Time:	14:40	Prep Date/Time:	Method:	SW8000C
Parent Sample #:	625919	Analyst:	ABS	Prep Analyst:		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Solids, Percent	56.7	%	50.6					11	8

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Duplicate

Analytical Run #:	118352	Analysis Date:	9/3/2015	Prep Batch #:	54021	Matrix:	TCLP
CTLab #:	627189	Analysis Time:	11:38	Prep Date/Time:	09/02/2015 1:00	Method:	SW6010
Parent Sample #:	625925	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Arsenic	0.0114	mg/L	0.0096				24	17	20
Barium	0.190	mg/L	0.19				1.80	0	20
Cadmium	0.00103	mg/L	0.00092				2.0	11	20
Chromium	0.00321	mg/L	0.0022				4.0	37	20
Lead	0.00140	mg/L	<0.00140 U				4.0	0	20
Selenium	0.00220	mg/L	<0.00220 U				13.0	0	20
Silver	0.000700	mg/L	<0.000700U				4.0	0	20

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Lab Control Spike Water

Analytical Run #:	118352	Analysis Date:	9/3/2015	Prep Batch #:	54021	Matrix:	LIQUID
CTLab #:	627188	Analysis Time:	11:16	Prep Date/Time:	09/02/2015 1:00	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Arsenic	0.790	mg/L			0.800	99	80 --- 120		
Barium	0.800	mg/L			0.800	100	80 --- 120		
Cadmium	0.0183	mg/L			0.0200	92	80 --- 120		
Chromium	0.0777	mg/L			0.0800	97	80 --- 120		
Lead	0.205	mg/L			0.200	102	80 --- 120		
Selenium	0.741	mg/L			0.800	93	80 --- 120		
Silver	0.0198	mg/L			0.0200	99	80 --- 120		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Method Blank Water

Analytical Run #:	118352	Analysis Date:	9/3/2015	Prep Batch #:	54021	Matrix:	LIQUID
CTLab #:	627187	Analysis Time:	11:20	Prep Date/Time:	09/02/2015 1:00	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Arsenic	0.004	mg/L		U	0		0.012		
Barium	0.00029	mg/L		U	0		00090		
Cadmium	0.0003	mg/L		U	0		.0010		
Chromium	0.000875	mg/L			0		.0020		
Lead	0.0014	mg/L		U	0		.0020		
Selenium	0.00431	mg/L			0		.0065		
Silver	0.0007	mg/L		U	0		.0020		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Matrix Spike Duplicate Water

Analytical Run #:	118352	Analysis Date:	9/3/2015	Prep Batch #:	54021	Matrix:	TCLP
CTLab #:	627191	Analysis Time:	11:47	Prep Date/Time:	09/02/2015 1:00	Method:	SW6010
Parent Sample #:	627190	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Arsenic	0.784	mg/L	0.0096		0.800	97	80 --- 120	7	20
Barium	0.940	mg/L	0.19		0.800	94	80 --- 120	8	20
Cadmium	0.0164	mg/L	0.00092		0.0200	77	80 --- 120	7	20
Chromium	0.0787	mg/L	0.0022		0.0800	96	80 --- 120	0	20
Lead	0.175	mg/L	BDL		0.200	88	80 --- 120	1	20
Selenium	0.885	mg/L	BDL		0.800	111	80 --- 120	1	20
Silver	0.0178	mg/L	BDL		0.0200	89	80 --- 120	10	20

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Matrix Spike Water

Analytical Run #:	118352	Analysis Date:	9/3/2015	Prep Batch #:	54021	Matrix:	TCLP
CTLab #:	627190	Analysis Time:	11:42	Prep Date/Time:	09/02/2015 1:00	Method:	SW6010
Parent Sample #:	625925	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Arsenic	0.837	mg/L	0.0096		0.800	103	80 --- 120		
Barium	1.02	mg/L	0.19		0.800	104	80 --- 120		
Cadmium	0.0176	mg/L	0.00092		0.0200	83	80 --- 120		
Chromium	0.0786	mg/L	0.0022		0.0800	96	80 --- 120		
Lead	0.174	mg/L	BDL		0.200	87	80 --- 120		
Selenium	0.880	mg/L	BDL		0.800	110	80 --- 120		
Silver	0.0197	mg/L	BDL		0.0200	98	80 --- 120		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Duplicate

Analytical Run #:	118397	Analysis Date:	9/4/2015	Prep Batch #:	54025	Matrix:	TCLP
CTLab #:	627352	Analysis Time:	09:25	Prep Date/Time:	09/03/2015 07:30	Method:	SW7470A
Parent Sample #:	625925	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.0000300	mg/L	<0.0000300				0.12	0	20

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Lab Control Spike Water

Analytical Run #:	118397	Analysis Date:	9/4/2015	Prep Batch #:	54025	Matrix:	LIQUID
CTLab #:	627351	Analysis Time:	10:14	Prep Date/Time:	09/03/2015 07:30	Method:	SW7470A
Parent Sample #:		Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.00319	mg/L			0.00300	106	80 --- 120		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Method Blank Water

Analytical Run #:	118397	Analysis Date:	9/4/2015	Prep Batch #:	54025	Matrix:	LIQUID
CTLab #:	627350	Analysis Time:	09:18	Prep Date/Time:	09/03/2015 07:30	Method:	SW7470A
Parent Sample #:		Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.00003	mg/L		U	0		00006		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Matrix Spike Duplicate Water

Analytical Run #:	118397	Analysis Date:	9/4/2015	Prep Batch #:	54025	Matrix:	TCLP
CTLab #:	627354	Analysis Time:	09:29	Prep Date/Time:	09/03/2015 07:30	Method:	SW7470A
Parent Sample #:	627353	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.00284	mg/L	BDL		0.00200	142	80 --- 120	1	20

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Matrix Spike Water

Analytical Run #:	118397	Analysis Date:	9/4/2015	Prep Batch #:	54025	Matrix:	TCLP
CTLab #:	627353	Analysis Time:	09:27	Prep Date/Time:	09/03/2015 07:30	Method:	SW7470A
Parent Sample #:	625925	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.00280	mg/L	BDL		0.00200	140	80 --- 120		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Lab Control Spike Soil

Analytical Run #:	118292	Analysis Date:	9/3/2015	Prep Batch #:	53994	Matrix:	SOLID
CTLab #:	626147	Analysis Time:	01:17	Prep Date/Time:	08/31/2015 13:30	Method:	SW8082
Parent Sample #:		Analyst:	SRT	Prep Analyst:	JLH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aroclor-1016	5350	ug/kg			5000	107	40 --- 140		30
Aroclor-1260	5690	ug/kg			5000	114	60 --- 130		30

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Method Blank Soil

Analytical Run #:	118292	Analysis Date:	9/3/2015	Prep Batch #:	53994	Matrix:	SOLID
CTLab #:	626146	Analysis Time:	00:55	Prep Date/Time:	08/31/2015 13:30	Method:	SW8082
Parent Sample #:		Analyst:	SRT	Prep Analyst:	JLH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aroclor-1016	5	ug/kg		U	0		15		
Aroclor-1221	7	ug/kg		U	0		15		
Aroclor-1232	9	ug/kg		U	0		15		
Aroclor-1242	7	ug/kg		U	0		15		
Aroclor-1248	7	ug/kg		U	0		15		
Aroclor-1254	9	ug/kg		U	0		15		
Aroclor-1260	6	ug/kg		U	0		15		
Aroclor-1262	7	ug/kg		U	0		15		
Aroclor-1268	5	ug/kg		U	0		15		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Matrix Spike Duplicate Soil

Analytical Run #:	118292	Analysis Date:	9/8/2015	Prep Batch #:	53994	Matrix:	SOIL
CTLab #:	626380	Analysis Time:	21:26	Prep Date/Time:	08/31/2015 13:30	Method:	SW8082
Parent Sample #:	626379	Analyst:	SRT	Prep Analyst:	JLH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aroclor-1016	8020	ug/kg	BDL		9690	83	40 --- 140	1	30
Aroclor-1260	11200	ug/kg	4340		9690	71	60 --- 130	12	30
Surr: DCBP	74.7	% Recovery			100	74.7	60 --- 125		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Matrix Spike Soil

Analytical Run #:	118292	Analysis Date:	9/8/2015	Prep Batch #:	53994	Matrix:	SOIL
CTLab #:	626379	Analysis Time:	21:05	Prep Date/Time:	08/31/2015 13:30	Method:	SW8082
Parent Sample #:	625919	Analyst:	SRT	Prep Analyst:	JLH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aroclor-1016	7890	ug/kg	BDL		9590	82	40 --- 140		
Aroclor-1260	9860	ug/kg	4340		9590	58	60 --- 130		
Surr: DCBP	63.9	% Recovery			100	63.9	60 --- 125		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Lab Control Spike Soil

Analytical Run #:	118372	Analysis Date:	9/3/2015	Prep Batch #:	53995	Matrix:	SOLID
CTLab #:	626154	Analysis Time:	03:04	Prep Date/Time:	09/02/2015 11:15	Method:	SW8082
Parent Sample #:		Analyst:	SRT	Prep Analyst:	JLH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aroclor-1016	4650	ug/kg			5000	93	40 --- 140		30
Aroclor-1260	4920	ug/kg			5000	98	60 --- 130		30

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Method Blank Soil

Analytical Run #:	118372	Analysis Date:	9/3/2015	Prep Batch #:	53995	Matrix:	SOLID
CTLab #:	626153	Analysis Time:	02:43	Prep Date/Time:	09/02/2015 1:15	Method:	SW8082
Parent Sample #:		Analyst:	SRT	Prep Analyst:	JLH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aroclor-1016	5	ug/kg		U	0		15		
Aroclor-1221	7	ug/kg		U	0		15		
Aroclor-1232	9	ug/kg		U	0		15		
Aroclor-1242	7	ug/kg		U	0		15		
Aroclor-1248	7	ug/kg		U	0		15		
Aroclor-1254	9	ug/kg		U	0		15		
Aroclor-1260	6	ug/kg		U	0		15		
Aroclor-1262	7	ug/kg		U	0		15		
Aroclor-1268	5	ug/kg		U	0		15		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Matrix Spike Duplicate Soil

Analytical Run #:	118372	Analysis Date:	9/8/2015	Prep Batch #:	53995	Matrix:	WASTE
CTLab #:	626157	Analysis Time:	20:43	Prep Date/Time:	09/02/2015 11:15	Method:	SW8082
Parent Sample #:	626156	Analyst:	SRT	Prep Analyst:	JLH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aroclor-1016	2840	ug/kg	BDL		3050	93	40 --- 140	10	30
Aroclor-1260	2810	ug/kg	BDL		3050	92	60 --- 130	17	30
Surr: DCBP	83.1	% Recovery			100	83.1	60 --- 125		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 113571

Project Number: 0001/S05-0001-1508-2

Matrix Spike Soil

Analytical Run #:	118372	Analysis Date:	9/8/2015	Prep Batch #:	53995	Matrix:	WASTE
CTLab #:	626156	Analysis Time:	20:22	Prep Date/Time:	09/02/2015 11:15	Method:	SW8082
Parent Sample #:	625913	Analyst:	SRT	Prep Analyst:	JLH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aroclor-1016	4800	ug/kg	BDL		4670	103	40 --- 140		
Aroclor-1260	5080	ug/kg	BDL		4670	109	60 --- 130		
Surr: DCBP	101	% Recovery			100	101	60 --- 125		

Sample Condition Report

Folder #: 113571	Print Date / Time: 08/28/2015 13:15
Client: TETRA TECH	Received Date / Time / By: 08/28/2015 0940 JLS
Project Name: WAGNER WARE SITE	Log-In Date / Time / By: 08/28/2015 1310 JLS
Project Phase:	Project #: 0001/S05-0001-1508-2 PM: PML
Coolers: 5513,5394	Temperature: 3.3,0.4 C On Ice: Y
Custody Seals Present : Y	COC Present?: Y Complete? Y
Seal Intact? Y	Numbers: DATED AND SIGNED
Ship Method: FEDEX EXPRESS	Tracking Number: 821219409594
Adequate Packaging: Y	Temp Blank Enclosed? Y

Notes: SAMPLES RECEIVED IN GOOD CONDITION ON ICE

1 CUSTODY SEAL PRESENT AND INTACT ON EACH COOLER. BOTH DATED 8/27/15 AND SIGNED

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625897 WW-20-LW-082715	JAR GL	1	/	FLASH
Total # of Containers of Type (JAR GL) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625901 WW-21-LW-082715	JAR GL	1	/	FLASH
Total # of Containers of Type (JAR GL) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625902 WW-22-LW-082715	JAR GL	1	/	FLASH
Total # of Containers of Type (JAR GL) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625903 WW-23-LW-082715	JAR GL	1	/	FLASH
Total # of Containers of Type (JAR GL) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625905 WW-17-LW-082715	UNPRES PL	1	/	pH
Total # of Containers of Type (UNPRES PL) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625906 WW-18-LW-082715	UNPRES PL Total # of Containers of Type	1 (UNPRES PL) =	/ 1	pH
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625907 WW-16-LW-082715	UNPRES PL Total # of Containers of Type	1 (UNPRES PL) =	/ 1	pH
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625908 WW-15-LW-082715	UNPRES PL Total # of Containers of Type	1 (UNPRES PL) =	/ 1	pH
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625909 WW-14-LW-082715	UNPRES PL Total # of Containers of Type	1 (UNPRES PL) =	/ 1	pH
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625910 WW-19-LW-082715	SOLIDS Total # of Containers of Type	1 (SOLIDS) =	/ 1	HG,ICP
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625911 WW-09-LW-082715	UNPRES GL Total # of Containers of Type	1 (UNPRES GL) =	/ 1	PCB
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625912 WW-13-LW-082715	UNPRES GL Total # of Containers of Type	1 (UNPRES GL) =	/ 1	PCB
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625913 WW-10-LW-082715	UNPRES GL UNPRES GL UNPRES GL Total # of Containers of Type	1 1 1 (UNPRES GL) =	/ 3	PCB PCB PCB

