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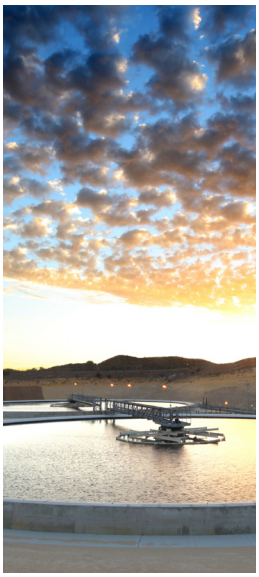
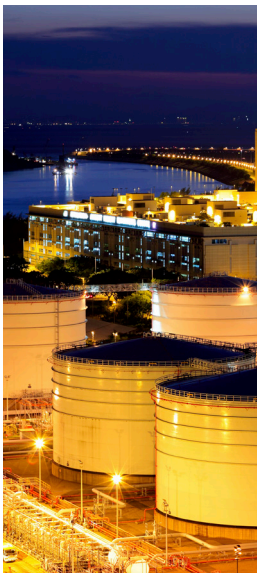
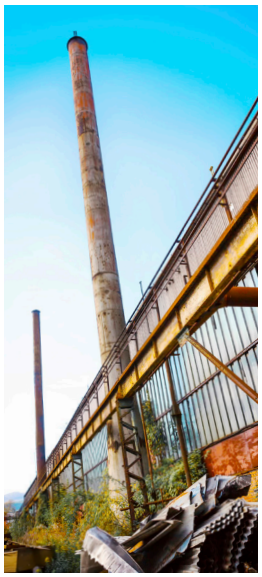
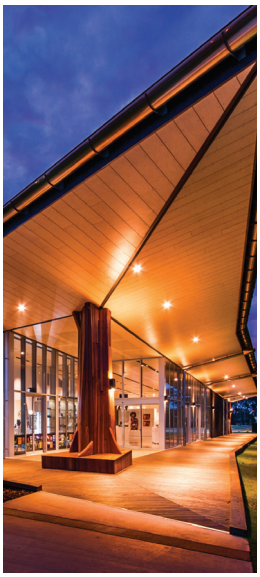


Draft Sediment Investigation and Data Evaluation Report

GM Janesville Assembly Plant
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Janesville, Wisconsin 53546

General Motors LLC

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058505 | Report No 19 | May 30 2016

Executive Summary

This Draft Sediment Investigation and Data Evaluation Report (Report) was prepared by GHD Services Inc. (GHD) (with input from Ramboll-Environ and Exponent) on behalf of General Motors LLC (GM) for the Former GM Janesville Assembly Plant (Plant) located at 1000 General Motors Drive in Janesville, Rock County, Wisconsin (Site).

The Site is currently owned by GM and comprises approximately 145 acres of land, including approximately 4.8 million square feet of floor space located in the Main Assembly Building (Plant Building), as well as several ancillary structures. The Site was acquired by General Motors Corporation (GMC) in 1918 (GMC declared bankruptcy on June 1, 2009). GMC changed its name to Motors Liquidation Company (MLC) during the bankruptcy proceeding. GM bought the Site from MLC (formerly known as GMC) in 2009 in a sale approved by the Bankruptcy Court overseeing the bankruptcy of MLC.

Prior to 1918, the Site consisted of vacant land or residential properties. Approximately 55 acres of the main plant property were purchased by GMC to produce Samson Tractors in 1918. Since the original property acquisition in 1918, the Site has undergone numerous additions and renovations, both in the acreage included in the properties comprising the Site and various structures. The Plant was "idled" on April 24, 2009. The GM Janesville Assembly plant was officially "closed" in November 2015.

GMC and GM have completed a series of environmental investigations and some remedial actions at the Site in conjunction with changes in land use and/or plant expansions during the past 30 to 40 years.

Stormwater collected from the main assembly plant property discharges via a permitted outfall (Wisconsin Pollutant Discharge Elimination System [WPDES] General Permit No. WI-0049344-4) to the Rock River. The Rock River is part of the Lower Rock River drainage basin, covering over 3,700 square miles (WDNR, 2016a). The segment of the Rock River near the Site flows from east to west and is approximately 400 feet (ft) to 800 ft wide. The Monterey Dam (Dam), constructed in 1855, is located approximately one quarter mile downstream of the Site, and consists of two spillways. The City of Janesville is currently considering whether to repair the Dam or remove the Dam and its associated spillways.

In general, dams act as sediment traps; limiting the transport of coarse sediment and creating areas where fine material can fall out of suspension resulting in the accumulation of sediment (Inter-Fluve, Inc, 2015). Sediment has been impounded upstream of the Dam, most notably in a relatively large embayment area located on the north side of the Rock River, just upstream of the Dam as well as in the area where the Rock River turns to the west just upstream of the Site (Figure 1.1) (Inter-Fluve, Inc, 2015).

Upstream of the Site, the Rock River flows through a mix of towns and agricultural areas, including the City of Janesville. Potential sources of pollutants to the Rock River and its sediment include agricultural runoff, stormwater discharges, treated municipal and industrial wastewater discharges, and legacy contamination (Inter-Fluve, Inc. 2015). Potential sources of polycyclic aromatic hydrocarbons (PAHs), mercury, and polychlorinated biphenyls (PCBs) to surface water and sediment include airborne deposition, municipal and industrial waste waters, urban storm water

runoff, runoff from coal storage areas, and road runoff (Agency for Toxic Substances and Disease Registry [ATSDR] 1995; 1999; 2000).

The primary objective of the GM Revised Sediment Investigation Work Plan (GHD, 2016) is to characterize sediment in the vicinity of the GM outfall to the Rock River. The sediment investigation scope of work (SOW) consisted of the following:

- Collection of eight sediment cores in the vicinity of the stormwater discharge location north of the Site along the south bank of the Rock River.
- Collection of 24 sediment samples and 3 duplicate sediment samples for laboratory analysis.
- Screening evaluation of the sediment data with respect to potential human health and ecological contact under the two future scenarios for the Monterey Dam: whether the Dam is repaired or is removed (and the sediment becomes soil).

The results of the sediment samples were generally consistent with the findings from the sampling conducted on behalf of the City of Janesville in the vicinity of the GM outfall by Inter-fluve, Inc (2015). A screening-level evaluation of the sediment data was performed to assess the degree to which the sediment concentrations may pose a human health or ecological risk.

For human exposures, a potential for unacceptable risk cannot be ruled out during the screening level evaluation given the high degree of conservatism necessary for such evaluations and the fact that some of the highest concentrations are located at the northern edge of the area that was sampled (e.g., PAHs at locations SS-5, SS-7, and SS-9) (Figure 2.2). Additional sampling to characterize the extent and sources of these concentrations within the area where sediment/soil exposures may occur would be an appropriate step in developing the data that would be needed to evaluate the significance of potential human exposures associated with these concentrations.

Similar to human exposures, potential for unacceptable risk cannot be ruled out for some ecological exposures, and additional sampling and evaluation beyond a screening-level ecological risk assessment (SLERA) would be required as follows:

- If the Dam is repaired - Constituents that require additional evaluation to better understand potential ecological risks include PAHs, PCBs, and certain metals (lead, cadmium, zinc, copper, and mercury).
- If the spillways are removed - Refinement of the screening analysis would depend on plans for future land use. For example, if the area is to be maintained with regular mowing/landscaping, then ecological habitat and ecological exposures would be very limited. If more naturalistic conditions are a goal, then further consideration of future ecological risks would be required.

The results of the Draft Sediment Investigation and Data Evaluation Report will be presented to the City of Janesville and WDNR. Following a decision by the City of Janesville as to whether the Monterey Dam will be repaired or removed, plans for additional characterization of the Rock River sediment in the vicinity of the GM outfall will be developed and implemented.

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Appendices

1. Introduction

This Draft Sediment Investigation and Data Evaluation Report (Report) was prepared by GHD Services Inc. (GHD) (with input from Ramboll-Environ and Exponent) on behalf of General Motors LLC (GM) for the Former GM Janesville Assembly Plant located at 1000 General Motors Drive in Janesville, Rock County, Wisconsin (Site). The Report documents the Sediment Investigation sampling and the analytical results.

The Sediment Investigation was completed consistent with the Revised Sediment Investigation Work Plan dated March 8, 2016 (GHD, 2016) (submitted to Wisconsin Department of Natural Resources [WDNR]).

1.1 Background

The Site is currently owned by GM and comprises approximately 145 acres of land, including approximately 4.8 million square feet of floor space located in the Main Assembly Building (Plant Building), as well as several ancillary structures (Wastewater Treatment Plant [WWTP]), Power House, Maintenance Storage Buildings 1, 2, and 3, Hazardous Materials Building, South Paint Mix Room, Guard Houses, South Tank Farm and associated buildings, North Tank Farm and associated buildings, Facilities Service Center, Care Building, Tire Building, associated tunnels (to Cherry Street, to WWTP Tanks, WWTP to railroad, and from Power House), railroad tracks, and landscaped areas. The WWTP is located approximately one quarter-mile to the west of the main plant property. The Site location is presented on Figure 1.1. The Site plan is presented on Figure 1.2.

The Site has been used by General Motors Corporation (GMC) since 1918. Prior to 1918, the Site consisted of vacant land or residential properties. Approximately 55 acres of the main plant property were purchased by GMC to produce Samson Tractors in 1918. Since the original property acquisition in 1918, the Site has undergone numerous additions and renovations, both in the acreage included in the properties comprising the Site and various structures. The Plant was "idled" on April 24, 2009. The GM Janesville Assembly plant was officially "closed" in November 2015.

In conjunction with plant expansions and other changes in operations during the past 30 to 40 years, GM and GMC have performed environmental investigation and remediation as necessary. The basic approach of past remedial actions included source remediation (usually by excavation and off-Site disposal) followed by natural attenuation (with some groundwater monitoring).

Stormwater collected from the Site's main assembly plant property discharges via a permitted outfall (Wisconsin Pollutant Discharge Elimination System [WPDES] -General Permit No. WI-0049344-4) to the Rock River. Other outfalls in the vicinity of the Site also discharge to the Rock River.

The Monterey Dam (Dam), constructed in 1855, is located approximately one quarter mile downstream of the Site and consists of two spillways. The City of Janesville is currently considering whether to repair the Dam or remove the Dam and associated spillways. If the Dam is removed, the water level in the Rock River would drop and some areas of sediment would no longer be under water (i.e., such sediment would become soil). Results of GM's sediment sampling may be relevant to the City of Janesville's plans for the Dam.

1.2 Environmental Setting

The Rock River is part of the Lower Rock River drainage basin, covering over 3,700 square miles (WDNR, 2016a). The Rock River watershed is approximately 31,200 acres in size, consisting of 32 miles of waterways, 124 acres of lakes, and 250 acres of wetlands (WDNR, 2016b). Because the Rock River is listed as a scenic urban waterway by the WDNR, the Rock River is designated as an Area of Special Natural Resource Interest (ASNRI). The WDNR has not issued a fish consumption advisory for the Rock River (WDNR, 2015); the nearest WDNR fish sampling stations upstream and downstream of the Site are shown on Figure 1.3.

The segment of the Rock River near the Site flows from east to west and is approximately 400 feet (ft) to 800 ft wide. The Dam is located approximately one quarter mile downstream of the Site and consists of two spillways, each approximately 185 to 190 ft long. One spillway is perpendicular to the flow of the river, while the other spillway is parallel to the flow (Inter-Fluve, Inc, 2015). In general, dams act as sediment traps; limiting the transport of coarse sediment and creating areas where fine material can fall out of suspension resulting in the accumulation of sediment (Inter-Fluve, Inc, 2015). Sediment has been impounded upstream of the Dam, most notably in a relatively large embayment area located on the north side of the Rock River, just upstream of the Dam, as well as in the area where the Rock River turns to the west just upstream of the Site (Figure 1.1) (Inter-Fluve, Inc, 2015).

Upstream of the Site, the Rock River flows through a mix of towns and agricultural areas, including the City of Janesville. Potential sources of pollutants to the Rock River and its sediment include agricultural runoff, stormwater discharges, treated municipal and industrial wastewater discharges, and legacy contamination (Inter-Fluve, Inc. 2015). Potential sources of polycyclic aromatic hydrocarbons (PAHs), mercury, and polychlorinated biphenyls (PCBs) to surface water and sediment include airborne deposition, municipal and industrial wastewaters, urban storm water runoff, runoff from coal storage areas, and road runoff (Agency for Toxic Substances and Disease Registry [ATSDR] 1995, 1999, 2000). Fine sediment, consisting of muck, silt, and sand have deposited in several lower energy areas in the margins outside of the main river channel, which generally is located along the center line of the existing river. The main channel consists primarily of sandy gravel and cobbles (Inter-Fluve, Inc, 2015).

2. Sediment Investigation

The Sediment Investigation was completed on March 9 and 10, 2016. The sampling area is presented on Figure 2.1. The Sediment Investigation consisted of eight sediment sampling locations in the immediate vicinity of the stormwater discharge location. Sediment sample location SS-8 had hard refusal at a depth of less than 1 foot and could not be sampled. Therefore, an additional location designated SS-9 replaced SS-8. Three sediment samples from each of the eight locations (plus 3 duplicate samples for quality control purposes) were submitted for laboratory analyses. The sample locations are presented on Figure 2.2. A photograph log is presented in Appendix A.

A core processing area was established on the north shore of the Rock River prior to commencing field activities. An experienced GHD geologist was on Site to process and log the sediment cores. Normandeau Associates, Inc. (Normandeau) transported the cores from the sample location to the core processing area. Cores remained in a vertical position while being transported to the processing area.

A trailerable coring vessel was utilized for sediment collection activities. The coring vessel was positioned at each sampling location using a sub-meter Differential Global Positioning System (DGPS) with either spuds or by anchoring. All sample points were located using sub-meter DGPS and R8 Global Navigation Satellite System (GNSS) Real Time Kinematic (RTK) Global Positioning System (GPS) referenced to North American Datum of 1983 (NAD83) and North American vertical datum of 1988 (NAVD88). Water depths were recorded using both a lead line and a calibrated fathometer. The coring vessel was outfitted with an A-Frame, electric winch, generator, and all necessary sediment collection tools.

Sediment cores were collected from each location using a Rossfelder® submersible vibracore unit. A piston corer was used to collect the top 0 to 6-inch interval in conjunction with the vibracoring equipment.

Sampling was conducted in accordance with the applicable GM Field Method Guideline (FMG) (FMG 6.2 – Sediment Sampling). The GM FMG has been incorporated into the Field Procedure and Core Processing Methods presented in Appendix B. Sediment cores were attempted to be advanced to a depth of approximately 6 ft. However, refusal (gravel) was encountered at all locations prior to reaching depths of 6 ft. Cores were sampled in the following intervals (0 to 0.5 ft, 0.5 to 2 ft [or maximum sediment depth if less than 2 ft], and 0 to 2 ft or 0 ft to total sediment depth). Penetration depth and depth of core recovery were recorded at each sample location to allow for determination of percent recovery (as measured by length divided by penetration length) and sediment thickness at each location.

A field sample key is presented in Table 2.1.

2.1 Field Procedure

Sediment core samples were collected using an electrically powered vibracorer which is lowered through the water column under winch control and penetrates the sediment by means of its weight and powered vibration. The procedures used for the vibracorer in the field are provided in detail in Appendix B.

2.2 Core Processing

The core processing methods which outline the procedures followed when cores were split, logged and subsampled in the field for laboratory analysis are provided in Appendix B. A field form was completed at each sample location that includes: sample coordinates; weather; wind conditions; water depth; penetration depth; depth of core recovery; and American Society for Testing and Materials (ASTM) soil description (Appendix C).

Each sediment core was field screened for grain-size distribution in accordance with the applicable FMG (FMG 6.2 – Sediment Sampling) (as applicable).

At each location, one sample was selected for laboratory analysis from the sediment depth intervals of 0 (riverbed surface) to 0.5 ft and 0.5 to 2 ft (or maximum sediment depth if less than 2 ft), for a total of 16 samples, in accordance with the applicable FMG (FMG 6.2 – Sediment Sampling). The data from these samples are intended for use in the assessment of potential human and ecological exposures.

The sediment samples were submitted for laboratory analysis of the following by the methods indicated in accordance with section s. NR 716.13, Wis. Adm. Code:

- Target Compound List (TCL) Volatile Organic Compounds (VOCs) (including 1,2,4-trimethylbenzene [TMB] and 1,3,5-TMB) by United States Environmental Protection Agency (U.S. EPA) method SW-846 8260.
- TCL semi-volatile organic compounds (SVOCs) by U.S. EPA Method SW-846 8270.
- Target Analyte List (TAL) Metals (less earth metals) by U.S. EPA Method SW-846 6020/7470.
- PCBs by U.S. EPA Method SW-846 8082.
- Total Organic Carbon (TOC) by the Lloyd Kahn Method.

A third sediment sample, which was a composite sample, was collected from alternating depth intervals. Eight composite sediment samples were submitted for laboratory analysis of Toxicity Characteristic Leaching Procedure (TCLP) Metals by U.S. EPA Method SW-846 1311/6010 in addition to the above noted analyses for sediment disposal purposes. It was anticipated that the top 2 ft of sediment would be less impacted than the deeper interval. However, the samples alternated between upper and lower compositing (e.g., half of the locations collected at 0 to 2 ft and half of the locations at 0 to 4 ft, or refusal). The purpose of this information was to assess remedial alternatives for disposal.

In addition to the above, the sediment sample collected from 0 to 0.5 ft (surface sediment) was also submitted for laboratory analysis of the following (to support a screening-level ecological risk assessments [SLERA]):

- Selected parent and alkylated PAHs by U.S. EPA Method SW-846 8270 selected ion monitoring (SIM).
- Acid-volatile sulfide (AVS) by U.S. EPA Method EPA-821-R-100.
- Simultaneously extracted metals (SEM) (cadmium, copper, lead, nickel, silver, zinc, and mercury) by U.S. EPA Method SW-846-6010/7470 and EPA-821-R-100.
- Methylmercury by U.S. EPA Method EPA 1630.
- Black carbon (soot) analysis by the black carbon in soil samples method.

The data from these analyses were intended to be used in the assessment of potential ecological exposures.

Sediment samples were placed in laboratory-supplied containers and shipped under standard chain-of-custody (COC) protocol for analysis of the parameters listed above on a two-week turn-around time (TAT).

The selected PAH compounds (parent and alkylated) were reported individually as well as a summation of the individual parent PAHs reported as Total PAH.

TCL-SVOC analysis was completed for all three core intervals (0 to 0.5 ft, 0.5 to 2 ft, and the alternating composite samples [0 to 2 ft and 0 to 4 ft or refusal]) and includes parent PAHs.

2.3 Quality Assurance/Quality Control

Quality Assurance/Quality Control (QA/QC) sampling included equipment blanks, field duplicates, and matrix spikes/matrix spike duplicates (MS/MSD). Equipment blanks were collected at a frequency of 1 per 10 sediment samples collected, at a minimum of 1 per day. Field duplicates were collected at a frequency of 1 per 10 sediment samples collected. MS/MSD samples were submitted at a frequency of 1 per 20 sediment samples collected. Trip blanks were submitted with each shipment of samples for VOC analysis. It should be noted, temperature blanks were not required as samples were shipped on ice.

2.4 Decontamination of Field Equipment

All sampling equipment was cleaned between sampling locations and before and prior to leaving the Site.

3. Field Observations and Analytical Results

The Sediment Investigation consisted of nine sediment sampling locations (SS-1 to SS-9) in the immediate vicinity of the GM stormwater discharge location. Water depth at the sample locations ranged from 3.3 ft at SS-4 to 7.7 ft at SS-7. Sediment cores were attempted to be advanced to a depth of approximately 6 ft at each sample location; however, refusal (gravel) was encountered at all locations prior to reaching depths of 6 ft. Sample location SS-8 could not be sampled as no sediment was encountered, only river bed material consisting of coarse grained gravel and sand. River bed material (gravel) was encountered at the other sample locations at depths ranging from 1.5 ft at SS-9 to 4.5 ft at SS-5.

Silt sediment was observed in six of the sample locations (SS-1 to SS-4, SS-6, and SS-9) while silt/sand sediment was noted at SS-7. An organic layer consisting of vegetative material (wood, reeds, and sticks) was observed above the sediment at SS-9. The surface sediment layer (0 to 0.5 ft) contained lots of vegetative material at SS-1, SS-3, and SS-4, while some vegetative material was noted at SS-2 and SS-6.

During core processing, photoionization detector (PID) readings were recorded for each core sampled. PID readings ranged from 0 ppm (SS-1, SS-7, and SS-9) to 162 ppm (SS-4). Elevated PID readings were often associated with an odor and observed sheen in the core sample. The analytical results for the sediment samples collected from the eight sample locations are presented in Table 3.1 and further evaluated in Section 4.

As previously discussed in Section 2.2, composite sediment samples which alternated between upper and lower composites (e.g., half of the locations collected at 0 to 2 ft and half of the locations at 0 to 4 ft, or refusal) were submitted for laboratory analysis of TCLP Metals for sediment disposal purposes. Sediment that fails the TCLP test has the potential to be classified as a Resource Conservation and Recovery Act (RCRA) hazardous waste if excavated for disposal. The results of the TCLP Metals analysis were compared to TCLP Criteria obtained from Table 2 Maximum Concentration of Contaminants for the Toxicity Characteristic, Section (s.) NR 661.24, Wis. Adm. Code, October 2013. A summary of the sediment data compared to the TCLP Criteria is presented in Table 3.1. TCLP Metals were not detected at concentrations above the TCLP Criteria indicating that the material can be disposed as non-hazardous waste.

The data validation memorandum and laboratory analytical reports are provided in Appendix D.

4. Data Evaluation

The sediment characterization data are evaluated in this section with respect to potential human and ecological exposures under the repair or removal alternatives the City of Janesville is considering for the Dam. For each alternative, a screening-level evaluation of the sediment data is performed by considering the types of exposures that may occur, and then assessing whether the available data would indicate that such exposures have the potential to pose an unacceptable risk. In performing the assessment, uncertainties regarding current and future exposures are addressed by the use of conservative assumptions that are expected to overestimate potential risks. Where a potential for unacceptable risk cannot be ruled out in this screening-level evaluation of the sediment data, the evaluation results may be used to focus the scope of further investigations and assessments.

The evaluation based on human exposures is summarized in Section 4.1, and the evaluation based on ecological exposures is summarized in Section 4.2. The details of these evaluations, including the methods, assumptions, and calculations, are provided in Appendices E and F.

4.1 Human Health

4.1.1 Potential Sediment Exposures

4.1.1.1 Dam is Repaired

If the Dam is repaired and remains in place, potential exposure to sediment may occur during recreation along the shore or during maintenance of the storm water outfall near this area.

River Recreation

People with the highest potential for exposure to sediment in this part of the Rock River are assumed to be nearby residents (children and adults), who might wade into the Rock River for recreational purposes where the sediment is under a few feet of water. Such exposures may occur during the five months when water in the River is at least 60°F, which is assumed to be warm enough for a couple hours of wading. Exposure pathways include incidental ingestion and dermal contact. The frequency of such wading activities is assumed to be 40 days/year, although it is expected to be less for a vast majority of recreators. Such potential exposures are conservatively assumed to occur for 30 years (6 years as children plus 24 years as adults) to evaluate cancer risk and for 6 years (as children) to evaluate non-cancer risk, per the WDNR's assumptions for residents in NR 720.