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625914 WW-11-LW-082715	UNPRES GL Total # of Containers of Type	1 (UNPRES GL) =	/ 1	PCB
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625915 WW-12-LW-082715	UNPRES GL Total # of Containers of Type	1 (UNPRES GL) =	/ 1	PCB
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625916 WW-01-SS-082715	UNPRES GL Total # of Containers of Type	1 (UNPRES GL) =	/ 1	PCB,%SOL
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625917 WW-02-SS-082715	UNPRES GL Total # of Containers of Type	1 (UNPRES GL) =	/ 1	PCB,%SOL
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625918 WW-03-SS-082715	UNPRES GL Total # of Containers of Type	1 (UNPRES GL) =	/ 1	PCB,%SOL
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625919 WW-05-SS-082715	UNPRES GL Total # of Containers of Type	1 (UNPRES GL) =	/ 1	PCB,%SOL
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625920 WW-04-SS-082715	UNPRES GL Total # of Containers of Type	1 (UNPRES GL) =	/ 1	PCB,%SOL
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
625921 WW-07-SS-082715	UNPRES GL Total # of Containers of Type	1 (UNPRES GL) =	/ 1	PCB,%SOL
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

625922 WW-08-SS-082715

UNPRES GL 1 /
Total # of Containers of Type (UNPRES GL) = 1 PCB,%SOL

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
-------------------------	----------------	------------	------------------	-------

625923 WW-06-SS-082715

UNPRES GL 1 /
Total # of Containers of Type (UNPRES GL) = 1 PCB,%SOL

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
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625924 WW-24-SW-082715

SOLIDS 1 /
Total # of Containers of Type (SOLIDS) = 1 HG,ICP

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
-------------------------	----------------	------------	------------------	-------

625925 WW-25-SW-082715

SOLIDS 1 /
Total # of Containers of Type (SOLIDS) = 1 HG,ICP

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
-------------------------	----------------	------------	------------------	-------

625926 WW-26-SW-082715

SOLIDS 1 /
Total # of Containers of Type (SOLIDS) = 1 HG,ICP

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
-------------------------	----------------	------------	------------------	-------

625927 WW-28-SW-082715

SOLIDS 1 /
Total # of Containers of Type (SOLIDS) = 1 HG,ICP

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
-------------------------	----------------	------------	------------------	-------

625928 WW-27-WW-082715

SOLIDS 1 /
Total # of Containers of Type (SOLIDS) = 1 HG,ICP

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
-------------------------	----------------	------------	------------------	-------

625944 WW-FD-082715-01

UNPRES PL 1 /
Total # of Containers of Type (UNPRES PL) = 1 pH

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
-------------------------	----------------	------------	------------------	-------

625945 WW-FD-082715-02

113571

JAR GL 1 / FLASH
Total # of Containers of Type (JAR GL) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
-------------------------	----------------	------------	------------------	-------

625947 WW-FD-082715-03	UNPRES GL	1	/	PCB
Total # of Containers of Type (UNPRES GL) = 1				

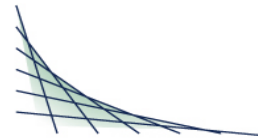
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
-------------------------	----------------	------------	------------------	-------

625948 WW-FD-082715-04	UNPRES GL	1	/	PCB,%SOL
Total # of Containers of Type (UNPRES GL) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
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625966 WW-FD-082715-05	SOLIDS	1	/	HG,ICP
Total # of Containers of Type (SOLIDS) = 1				

<u>Condition Code</u>	<u>Condition Description</u>
1	Sample Received OK



ANALYTICAL REPORT

This report at a minimum contains the following information:

- Analytical Report of Test Results
- Description of QC Qualifiers
- Chain of Custody (copy)
- Quality Control Summary
- Case Narrative (if applicable)
- Correspondence with Client (if applicable)

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for parameters where accreditation is required or available, unless otherwise noted in the case narrative.



ANALYTICAL REPORT

TETRA TECH
 BRANDON HELM
 250 W COURT STREET
 SUITE 200W
 CINCINNATI, OH 45202

Project Name: WAGNER WARE SITE
 Project Phase:
 Contract #: 2833
 Project #: 0001/S05-0001-1508-2
 Folder #: 114008
 Purchase Order #: 1111200

Page 1 of 3
 Arrival Temperature: See COC
 Report Date: 9/28/2015
 Date Received: 8/28/2015
 Reprint Date: 9/28/2015

CT LAB#: 632900	Sample Description: WW-24-SW-082715	Client Sample #:	Sampled: 8/27/2015 1440
-----------------	-------------------------------------	------------------	-------------------------

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Solids, Percent	95.5	%	0.1	0.1	0.1	0.1	1.00			9/17/15 15:00	MDS	EPA 8000C
-----------------	------	---	-----	-----	-----	-----	------	--	--	---------------	-----	-----------

Metals Results

Cadmium	0.44	mg/kg	0.0064	0.021	0.043	0.043	1.00	M,Y	9/21/2015 10:00	9/22/15 14:29	NAH	EPA 6010C ^
---------	------	-------	--------	-------	-------	-------	------	-----	-----------------	---------------	-----	-------------

CT LAB#: 632901	Sample Description: WW-26-SW-082715	Client Sample #:	Sampled: 8/27/2015 1500
-----------------	-------------------------------------	------------------	-------------------------

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
---------	--------	-------	----	------------	------------	----	----	-----------	-------------------	-----------------------	---------	--------

Inorganic Results

Solids, Percent	80.3	%	0.1	0.1	0.1	0.1	1.00			9/17/15 15:00	MDS	EPA 8000C
-----------------	------	---	-----	-----	-----	-----	------	--	--	---------------	-----	-----------

Metals Results

Arsenic	3.4	mg/kg	0.16	0.50	1.0	1.0	1.00		9/21/2015 10:00	9/22/15 14:58	NAH	EPA 6010C ^
---------	-----	-------	------	------	-----	-----	------	--	-----------------	---------------	-----	-------------

CT LAB#: 632902	Sample Description: WW-28-SW-082715	Client Sample #:	Sampled: 8/27/2015 1515
-----------------	-------------------------------------	------------------	-------------------------

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	99.0	%	0.1	0.1	0.1	0.1	1.00			9/17/15 15:00	MDS	EPA 8000C
Metals Results												
Lead	125	mg/kg	0.040	0.13	0.25	0.25	1.00		9/21/2015 10:00	9/22/15 15:02	NAH	EPA 6010C ^

CT LAB#: 632903	Sample Description: WW-27-SW-082715	Client Sample #:	Sampled: 8/27/2015 1522
-----------------	-------------------------------------	------------------	-------------------------

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	96.6	%	0.1	0.1	0.1	0.1	1.00			9/17/15 15:00	MDS	EPA 8000C
Metals Results												
Barium	3310	mg/kg	0.93	2.6	5.2	5.2	100.00		9/21/2015 10:00	9/25/15 16:53	NAH	EPA 6010C ^
Chromium	145	mg/kg	2.4	7.2	14	14	100.00		9/21/2015 10:00	9/25/15 16:53	NAH	EPA 6010C ^

Notes:

^ Indicates the laboratory is NELAP accredited for this analyte by the indicated matrix and method. DL (detection limit), LOD (limit of detection), loq (limit of quantitation) as defined by most recent DOD QSM version.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

Submitted by: Pat M. Letterer
Project Manager
608-356-2760

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for the parameters where accreditation is required or available, unless noted in the case narrative.

QC Qualifiers		Current CT Laboratories Certifications
Code	Description	
B	Analyte detected in the associated Method Blank.	Kansas NELAP ID# E-10368
C	Toxicity present in BOD sample.	Kentucky ID# 0023
D	Diluted Out.	ISO/IEC 17025-2005 A2LA Cert # 3806.01
E	Safe, No Total Coliform detected.	North Carolina ID# 674
F	Unsafe, Total Coliform detected, no E. Coli detected.	Wisconsin (WDNR) Chemistry ID# 157066030
G	Unsafe, Total Coliform detected and E. Coli detected.	Wisconsin (DATCP) Bacteriology ID# 105-289
H	Holding time exceeded.	DoD-ELAP A2LA 3806.01
I	BOD incubator temperature was outside acceptance limits during test period.	GA EPD Stipulation ID E871111, Expires Annually
J	Estimated value.	Louisiana ID # 115843
L	Significant peaks were detected outside the chromatographic window.	Virginia ID# 7608
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.	Illinois NELAP ID # 002413
N	Insufficient BOD oxygen depletion.	Wisconsin (WOSB) ID# WI-5499-WBE
O	Complete BOD oxygen depletion.	Maryland ID# 344
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.	
Q	Laboratory Control Sample outside acceptance limits.	
R	See Narrative at end of report.	
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.	
T	Sample received with improper preservation or temperature.	
U	Analyte concentration was below detection limit.	
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.	
W	Sample amount received was below program minimum.	
X	Analyte exceeded calibration range.	
Y	Replicate/Duplicate precision outside acceptance limits.	
Z	Specified calibration criteria was not met.	

Sampled By: B. Helm & K. Tobias

Invoice To:*
EMAIL:
rindy.mortensen@tetrattech.com
Company: Tetra Tech
Address: 1 S Wacker Drive, Chicago IL
60606

Logged By: TKR PM: PM

PO #

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

**Rush analysis requires prior
CT Laboratories' approval**

Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Designated MS/MSD

CT Lab ID # _____
Lab use only

Lab use only														
8/27/15	13:57	M	G	WW-10-LW-082715	N	3						3	X	625 913
8/27/15	14:00	M	G	WW-11-LW-082715	N	1						1		" 914
8/27/15	14:03	M	G	WW-12-LW-082715	N	1						1		915
8/27/15	14:07	S	G	WW-01-SS-082715	N	1						1		916
8/27/15	14:10	S	G	WW-02-SS-082715	N	1						1		917
8/27/15	14:13	S	G	WW-03-SS-082715	N	1						1		918
8/27/15	14:15	S	G	WW-05-SS-082715	N	1						1	X	919
8/27/15	14:16	S	G	WW-04-SS-082715	N	1						1		920
8/27/15	14:17	S	G	WW-07-SS-082715	N	1						1		921
8/27/15	14:19	S	G	WW-08-SS-082715	N	1						1		922
8/27/15	14:22	S	G	WW-06-SS-082715	N	1						1		923
8/27/15	14:40	M	G	WW-24-SW-082715	N				1			1		924

Lab Use Only
Ice Present Yes No
Temperature 3.3, 0.4
Cooler # 5513, 5394

Company: Tetra Tech
 Project Contact: Brandon Helm
 Telephone: 513-532-4289
 Project Name: Wagner Ware Site
 Project #: 0001/S05-0001-1508-200
 Location: Sidney, Shelby County, Ohio
 Sampled By: B. Helm & K. Tobias

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
 608-356-2760 Fax 608-356-2766
 www.ctlaboratories.com

Report To: Brandon Helm
 EMAIL: Brandon.helm@tetratech.com
 Company: Tetra Tech
 Address: 250 W Court Street, Suite 200W, Cincinnati, OH 45202

Lab Use Only
 Place Header Sticker Here:

Program:
 QSM RCRA SDWA NPDES
 Solid Waste
 Other Superfund
 PO #

Invoice To:
 EMAIL:
 rindy.mortensen@tetratech.com
 Company: Tetra Tech
 Address: 1 S Wacker Drive, Chicago IL 60606

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

ANALYSES REQUESTED

Filtered Y/N

PCBs

pH

Flashpoint

TCLP Metals

Total # Containers

Designated MS/MSD

Turnaround Time
 Normal RUSH*
 Date Needed: _____

Rush analysis requires prior
 CT Laboratories' approval
 Surcharges:
 24 hr 200%
 2-3 days 100%
 4-9 days 50%

Matrix:
 GW - groundwater SW - surface water WW - wastewater DW - drinking water
 S - soil/sediment SL - sludge A - air M - misc/waste

Collection		Matrix	Grab/Comp	Sample ID Description		Fill in Spaces with Bottles per Test																CT Lab ID # Lab use only	
Date	Time																						
8/27/15	14:45	M	G	WW-25-SW-082715	N				1									1	X	625925			
8/27/15	15:00	M	G	WW-26-SW-082715	N				1									1		" 926			
8/27/15	15:15	M	G	WW-28-SW-082715	N				1									1		927			
8/27/15	15:22	M	C	WW-27-SW-082715	N				1									1		928			
8/27/15	00:00	QC	G	WW-FD-082715-01	N		1											1		944			
8/27/15	00:00	QC	G	WW-FD-082715-02	N			1										1		945			
8/27/15	00:00	QC	G	WW-FD-082715-03	N	1												1		947			
8/27/15	00:00	QC	G	WW-FD-082715-04	N	1												1		948			
8/27/15	00:00	QC	G	WW-FD-082715-05	N				1									1		946			

Relinquished By:

Date/Time
 8/27/15 1800

Received By:

Date/Time

Lab Use Only
 Ice Present Yes No

Received by:

Date/Time

Received for Laboratory by:

Date/Time
 8/28/15 1310

Temperature 3.3, 0.4
 Cooler # 5513, 5514

Linley, Dennis J

From: Helm, Brandon <Brandon.Helm@tetrattech.com>
Sent: Thursday, September 17, 2015 10:11 AM
To: Linley, Dennis J
Subject: Wagner Ware site Metals reruns

Dennis, Here are the samples we are looking to have rerun for total metals:

<u>Lab ID</u>	<u>Sample ID</u>	<u>Analyte</u>
625924	WW-24-SW-082715	Total Cadmium
625926	WW-26-SW-082715	Total Arsenic
625928	WW-27-WW-082715	Total Barium & Total Chromium
625927	WW-28-SW-082715	Total Lead

→ ICP

Also we are looking to get a shorter TAT for these, perhaps 5 day if possible.

Let me know if you have any questions.

Thanks!

(Handwritten circle around the text "perhaps 5 day if possible.")