Outfall Maintenance

Workers performing occasional maintenance on the storm water outfall from the Site are assumed to wade into the Rock River during part of the maintenance activities, and may be exposed to constituents in sediment via incidental ingestion and dermal contact. The frequency of such exposures to sediment is assumed to be 5 days/year, although it is expected to be less for a vast majority of workers. Potential exposures are assumed to occur for 10 years (Burmaster, 2000).

4.1.1.2 Spillways are Removed

If the Dam is removed, the area of sediment that was sampled is expected to become an upland area, and may be used for open space or a park. In this case, potential exposure to the soil (that was originally sediment) may occur during recreation or landscape maintenance at the new park, if the newly exposed area becomes suitable for park recreation. For this scenario, it is conservatively assumed that no topsoil or vegetation is added to cover the area.

Park Recreation

People with the highest potential for exposure to soil at the park are assumed to be nearby residents (children and adults), who may have contact with the surface soil during recreational activities. Such exposures may occur during the nine months of spring, summer, and fall, when it would be warm enough (i.e., above freezing) for children to spend a couple hours at the park. Potential exposures to constituents in soil may occur via incidental ingestion, dermal contact, and inhalation of soil vapors and particulates. The frequency of such recreation activities is assumed to be 72 days/year, although it is expected to be less for a vast majority of park visitors. These hypothetical exposures are also conservatively assumed to occur for 30 years (6 years as children plus 24 years as adults) to evaluate cancer risk and for 6 years (as children) to evaluate non-cancer risk, per the WDNR's assumptions for residents in NR 720.

Landscape Maintenance

Workers performing occasional landscape maintenance at the park are assumed to be exposed to surface and subsurface soil via incidental ingestion, dermal contact, and inhalation of soil vapors and particulates. The frequency of such maintenance activities is assumed to be 30 days/year, although it is expected to be less for a vast majority of workers. Potential exposures are assumed to occur for 10 years (Burmaster, 2000).

4.1.2 Risk-Based Screening Levels

To facilitate an initial assessment of sediment quality, the sediment data are compared to risk-based screening levels (RBSLs) that were derived for each of the potential sediment and soil exposures discussed in Section 4.1.1.

The RBSLs were calculated using a target cancer risk (TCR) and target hazard quotient (THQ) that are 1/10th of the WDNR's limits for cumulative cancer and noncancer risks, to account conservatively for potential exposures to multiple chemicals. Specifically, the TCR and THQ are 10^{-6} and 0.1, respectively. Derivation of the RBSLs is discussed in Appendix E and the RBSLs are presented on Figures 4.1 to 4.4 and in Table 3.1.

The RBSLs based on river recreation, park recreation, and outfall maintenance were used in the evaluation of data from the surface sediment (0 to 0.5 ft) which is the depth interval most likely to be contacted in these exposure scenarios. The RBSLs based on landscaping were used in the evaluation of data from the 0 to 2 ft depth, since landscaping activities may involve direct contact with deeper soil (e.g., while gardening/planting activities).

4.1.3 Data Preparation

The following procedures were used to prepare the sediment data for screening. These procedures, which are based on U.S. EPA guidance on human health RA (U.S. EPA,1989), are as follows:

- Constituent concentrations qualified as not detected (i.e., U or UJ qualified data) during data validation are evaluated as non-detects.
- Constituent concentrations qualified as not usable (i.e., R qualified data) during data validation are not included in the screening.
- Concentrations qualified as estimated (i.e., J qualified data) are included for screening.
- The concentrations of xylenes (total) are the sums of the concentrations of the isomers that were detected and half the quantitation limits of the isomers that were not detected in the same sample but detected in other sediment samples. If no isomer is detected in a sample, xylene is considered to be not detected in the sample.
- The concentrations of PCBs (total) are the sums of the concentrations of the Aroclors that were detected. If no Aroclor was detected in a sample, PCBs is considered to be not detected in the sample.
- For sediment sampling locations where AVS was detected (SS-2 through SS-7 and SS-9), total chromium concentrations are evaluated as trivalent chromium, as discussed in Appendix F.

The data screening evaluation includes all of the sediment data collected in March 2016, except as discussed above.

4.1.4 Screening Results

The sediment data screening results are summarized on Figures 4.1 and 4.2 for the scenario in which the Dam is repaired and on Figures 4.3 and 4.4 for the scenario in which the Dam is removed (and the sediment becomes soil). The chemicals shown in the figures have at least one concentration exceeding an RBSL. The concentrations that exceed an RBSL are highlighted.

These figures show that the chemicals with exceedances are primarily PAHs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene) and arsenic (at all eight locations). Two locations have PCB concentrations (consisting of Aroclor 1268 predominantly and Aroclor 1254 at lower concentrations) that exceed the RBSLs. A number of metals, including antimony, cadmium, chromium (total), lead, and mercury exceed the RBSLs at one or more locations.

Among the constituents with concentrations that exceed RBSLs, benzo(a)pyrene is the only one with concentrations that exceed the RBSLs by a factor of 10 or more. The highest benzo(a)pyrene concentrations are at SS-5, SS-7, and SS-9, which are on the edge of the sampled area, as shown on Figures 4.1 to 4.4. The highest concentrations of the other PAHs (benzo(a)anthracene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene) are also found at these sample locations.

As noted above, exceedances of RBSLs are not necessarily indicative of an unacceptable risk; rather they indicate the need for further evaluation. For example, the RBSLs for some constituents (e.g., PAHs, arsenic) are likely to be as low as or lower than background levels in sediment or soil, and as such, would not be usable for distinguishing contributions from background versus the Site.

In fact, background levels of some constituents (e.g., benzo(a)pyrene concentrations in sediment upstream of the Site) may exceed the RBSLs.

To further evaluate the concentrations that exceed the RBSLs, additional sediment sampling would be warranted to characterize the spatial extent or sources of these concentrations within the area where exposure to sediment/soil may occur. An approximation of this exposure area, which is the area between the new river channel and the south shoreline, is shown on Figure 4.5. The collection of additional sediment data in this area would provide a basis for estimating the exposure concentrations that may be used in a human health risk assessment to characterize the significance of potential human exposures.

4.2 Screening-Level Ecological Risk Assessment

A SLERA was conducted to evaluate the likelihood that adverse ecological effects may result from exposure to sediment in the Rock River near the Site. This SLERA is not intended to yield definitive estimates of ecological risk, but rather to identify areas, chemical constituents, and pathways that clearly are not of ecological concern, and identify locations and constituents that require further analysis. The SLERA was prepared based on guidance issued by the U.S. EPA for conducting ecological risk assessments (U.S. EPA 1997; 1998; 2000; 2001). The complete SLERA is provided in Appendix F and is summarized below.

4.2.1 Problem Formulation

The screening-level problem formulation provides the foundation for the SLERA by describing and defining the ecological setting, Study Area, potentially complete exposure pathways and exposed ecological receptors, and preliminary assessment endpoints.

4.2.1.1 Ecological Setting and Study Area Definition

The ecological setting is described in Section 1.2. The Site's nexus to the river is primarily from storm water that is collected from the main assembly plant property which discharges via a WPDES Permit No. WI-0049344-4 through Outfall 010 to the Rock River. Therefore, the Study Area for this SLERA focuses on the Rock River immediately north of the Site where samples SS-1 through SS-9 were collected.

4.2.1.2 Potentially Complete Exposure Pathways

A complete exposure pathway is one in which constituents can be traced or are expected to travel from the source to a receptor (U.S. EPA, 1997). Potentially complete exposure pathways evaluated in this SLERA include direct contact of organisms with sediment and exposure to bioaccumulative chemicals through the food web. Site-related chemicals may enter the Rock River via the WPDES-permitted outfall to the river. Chemicals from potential upstream sources also may enter the Rock River segment near the Site through the transport of re-suspended sediment or dissolved chemicals.

4.2.1.3 Potentially Exposed Ecological Receptors

Because it is not feasible to complete risk calculations for all species potentially exposed, representative receptors of interest are selected. Receptors for a SLERA are typically selected based on sensitivity to the constituents in a Study Area, a high likelihood of exposure to those

constituents due to their feeding habits and trophic position in the food web, their expected presence within the Study Area, their ecological relevance, and the availability of important life history information. For this SLERA, selected receptors of interest include benthic (bottom-dwelling) invertebrates, fish, and aquatic-feeding wildlife (Appendix F).

4.2.1.4 Preliminary Assessment and Measurement Endpoints

Assessment endpoints are the explicit expression of ecological entities (e.g., mammal populations) and attributes (e.g., reproductive ability) to be protected (U.S. EPA, 1997; 2004). The following assessment endpoints are identified in this SLERA for the Study Area:

- Benthic invertebrate community structure and function in the Rock River near the Site.
- Fish community structure and function in the Rock River near the Site.
- Survival and reproduction of aquatic-feeding bird and mammal populations utilizing the Rock River near the Site.

"Community structure and function" refers to the types and diversity of species present and their ecological roles (e.g., serving as prey for wildlife). Community structure and function generally does not depend on the presence or absence of any single species. "Population" refers to a group of interbreeding individuals of a single species, occurring within a geographic area.

Because direct measurement of assessment endpoints is often difficult or impossible, measurement endpoints are used to provide the information necessary to evaluate whether the values associated with the assessment endpoint are being protected. A measurement endpoint is a measurable ecological characteristic and/or response to a stressor (U.S. EPA, 1998). In this SLERA, potential adverse effects of chemicals on the survival or reproduction of ecological receptors, and consequent effects on populations and communities, are indirectly evaluated in the initial screening evaluation through comparison to conservative ecotoxicity screening levels.

4.2.2 Ecological Screening Analysis

Two separate ecological screening analyses were performed to evaluate (1) ecological risks related to sediments under current conditions, and (2) future risks in the event that the Dam is removed and current sediments become exposed soils. The screening analysis based on current conditions focused on the top 6 inches of sediment, generally considered the biologically active zone in sediment. The screening analysis for future soils considered the top two feet of sediment, because the biologically active zone in soils tends to extend deeper than that in sediments.

4.2.2.1 Screening Analysis of Current Conditions

The assessment of ecological risks under current conditions included initial comparisons to conservative screening values, followed by a refined screening step. Screening values used in the initial screening step were identified from WDNR guidance, if available, and otherwise from U.S. EPA Region 5's Ecological Screening Levels (ESLs) (Figures 4.1 to 4.4). The refined screening analysis involved consideration of information such as background concentrations, additional toxicological data, chemical bioavailability, and bioaccumulation potential. Consistent with U.S. EPA guidance, the refined screening process was performed in part because many ecological screening values are within the range of naturally occurring background metal concentrations, and screening values are lacking for a number of chemicals. Certain specialized data were collected to support the

refined screening analysis for PAHs and metals. As with the human health risk assessment, if a constituent is present at a concentration below a screening value, it can be concluded that ecological risk from exposure to that constituent is negligible. If a constituent is present at a concentration above a screening value, it does not follow that ecological risk is unacceptable; rather it merely indicates that further assessment is needed to more accurately characterize risk. The results of the sediment screening analysis are summarized below for organic compounds (PAHs, other SVOCs and VOCs, PCBs) and metals and the full list is presented in Appendix F.