Level IV
TD

Brandon B Helm | Environmental Scientist
Direct: 513.333.3664 | Cell: 513.532.4289 | Fax: 513.241.0354
brandon.helm@tetrattech.com

Tetra Tech | Complex World, Clear Solutions™
250 W. Court Street, Suite 200W | Cincinnati, OH 45202 | www.tetrattech.com

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Due 9/25/15
(Handwritten signature)

QC SUMMARY REPORT

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 114008

Project Number: 0001/S05-0001-1508-2

Duplicate

Analytical Run #:	118842	Analysis Date:	9/17/2015	Prep Batch #:	Matrix:	SOIL
CTLab #:	633573	Analysis Time:	15:00	Prep Date/Time:	Method:	SW8000C
Parent Sample #:	632900	Analyst:	MDS	Prep Analyst:		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Solids, Percent	95.1	%	95.5					0	8

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 114008

Project Number: 0001/S05-0001-1508-2

Duplicate

Analytical Run #:	118959	Analysis Date:	9/22/2015	Prep Batch #:	54267	Matrix:	SOIL
CTLab #:	634472	Analysis Time:	14:39	Prep Date/Time:	09/21/2015 10:00	Method:	SW6010
Parent Sample #:	632900	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Cadmium	0.94	mg/kg	0.44				1.60	72	20

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 114008

Project Number: 0001/S05-0001-1508-2

Lab Control Spike Soil

Analytical Run #:	118959	Analysis Date:	9/22/2015	Prep Batch #:	54267	Matrix:	SOLID
CTLab #:	634471	Analysis Time:	14:20	Prep Date/Time:	09/21/2015 10:00	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Arsenic	97.3	mg/kg			100	97	80 --- 120		
Barium	94.5	mg/kg			100	94	80 --- 120		
Cadmium	2.9	mg/kg			2.5	116	80 --- 120		
Chromium	10.1	mg/kg			10.0	101	80 --- 120		
Lead	23.2	mg/kg			25.0	93	80 --- 120		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 114008

Project Number: 0001/S05-0001-1508-2

Method Blank Soil

Analytical Run #:	118959	Analysis Date:	9/22/2015	Prep Batch #:	54267	Matrix:	SOLID
CTLab #:	634470	Analysis Time:	14:25	Prep Date/Time:	09/21/2015 10:00	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Arsenic	0.13	mg/kg		U	0		0.40		
Barium	0.039	mg/kg			0		0.025		
Cadmium	0.006	mg/kg		U	0		0.020		
Chromium	0.034	mg/kg			0		0.125		
Lead	0.043	mg/kg			0		0.125		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 114008

Project Number: 0001/S05-0001-1508-2

Matrix Spike Duplicate Soil

Analytical Run #:	118959	Analysis Date:	9/22/2015	Prep Batch #:	54267	Matrix:	SOIL
CTLab #:	634474	Analysis Time:	14:48	Prep Date/Time:	09/21/2015 10:00	Method:	SW6010
Parent Sample #:	634473	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Cadmium	2.5	mg/kg	0.44		2.6	79	80 --- 120	5	20

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 114008

Project Number: 0001/S05-0001-1508-2

Matrix Spike Soil

Analytical Run #:	118959	Analysis Date:	9/22/2015	Prep Batch #:	54267	Matrix:	SOIL
CTLab #:	634473	Analysis Time:	14:43	Prep Date/Time:	09/21/2015 10:00	Method:	SW6010
Parent Sample #:	632900	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Cadmium	2.7	mg/kg	0.44		2.7	84	80 --- 120		

Sample Condition Report

Folder #: 114008
 Client: TETRA TECH

Print Date / Time: 09/17/2015 11:21
 Received Date / Time / By: 08/28/2015 0940 JLS

Project Name: WAGNER WARE SITE
 Project Phase:

Log-In Date / Time / By: 09/17/2015 1059 TKR
 Project #: 0001/S05-0001-1508-2 PM: PML

Coolers: 5513,5394
 Custody Seals Present :

Temperature: 3.3 C On Ice: Y
 COC Present?: Y Complete? Y

Seal Intact?
 Ship Method:
 Adequate Packaging: Y

Numbers:
 Tracking Number:
 Temp Blank Enclosed?

Notes: THE SAMPLES WERE ORIGINALLY RECEIVED ON 08/28/15 AND LOGGED IN UNDER FOLDER 113571. THE SAMPLES HAVE BEEN IN STORAGE SINCE THE ORIGINAL ANALYSIS. CLIENT CONTACTED THE LAB ON 09/17/15 AND REQUESTED THESE ADDITIONAL ANALYSES BE PERFORMED ON FOUR SAMPLES. THE SAMPLES HAVE BEEN IN COLD STORAGE SINCE RECEIPT. THE ADDITIONAL ANALYSES WERE LOGGED IN FOLLOWING THE REQUEST FROM THE CLIENT'S EMAIL DATED 09/17/15.

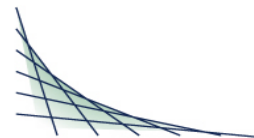
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
632900 WW-24-SW-082715	SOLIDS	1	/	%SOL,ICP
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
632901 WW-26-SW-082715	SOLIDS	1	/	%SOL,ICP
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
632902 WW-28-SW-082715	SOLIDS	1	/	%SOL,ICP
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
632903 WW-27-SW-082715	SOLIDS	1	/	%SOL,ICP
Total # of Containers of Type (SOLIDS) = 1				

Condition Code Condition Description
 1 Sample Received OK



ANALYTICAL REPORT

This report at a minimum contains the following information:

- Analytical Report of Test Results
- Description of QC Qualifiers
- Chain of Custody (copy)
- Quality Control Summary
- Case Narrative (if applicable)
- Correspondence with Client (if applicable)

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for parameters where accreditation is required or available, unless otherwise noted in the case narrative.



ANALYTICAL REPORT

TETRA TECH
 LAUREN FOSTER
 250 W COURT STREET
 SUITE 200W
 CINCINNATI, OH 45202

Project Name: WAGNER WARE SITE
 Project Phase:
 Contract #: 2833
 Project #: 0001/S05-0001-1508-2
 Folder #: 115315
 Purchase Order #: 1111200

Page 1 of 5
 Arrival Temperature: 1.3
 Report Date: 11/17/2015
 Date Received: 11/11/2015
 Reprint Date: 11/17/2015

CT LAB#: 656569 Sample Description: WW-29-SS-102115 Client Sample #: Sampled: 10/21/2015 1445

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
TCLP Arsenic	0.0041	mg/L	0.0040	0.012	0.024	0.024	1.00	J	11/13/2015 07:00	11/16/15 10:39	NAH	EPA 6010C ^
TCLP Barium	0.26	mg/L	0.00029	0.00090	0.0018	0.0018	1.00		11/13/2015 07:00	11/16/15 10:39	NAH	EPA 6010C ^
TCLP Cadmium	<0.00030	mg/L	0.00030	0.0010	0.0020	0.0020	1.00	U	11/13/2015 07:00	11/16/15 10:39	NAH	EPA 6010C ^
TCLP Chromium	<0.00060	mg/L	0.00060	0.0020	0.0040	0.0040	1.00	U	11/13/2015 07:00	11/16/15 10:39	NAH	EPA 6010C ^
TCLP Lead	0.088	mg/L	0.0014	0.0020	0.0040	0.0040	1.00		11/13/2015 07:00	11/16/15 10:39	NAH	EPA 6010C ^
TCLP Selenium	0.025	mg/L	0.0022	0.0065	0.013	0.013	1.00	B	11/13/2015 07:00	11/16/15 10:39	NAH	EPA 6010C ^
TCLP Silver	0.0052	mg/L	0.00070	0.0020	0.0040	0.0040	1.00		11/13/2015 07:00	11/16/15 10:39	NAH	EPA 6010C ^
TCLP Mercury	<0.000030	mg/L	0.000030	0.000060	0.00012	0.00012	1.00	U	11/13/2015 07:00	11/16/15 08:45	LJF	EPA 7470A

CT LAB#: 656570 Sample Description: WW-30-SS-102115 Client Sample #: Sampled: 10/21/2015 1450

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
TCLP Arsenic	0.015	mg/L	0.0040	0.012	0.024	0.024	1.00	J	11/13/2015 07:00	11/16/15 10:45	NAH	EPA 6010C ^
TCLP Barium	0.11	mg/L	0.00029	0.00090	0.0018	0.0018	1.00		11/13/2015 07:00	11/16/15 10:45	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 656570	Sample Description: WW-30-SS-102115	Client Sample #:	Sampled: 10/21/2015 1450
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
TCLP Cadmium	<0.00030	mg/L	0.00030	0.0010	0.0020	0.0020	1.00	U	11/13/2015 07:00	11/16/15 10:45	NAH	EPA 6010C ^
TCLP Chromium	<0.00060	mg/L	0.00060	0.0020	0.0040	0.0040	1.00	U	11/13/2015 07:00	11/16/15 10:45	NAH	EPA 6010C ^
TCLP Lead	0.096	mg/L	0.0014	0.0020	0.0040	0.0040	1.00		11/13/2015 07:00	11/16/15 10:45	NAH	EPA 6010C ^
TCLP Selenium	0.032	mg/L	0.0022	0.0065	0.013	0.013	1.00	B	11/13/2015 07:00	11/16/15 10:45	NAH	EPA 6010C ^
TCLP Silver	0.0048	mg/L	0.00070	0.0020	0.0040	0.0040	1.00		11/13/2015 07:00	11/16/15 10:45	NAH	EPA 6010C ^
TCLP Mercury	<0.000030	mg/L	0.000030	0.000060	0.00012	0.00012	1.00	U	11/13/2015 07:00	11/16/15 08:57	LJF	EPA 7470A

CT LAB#: 656571	Sample Description: WW-31-SS-102115	Client Sample #:	Sampled: 10/21/2015 1500
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
TCLP Arsenic	0.012	mg/L	0.0040	0.012	0.024	0.024	1.00	J	11/13/2015 07:00	11/16/15 10:50	NAH	EPA 6010C ^
TCLP Barium	0.085	mg/L	0.00029	0.00090	0.0018	0.0018	1.00		11/13/2015 07:00	11/16/15 10:50	NAH	EPA 6010C ^
TCLP Cadmium	0.0029	mg/L	0.00030	0.0010	0.0020	0.0020	1.00	B	11/13/2015 07:00	11/16/15 10:50	NAH	EPA 6010C ^
TCLP Chromium	0.063	mg/L	0.00060	0.0020	0.0040	0.0040	1.00		11/13/2015 07:00	11/16/15 10:50	NAH	EPA 6010C ^
TCLP Lead	0.045	mg/L	0.0014	0.0020	0.0040	0.0040	1.00		11/13/2015 07:00	11/16/15 10:50	NAH	EPA 6010C ^
TCLP Selenium	0.022	mg/L	0.0022	0.0065	0.013	0.013	1.00	B	11/13/2015 07:00	11/16/15 10:50	NAH	EPA 6010C ^
TCLP Silver	0.0080	mg/L	0.00070	0.0020	0.0040	0.0040	1.00		11/13/2015 07:00	11/16/15 10:50	NAH	EPA 6010C ^
TCLP Mercury	0.00012	mg/L	0.000030	0.000060	0.00012	0.00012	1.00		11/13/2015 07:00	11/16/15 08:59	LJF	EPA 7470A

CT LAB#: 656572	Sample Description: WW-32-SS-102115	Client Sample #:	Sampled: 10/21/2015 1545
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
TCLP Arsenic	0.0089	mg/L	0.0040	0.012	0.024	0.024	1.00	J	11/13/2015 07:00	11/16/15 10:56	NAH	EPA 6010C ^

CT LAB#: 656572	Sample Description: WW-32-SS-102115	Client Sample #:	Sampled: 10/21/2015 1545
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
TCLP Barium	0.043	mg/L	0.00029	0.00090	0.0018	0.0018	1.00		11/13/2015 07:00	11/16/15 10:56	NAH	EPA 6010C ^
TCLP Cadmium	0.00065	mg/L	0.00030	0.0010	0.0020	0.0020	1.00	J B	11/13/2015 07:00	11/16/15 10:56	NAH	EPA 6010C ^
TCLP Chromium	0.00096	mg/L	0.00060	0.0020	0.0040	0.0040	1.00	J	11/13/2015 07:00	11/16/15 10:56	NAH	EPA 6010C ^
TCLP Lead	0.0047	mg/L	0.0014	0.0020	0.0040	0.0040	1.00		11/13/2015 07:00	11/16/15 10:56	NAH	EPA 6010C ^
TCLP Selenium	<0.0022	mg/L	0.0022	0.0065	0.013	0.013	1.00	U	11/13/2015 07:00	11/16/15 10:56	NAH	EPA 6010C ^
TCLP Silver	<0.00070	mg/L	0.00070	0.0020	0.0040	0.0040	1.00	U	11/13/2015 07:00	11/16/15 10:56	NAH	EPA 6010C ^
TCLP Mercury	<0.000030	mg/L	0.000030	0.000060	0.00012	0.00012	1.00	U	11/13/2015 07:00	11/16/15 09:05	LJF	EPA 7470A

CT LAB#: 656573	Sample Description: WW-33-SS-102115	Client Sample #:	Sampled: 10/21/2015 1615
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
TCLP Arsenic	<0.0040	mg/L	0.0040	0.012	0.024	0.024	1.00	U	11/13/2015 07:00	11/16/15 11:01	NAH	EPA 6010C ^
TCLP Barium	0.072	mg/L	0.00029	0.00090	0.0018	0.0018	1.00		11/13/2015 07:00	11/16/15 11:01	NAH	EPA 6010C ^
TCLP Cadmium	0.025	mg/L	0.00030	0.0010	0.0020	0.0020	1.00	M	11/13/2015 07:00	11/16/15 11:01	NAH	EPA 6010C ^
TCLP Chromium	0.0095	mg/L	0.00060	0.0020	0.0040	0.0040	1.00		11/13/2015 07:00	11/16/15 11:01	NAH	EPA 6010C ^
TCLP Lead	0.019	mg/L	0.0014	0.0020	0.0040	0.0040	1.00		11/13/2015 07:00	11/16/15 11:01	NAH	EPA 6010C ^
TCLP Selenium	0.0089	mg/L	0.0022	0.0065	0.013	0.013	1.00	J B	11/13/2015 07:00	11/16/15 11:01	NAH	EPA 6010C ^
TCLP Silver	<0.00070	mg/L	0.00070	0.0020	0.0040	0.0040	1.00	U	11/13/2015 07:00	11/16/15 11:01	NAH	EPA 6010C ^
TCLP Mercury	<0.000030	mg/L	0.000030	0.000060	0.00012	0.00012	1.00	U	11/13/2015 07:00	11/16/15 09:06	LJF	EPA 7470A