Organic Compounds

A refined screening analysis was conducted for several organic compounds, as follows:

- PAHs (evaluated collectively), including acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(e)pyrene, benzo(g,h,i)perylene, benzo(j)fluoranthene/benzo(k)fluoranthene, C1-benzo(a)anthracenes/chrysenes, C1-fluoranthenes/pyrenes, C1-fluorenes, C1-naphthalenes, C1-phenanthrenes/anthracenes, C2-benzo(a)anthracenes/chrysenes, C2-fluorenes, C2-naphthalenes, C2-phenanthrenes/anthracenes, C3-benzo(a)anthracenes/chrysenes, C3-fluorenes, C3-naphthalenes, C3-phenanthrenes/anthracenes, C4-benzo(a)anthracenes/chrysenes, C4-naphthalenes, C4-phenanthrenes/anthracenes, chrysene/triphenylene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, perylene, phenanthrene, pyrene
- Other hydrocarbons and related compounds, including acetone, cumene, cyclohexane, methyl acetate, methylcyclohexane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, total xylenes, 1,1-biphenyl, and dibenzofuran
- Phthalate esters, including butyl benzyl phthalate and bis(2-ethylhexyl)phthalate
- PCBs (considered collectively), reported as Aroclor 1254 and Aroclor 1268

For PAHs, risks to benthic invertebrates were evaluated using a cumulative exposure model developed by U.S. EPA (2003). The model addresses an extended analyte list including alkylated PAHs and is based on the observation that PAH concentrations in sediment interstitial water (porewater) are predictive of whole sediment toxicity to benthic invertebrates. Porewater screening benchmarks are extrapolated to sediment, assuming equilibrium partitioning of chemical concentrations between sediment organic carbon and porewater. The PAH model can consider partitioning to all sediment organic carbon collectively, or different types of organic carbon can be distinguished. Specifically, black carbon (soot) has a particularly strong affinity for PAHs, compared to "normal," amorphous organic carbon. Both modeling approaches were used to estimate PAH-related risks. These models indicated that toxicity to benthic invertebrates is unlikely, but the results for some sediment samples are uncertain due to limitations of the models (see Appendix G for details).

In addition to PAHs, several other hydrocarbons (primarily VOCs) and two phthalate esters required evaluation as part of the refined screening process. The hydrocarbons were evaluated using a model similar to that applied in the PAH assessment, because they are expected to exert toxicity (if any) through the same mechanism of toxicity as PAHs (U.S. EPA, 2008). This analysis indicated that non-PAH hydrocarbons, taken together, are not present at high enough concentrations to cause toxicity, but they could contribute incrementally to PAH-related risks. The phthalate esters were evaluated using the equilibrium partitioning approach, as well as comparison to spiked

sediment toxicity test results, and were determined to pose no significant risks to benthic invertebrates. Additionally, the hydrocarbons and phthalate esters have a low potential to bioaccumulate and thus do not pose a risk to fish or wildlife.

The screening analysis for PCBs included an evaluation of modeled PCB concentrations in fish. Fish tissue PCB concentrations were estimated using biota-sediment accumulation factors from a food web study of the Sheboygan River (Burzynski, 2000) as presented in Appendix F. Based on the screening results, refinement is necessary to account for the fact that fish are not exposed to the maximum sediment concentration at all times. Furthermore, additional evaluation would be needed to determine whether fish-eating wildlife could be at risk. However, it is notable that the PCBs detected in Rock River sediment are mostly Aroclor 1268, a highly chlorinated PCB mixture commonly found in rubber and synthetic resins (ATSDR, 2000). The sediment contains relatively low concentrations of the most potent PCB compounds. Aroclor 1268 is much less toxic to wildlife than other, more commonly encountered environmental PCB mixtures (Folland et al., 2016). With respect to benthic invertebrates, the PCB concentrations reported in Rock River sediment are below levels that would be expected to cause toxicity, based on equilibrium partitioning sediment benchmarks.

Metals

For metals, the refined screening analysis included an evaluation of the bioavailability of certain divalent metals (lead, zinc, cadmium, copper, nickel, and silver), as well as chromium, in accordance with U.S. EPA methods (U.S. EPA, 2005). Nickel and silver were included only to assess their potential contribution to metal mixtures; these two metals otherwise were eliminated from further consideration in the initial screening step. This assessment was based on analyses of acid volatile sulfide, simultaneously extracted metals (i.e., extracted along with the sulfide), and total organic carbon. The resulting data indicated that Rock River sediments contain enough sulfide and organic carbon to bind all of the divalent metals present, resulting in low bioavailability to benthic organisms and thus low risk of sediment toxicity. Also, the fact that sulfide was present in the sediments demonstrates that chromium is present is a relatively nontoxic form (U.S. EPA, 2005). Although the bioavailability assessment indicates a low risk of sediment toxicity, it is not necessarily predictive of low bioaccumulation, so additional evaluation would be needed to refine the risk analysis for cadmium, copper, lead, and zinc with respect to wildlife feeding from the Rock River.

Specialized data collection was also performed to support the refined screening analysis for mercury. Mercury exists in the environment in multiple forms, of which methylmercury is the most toxic and bioaccumulative form. Therefore, methylmercury was analyzed to support an evaluation of the site-specific bioaccumulation potential of mercury. A food web model was used to estimate methylmercury bioaccumulation in fish (Grapentine et al., 2005; Hope, 2003); this model predicted relatively low fish tissue mercury concentrations. Thus, although the total mercury concentration in Rock River sediment is elevated at a few locations, methylmercury concentrations are not elevated enough to pose a risk to fish or to wildlife consuming fish. However, the likelihood of mercury-related toxicity to benthic invertebrates remains uncertain, because the available toxicity data to assess such risks is largely based on total mercury.

Several other metals required refined screening due to the lack of applicable screening values. Of these metals, beryllium and vanadium were present at concentrations consistent with naturally occurring background conditions, and thallium was present at a concentration below levels expected to cause sediment toxicity. Barium toxicity is considered unlikely, because this metal

usually occurs in sediment in a highly insoluble and nontoxic form (barium sulfate). Antimony toxicity is also considered unlikely due to the low aquatic toxicity of this metal, although sediment toxicity studies for antimony are generally unavailable. Lastly, most of the reported selenium concentrations in Rock River sediments are within a range considered unlikely to pose ecological risks. Fish and wildlife are the most sensitive organisms with respect to adverse effects of selenium. Because fish and wildlife are mobile, and the average selenium concentration in sediment is well within the no-effect concentration range, selenium in Study Area sediments is unlikely to cause adverse ecological effects.

In summary, the SLERA identified several VOCs, SVOCs, and metals that are unlikely to pose a significant ecological risk. Chemicals that would require additional evaluation to better understand potential ecological risks under current conditions include PAHs, PCBs, and certain metals (lead, cadmium, zinc, copper, and mercury).

4.2.2.2 Screening Analysis for Dam Removal Scenario

In addition to the sediment screening analysis described above, chemical concentrations in sediment were compared to soil screening values to evaluate potential risks in the event that the Dam is removed and the subject sediments become soils. Soil screening values were U.S. EPA's Ecological Soil Screening Levels (Eco-SSLs) if available; otherwise, U.S. EPA Region 5 ESLs were used. The initial comparison to soil screening benchmarks yielded results similar to the initial sediment screening step, namely that PAHs, other SVOCs and VOCs, PCBs, and metals are present at concentrations higher than the screening values, as shown in Appendix F and Figures 4.1 to 4.4.

As noted above for the sediment screening, many of the soil screening values for metals are within the range of naturally occurring background concentrations, and soil screening values are lacking for a number of organic compounds detected in Rock River sediment. Thus, the initial screening analysis has limited utility as a tool to inform sediment (i.e., future soil) management in the event of future Dam removal. However, in contrast to the sediment evaluation for current conditions, two key factors limit the ability to effectively refine the screening analysis. Specifically, metal geochemistry is likely to change if sediments become exposed soils, due to a shift from anoxic to oxygenated conditions. Thus, current measures of metal bioavailability in sediment may not apply to hypothetical future soil conditions. Additionally, terrestrial bioaccumulation potential cannot be readily measured because the habitat and resident organisms are not currently terrestrial.

Ultimately, the need for refinement of the screening analysis for the dam removal scenario will depend on plans for future land use. For example, if the area is to be maintained with regular mowing, then ecological habitat and ecological exposures would be very limited. If more naturalistic conditions are a goal, then further consideration of future ecological risks would be required.

5. Summary and Conclusions

The sediment characterization data were evaluated with respect to potential human health and ecological exposures under the two alternatives the City of Janesville is considering for the Monterey Dam. Specifically, the data were evaluated with respect to the potential for unacceptable human health or ecological risk in the event that the Dam is repaired or is removed (and the sediment becomes soil).

For human exposures, a potential for unacceptable risk cannot be ruled out during the screening-level evaluation given the high degree of conservatism necessary for such evaluations and the fact that some of the highest concentrations are located at the northern edge of the area that was sampled (e.g., PAHs at locations SS-5, SS-7, and SS-9). Additional sampling to characterize the extent and sources of these concentrations within the area where sediment/soil exposures may occur would be an appropriate step in developing the data that would be needed to evaluate the significance of potential health risks associated with these concentrations.

Similar to human exposures, potential for unacceptable risk cannot be ruled out for some ecological exposures, and additional sample and evaluation beyond a SLERA would be required as follows:

- If the Dam is repaired - Constituents that require additional evaluation to better understand potential ecological risks include PAHs, PCBs, and certain metals (lead, cadmium, zinc, copper, and mercury).
- If the spillways are removed - Refinement of the screening analysis would depend on plans for future land use. For example, if the area is to be maintained with regular mowing/landscaping, then ecological habitat and ecological exposures would be very limited. If more naturalistic conditions are a goal, then further consideration of future ecological risks would be required.

6. Recommendations

Recommendations following the completion of the Sediment Investigation include:

- Presenting the results of the report to the City of Janesville and WDNR.
- Discussing the next steps for the sediment characterization of the Rock River based on the future outcome of the Dam.

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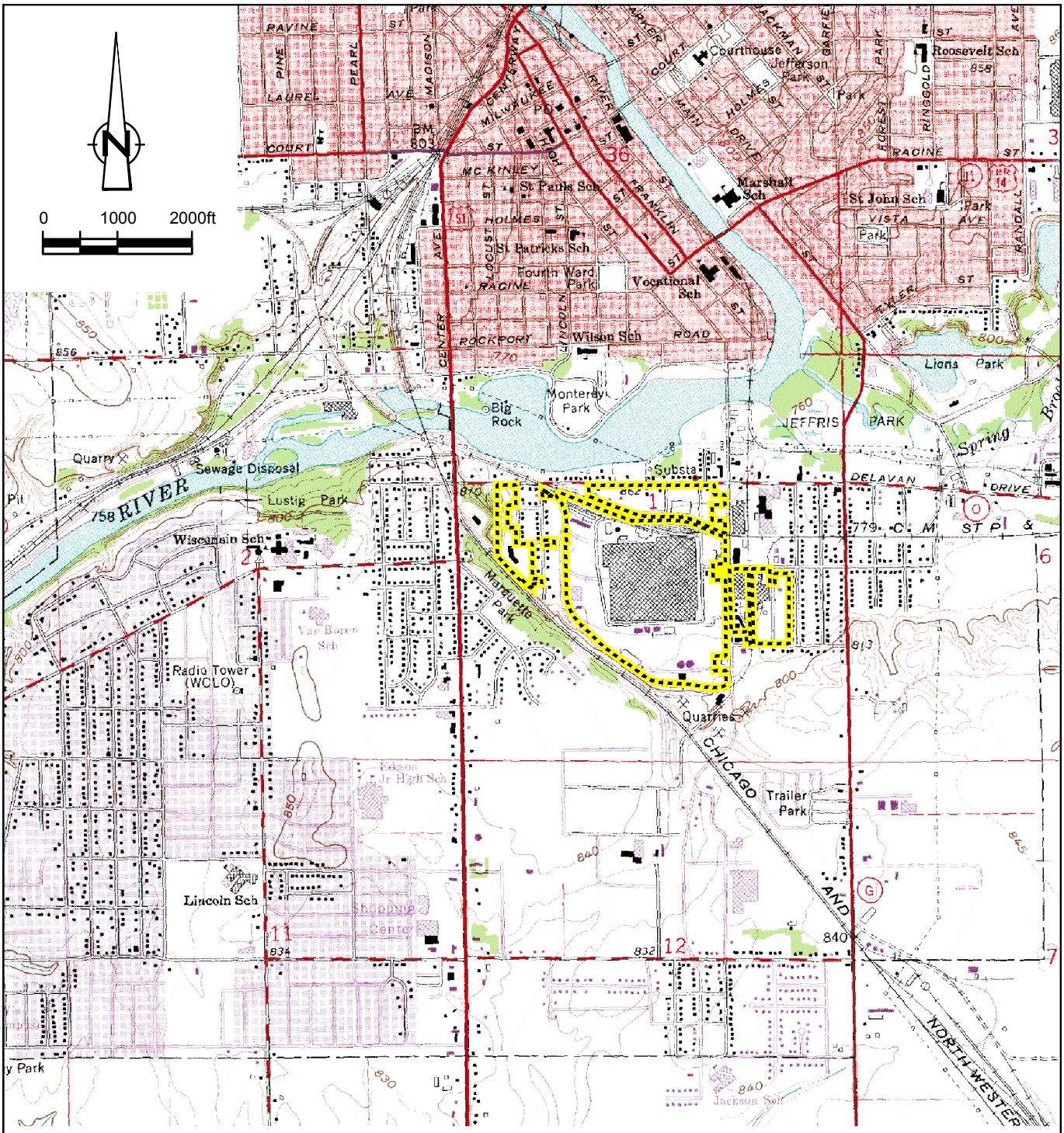


SOURCE: USGS QUADRANGLE MAP;
JANESVILLE WEST , WISCONSIN,
PHOTOREVISED 1971 AND 1976

LEGEND

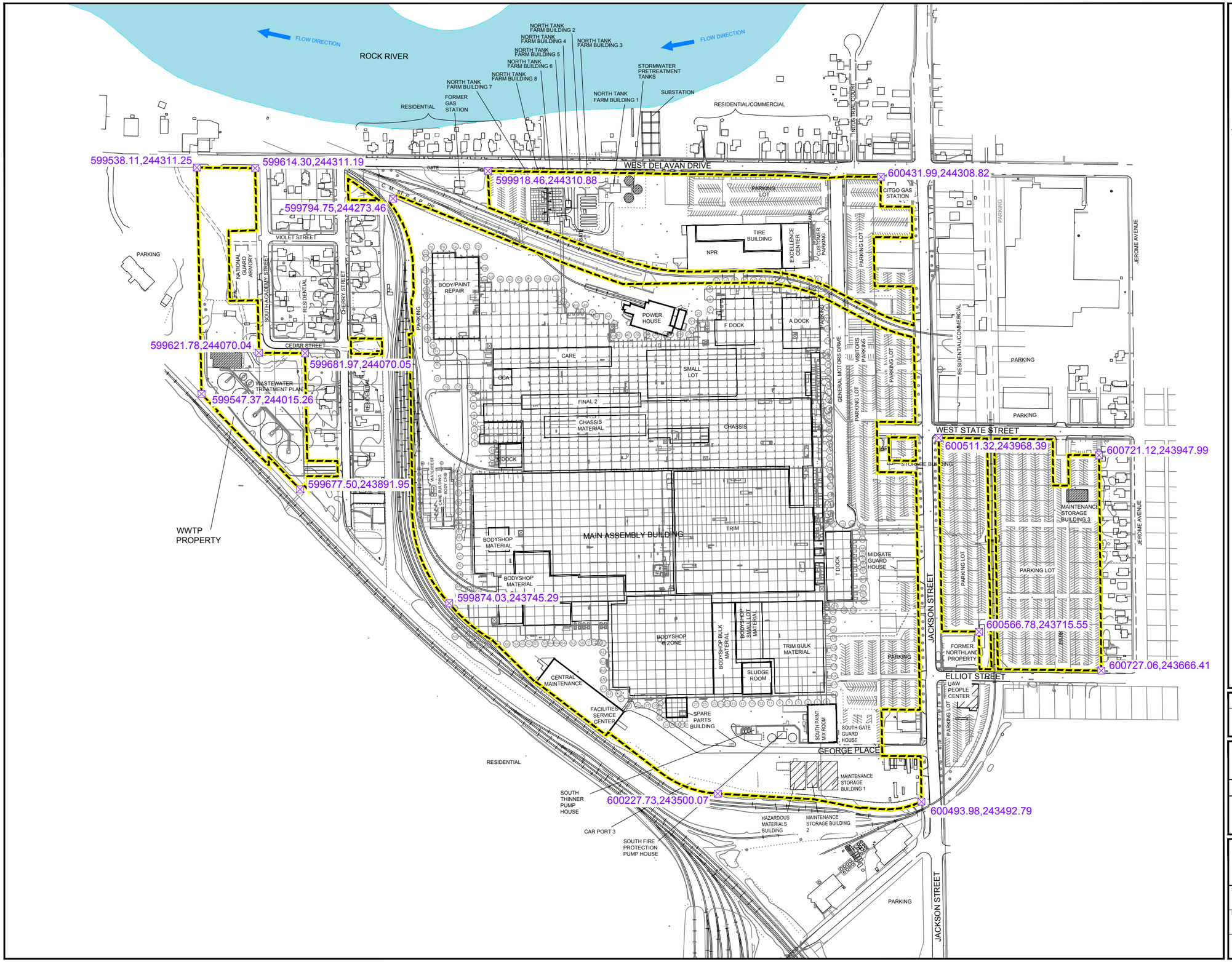
GM JANESVILLE ASSEMBLY PLANT PROPERTY BOUNDARY

JANESVILLE
WISCONSIN

DRAFT

figure 1.1

SITE LOCATION
DRAFT SEDIMENT INVESTIGATION AND DATA EVALUATION REPORT
GM JANESVILLE ASSEMBLY PLANT
Janesville, Wisconsin



0 100 200ft

LEGEND

- PROPERTY BOUNDARY
- RAILROAD
- FENCE LINE
- PROPERTY CORNER POINT

NOTE:
DISPLAYED COORDINATES HAVE BEEN PROJECTED ONTO WISCONSIN TRANSVERSE MERCATOR '91 IN ACCORDANCE WITH S. NR 716.15 (5)(D)2, WIS. ADM. CODE

DRAFT

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

GM JANESVILLE ASSEMBLY PLANT
JANESVILLE, WISCONSIN

DRAFT SEDIMENT INVESTIGATION AND DATA EVALUATION REPORT

SITE PLAN

GHD

Source Reference:
CSG JOB NUMBER: 1020101, FILE NAME: 10A05AS5.DWG, SHEETS 1 TO 10 OF 10, CROWN SERVICES GROUP, 03/09/2011.

Project Manager:	Reviewed By:	Date:	
J. CHARLTON	J. CHARLTON	MAY 2016	
Scale: AS SHOWN	Project Nº: 58505-01	Report Nº: 019	Drawing Nº: figure 1.2

58505-01(019)GN-WA009 MAY 30, 2016

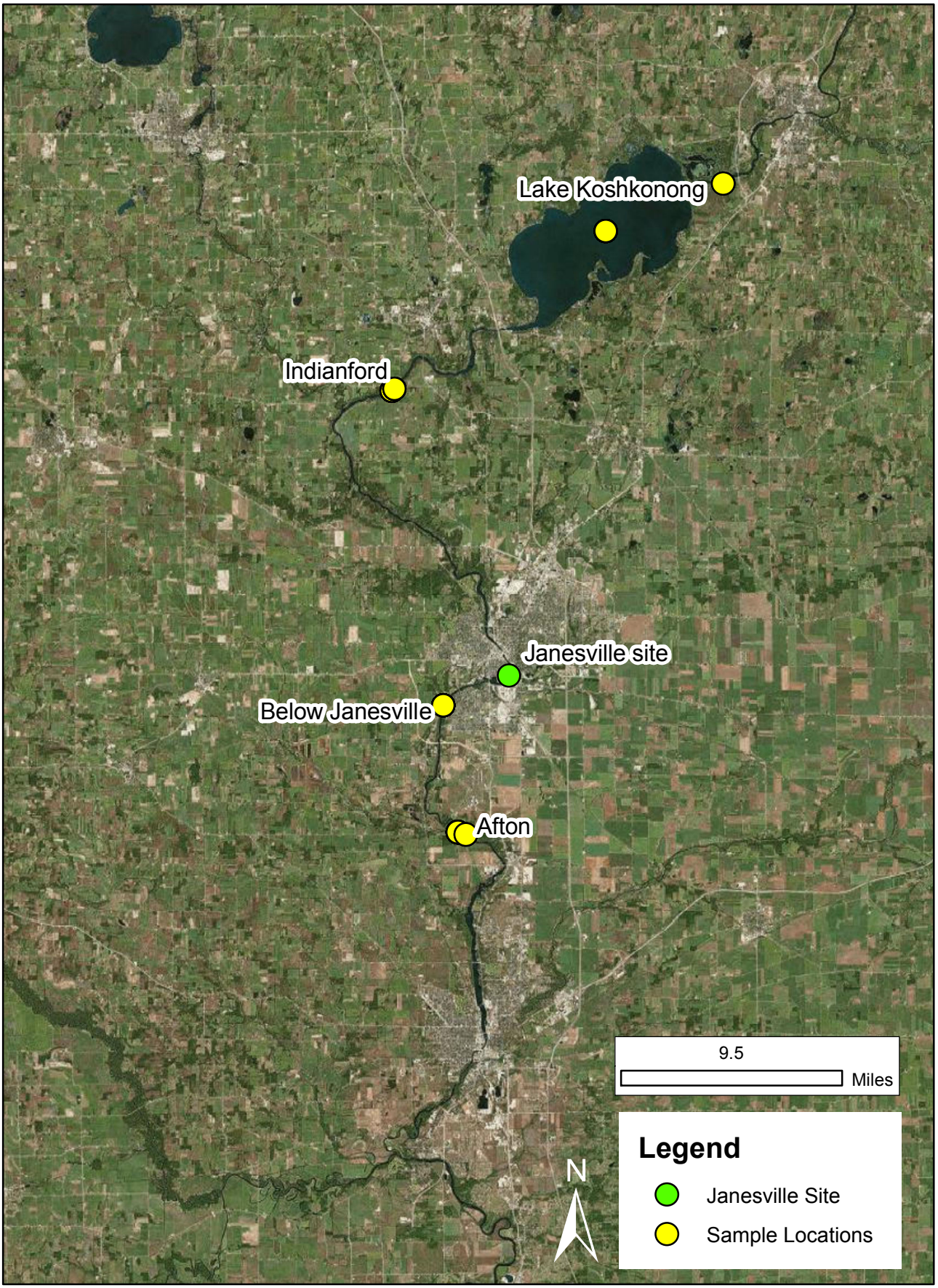
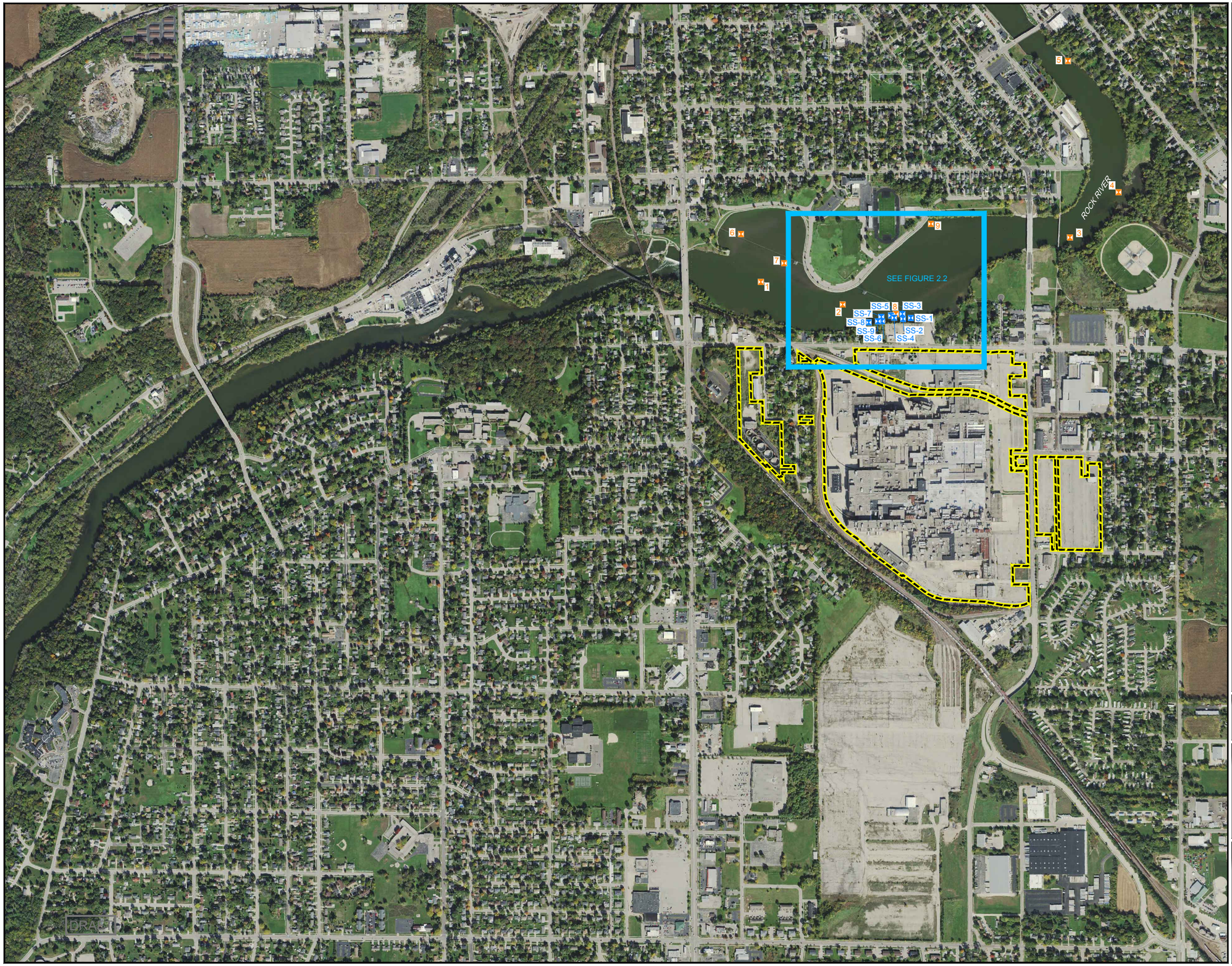