CT LAB#: 656574	Sample Description: WW-34-SS-102115	Client Sample #:	Sampled: 10/21/2015 1525
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Metals Results

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 656574

Sample Description: WW-34-SS-102115

Client Sample #:

Sampled: 10/21/2015 1525

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
TCLP Arsenic	0.020	mg/L	0.0040	0.012	0.024	0.024	1.00	J	11/13/2015 07:00	11/16/15 11:50	NAH	EPA 6010C ^
TCLP Barium	1.0	mg/L	0.00029	0.00090	0.0018	0.0018	1.00		11/13/2015 07:00	11/16/15 11:50	NAH	EPA 6010C ^
TCLP Cadmium	0.00063	mg/L	0.00030	0.0010	0.0020	0.0020	1.00	J B	11/13/2015 07:00	11/16/15 11:50	NAH	EPA 6010C ^
TCLP Chromium	0.0014	mg/L	0.00060	0.0020	0.0040	0.0040	1.00	J	11/13/2015 07:00	11/16/15 11:50	NAH	EPA 6010C ^
TCLP Lead	0.0042	mg/L	0.0014	0.0020	0.0040	0.0040	1.00		11/13/2015 07:00	11/16/15 11:50	NAH	EPA 6010C ^
TCLP Selenium	0.022	mg/L	0.0022	0.0065	0.013	0.013	1.00	B	11/13/2015 07:00	11/16/15 11:50	NAH	EPA 6010C ^
TCLP Silver	<0.00070	mg/L	0.00070	0.0020	0.0040	0.0040	1.00	U	11/13/2015 07:00	11/16/15 11:50	NAH	EPA 6010C ^
TCLP Mercury	<0.000030	mg/L	0.000030	0.000060	0.00012	0.00012	1.00	U	11/13/2015 07:00	11/16/15 09:08	LJF	EPA 7470A

Notes:

^ Indicates the laboratory is NELAP accredited for this analyte by the indicated matrix and method. DL (detection limit), LOD (limit of detection), loq (limit of quantitation) as defined by most recent DOD QSM version.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

Submitted by: Pat M. Letterer
Project Manager
608-356-2760

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for the parameters where accreditation is required or available, unless noted in the case narrative.

QC Qualifiers		Current CT Laboratories Certifications
Code	Description	
B	Analyte detected in the associated Method Blank.	Kansas NELAP ID# E-10368 Kentucky ID# 0023 ISO/IEC 17025-2005 A2LA Cert # 3806.01 North Carolina ID# 674 Wisconsin (WDNR) Chemistry ID# 157066030 Wisconsin (DATCP) Bacteriology ID# 105-289 DoD-ELAP A2LA 3806.01 GA EPD Stipulation ID E871111, Expires Annually Louisiana ID # 115843 Virginia ID# 7608 Illinois NELAP ID # 002413 Wisconsin (WOSB) ID# WI-5499-WBE Maryland ID# 344
C	Toxicity present in BOD sample.	
D	Diluted Out.	
E	Safe, No Total Coliform detected.	
F	Unsafe, Total Coliform detected, no E. Coli detected.	
G	Unsafe, Total Coliform detected and E. Coli detected.	
H	Holding time exceeded.	
I	BOD incubator temperature was outside acceptance limits during test period.	
J	Estimated value.	
L	Significant peaks were detected outside the chromatographic window.	
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.	
N	Insufficient BOD oxygen depletion.	
O	Complete BOD oxygen depletion.	
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.	
Q	Laboratory Control Sample outside acceptance limits.	
R	See Narrative at end of report.	
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.	
T	Sample received with improper preservation or temperature.	
U	Analyte concentration was below detection limit.	
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.	
W	Sample amount received was below program minimum.	
X	Analyte exceeded calibration range.	
Y	Replicate/Duplicate precision outside acceptance limits.	
Z	Specified calibration criteria was not met.	

Sampled By: L. Foster & C. Tipton

Logged By: JLS PM: PM



'O #

EMAIL: rindy.mortensen@tetrattech.com
Company: Tetra Tech
Address: 1 S Wacker Drive, Chicago IL
60606

**Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions*

Please hold after TCLP results. Contact Lauren Foster.
May need total metals run on samples

GW - groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Relinquished By: 	Date/Time 11/10/2015	Received By: 	Date/Time 11/11/15 1002	Lab Use Only Ice Present Yes No Temperature 73 #8 Cooler #
Received by:	Date/Time	Received for Laboratory by: 115315- Page 7 of 20	Date/Time 11/11/15 10:00	

Ice Present Yes No
 Temperature 1.3
 Initials JS
 Date 11/11/15 Time 10:00
 Cooler #

U.S. ENVIRONMENTAL PROTECTION AGENCY
 REGION V
 OFFICIAL SEAL
 No 30104

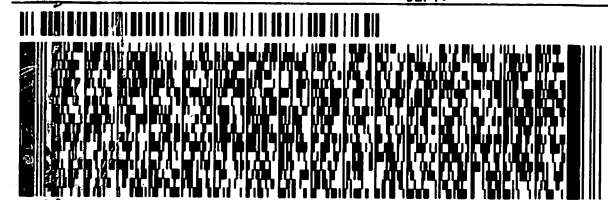
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 CINCINNATI, OH 452021072
 UNITED STATES US

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TO
 CT LABORATORIES, LLC
 1230 LANGE CT

BARABOO WI 53913

(808) 368-2780 REF: DEPT:



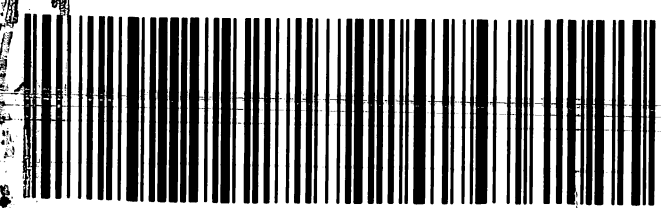
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 WI-US MSNA



QC SUMMARY REPORT

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 115315

Project Number: 0001/S05-0001-1508-2

Duplicate

Analytical Run #:	120957	Analysis Date:	11/16/2015	Prep Batch #:	55083	Matrix:	TCLP
CTLab #:	657991	Analysis Time:	11:28	Prep Date/Time:	11/13/2015 1:00	Method:	SW6010
Parent Sample #:	656573	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Arsenic	0.0170	mg/L	<0.00400				24	200	20
Barium	0.0741	mg/L	0.072				1.80	3	20
Cadmium	0.0253	mg/L	0.025				2.0	1	20
Chromium	0.00990	mg/L	0.0095				4.0	4	20
Lead	0.0189	mg/L	0.019				4.0	1	20
Selenium	0.00220	mg/L	0.0089 U				13.0	200	20
Silver	0.000700	mg/L	<0.000700U				4.0	0	20

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 115315

Project Number: 0001/S05-0001-1508-2

Lab Control Spike Water

Analytical Run #:	120957	Analysis Date:	11/16/2015	Prep Batch #:	55083	Matrix:	LIQUID
CTLab #:	657990	Analysis Time:	10:28	Prep Date/Time:	11/13/2015 1:00	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Arsenic	0.719	mg/L			0.800	90	80 --- 120		
Barium	0.836	mg/L			0.800	104	80 --- 120		
Cadmium	0.0194	mg/L			0.0200	97	80 --- 120		
Chromium	0.0729	mg/L			0.0800	91	80 --- 120		
Lead	0.207	mg/L			0.200	104	80 --- 120		
Selenium	0.751	mg/L			0.800	94	80 --- 120		
Silver	0.0182	mg/L			0.0200	91	80 --- 120		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 115315

Project Number: 0001/S05-0001-1508-2

Method Blank Water

Analytical Run #:	120957	Analysis Date:	11/16/2015	Prep Batch #:	55083	Matrix:	LIQUID
CTLab #:	657989	Analysis Time:	10:33	Prep Date/Time:	11/13/2015 1:00	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Arsenic	0.004	mg/L		U	0		0.012		
Barium	0.00029	mg/L		U	0		00090		
Cadmium	0.000413	mg/L			0		.0010		
Chromium	0.0006	mg/L		U	0		.0020		
Lead	0.0014	mg/L		U	0		.0020		
Selenium	0.00850	mg/L			0		.010		
Silver	0.0007	mg/L		U	0		.0020		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 115315

Project Number: 0001/S05-0001-1508-2

Matrix Spike Duplicate Water

Analytical Run #:	120957	Analysis Date:	11/16/2015	Prep Batch #:	55083	Matrix:	TCLP
CTLab #:	657993	Analysis Time:	11:39	Prep Date/Time:	11/13/2015 1:00	Method:	SW6010
Parent Sample #:	657992	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Arsenic	0.818	mg/L	BDL		0.800	102	80 --- 120	3	20
Barium	0.905	mg/L	0.072		0.800	104	80 --- 120	6	20
Cadmium	0.0396	mg/L	0.025		0.0200	73	80 --- 120	3	20
Chromium	0.0727	mg/L	0.0095		0.0800	79	80 --- 120	5	20
Lead	0.175	mg/L	0.019		0.200	78	80 --- 120	3	20
Selenium	1.01	mg/L	0.0089		0.800	125	80 --- 120	4	20
Silver	0.0161	mg/L	BDL		0.0200	80	80 --- 120	0	20

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 115315

Project Number: 0001/S05-0001-1508-2

Matrix Spike Water

Analytical Run #:	120957	Analysis Date:	11/16/2015	Prep Batch #:	55083	Matrix:	TCLP
CTLab #:	657992	Analysis Time:	11:33	Prep Date/Time:	11/13/2015 1:00	Method:	SW6010
Parent Sample #:	656573	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Arsenic	0.844	mg/L	BDL		0.800	106	80 --- 120		
Barium	0.961	mg/L	0.072		0.800	111	80 --- 120		
Cadmium	0.0408	mg/L	0.025		0.0200	79	80 --- 120		
Chromium	0.0763	mg/L	0.0095		0.0800	84	80 --- 120		
Lead	0.181	mg/L	0.019		0.200	81	80 --- 120		
Selenium	1.05	mg/L	0.0089		0.800	130	80 --- 120		
Silver	0.0161	mg/L	BDL		0.0200	80	80 --- 120		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 115315

Project Number: 0001/S05-0001-1508-2

Duplicate

Analytical Run #:	120962	Analysis Date:	11/16/2015	Prep Batch #:	55077	Matrix:	TCLP
CTLab #:	657942	Analysis Time:	08:49	Prep Date/Time:	11/13/2015 09:00	Method:	SW7470A
Parent Sample #:	656569	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.0000300	mg/L	<0.0000300				0.12	0	20

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 115315

Project Number: 0001/S05-0001-1508-2

Lab Control Spike Water

Analytical Run #:	120962	Analysis Date:	11/16/2015	Prep Batch #:	55077	Matrix:	LIQUID
CTLab #:	657941	Analysis Time:	08:41	Prep Date/Time:	11/13/2015 09:00	Method:	SW7470A
Parent Sample #:		Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.00331	mg/L			0.00300	110	80 --- 120		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 115315

Project Number: 0001/S05-0001-1508-2

Method Blank Water

Analytical Run #:	120962	Analysis Date:	11/16/2015	Prep Batch #:	55077	Matrix:	LIQUID
CTLab #:	657940	Analysis Time:	08:43	Prep Date/Time:	11/13/2015 09:00	Method:	SW7470A
Parent Sample #:		Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.00003	mg/L		U	0		00006		

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 115315

Project Number: 0001/S05-0001-1508-2

Matrix Spike Duplicate Water

Analytical Run #:	120962	Analysis Date:	11/16/2015	Prep Batch #:	55077	Matrix:	TCLP
CTLab #:	657944	Analysis Time:	08:53	Prep Date/Time:	11/13/2015 09:00	Method:	SW7470A
Parent Sample #:	657943	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.00217	mg/L	BDL		0.00200	108	80 --- 120	5	20

TETRA TECH

Project Name: WAGNER WARE SITE

SDG #: 0

Folder #: 115315

Project Number: 0001/S05-0001-1508-2

Matrix Spike Water

Analytical Run #:	120962	Analysis Date:	11/16/2015	Prep Batch #:	55077	Matrix:	TCLP
CTLab #:	657943	Analysis Time:	08:51	Prep Date/Time:	11/13/2015 09:00	Method:	SW7470A
Parent Sample #:	656569	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.00228	mg/L	BDL		0.00200	114	80 --- 120		

Sample Condition Report

Folder #: 115315
 Client: TETRA TECH

Print Date / Time: 11/11/2015 10:02
 Received Date / Time / By: 11/11/2015 1000 DJL

Project Name: WAGNER WARE SITE
 Project Phase:

Log-In Date / Time / By: 11/11/2015 1002 JLS
 Project #: 0001/S05-0001-1508-2 PM: PML

Coolers: UNMARKED
 Custody Seals Present : Y

Temperature: 1.3 C On Ice: Y
 COC Present?: Y Complete? Y

Seal Intact? Y
 Ship Method: FEDEX EXPRESS
 Adequate Packaging: Y

Numbers: 36184
 Tracking Number: 803781686418
 Temp Blank Enclosed? Y

Notes: SAMPLES RECEIVED IN GOOD CONDITION ON ICE

1 US EPA CUSTODY SEAL PRESENT AND INTACT

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
656569 WW-29-SS-102115	SOLIDS Total # of Containers of Type	1 (SOLIDS) =	/ 1	HG,ICP
656570 WW-30-SS-102115	SOLIDS Total # of Containers of Type	1 (SOLIDS) =	/ 1	HG,ICP
656571 WW-31-SS-102115	SOLIDS Total # of Containers of Type	1 (SOLIDS) =	/ 1	HG,ICP
656572 WW-32-SS-102115	SOLIDS Total # of Containers of Type	1 (SOLIDS) =	/ 1	HG,ICP
656573 WW-33-SS-102115	SOLIDS Total # of Containers of Type	1 (SOLIDS) =	/ 1	HG,ICP

SOLIDS 1 / HG,ICP
Total # of Containers of Type (SOLIDS) = 1

<i>Condition Code</i>	<i>Condition Description</i>
1	Sample Received OK

Sunday, November 29, 2015

Lauren Foster
Tetra Tech
250 W. Court St., Suite 200W
Cincinnati, OH 45202

Re: ALS Workorder: 1511235
Project Name: Sidney, Shelby County, OH
Project Number: 001/S05-0001-1508-200

Dear Ms. Foster:

One soil sample was received from Tetra Tech, on 11/12/2015. The sample was scheduled for the following analyses:

Gamma Spectroscopy

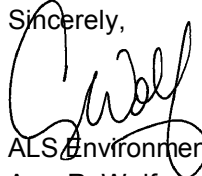
Gross Alpha/Beta

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,


ALS Environmental
Amy R. Wolf
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Connecticut (CT)	PH-0232
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
L-A-B (DoD ELAP/ISO 170250)	L2257
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280



1511235

Gamma Spectroscopy:

The sample was analyzed for the presence of gamma emitting radionuclides according to the current revision of SOP 739.

Activity concentrations above the calculated MDC are reported in some instances where minimum nuclide identification criteria are not met. Such tentative identifications result when the software attempts to calculate net activity concentrations for analytes where either one or both of the following criteria are not satisfied: the 'diagnostic' peak for a nuclide must be identified above the critical level, or the minimum library peak abundance must be attained. Nuclides not meeting these requirements have been flagged with a "TI" qualifier.

All acceptance criteria were met.

Gross Alpha/Beta:

The sample was analyzed for gross alpha and beta activity by gas flow proportional counting according to the current revision of SOP 724. Gross alpha results are referenced to ^{241}Am . Gross beta results are referenced to $^{90}\text{Sr/Y}$.

All acceptance criteria were met.

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1511235

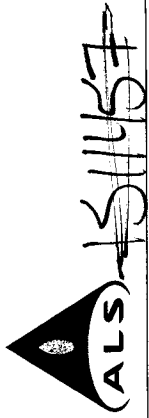
Client Name: Tetra Tech

Client Project Name: Sidney, Shelby County, OH

Client Project Number: 001/S05-0001-1508-200

Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
WW-34RAD-SS-102115	1511235-1		SOIL	21-Oct-15	15:25



Field Chain-of-Custody Record

Page 1 of 1 15335

☒ REGULAR Status

☒ RUSH Status

Cooler Temp: _____
(Lab only)

511235

Date <u>11/10/2015</u> Purchase Order No. _____		Billing Address (if different) <u>Tetra Tech</u>		Analysis Requested	
Company Name <u>Tetra Tech</u>		Address <u>250 W. Court St. Suite 200W</u>		Sample Type	
City <u>Cincinnati</u> State <u>OH</u> Zip <u>45202</u>		Person to Contact <u>Lauren Foster</u>		Preservation	
Email Address <u>lauren.foster@tetratech.com</u>		Sampling Site <u>Sidney, Shelby County, OH</u>		Lab Sample Number	
Telephone <u>(937) 738-6743</u>		Date/Time of Collection <u>10/21/2015 1525</u>		Time	
Fax Telephone () _____		VAP <input type="checkbox"/> Yes <input type="checkbox"/> No		Date	
Sample Number <u>01</u>	Site ID <u>WW-34RAD-SS-102115-1</u>	Date <u>10/21/2015</u>	Time <u>1525</u>	Lab Sample Number <u>1</u>	No. of Containers <u>1</u>
<u>CIT. 11/10/2015</u>					
Notes:					

DELIVERY METHOD: ☒ STD / PRY MAIL UPS
CUSTODY SEALS: ☒ NONE
COOLING METHOD: ☒ NONE
CARRIER: ☒ ALS COURIER
COOLER TEMP: 4.1 °C

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

Relinquished by: (Signature)	Time / Date	Received by: (Signature)	Time / Date
<u>[Signature]</u>	<u>11/10/2015</u>	<u>[Signature]</u>	<u>11/11/15</u>
Relinquished by: (Signature)	Time / Date	Received by: (Signature)	Time / Date
<u>[Signature]</u>	<u>11/11/15</u>	<u>[Signature]</u>	<u>11/12/15</u>
Relinquished by: (Signature)	Time / Date	Received by: (Signature)	Time / Date
<u>[Signature]</u>	<u>3:20</u>	<u>[Signature]</u>	<u>11/12/15</u>

Ship to: **ALS Environmental**
4388 Glendale - Milford Road
Cincinnati, Ohio 45242
Phone: 513.733.5336
Fax: 513.733.5347

Carrier / Airbill #

Date / Time:



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: tetra tech

Workorder No: 1511235

Project Manager: ARW

Initials: SDM Date: 11-12-15

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody seals on shipping containers intact?	<input checked="" type="radio"/> NONE	YES	NO
3. Are Custody seals on sample containers intact?	<input checked="" type="radio"/> NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the COC and bottle labels complete and legible?		<input checked="" type="radio"/> YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES	<input checked="" type="radio"/> NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	<input checked="" type="radio"/> N/A	YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	<input checked="" type="radio"/> N/A	YES	NO
10. Is there sufficient sample for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within holding times for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	<input checked="" type="radio"/> N/A	YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	<input checked="" type="radio"/> N/A	YES	NO
16. Were the samples shipped on ice?		<input checked="" type="radio"/> YES	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 #4	RAD ONLY	YES	<input checked="" type="radio"/> NO
Cooler #: <u>1</u>			
Temperature (°C): <u>9.0</u>			
No. of custody seals on cooler: <u>0</u>			
External μ R/hr reading: <u>17</u>			
Background μ R/hr reading: <u>12</u>			
Were external μ R/hr readings \leq two times background and within DOT acceptance criteria? <input checked="" type="radio"/> YES / NO / NA (If no, see Form 008.)			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

Analyze for Gamma and Gross alpha/beta.

aw 11/13/15

Airbill not removable.

aw 11/13/15

If applicable, was the client contacted? ☒ YES / NO / NA Contact: Lauren Foster Date/Time: 11/13/15

Project Manager Signature / Date: [Signature] 11/13/15

Client: Tetra Tech
Project: 001/S05-0001-1508-200 Sidney, Shelby County, OH
Sample ID: WW-34RAD-SS-102115
Legal Location:
Collection Date: 10/21/2015 15:25

Date: 29-Nov-15
Work Order: 1511235
Lab ID: 1511235-1
Matrix: SOIL
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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Gamma Spectroscopy Results**PAI 713**

Prep Date: 11/18/2015

PrepBy: SAM

Ac-228	2.13 (+/- 0.96)	G,Tl	1.66	pCi/g	NA	11/24/2015 09:51
Ag-110m	ND (+/- 0.23)	U,G	0.45	pCi/g	NA	11/24/2015 09:51
Al-26	ND (+/- 0.33)	U,G	0.8	pCi/g	NA	11/24/2015 09:51
Am-241	ND (+/- 0.26)	U,G	0.52	pCi/g	NA	11/24/2015 09:51
Be-7	ND (+/- 2.2)	U,G	4.3	pCi/g	NA	11/24/2015 09:51
Bi-212	ND (+/- 3.9)	U,G	5.8	pCi/g	NA	11/24/2015 09:51
Bi-214	2.58 (+/- 0.93)	G	1.1	pCi/g	NA	11/24/2015 09:51
Ce-139	ND (+/- 0.15)	U,G	0.29	pCi/g	NA	11/24/2015 09:51
Ce-144	ND (+/- 0.75)	U,G	1.49	pCi/g	NA	11/24/2015 09:51
Co-56	ND (+/- 0.5)	U,G	0.92	pCi/g	NA	11/24/2015 09:51
Co-57	ND (+/- 0.095)	U,G	0.168	pCi/g	NA	11/24/2015 09:51
Co-58	ND (+/- 0.27)	U,G	0.54	pCi/g	NA	11/24/2015 09:51
Co-60	ND (+/- 0.17)	U,G	0.4	pCi/g	NA	11/24/2015 09:51
Cr-51	ND (+/- 3.1)	U,G	4.9	pCi/g	NA	11/24/2015 09:51
Cs-134	ND (+/- 0.24)	U,G	0.44	pCi/g	NA	11/24/2015 09:51
Cs-137	ND (+/- 0.22)	U,G	0.42	pCi/g	NA	11/24/2015 09:51
Eu-152	ND (+/- 1.5)	U,G	3.1	pCi/g	NA	11/24/2015 09:51
Eu-154	ND (+/- 1.3)	U,G	2.6	pCi/g	NA	11/24/2015 09:51
Eu-155	ND (+/- 0.39)	U,G	0.6	pCi/g	NA	11/24/2015 09:51
Fe-59	ND (+/- 0.69)	U,G	1.35	pCi/g	NA	11/24/2015 09:51
I-131	ND (+/- 3.6)	U,G	7.1	pCi/g	NA	11/24/2015 09:51
K-40	ND (+/- 4)	U,G	5.7	pCi/g	NA	11/24/2015 09:51
Mn-54	ND (+/- 0.2)	U,G	0.45	pCi/g	NA	11/24/2015 09:51
Na-22	ND (+/- 0.19)	U,G	0.37	pCi/g	NA	11/24/2015 09:51
Nb-94	ND (+/- 0.24)	U,G	0.38	pCi/g	NA	11/24/2015 09:51
Nb-95	ND (+/- 0.33)	U,G	0.64	pCi/g	NA	11/24/2015 09:51
Pa-234m	ND (+/- 39)	U,G	83	pCi/g	NA	11/24/2015 09:51
Pb-212	2.38 (+/- 0.59)	G	0.57	pCi/g	NA	11/24/2015 09:51
Pb-214	2.6 (+/- 0.64)	G	0.75	pCi/g	NA	11/24/2015 09:51
Ru-106	ND (+/- 2.2)	U,G	4.2	pCi/g	NA	11/24/2015 09:51
Sb-124	ND (+/- 0.34)	U,G	0.63	pCi/g	NA	11/24/2015 09:51
Sb-125	ND (+/- 0.5)	U,G	0.97	pCi/g	NA	11/24/2015 09:51
Sc-46	ND (+/- 0.25)	U,G	0.52	pCi/g	NA	11/24/2015 09:51
Th-227	ND (+/- 0.91)	U,G	1.62	pCi/g	NA	11/24/2015 09:51
Th-234	ND (+/- 2.7)	U,G	4.2	pCi/g	NA	11/24/2015 09:51
Tl-208	0.87 (+/- 0.36)	G	0.41	pCi/g	NA	11/24/2015 09:51
U-235	ND (+/- 0.82)	U,G	1.46	pCi/g	NA	11/24/2015 09:51
Zn-65	ND (+/- 0.47)	U,G	0.93	pCi/g	NA	11/24/2015 09:51

Gross Alpha/Beta by GFPC**PAI 724**

Prep Date: 11/17/2015

PrepBy: JKB

GROSS ALPHA	8.1 (+/- 2.5)	2.3	pCi/g	NA	11/19/2015 08:18
GROSS BETA	7.2 (+/- 1.8)	2.2	pCi/g	NA	11/19/2015 08:18

Client:	Tetra Tech	Date:	29-Nov-15
Project:	001/S05-0001-1508-200 Sidney, Shelby County, OH	Work Order:	1511235
Sample ID:	WW-34RAD-SS-102115	Lab ID:	1511235-1
Legal Location:		Matrix:	SOIL
Collection Date:	10/21/2015 15:25	Percent Moisture:	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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Explanation of Qualifiers

Radiochemistry:

U or ND - Result is less than the sample specific MDC.	M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.	L - LCS Recovery below lower control limit.
Y2 - Chemical Yield outside default limits.	H - LCS Recovery above upper control limit.
W - DER is greater than Warning Limit of 1.42	P - LCS, Matrix Spike Recovery within control limits.
* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.	N - Matrix Spike Recovery outside control limits
# - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.	NC - Not Calculated for duplicate results less than 5 times MDC
G - Sample density differs by more than 15% of LCS density.	B - Analyte concentration greater than MDC.
D - DER is greater than Control Limit	B3 - Analyte concentration greater than MDC but less than Requested MDC.
M - Requested MDC not met.	
LT - Result is less than requested MDC but greater than achieved MDC.	

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).

U or ND - Indicates that the compound was analyzed for but not detected.

E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

M - Duplicate injection precision was not met.

N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

* - Duplicate analysis (relative percent difference) not within control limits.

S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.

B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.

E - Analyte concentration exceeds the upper level of the calibration range.

J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).

A - A tentatively identified compound is a suspected aldol-condensation product.

X - The analyte was diluted below an accurate quantitation level.

* - The spike recovery is equal to or outside the control criteria used.

+ - The relative percent difference (RPD) equals or exceeds the control criteria.

G - A pattern resembling gasoline was detected in this sample.

D - A pattern resembling diesel was detected in this sample.

M - A pattern resembling motor oil was detected in this sample.

C - A pattern resembling crude oil was detected in this sample.

4 - A pattern resembling JP-4 was detected in this sample.

5 - A pattern resembling JP-5 was detected in this sample.

H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.

L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.

Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:

- gasoline
- JP-8
- diesel
- mineral spirits
- motor oil
- Stoddard solvent
- bunker C

ALS Environmental -- FC

Date: 11/29/2015 11:2

Client: Tetra Tech

Work Order: 1511235

Project: 001/S05-0001-1508-200 Sidney, Shelby County,

QC BATCH REPORT

Batch ID: AB151117-5-2

Instrument ID: LB4100-C

Method: Gross Alpha/Beta by GFPC

LCS	Sample ID: AB151117-5				Units: pCi/g		Analysis Date: 11/19/2015 08:18				
Client ID:	Run ID: AB151117-5A				Prep Date: 11/17/2015			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
GROSS ALPHA	16.4 (+/- 2.8)	0.3	15.03		109	70-130					P
GROSS BETA	13.6 (+/- 2.2)	0.5	13.6		100	70-130					P

MB	Sample ID: AB151117-5				Units: pCi/g			Analysis Date: 11/19/2015 08:18			
Client ID:	Run ID: AB151117-5A				Prep Date: 11/17/2015			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
GROSS ALPHA	ND	0.217									U
GROSS BETA	ND	0.31									U

The following samples were analyzed in this batch:

1511235-1

Client: Tetra Tech
 Work Order: 1511235
 Project: 001/S05-0001-1508-200 Sidney, Shelby County,

QC BATCH REPORT

Batch ID: **GS151118-2-1** Instrument ID: **GAMMA** Method: **Gamma Spectroscopy Results**

DUP Sample ID: **1511235-1** Units: **pCi/g** Analysis Date: **11/24/2015 11:03**
 Client ID: **WW-34RAD-SS-102115** Run ID: **GS151118-2A** Prep Date: **11/18/2015** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ac-228	2.04 (+/- 0.88)	1.67						2.13	0.08	2.1	G,TI
Ag-110m	ND	0.35						-0.05	0.2	2.1	U,G
Al-26	0.12 (+/- 0.14)	0.11						-0.26	1.1	2.1	G,NQ
Am-241	ND	0.39						-0.3	0.7	2.1	U,G
Be-7	ND	4.1						-0.6	0.3	2.1	U,G
Bi-212	ND	5.6						4.4	0.4	2.1	U,G
Bi-214	2.55 (+/- 0.77)	0.78						2.58	0.02	2.1	G
Ce-139	ND	0.187						-0.09	0.3	2.1	U,G
Ce-144	ND	1.34						-0.53	0.6	2.1	U,G
Co-56	ND	0.9						0.19	0.3	2.1	U,G
Co-57	ND	0.151						0.023	0.5	2.1	U,G
Co-58	ND	0.46						-0.03	0.06	2.1	U,G
Co-60	ND	0.43						-0.03	0.005	2.1	U,G
Cr-51	ND	4.7						2.8	0.4	2.1	U,G
Cs-134	ND	0.42						0.04	0.3	2.1	U,G
Cs-137	ND	0.34						0	0.2	2.1	U,G
Eu-152	ND	2.4						-0.2	0.1	2.1	U,G
Eu-154	ND	2.2						-0.2	0.1	2.1	U,G
Eu-155	ND	0.51						0.47	0.8	2.1	U,G
Fe-59	ND	1.13						0.1	0.2	2.1	U,G
I-131	ND	4.9						-2	0.8	2.1	U,G
K-40	8.2 (+/- 3.7)	3.9						5.2	0.5	2.1	G
Mn-54	0.35 (+/- 0.22)	0.26						-0.13	1.6	2.1	G,NQ
Na-22	ND	0.5						0.07	0.5	2.1	U,G
Nb-94	ND	0.41						0.21	0.9	2.1	U,G
Nb-95	ND	0.68						-0.05	0.6	2.1	U,G
Pa-234m	ND	43						-15	0.9	2.1	U,G
Pb-212	2.7 (+/- 0.59)	0.48						2.38	0.4	2.1	G
Pb-214	2.59 (+/- 0.59)	0.66						2.6	0.009	2.1	G
Ru-106	ND	3.8						0	0.1	2.1	U,G
Sb-124	ND	0.57						0.05	0.02	2.1	U,G
Sb-125	ND	0.96						-0.07	0.4	2.1	U,G
Sc-46	ND	0.59						-0.01	0.3	2.1	U,G
Th-227	ND	1.2						0.19	0.3	2.1	U,G
Th-234	3.4 (+/- 1.5)	3						3.9	0.2	2.1	G
Tl-208	0.77 (+/- 0.3)	0.33						0.87	0.2	2.1	G
U-235	ND	1.37						0.16	0.4	2.1	U,G
Zn-65	ND	1.2						0.07	0.4	2.1	U,G

Client: Tetra Tech
Work Order: 1511235
Project: 001/S05-0001-1508-200 Sidney, Shelby County,

QC BATCH REPORT

Batch ID: **GS151118-2-1** Instrument ID: **GAMMA** Method: **Gamma Spectroscopy Results**

LCS Sample ID: **GS151118-2** Units: **pCi/g** Analysis Date: **11/24/2015 11:47**

Client ID: Run ID: **GS151118-2A** Prep Date: **11/18/2015** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Am-241	980 (+/- 110)	0	980.9		100	85-115					P
Co-60	449 (+/- 53)	1	449.6		99.9	85-115					P
Cs-137	393 (+/- 46)	2	389.1		101	85-115					P,M3

Client: Tetra Tech
Work Order: 1511235
Project: 001/S05-0001-1508-200 Sidney, Shelby County,

QC BATCH REPORT

Batch ID: **GS151118-2-1** Instrument ID: **GAMMA** Method: **Gamma Spectroscopy Results**

MB		Sample ID: GS151118-2		Units: pCi/g		Analysis Date: 11/24/2015 11:03						
Client ID:		Run ID: GS151118-2A		Prep Date: 11/18/2015		DF: NA						
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual	
Ac-228	ND	0.72									U	
Ag-110m	ND	0.097									U	
Al-26	ND	0.2									U	
Am-241	ND	0.145									U	
Be-7	ND	1.1									U	
Bi-212	ND	2.8									U	
Bi-214	ND	0.46									U	
Ce-139	ND	0.059									U	
Ce-144	ND	0.52									U	
Co-56	ND	0.3									U	
Co-57	ND	0.051									U	
Co-58	ND	0.181									U	
Co-60	ND	0.25									U	
Cr-51	ND	1.12									U	
Cs-134	ND	0.18									U	
Cs-137	ND	0.162									U	
Eu-152	ND	0.89									U	
Eu-154	ND	1.06									U	
Eu-155	ND	0.24									U	
Fe-59	ND	0.45									U	
I-131	ND	0.188									U	
K-40	ND	2.7									U	
Mn-54	ND	0.162									U	
Na-22	ND	0.141									U	
Nb-94	ND	0.19									U	
Nb-95	ND	0.2									U	
Pa-234m	ND	35									U	
Pb-212	ND	0.22									U	
Pb-214	ND	0.36									U	
Ru-106	ND	1.57									U	
Sb-124	ND	0.22									U	
Sb-125	ND	0.35									U	
Sc-46	ND	0.16									U	
Th-227	ND	0.74									U	
Th-234	ND	1.17									U	
Tl-208	ND	0.164									U	
U-235	ND	0.59									U	
Zn-65	ND	0.42									U	

The following samples were analyzed in this batch:

1511235-1

TECHNICAL BULLETIN ADDENDUM

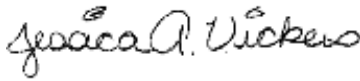
The library used for analysis defines the gamma emission(s) to be used for analysis of each nuclide. If multiple gamma emissions are used for quantification, then a 'NET' quantification emission (or peak) must be defined in the library. This designation provides for the calculation of nuclide activity concentrations and detection limits in the case of non-presence of the nuclide. When the nuclide is not present, or the software is unable to resolve a peak at the library defined 'NET' energy, the software evaluates the 'NET' region of interest ('NET' peak energy \pm 2 keV) by performing a summation of the net counts above the background level. This 'NET' quantification can result in net negative, zero, or positive activity results, and is highly dependent on the spectral distribution in the region of interest of the 'NET' peak. In cases where only the 'NET' peak is found, and the software performs a net quantification, the nuclide result will be flagged with an 'NQ' qualifier on the final reports. This indicates that the nuclide is not detected or supported at any level above the reported MDC. Results are submitted without further qualification.

All nuclides specified in the library of analysis for gamma spectroscopy are evaluated for positive OR tentative identification on the following criteria:

- The individual abundances for the gamma emissions specified for each nuclide are summed to obtain a total nuclide abundance.
- From the total nuclide abundance, a positive identification criterion is set as 75% of this total nuclide abundance.
- For all nuclide peaks that are not net quantified, those peak abundances are summed. The total non-net quantified peak sum is compared to the calculated 75% abundance criterion. If this sum is greater than the 75% criterion, the nuclide is considered to be positively identified at the reported concentration. If the sum is less than the 75% criterion, the nuclide is tentatively identified at the reported concentration. These results will be flagged with a 'TI' qualifier on the final reports to indicate that the 75% abundance criterion was not met.

APPENDIX F
DATA VALIDATION REPORT

**DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 5 START CONTRACT**

Site Name	Wagner Ware	TDD No.	103X90260001S051508200
Document Tracking No.		Technical Reviewer (signature and date)	
Data Reviewer (signature and date)	 November 18, 2015	Laboratory	CT Laboratories, Baraboo, WI
Laboratory Report No.	115315		
Analyses	Toxicity Characteristic Leaching Procedure (TCLP) Metals – SW1311/6010C/7470A		
Samples and Matrix	6 soil samples		
Field Duplicate Pairs	None		
Field Blanks	None		

INTRODUCTION

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA *Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Inorganic Superfund Data Review* (August 2014).

OVERALL EVALUATION

Rejection of data was not required for this data set. Results may be used with the qualifications indicated in the below sections.

Data completeness:

Within Criteria	Exceedance/Notes
Y	

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	



DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 5 START CONTRACT

Method blanks:

Within Criteria	Exceedance/Notes
N	120957: TCLP cadmium = 0.000413 mg/L and TCLP selenium = 0.00850 mg/L. Results were flagged as estimated with a possible high bias (J+) for TCLP cadmium in WW-31-SS-102115 and TCLP selenium in WW-29-SS-102115, WW-30-SS-102115, WW-31-SS-102115, and WW-34-SS-102115; and raised to the limit of quantitation and qualified as non-detect (U) for TCLP cadmium in WW-32-SS-102115 and WW-34-SS-102115, and TCLP selenium in WW-33-SS-102115.

Field blanks:

Within Criteria	Exceedance/Notes
NA	

System monitoring compounds (surrogates and labeled compounds):

Within Criteria	Exceedance/Notes
NA	

MS/MSD:

Within Criteria	Exceedance/Notes
NA	Performed on non-project samples and therefore not evaluated.

Laboratory duplicates:

Within Criteria	Exceedance/Notes
Y	

**DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 5 START CONTRACT**

Field duplicates:

Within Criteria	Exceedance/Notes
NA	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
NA	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes
Y	Laboratory flagged results between the detection limit and limit of quantitation as estimated (J).

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
NA	



DATA VALIDATION CHECKLIST – STAGE 2A EPA REGION 5 START CONTRACT

Other [specify]:

Within Criteria	Exceedance/Notes
NA	

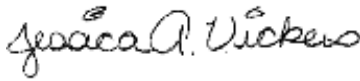
Overall Qualifications:

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

Samp_No	Lab_Samp_No	Matrix_ID	Analyte	Result	Lab_Qual	Result_Units	RL	Val_Result	Val_Qual
WW-29-SS-102115	656569	SO	Arsenic	0.0041 J		mg/L	0.024	0.0041 J	
WW-29-SS-102115	656569	SO	Barium	0.26		mg/L	0.0018	0.26	
WW-29-SS-102115	656569	SO	Cadmium	0 U		mg/L	0.0020	0.0020 U	
WW-29-SS-102115	656569	SO	Chromium	0 U		mg/L	0.0040	0.0040 U	
WW-29-SS-102115	656569	SO	Lead	0.088		mg/L	0.0040	0.088	
WW-29-SS-102115	656569	SO	Mercury	0 U		mg/L	0.00012	0.00012 U	
WW-29-SS-102115	656569	SO	Selenium	0.025 B		mg/L	0.013	0.025 J+	
WW-29-SS-102115	656569	SO	Silver	0.0052		mg/L	0.0040	0.0052	
WW-30-SS-102115	656570	SO	Arsenic	0.015 J		mg/L	0.024	0.015 J	
WW-30-SS-102115	656570	SO	Barium	0.11		mg/L	0.0018	0.11	
WW-30-SS-102115	656570	SO	Cadmium	0 U		mg/L	0.0020	0.0020 U	
WW-30-SS-102115	656570	SO	Chromium	0 U		mg/L	0.0040	0.0040 U	
WW-30-SS-102115	656570	SO	Lead	0.096		mg/L	0.0040	0.096	
WW-30-SS-102115	656570	SO	Mercury	0 U		mg/L	0.00012	0.00012 U	
WW-30-SS-102115	656570	SO	Selenium	0.032 B		mg/L	0.013	0.032 J+	
WW-30-SS-102115	656570	SO	Silver	0.0048		mg/L	0.0040	0.0048	
WW-31-SS-102115	656571	SO	Arsenic	0.012 J		mg/L	0.024	0.012 J	
WW-31-SS-102115	656571	SO	Barium	0.085		mg/L	0.0018	0.085	
WW-31-SS-102115	656571	SO	Cadmium	0.0029 B		mg/L	0.0020	0.0029 J+	
WW-31-SS-102115	656571	SO	Chromium	0.063		mg/L	0.0040	0.063	
WW-31-SS-102115	656571	SO	Lead	0.045		mg/L	0.0040	0.045	
WW-31-SS-102115	656571	SO	Mercury	0.00012		mg/L	0.00012	0.00012	
WW-31-SS-102115	656571	SO	Selenium	0.022 B		mg/L	0.013	0.022 J+	
WW-31-SS-102115	656571	SO	Silver	0.0080		mg/L	0.0040	0.0080	
WW-32-SS-102115	656572	SO	Arsenic	0.0089 J		mg/L	0.024	0.0089 J	
WW-32-SS-102115	656572	SO	Barium	0.043		mg/L	0.0018	0.043	
WW-32-SS-102115	656572	SO	Cadmium	0.00065 JB		mg/L	0.0020	0.0020 U	
WW-32-SS-102115	656572	SO	Chromium	0.00096 J		mg/L	0.0040	0.00096 J	
WW-32-SS-102115	656572	SO	Lead	0.0047		mg/L	0.0040	0.0047	
WW-32-SS-102115	656572	SO	Mercury	0 U		mg/L	0.00012	0.00012 U	
WW-32-SS-102115	656572	SO	Selenium	0 U		mg/L	0.013	0.013 U	
WW-32-SS-102115	656572	SO	Silver	0 U		mg/L	0.0040	0.0040 U	
WW-33-SS-102115	656573	SO	Arsenic	0 U		mg/L	0.024	0.024 U	
WW-33-SS-102115	656573	SO	Barium	0.072		mg/L	0.0018	0.072	
WW-33-SS-102115	656573	SO	Cadmium	0.025 M		mg/L	0.0020	0.025	
WW-33-SS-102115	656573	SO	Chromium	0.0095		mg/L	0.0040	0.0095	
WW-33-SS-102115	656573	SO	Lead	0.019		mg/L	0.0040	0.019	
WW-33-SS-102115	656573	SO	Mercury	0 U		mg/L	0.00012	0.00012 U	
WW-33-SS-102115	656573	SO	Selenium	0.0089 JB		mg/L	0.013	0.013 U	
WW-33-SS-102115	656573	SO	Silver	0 U		mg/L	0.0040	0.0040 U	
WW-34-SS-102115	656574	SO	Arsenic	0.020 J		mg/L	0.024	0.020 J	
WW-34-SS-102115	656574	SO	Barium	1.0		mg/L	0.0018	1.0	
WW-34-SS-102115	656574	SO	Cadmium	0.00063 JB		mg/L	0.0020	0.0020 U	
WW-34-SS-102115	656574	SO	Chromium	0.0014 J		mg/L	0.0040	0.0014 J	
WW-34-SS-102115	656574	SO	Lead	0.0042		mg/L	0.0040	0.0042	
WW-34-SS-102115	656574	SO	Mercury	0 U		mg/L	0.00012	0.00012 U	
WW-34-SS-102115	656574	SO	Selenium	0.022 B		mg/L	0.013	0.022 J+	
WW-34-SS-102115	656574	SO	Silver	0 U		mg/L	0.0040	0.0040 U	

**DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 5 START CONTRACT**

Site Name	Wagner Ware	TDD No.	103X90260001S051508200
Document Tracking No.		Technical Reviewer (signature and date)	
Data Reviewer (signature and date)	 November 12, 2015	Laboratory	CT Laboratories, Baraboo, WI
Laboratory Report No.	113571		
Analyses	Polychlorinated Biphenyls (PCBs) – SW8082A, pH – SW9045D, Flashpoint – SW1010, Toxicity Characteristic Leaching Procedure (TCLP) Metals – SW1311/6010C/7470A		
Samples and Matrix	20 waste samples, 8 soil samples, and 5 field duplicates		
Field Duplicate Pairs	WW-14-LW-082715/WW-FD-082715-01, WW-19-LW-082715/WW-FD-082715-02, WW-09-LW-082715/WW-FD-082715-03, WW-04-SS-082715/WW-FD-082715-04, and WW-24-SW-082715/WW-FD-082715-05		
Field Blanks	None		

INTRODUCTION

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA *Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Superfund Organic Methods Data Review* (August 2014) and the EPA *CLP NFG for Inorganic Superfund Data Review* (August 2014).

OVERALL EVALUATION

Rejection of data was not required for this data set. Results may be used with the qualifications indicated in the below sections.

Data completeness:

Within Criteria	Exceedance/Notes
Y	

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
N	Holding time of as soon as possible was exceeded for all pH analyses. Results were flagged as estimated (J).



DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 5 START CONTRACT

Method blanks:

Within Criteria	Exceedance/Notes
N	118352: TCLP chromium = 0.000875 mg/L and TCLP selenium = 0.00431 mg/L. Results were raised to the limit of quantitation and qualified as non-detect (U) for TCLP chromium in WW-25-SW-082715 and TCLP selenium in WW-24-SW-082715 and WW-28-SW-082715.

Field blanks:

Within Criteria	Exceedance/Notes
NA	

System monitoring compounds (surrogates and labeled compounds):

Within Criteria	Exceedance/Notes
N	PCB surrogate recovery was above criteria for WW-12-LW-082715. No action was required because the associated results were non-detect. PCB surrogate recovery was low criteria for WW-06-SS-082715. The associated results were qualified with a possible low bias (J-/UJ).

MS/MSD:

Within Criteria	Exceedance/Notes
N	Aroclor-1260 recovery was below criteria for WW-05-SS-082715. The associated result was qualified with a possible low bias (J-). TCLP cadmium recovery was below criteria and the TCLP mercury recoveries were above criteria for WW-25-SW-082715. The associated TCLP cadmium result was qualified with a possible low bias (J-). No action was required for TCLP mercury because the associated result was non-detect.

**DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 5 START CONTRACT**

Laboratory duplicates:

Within Criteria	Exceedance/Notes
N	TCLP chromium exceeded the QC criteria for WW-25-SW-082715. No action was required because the associated result was qualified as a non-detect due to method blank contamination.

Field duplicates:

Within Criteria	Exceedance/Notes
Y	

LCSS/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	2x: PCBs for WW-13-LW-082715

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes
Y	Laboratory flagged results between the detection limit and limit of quantitation as estimated (J).



DATA VALIDATION CHECKLIST – STAGE 2A EPA REGION 5 START CONTRACT

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
NA	

Other [specify]:

Within Criteria	Exceedance/Notes
NA	

Overall Qualifications:

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

Samp_No	Lab_Samp_No	Matrix_ID	Analyte	Result	Lab_Qual	Units	RL	Val_Result	Val_Qual
WW-01-SS-082715	625916	SO	Aroclor-1016	0	U	ug/kg	480	480	U
WW-01-SS-082715	625916	SO	Aroclor-1221	0	U	ug/kg	480	480	U
WW-01-SS-082715	625916	SO	Aroclor-1232	0	U	ug/kg	480	480	U
WW-01-SS-082715	625916	SO	Aroclor-1242	0	U	ug/kg	480	480	U
WW-01-SS-082715	625916	SO	Aroclor-1248	0	U	ug/kg	480	480	U
WW-01-SS-082715	625916	SO	Aroclor-1254	0	U	ug/kg	480	480	U
WW-01-SS-082715	625916	SO	Aroclor-1260	6060		ug/kg	480	6060	
WW-01-SS-082715	625916	SO	Aroclor-1262	0	U	ug/kg	480	480	U
WW-01-SS-082715	625916	SO	Aroclor-1268	0	U	ug/kg	480	480	U
WW-01-SS-082715	625916	SO	Solids, Percent	60.5		PERCENT	0.1	60.5	
WW-02-SS-082715	625917	SO	Aroclor-1016	0	U	ug/kg	440	440	U
WW-02-SS-082715	625917	SO	Aroclor-1221	0	U	ug/kg	440	440	U
WW-02-SS-082715	625917	SO	Aroclor-1232	0	U	ug/kg	440	440	U
WW-02-SS-082715	625917	SO	Aroclor-1242	0	U	ug/kg	440	440	U
WW-02-SS-082715	625917	SO	Aroclor-1248	0	U	ug/kg	440	440	U
WW-02-SS-082715	625917	SO	Aroclor-1254	0	U	ug/kg	440	440	U
WW-02-SS-082715	625917	SO	Aroclor-1260	759		ug/kg	440	759	
WW-02-SS-082715	625917	SO	Aroclor-1262	0	U	ug/kg	440	440	U
WW-02-SS-082715	625917	SO	Aroclor-1268	0	U	ug/kg	440	440	U
WW-02-SS-082715	625917	SO	Solids, Percent	67.2		PERCENT	0.1	67.2	
WW-03-SS-082715	625918	SO	Aroclor-1016	0	U	ug/kg	370	370	U
WW-03-SS-082715	625918	SO	Aroclor-1221	0	U	ug/kg	370	370	U
WW-03-SS-082715	625918	SO	Aroclor-1232	0	U	ug/kg	370	370	U
WW-03-SS-082715	625918	SO	Aroclor-1242	0	U	ug/kg	370	370	U
WW-03-SS-082715	625918	SO	Aroclor-1248	0	U	ug/kg	370	370	U
WW-03-SS-082715	625918	SO	Aroclor-1254	0	U	ug/kg	370	370	U
WW-03-SS-082715	625918	SO	Aroclor-1260	1610		ug/kg	370	1610	
WW-03-SS-082715	625918	SO	Aroclor-1262	0	U	ug/kg	370	370	U
WW-03-SS-082715	625918	SO	Aroclor-1268	0	U	ug/kg	370	370	U
WW-03-SS-082715	625918	SO	Solids, Percent	70.1		PERCENT	0.1	70.1	
WW-04-SS-082715	625920	SO	Aroclor-1016	0	U	ug/kg	350	350	U
WW-04-SS-082715	625920	SO	Aroclor-1221	0	U	ug/kg	350	350	U
WW-04-SS-082715	625920	SO	Aroclor-1232	0	U	ug/kg	350	350	U
WW-04-SS-082715	625920	SO	Aroclor-1242	0	U	ug/kg	350	350	U
WW-04-SS-082715	625920	SO	Aroclor-1248	0	U	ug/kg	350	350	U
WW-04-SS-082715	625920	SO	Aroclor-1254	0	U	ug/kg	350	350	U
WW-04-SS-082715	625920	SO	Aroclor-1260	3770		ug/kg	350	3770	
WW-04-SS-082715	625920	SO	Aroclor-1262	0	U	ug/kg	350	350	U
WW-04-SS-082715	625920	SO	Aroclor-1268	0	U	ug/kg	350	350	U
WW-04-SS-082715	625920	SO	Solids, Percent	79.5		PERCENT	0.1	79.5	
WW-05-SS-082715	625919	SO	Aroclor-1016	0	U	ug/kg	590	590	U
WW-05-SS-082715	625919	SO	Aroclor-1221	0	U	ug/kg	590	590	U
WW-05-SS-082715	625919	SO	Aroclor-1232	0	U	ug/kg	590	590	U
WW-05-SS-082715	625919	SO	Aroclor-1242	0	U	ug/kg	590	590	U
WW-05-SS-082715	625919	SO	Aroclor-1248	0	U	ug/kg	590	590	U
WW-05-SS-082715	625919	SO	Aroclor-1254	0	U	ug/kg	590	590	U
WW-05-SS-082715	625919	SO	Aroclor-1260	4340	M	ug/kg	590	4340	J-
WW-05-SS-082715	625919	SO	Aroclor-1262	0	U	ug/kg	590	590	U
WW-05-SS-082715	625919	SO	Aroclor-1268	0	U	ug/kg	590	590	U
WW-05-SS-082715	625919	SO	Solids, Percent	50.6	Y	PERCENT	0.1	50.6	
WW-06-SS-082715	625923	SO	Aroclor-1016	0	U	ug/kg	340	340	UJ
WW-06-SS-082715	625923	SO	Aroclor-1221	0	U	ug/kg	340	340	UJ
WW-06-SS-082715	625923	SO	Aroclor-1232	0	U	ug/kg	340	340	UJ
WW-06-SS-082715	625923	SO	Aroclor-1242	0	U	ug/kg	340	340	UJ
WW-06-SS-082715	625923	SO	Aroclor-1248	0	U	ug/kg	340	340	UJ
WW-06-SS-082715	625923	SO	Aroclor-1254	0	U	ug/kg	340	340	UJ
WW-06-SS-082715	625923	SO	Aroclor-1260	1040		ug/kg	340	1040	J-
WW-06-SS-082715	625923	SO	Aroclor-1262	0	U	ug/kg	340	340	UJ
WW-06-SS-082715	625923	SO	Aroclor-1268	0	U	ug/kg	340	340	UJ
WW-06-SS-082715	625923	SO	Solids, Percent	79.7		PERCENT	0.1	79.7	
WW-07-SS-082715	625921	SO	Aroclor-1016	0	U	ug/kg	460	460	U
WW-07-SS-082715	625921	SO	Aroclor-1221	0	U	ug/kg	460	460	U
WW-07-SS-082715	625921	SO	Aroclor-1232	0	U	ug/kg	460	460	U
WW-07-SS-082715	625921	SO	Aroclor-1242	0	U	ug/kg	460	460	U
WW-07-SS-082715	625921	SO	Aroclor-1248	0	U	ug/kg	460	460	U
WW-07-SS-082715	625921	SO	Aroclor-1254	0	U	ug/kg	460	460	U
WW-07-SS-082715	625921	SO	Aroclor-1260	2630		ug/kg	460	2630	