Figure 1.3 - Rock River Fish Tissue Sampling Locations Nearest the Site



0 250 500ft

LEGEND

PROPERTY BOUNDARY

1 APPROXIMATE SEDIMENT SAMPLE LOCATION (INTER-FLUVE, INC - OCTOBER 30, 2015)

SS-1 APPROXIMATE SEDIMENT SAMPLE LOCATION (NORMANDEAU ASSOCIATES, INC. - MARCH 9 AND 10, 2016)

SOURCES:

- IMAGERY PROVIDED BY NAIP IMAGERY OF WISCONSIN, 2015 – U.S. DEPARTMENT OF AGRICULTURE (USDA) FARM SERVICE AGENCY, AERIAL PHOTOGRAPHY FIELD OFFICE.
- SEDIMENT SAMPLE LOCATIONS FROM MONTEREY DAM SEDIMENT ANALYSIS SEDIMENT ANALYSIS EXHIBIT , INTER-FLUVE, INC, DECEMBER 9, 2015.

DRAFT

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

GM JANESVILLE ASSEMBLY PLANT
JANESVILLE, WISCONSIN

DRAFT SEDIMENT INVESTIGATION AND DATA EVALUATION REPORT

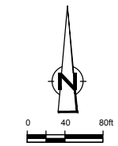
ROCK RIVER SAMPLING AREA

GHD

Source Reference:

Project Manager:	Reviewed By:	Date:	
J. CHARLTON	J. CHARLTON	MAY 2016	
Scale: AS SHOWN	Project №: 58505-01	Report №: 019	Drawing №: figure 2.1

58505-01(019)GN-WA001 MAY 30, 2016



LEGEND

- PROPERTY BOUNDARY
- 1 — APPROXIMATE SEDIMENT SAMPLE LOCATION (INTER-FLUVE, INC - OCTOBER 30, 2015)
- SS-1 — APPROXIMATE SEDIMENT SAMPLE LOCATION (NORMANDEAU ASSOCIATES, INC. - MARCH 9 AND 10, 2016)

SOURCES:

- IMAGERY PROVIDED BY NAIP IMAGERY OF WISCONSIN, 2015 – U.S. DEPARTMENT OF AGRICULTURE (USDA) FARM SERVICE AGENCY, AERIAL PHOTOGRAPHY FIELD OFFICE.
- SEDIMENT SAMPLE LOCATIONS FROM MONTEREY DAM SEDIMENT ANALYSIS SEDIMENT ANALYSIS EXHIBIT , INTER-FLUVE, INC, DECEMBER 9, 2015.
- SEDIMENT SAMPLE LOCATIONS FROM MARCH 9 AND 10, 2016 SURVEY, NORMANDEAU ASSOCIATES, INC.

DRAFT

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

GM JANESVILLE ASSEMBLY PLANT
JANESVILLE, WISCONSIN

DRAFT SEDIMENT INVESTIGATION AND DATA EVALUATION REPORT

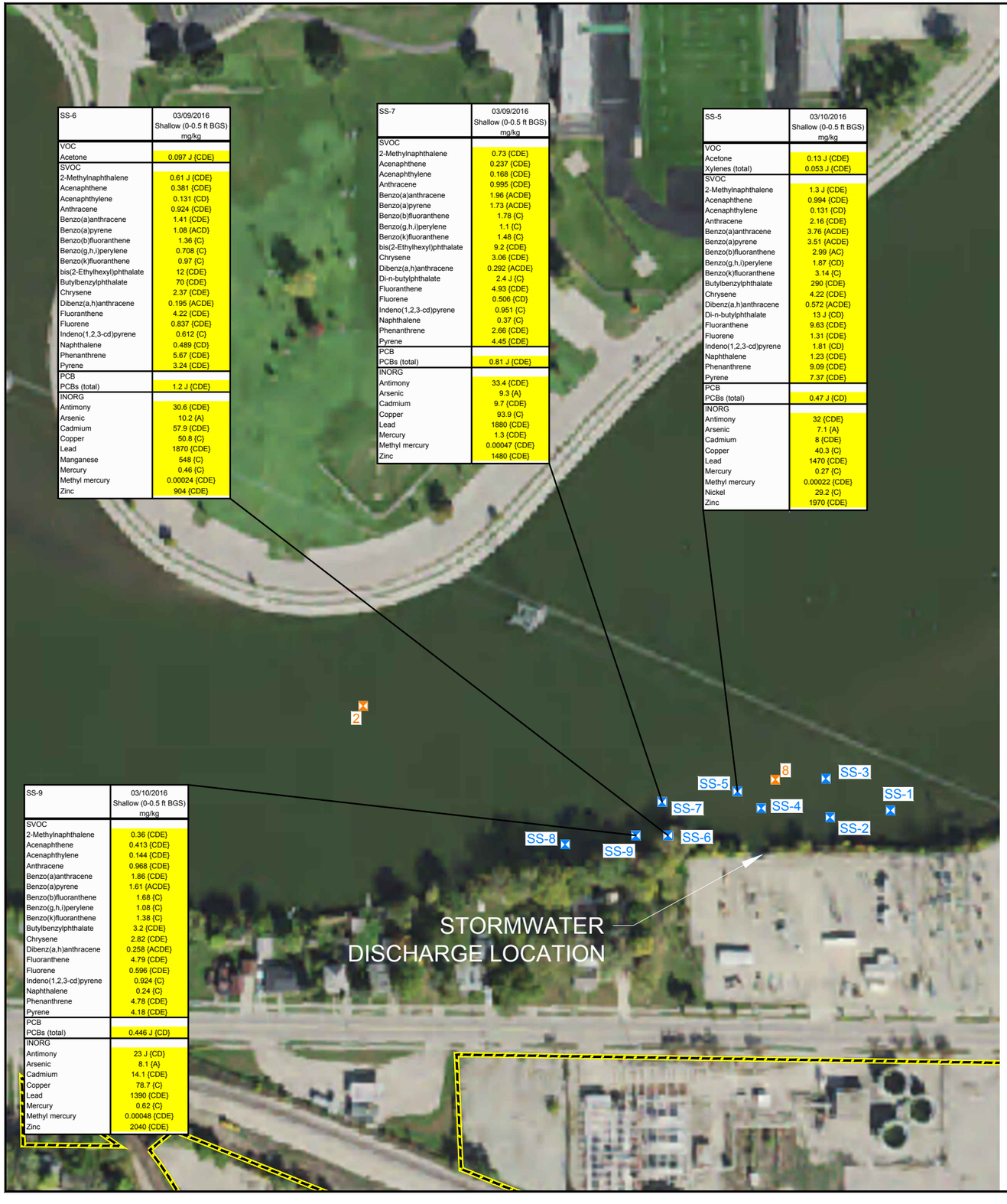
SEDIMENT SAMPLE LOCATIONS

GHD

Source Reference:

Project Manager:	Reviewed By:	Date:	
J. CHARLTON	J. CHARLTON	MAY 2016	
Scale: AS SHOWN	Project №: 58505-01	Report №: 019	Drawing №: figure 2.2

58505-01(019)GN-WA002 MAY 30, 2016



SS-1 | 03/10/2016 | SAMPLE IDENTIFIER, DATE SAMPLE COLLECTED
mg/kg | UNITS
INORG
Antimony 0.13
Arsenic 4.5 {C} | CONCENTRATION (mg/kg)
Cadmium 0.52
Chromium (total) 15.7 {C}
PARAMETER

	RESULT EXCEEDS* CRITERIA INDICATED IN PARENTHESIS
-	NO EXCEEDANCE/NOT ANALYZED REFER TO TABLES
-/-	PARENT RESULTS/DUPLICATE RESULT
*	AN EXCEEDANCE IS INDICATED IF THE RATIO OF THE DETECTED CONCENTRATION TO THE SCREENING LEVEL EXCEEDS 1.0.
INORG	INORGANIC (METALS)
J	ESTIMATE VALUE
MEC	MIDPOINT EFFECT CONCENTRATION, IF CONCENTRATION IS > MEC AND ≤ PEC, LEVEL 3 CONCERN
NV	NO VALUE, CRITERIA COULD NOT BE CALCULATED
PEC	PROBABLE EFFECT CONCENTRATION, IF CONCENTRATION > PEC, LEVEL 4 CONCERN
SVOC	SEMI-VOLATILE ORGANIC COMPOUND
TEC	THRESHOLD EFFECT CONCENTRATION, IF CONCENTRATION > TEC AND ≤ MEC, LEVEL 2 CONCERN. IF CONCENTRATION ≤ TEC, LEVEL 1 CONCERN
UJ	NOT DETECTED; ASSOCIATED REPORTING LIMIT IS ESTIMATED.
USEPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
VOC	VOLATILE ORGANIC COMPOUND
WDNR	WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ft BGS	FEET BELOW GROUND SURFACE
PCB	POLYCHLORINATED BIPHENYL

NOTES:

1. SITE-SPECIFIC RISK-BASED SCREENING LEVELS ARE BASED ON A CANCER RISK AND NON-CANCER HAZARD QUOTIENT OF 1E-6 AND 0.1, RESPECTIVELY.
2. DEVELOPED BY GM.
3. CONSENSUS-BASED SEDIMENT QUALITY GUIDELINES: RECOMMENDATIONS FOR USE AND APPLICATION (WDNR, 2003). SEDIMENT SCREENING LEVELS ARE ONLY COMPARED TO SAMPLES WITH A BOTTOM DEPTH OF 0.5 FT OR LESS.
4. EACH SCREENING CRITERION FROM SEDIMENT QUALITY GUIDELINES (3) IS USED WHEN AVAILABLE; IF NO OTHER CRITERION IS AVAILABLE, USEPA REGION 5 ECOLOGICAL SCREENING LEVELS ARE USED.
5. WHEN ACID-VOLATILE SULFIDE IS PRESENT, CHROMIUM CAN ONLY EXIST IN THE CHROMIUM III OXIDATION STATE. THEREFORE, FOR SAMPLES WITH AVS DETECTIONS, CHROMIUM (TOTAL) HAS BEEN CONVERTED TO CHROMIUM III.
6. REFER TO TABLE 3.1 FOR FULL ANALYTICAL SUMMARY AND FURTHER DETAILS.

	Site-specific Risk-based Screening Levels [1]		WDNR Criteria [3]		
	A	B	C	D	E
Chemical[6]	Recreator Sediment Contact Screening Level (mg/kg)[2]	Maintenance Worker Sediment Contact Screening Level (mg/kg)[2]	Sediment TEC (mg/kg)[4]	Sediment MEC (mg/kg)[4]	Sediment PEC (mg/kg)[4]
VOC					
Acetone	120000	9200000	0.0099	0.0099	0.0099
Xylenes (total)	27000	2000000	0.025	0.038	0.05
SVOC					
2-Methylnaphthalene	380	18000	0.02	0.11	0.2
Acenaphthene	5300	230000	0.0067	0.048	0.089
Acenaphthylene	2600	110000	0.0059	0.067	0.13
Anthracene	26000	1100000	0.057	0.45	0.85
Benzo(a)anthracene	1.9	980	0.11	0.58	1.1
Benzo(a)pyrene	0.19	98	0.15	0.8	1.5
Benzo(b)fluoranthene	1.9	980	0.24	6.8	13
Benzo(g,h,i)perylene	2600	110000	0.17	1.7	3.2
Benzo(k)fluoranthene	19	9800	0.24	6.8	13
bis(2-Ethylhexyl)phthalate	380	22000	0.18	0.18	0.18
Butylbenzylphthalate	2800	160000	2	2	2
Chrysene	190	98000	0.17	0.73	1.3
Dibenz(a,h)anthracene	0.19	98	0.033	0.084	0.14
Di-n-butylphthalate	9500	440000	2.2	9.6	17
Fluoranthene	3500	150000	0.42	1.3	2.2
Fluorene	3500	150000	0.077	0.31	0.54
Indeno(1,2,3-cd)pyrene	1.9	980	0.2	1.7	3.2
Naphthalene	1800	75000	0.18	0.37	0.56
Phenanthrene	2600	110000	0.2	0.69	1.2
Pyrene	2600	110000	0.2	0.86	1.5
PCB					
PCBs (total)	1.7	72	0.06	0.37	0.68
INORG[5]					
Antimony	55	4100	2	14	25
Arsenic	5.6	340	9.8	21	33
Barium	27000	2000000	NV	NV	NV
Cadmium	120	6700	0.99	3	5
Copper	5500	410000	32	91	150
Lead	4300	NV	36	83	130
Manganese	19000	1400000	460	780	1100
Mercury	41	3100	0.18	0.64	1.1
Methyl mercury	14	1000	0.00001	0.00001	0.00001
Nickel	2700	200000	23	36	49
Zinc	41000	3100000	120	290	460

0 40 80ft

LEGEND

PROPERTY BOUNDARY

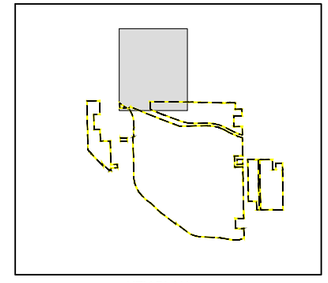
1 APPROXIMATE SEDIMENT SAMPLE LOCATION (INTER-FLUVE, INC - OCTOBER 30, 2015)

SS-1 APPROXIMATE SEDIMENT SAMPLE LOCATION (NORMANDEAU ASSOCIATES, INC. - MARCH 9 AND 10, 2016)

DRAFT

SOURCES:

- IMAGERY PROVIDED BY NAIP IMAGERY OF WISCONSIN, 2015 – U.S. DEPARTMENT OF AGRICULTURE (USDA) FARM SERVICE AGENCY, AERIAL PHOTOGRAPHY FIELD OFFICE.
- SEDIMENT SAMPLE LOCATIONS FROM MONTEREY DAM SEDIMENT ANALYSIS SEDIMENT ANALYSIS EXHIBIT , INTER-FLUVE, INC, DECEMBER 9, 2015.
- SEDIMENT SAMPLE LOCATIONS FROM MARCH 9 AND 10, 2016 SURVEY, NORMANDEAU ASSOCIATES, INC.



KEY PLAN

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

GM JANESVILLE ASSEMBLY PLANT
JANESVILLE, WISCONSIN

DRAFT SEDIMENT INVESTIGATION AND DATA EVALUATION REPORT

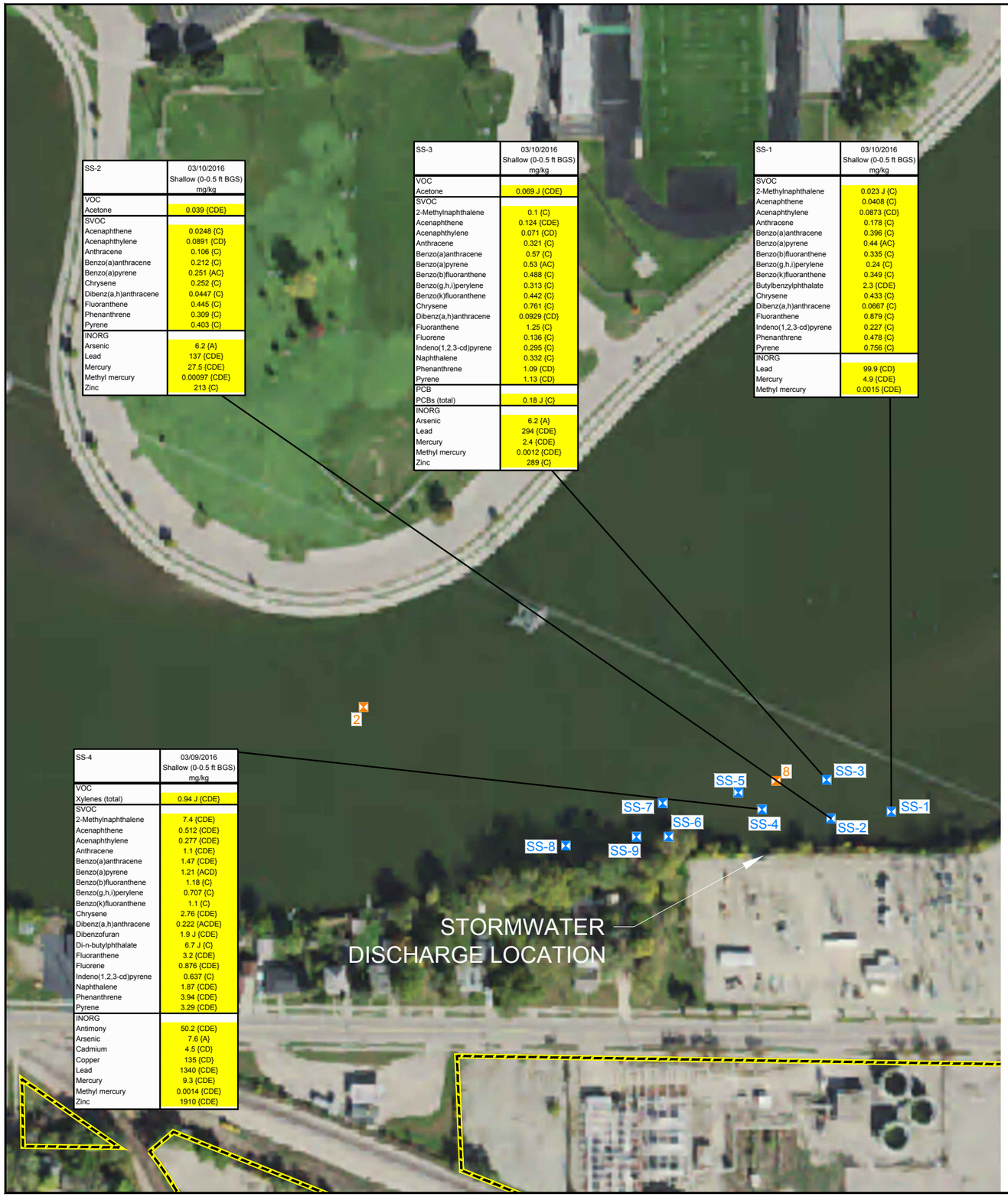
SUMMARY OF SEDIMENT ANALYTICAL RESULTS - EXCEEDANCES - WEST SEDIMENT SCREENING (0 – 0.5 FT)

GHD

Source Reference:

Project Manager:	Reviewed By:	Date:	
J. CHARLTON	J. CHARLTON	MAY 2016	
Scale: AS SHOWN	Project Nº: 58505-01	Report Nº: 019	Drawing Nº: figure 4.1

58505-01(019)GN-WA004 MAY 30, 2016



SS-1 | 03/10/2016 | SAMPLE IDENTIFIER; DATE SAMPLE COLLECTED
mg/kg | UNITS
INORG
Antimony 0.13
Arsenic 4.5 {C}
Cadmium 0.52
Chromium (total) 15.7 {C} | CONCENTRATION (mg/kg)
PARAMETER

	RESULT EXCEEDS* CRITERIA INDICATED IN PARENTHESIS
-	NO EXCEEDANCE/NOT ANALYZED REFER TO TABLES
-/-	PARENT RESULTS/DUPLICATE RESULT
*	AN EXCEEDANCE IS INDICATED IF THE RATIO OF THE DETECTED CONCENTRATION TO THE SCREENING LEVEL EXCEEDS 1.0.
INORG	INORGANIC (METALS)
J	ESTIMATE VALUE
MEC	MIDPOINT EFFECT CONCENTRATION, IF CONCENTRATION IS > MEC AND ≤ PEC, LEVEL 3 CONCERN
NV	NO VALUE, CRITERIA COULD NOT BE CALCULATED
PEC	PROBABLE EFFECT CONCENTRATION, IF CONCENTRATION > PEC, LEVEL 4 CONCERN
SVOC	SEMI-VOLATILE ORGANIC COMPOUND
TEC	THRESHOLD EFFECT CONCENTRATION, IF CONCENTRATION > TEC AND ≤ MEC, LEVEL 2 CONCERN. IF CONCENTRATION ≤ TEC, LEVEL 1 CONCERN
UJ	NOT DETECTED; ASSOCIATED REPORTING LIMIT IS ESTIMATED.
USEPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
VOC	VOLATILE ORGANIC COMPOUND
WDNR	WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ft BGS	FEET BELOW GROUND SURFACE
PCB	POLYCHLORINATED BIPHENYL

NOTES:

1. SITE-SPECIFIC RISK-BASED SCREENING LEVELS ARE BASED ON A CANCER RISK AND NON-CANCER HAZARD QUOTIENT OF 1E-6 AND 0.1, RESPECTIVELY.
2. DEVELOPED BY GM.
3. CONSENSUS-BASED SEDIMENT QUALITY GUIDELINES: RECOMMENDATIONS FOR USE AND APPLICATION (WDNR, 2003). SEDIMENT SCREENING LEVELS ARE ONLY COMPARED TO SAMPLES WITH A BOTTOM DEPTH OF 0.5 FT OR LESS.
4. EACH SCREENING CRITERION FROM SEDIMENT QUALITY GUIDELINES (3) IS USED WHEN AVAILABLE; IF NO OTHER CRITERION IS AVAILABLE, USEPA REGION 5 ECOLOGICAL SCREENING LEVELS ARE USED.
5. WHEN ACID-VOLATILE SULFIDE IS PRESENT, CHROMIUM CAN ONLY EXIST IN THE CHROMIUM III OXIDATION STATE. THEREFORE, FOR SAMPLES WITH AVS DETECTIONS, CHROMIUM (TOTAL) HAS BEEN CONVERTED TO CHROMIUM III.
6. REFER TO TABLE 3.1 FOR FULL ANALYTICAL SUMMARY AND FURTHER DETAILS.