WW-07-SS-082715	625921	SO	Aroclor-1262	0 U	ug/kg	460	460 U
WW-07-SS-082715	625921	SO	Aroclor-1268	0 U	ug/kg	460	460 U
WW-07-SS-082715	625921	SO	Solids, Percent	60.9	PERCENT	0.1	60.9
WW-08-SS-082715	625922	SO	Aroclor-1016	0 U	ug/kg	360	360 U
WW-08-SS-082715	625922	SO	Aroclor-1221	0 U	ug/kg	360	360 U
WW-08-SS-082715	625922	SO	Aroclor-1232	0 U	ug/kg	360	360 U
WW-08-SS-082715	625922	SO	Aroclor-1242	0 U	ug/kg	360	360 U
WW-08-SS-082715	625922	SO	Aroclor-1248	0 U	ug/kg	360	360 U
WW-08-SS-082715	625922	SO	Aroclor-1254	0 U	ug/kg	360	360 U
WW-08-SS-082715	625922	SO	Aroclor-1260	1340	ug/kg	360	1340
WW-08-SS-082715	625922	SO	Aroclor-1262	0 U	ug/kg	360	360 U
WW-08-SS-082715	625922	SO	Aroclor-1268	0 U	ug/kg	360	360 U
WW-08-SS-082715	625922	SO	Solids, Percent	76.1	PERCENT	0.1	76.1
WW-09-LW-082715	625911	ST	Aroclor-1016	0 U	ug/kg	260	260 U
WW-09-LW-082715	625911	ST	Aroclor-1221	0 U	ug/kg	260	260 U
WW-09-LW-082715	625911	ST	Aroclor-1232	0 U	ug/kg	260	260 U
WW-09-LW-082715	625911	ST	Aroclor-1242	0 U	ug/kg	260	260 U
WW-09-LW-082715	625911	ST	Aroclor-1248	0 U	ug/kg	260	260 U
WW-09-LW-082715	625911	ST	Aroclor-1254	0 U	ug/kg	260	260 U
WW-09-LW-082715	625911	ST	Aroclor-1260	0 U	ug/kg	260	260 U
WW-09-LW-082715	625911	ST	Aroclor-1262	0 U	ug/kg	260	260 U
WW-09-LW-082715	625911	ST	Aroclor-1268	0 U	ug/kg	260	260 U
WW-10-LW-082715	625913	ST	Aroclor-1016	0 U	ug/kg	280	280 U
WW-10-LW-082715	625913	ST	Aroclor-1221	0 U	ug/kg	280	280 U
WW-10-LW-082715	625913	ST	Aroclor-1232	0 U	ug/kg	280	280 U
WW-10-LW-082715	625913	ST	Aroclor-1242	0 U	ug/kg	280	280 U
WW-10-LW-082715	625913	ST	Aroclor-1248	0 U	ug/kg	280	280 U
WW-10-LW-082715	625913	ST	Aroclor-1254	0 U	ug/kg	280	280 U
WW-10-LW-082715	625913	ST	Aroclor-1260	0 U	ug/kg	280	280 U
WW-10-LW-082715	625913	ST	Aroclor-1262	0 U	ug/kg	280	280 U
WW-10-LW-082715	625913	ST	Aroclor-1268	0 U	ug/kg	280	280 U
WW-11-LW-082715	625914	ST	Aroclor-1016	0 U	ug/kg	280	280 U
WW-11-LW-082715	625914	ST	Aroclor-1221	0 U	ug/kg	280	280 U
WW-11-LW-082715	625914	ST	Aroclor-1232	0 U	ug/kg	280	280 U
WW-11-LW-082715	625914	ST	Aroclor-1242	0 U	ug/kg	280	280 U
WW-11-LW-082715	625914	ST	Aroclor-1248	0 U	ug/kg	280	280 U
WW-11-LW-082715	625914	ST	Aroclor-1254	0 U	ug/kg	280	280 U
WW-11-LW-082715	625914	ST	Aroclor-1260	0 U	ug/kg	280	280 U
WW-11-LW-082715	625914	ST	Aroclor-1262	0 U	ug/kg	280	280 U
WW-11-LW-082715	625914	ST	Aroclor-1268	0 U	ug/kg	280	280 U
WW-12-LW-082715	625915	ST	Aroclor-1016	0 U	ug/kg	280	280 U
WW-12-LW-082715	625915	ST	Aroclor-1221	0 U	ug/kg	280	280 U
WW-12-LW-082715	625915	ST	Aroclor-1232	0 U	ug/kg	280	280 U
WW-12-LW-082715	625915	ST	Aroclor-1242	0 U	ug/kg	280	280 U
WW-12-LW-082715	625915	ST	Aroclor-1248	0 U	ug/kg	280	280 U
WW-12-LW-082715	625915	ST	Aroclor-1254	0 U	ug/kg	280	280 U
WW-12-LW-082715	625915	ST	Aroclor-1260	0 U	ug/kg	280	280 U
WW-12-LW-082715	625915	ST	Aroclor-1262	0 U	ug/kg	280	280 U
WW-12-LW-082715	625915	ST	Aroclor-1268	0 U	ug/kg	280	280 U
WW-13-LW-082715	625912	ST	Aroclor-1016	0 U	ug/kg	570	570 U
WW-13-LW-082715	625912	ST	Aroclor-1221	0 U	ug/kg	570	570 U
WW-13-LW-082715	625912	ST	Aroclor-1232	0 U	ug/kg	570	570 U
WW-13-LW-082715	625912	ST	Aroclor-1242	0 U	ug/kg	570	570 U
WW-13-LW-082715	625912	ST	Aroclor-1248	0 U	ug/kg	570	570 U
WW-13-LW-082715	625912	ST	Aroclor-1254	0 U	ug/kg	570	570 U
WW-13-LW-082715	625912	ST	Aroclor-1260	5190	ug/kg	570	5190
WW-13-LW-082715	625912	ST	Aroclor-1262	0 U	ug/kg	570	570 U
WW-13-LW-082715	625912	ST	Aroclor-1268	0 U	ug/kg	570	570 U
WW-14-LW-082715	625909	ST	pH	1.16	S.U.		1.16 J
WW-15-LW-082715	625908	ST	pH	1.17	S.U.		1.17 J
WW-16-LW-082715	625907	ST	pH	1.21	S.U.		1.21 J
WW-17-LW-082715	625905	ST	pH	13.60	S.U.		13.60 J
WW-18-LW-082715	625906	ST	pH	0.97	S.U.		0.97 J
WW-19-LW-082715	625910	ST	Flashpoint	115.3	Deg. F		115.3
WW-20-LW-082715	625897	ST	Flashpoint	110	Deg. F		110
WW-21-LW-082715	625901	ST	Flashpoint	>140.0	Deg. F		>140.0
WW-22-LW-082715	625902	ST	Flashpoint	79	Deg. F		79
WW-23-LW-082715	625903	ST	Flashpoint	100	Deg. F		100

WW-24-SW-082715	625924	LA	Arsenic	0.014 J	mg/L	0.024	0.014 J
WW-24-SW-082715	625924	LA	Barium	0.35	mg/L	0.0018	0.35
WW-24-SW-082715	625924	LA	Cadmium	0.0050	mg/L	0.002	0.0050
WW-24-SW-082715	625924	LA	Chromium	0.021	mg/L	0.004	0.021
WW-24-SW-082715	625924	LA	Lead	0.075	mg/L	0.004	0.075
WW-24-SW-082715	625924	LA	Mercury	0.000050 J	mg/L	0.00012	0.000050 J
WW-24-SW-082715	625924	LA	Selenium	0.0027 JB	mg/L	0.013	0.013 U
WW-24-SW-082715	625924	LA	Silver	0 U	mg/L	0.004	0.004 U
WW-25-SW-082715	625925	LA	Arsenic	0.0096 J	mg/L	0.024	0.0096 J
WW-25-SW-082715	625925	LA	Barium	0.19	mg/L	0.0018	0.19
WW-25-SW-082715	625925	LA	Cadmium	0.00092 J	mg/L	0.002	0.00092 J-
WW-25-SW-082715	625925	LA	Chromium	0.0022 JB	mg/L	0.004	0.004 U
WW-25-SW-082715	625925	LA	Lead	0 U	mg/L	0.004	0.004 U
WW-25-SW-082715	625925	LA	Mercury	0 UM	mg/L	0.00012	0.00012 U
WW-25-SW-082715	625925	LA	Selenium	0 U	mg/L	0.013	0.013 U
WW-25-SW-082715	625925	LA	Silver	0 U	mg/L	0.004	0.004 U
WW-26-SW-082715	625926	LA	Arsenic	0.022 J	mg/L	0.024	0.022 J
WW-26-SW-082715	625926	LA	Barium	0.0095	mg/L	0.0018	0.0095
WW-26-SW-082715	625926	LA	Cadmium	0 U	mg/L	0.002	0.002 U
WW-26-SW-082715	625926	LA	Chromium	0.015	mg/L	0.004	0.015
WW-26-SW-082715	625926	LA	Lead	0.040	mg/L	0.004	0.040
WW-26-SW-082715	625926	LA	Mercury	0.000050 J	mg/L	0.00012	0.000050 J
WW-26-SW-082715	625926	LA	Selenium	0 U	mg/L	0.013	0.013 U
WW-26-SW-082715	625926	LA	Silver	0.0021 J	mg/L	0.004	0.0021 J
WW-27-WW-082715	625928	LA	Arsenic	0.019 J	mg/L	0.024	0.019 J
WW-27-WW-082715	625928	LA	Barium	0.50	mg/L	0.0018	0.50
WW-27-WW-082715	625928	LA	Cadmium	0 U	mg/L	0.002	0.002 U
WW-27-WW-082715	625928	LA	Chromium	0.040	mg/L	0.004	0.040
WW-27-WW-082715	625928	LA	Lead	0.0015 J	mg/L	0.004	0.0015 J
WW-27-WW-082715	625928	LA	Mercury	0 U	mg/L	0.00012	0.00012 U
WW-27-WW-082715	625928	LA	Selenium	0 U	mg/L	0.013	0.013 U
WW-27-WW-082715	625928	LA	Silver	0 U	mg/L	0.004	0.004 U
WW-28-SW-082715	625927	LA	Arsenic	0 U	mg/L	0.024	0.024 U
WW-28-SW-082715	625927	LA	Barium	0.11	mg/L	0.0018	0.11
WW-28-SW-082715	625927	LA	Cadmium	0.00063 J	mg/L	0.002	0.00063 J
WW-28-SW-082715	625927	LA	Chromium	0.012	mg/L	0.004	0.012
WW-28-SW-082715	625927	LA	Lead	0.13	mg/L	0.004	0.13
WW-28-SW-082715	625927	LA	Mercury	0 U	mg/L	0.00012	0.00012 U
WW-28-SW-082715	625927	LA	Selenium	0.0023 JB	mg/L	0.013	0.013 U
WW-28-SW-082715	625927	LA	Silver	0 U	mg/L	0.004	0.004 U
WW-FD-082715-01	625944	ST	pH	1.16	S.U.		1.16 J
WW-FD-082715-02	625945	ST	Flashpoint	113	Deg. F		113
WW-FD-082715-03	625947	ST	Aroclor-1016	0 U	ug/kg	280	280 U
WW-FD-082715-03	625947	ST	Aroclor-1221	0 U	ug/kg	280	280 U
WW-FD-082715-03	625947	ST	Aroclor-1232	0 U	ug/kg	280	280 U
WW-FD-082715-03	625947	ST	Aroclor-1242	0 U	ug/kg	280	280 U
WW-FD-082715-03	625947	ST	Aroclor-1248	0 U	ug/kg	280	280 U
WW-FD-082715-03	625947	ST	Aroclor-1254	0 U	ug/kg	280	280 U
WW-FD-082715-03	625947	ST	Aroclor-1260	0 U	ug/kg	280	280 U
WW-FD-082715-03	625947	ST	Aroclor-1262	0 U	ug/kg	280	280 U
WW-FD-082715-03	625947	ST	Aroclor-1268	0 U	ug/kg	280	280 U
WW-FD-082715-04	625948	SO	Aroclor-1016	0 U	ug/kg	340	340 U
WW-FD-082715-04	625948	SO	Aroclor-1221	0 U	ug/kg	340	340 U
WW-FD-082715-04	625948	SO	Aroclor-1232	0 U	ug/kg	340	340 U
WW-FD-082715-04	625948	SO	Aroclor-1242	0 U	ug/kg	340	340 U
WW-FD-082715-04	625948	SO	Aroclor-1248	0 U	ug/kg	340	340 U
WW-FD-082715-04	625948	SO	Aroclor-1254	0 U	ug/kg	340	340 U
WW-FD-082715-04	625948	SO	Aroclor-1260	3420	ug/kg	340	3420
WW-FD-082715-04	625948	SO	Aroclor-1262	0 U	ug/kg	340	340 U
WW-FD-082715-04	625948	SO	Aroclor-1268	0 U	ug/kg	340	340 U
WW-FD-082715-04	625948	SO	Solids, Percent	87.6	PERCENT	0.1	0.1
WW-FD-082715-05	625966	LA	Arsenic	0.018 J	mg/L	0.024	0.024 J
WW-FD-082715-05	625966	LA	Barium	0.29	mg/L	0.0018	0.0018
WW-FD-082715-05	625966	LA	Cadmium	0.0049	mg/L	0.002	0.002
WW-FD-082715-05	625966	LA	Chromium	0.018	mg/L	0.004	0.004
WW-FD-082715-05	625966	LA	Lead	0.098	mg/L	0.004	0.004
WW-FD-082715-05	625966	LA	Mercury	0.000080 J	mg/L	0.00012	0.00012 J
WW-FD-082715-05	625966	LA	Selenium	0 U	mg/L	0.013	0.013 U

WW-FD-082715-05

625966

LA

Silver

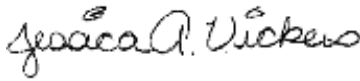
0 U

mg/L

0.004

0.004 U

**DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 5 START CONTRACT**

Site Name	Wagner Ware	TDD No.	103X90260001S051508200
Document Tracking No.		Technical Reviewer (signature and date)	
Data Reviewer (signature and date)	 November 12, 2015	Laboratory	CT Laboratories, Baraboo, WI
Laboratory Report No.	114008		
Analyses	Selected Metals – SW6010C		
Samples and Matrix	4 waste samples		
Field Duplicate Pairs	None		
Field Blanks	None		

INTRODUCTION

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA *Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Inorganic Superfund Data Review* (August 2014).

OVERALL EVALUATION

Rejection of data was not required for this data set. Results may be used with the qualifications indicated in the below sections.

Data completeness:

Within Criteria	Exceedance/Notes
Y	

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	



**DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 5 START CONTRACT**

Method blanks:

Within Criteria	Exceedance/Notes
N	118959: barium = 0.069 mg/kg, chromium = 0.034 mg/kg, and lead = 0.043 mg/kg. No qualification was required because the associated results were greater than ten times the associated blank values.

Field blanks:

Within Criteria	Exceedance/Notes
NA	

System monitoring compounds (surrogates and labeled compounds):

Within Criteria	Exceedance/Notes
NA	

MS/MSD:

Within Criteria	Exceedance/Notes
N	Cadmium recovery was below the QC criteria for WW-24-SW-082715. The associated result was qualified as estimated (J-).

Laboratory duplicates:

Within Criteria	Exceedance/Notes
N	Cadmium exceeded the QC criteria for WW-24-SW-082715. No qualification was required because the associated result was previously flagged for MS/MSD exceedance.

Field duplicates:

Within Criteria	Exceedance/Notes
NA	



**DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 5 START CONTRACT**

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	100x: barium and chromium for WW-27-SW-082715

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes
Y	

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
NA	

Other [specify]:

Within Criteria	Exceedance/Notes
NA	



DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 5 START CONTRACT

Overall Qualifications:

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

Samp_No	Lab_Samp_No	Matrix_ID	Analyte	Result	Lab_Qual	Units	RL	Val_Result	Val_Qual
WW-24-SW-082715	632900	SO	Solids, Percent	95.5		PERCENT	0.1	95.5	
WW-24-SW-082715	632900	SO	Cadmium	0.44	M,Y	mg/kg	0.043	0.44 J-	
WW-26-SW-082715	632901	SO	Solids, Percent	80.3		PERCENT	0.1	80.3	
WW-26-SW-082715	632901	SO	Arsenic	3.4		mg/kg	1.0	3.4	
WW-28-SW-082715	632902	SO	Solids, Percent	99.0		PERCENT	0.1	99.0	
WW-28-SW-082715	632902	SO	Lead	125		mg/kg	0.25	125	
WW-27-SW-082715	632903	SO	Solids, Percent	96.6		PERCENT	0.1	96.6	
WW-27-SW-082715	632903	SO	Chromium	145		mg/kg	14	145	
WW-27-SW-082715	632903	SO	Barium	3310		mg/kg	5.2	3310	