	Site-specific Risk-based Screening Levels [1]		WDNR Criteria [3]		
	A	B	C	D	E
Chemical[6]	Recreator Sediment Contact Screening Level (mg/kg)[2]	Maintenance Worker Sediment Contact Screening Level (mg/kg)[2]	Sediment TEC (mg/kg)[4]	Sediment MEC (mg/kg)[4]	Sediment PEC (mg/kg)[4]
VOC					
Acetone	120000	9200000	0.0099	0.0099	0.0099
Xylenes (total)	27000	2000000	0.025	0.038	0.05
SVOC					
2-Methylnaphthalene	380	18000	0.02	0.11	0.2
Acenaphthene	5300	230000	0.0067	0.048	0.089
Acenaphthylene	2600	110000	0.0059	0.067	0.13
Anthracene	26000	1100000	0.057	0.45	0.85
Benzo(a)anthracene	1.9	980	0.11	0.58	1.1
Benzo(a)pyrene	0.19	98	0.15	0.8	1.5
Benzo(b)fluoranthene	1.9	980	0.24	6.8	13
Benzo(g,h,i)perylene	2600	110000	0.17	1.7	3.2
Benzo(k)fluoranthene	19	9800	0.24	6.8	13
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Butylbenzylphthalate	2800	160000	2	2	2
Chrysene	190	98000	0.17	0.73	1.3
Dibenz(a,h)anthracene	0.19	98	0.033	0.084	0.14
Dibenzofuran	380	18000	0.15	0.37	0.58
Di-n-butylphthalate	9500	440000	2.2	9.6	17
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PCBs (total)	1.7	72	0.06	0.37	0.68
INORG[5]					
Antimony	55	4100	2	14	25
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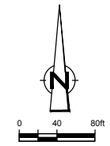
Cadmium	120	6700	0.99	3	5
Copper	5500	410000	32	91	150
Lead	4300	NV	36	83	130
Mercury	41	3100	0.18	0.64	1.1
Methyl mercury	14	1000	0.00001	0.00001	0.00001
Zinc	41000	3100000	120	290	460



LEGEND

PROPERTY BOUNDARY

1 APPROXIMATE SEDIMENT SAMPLE LOCATION (INTER-FLUVE, INC - OCTOBER 30, 2015)

SS-1 APPROXIMATE SEDIMENT SAMPLE LOCATION (NORMANDEAU ASSOCIATES, INC. - MARCH 9 AND 10, 2016)

DRAFT

SOURCES:

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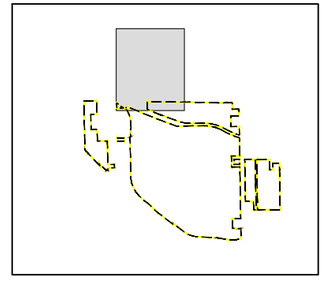


KEY PLAN

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

GM JANESVILLE ASSEMBLY PLANT
JANESVILLE, WISCONSIN

DRAFT SEDIMENT INVESTIGATION AND DATA EVALUATION REPORT

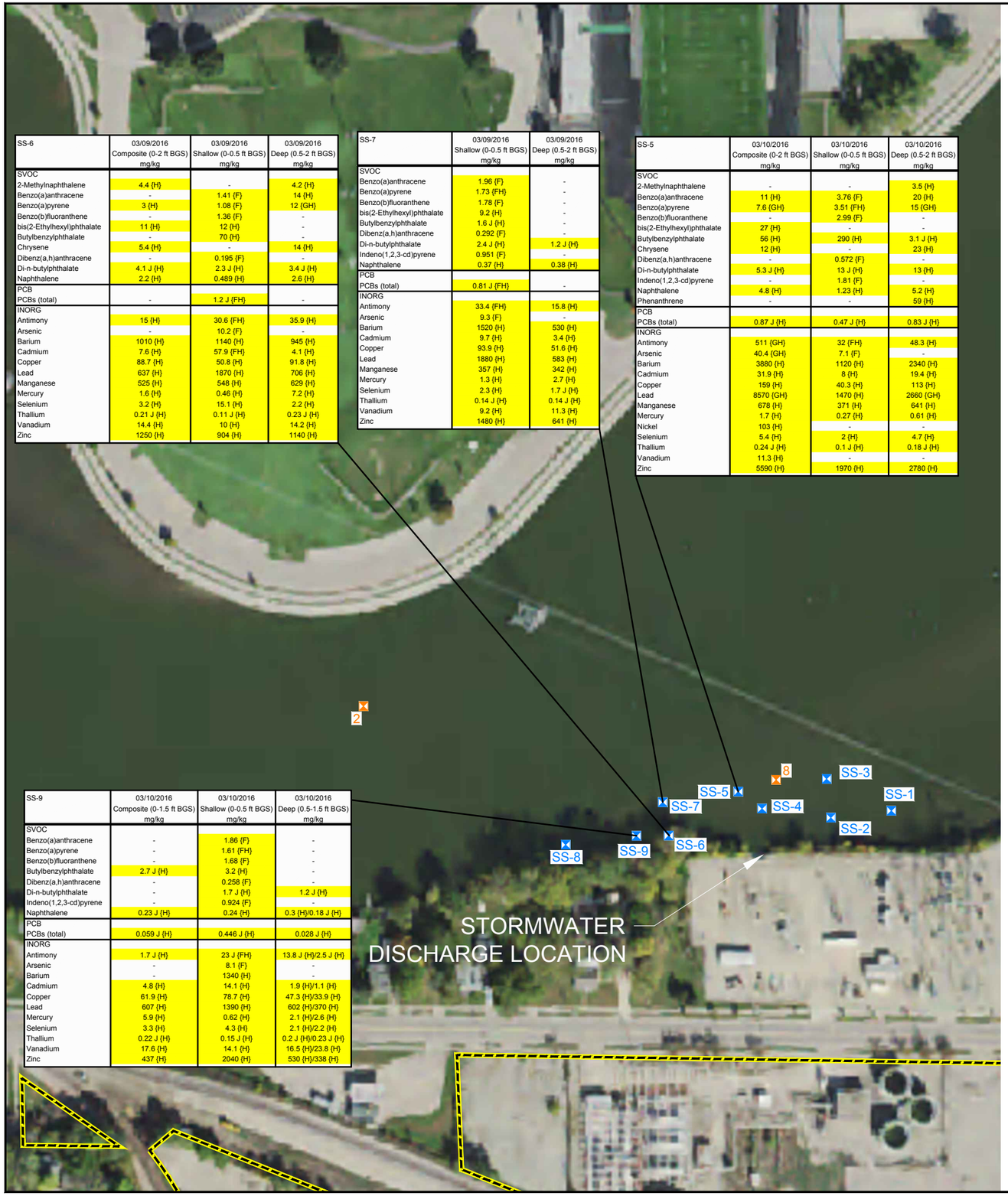
SUMMARY OF SEDIMENT ANALYTICAL RESULTS - EXCEEDANCES - EAST SEDIMENT SCREENING (0 – 0.5 FT)

GHD

Source Reference:

Project Manager:	Reviewed By:	Date:	
J. CHARLTON	J. CHARLTON	MAY 2016	
Scale: AS SHOWN	Project Nº: 58505-01	Report Nº: 019	Drawing Nº: figure 4.2

58505-01(019)GN-WA005 MAY 30, 2016

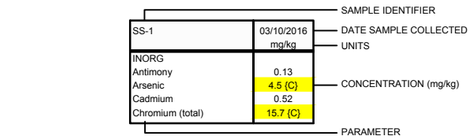


SS-6	03/09/2016 Composite (0-2 ft BGS) mg/kg	03/09/2016 Shallow (0-0.5 ft BGS) mg/kg	03/09/2016 Deep (0.5-2 ft BGS) mg/kg
SVOC			
2-Methylnaphthalene	4.4 {H}	-	4.2 {H}
Benzo(a)anthracene	-	1.41 {F}	14 {H}
Benzo(a)pyrene	3 {H}	1.08 {F}	12 {GH}
Benzo(b)fluoranthene	-	1.36 {F}	-
bis(2-Ethylhexyl)phthalate	11 {H}	12 {H}	-
Butylbenzylphthalate	-	70 {H}	-
Chrysene	5.4 {H}	-	14 {H}
Dibenz(a,h)anthracene	-	0.195 {F}	-
Di-n-butylphthalate	4.1 J {H}	2.3 J {H}	3.4 J {H}
Naphthalene	2.2 {H}	0.489 {H}	2.6 {H}
PCB			
PCBs (total)	-	1.2 J {FH}	-
INORG			
Antimony	15 {H}	30.6 {FH}	35.9 {H}
Arsenic	-	10.2 {F}	-
Barium	1010 {H}	1140 {H}	945 {H}
Cadmium	7.6 {H}	57.9 {FH}	4.1 {H}
Copper	88.7 {H}	50.8 {H}	91.8 {H}
Lead	637 {H}	1870 {H}	706 {H}
Manganese	525 {H}	548 {H}	629 {H}
Mercury	1.6 {H}	0.46 {H}	7.2 {H}
Selenium	3.2 {H}	15.1 {H}	2.2 {H}
Thallium	0.21 J {H}	0.11 J {H}	0.23 J {H}
Vanadium	14.4 {H}	10 {H}	14.2 {H}
Zinc	1250 {H}	904 {H}	1140 {H}

SS-7	03/09/2016 Shallow (0-0.5 ft BGS) mg/kg	03/09/2016 Deep (0.5-2 ft BGS) mg/kg
SVOC		
Benzo(a)anthracene	1.96 {F}	-
Benzo(a)pyrene	1.73 {FH}	-
Benzo(b)fluoranthene	1.78 {F}	-
bis(2-Ethylhexyl)phthalate	9.2 {H}	-
Butylbenzylphthalate	1.6 J {H}	-
Dibenz(a,h)anthracene	0.292 {F}	-
Di-n-butylphthalate	2.4 J {H}	1.2 J {H}
Indeno(1,2,3-cd)pyrene	0.951 {F}	-
Naphthalene	0.37 {H}	0.38 {H}
PCB		
PCBs (total)	0.81 J {FH}	-
INORG		
Antimony	33.4 {FH}	15.8 {H}
Arsenic	9.3 {F}	-
Barium	1520 {H}	530 {H}
Cadmium	9.7 {H}	3.4 {H}
Copper	93.9 {H}	51.6 {H}
Lead	1880 {H}	583 {H}
Manganese	357 {H}	342 {H}
Mercury	1.3 {H}	2.7 {H}
Selenium	2.3 {H}	1.7 J {H}
Thallium	0.14 J {H}	0.14 J {H}
Vanadium	9.2 {H}	11.3 {H}
Zinc	1480 {H}	641 {H}

SS-5	03/10/2016 Composite (0-2 ft BGS) mg/kg	03/10/2016 Shallow (0-0.5 ft BGS) mg/kg	03/10/2016 Deep (0.5-2 ft BGS) mg/kg
SVOC			
2-Methylnaphthalene	-	-	3.5 {H}
Benzo(a)anthracene	11 {H}	3.76 {F}	20 {H}
Benzo(a)pyrene	7.6 {GH}	3.51 {FH}	15 {GH}
Benzo(b)fluoranthene	-	2.99 {F}	-
bis(2-Ethylhexyl)phthalate	27 {H}	-	-
Butylbenzylphthalate	56 {H}	290 {H}	3.1 J {H}
Chrysene	12 {H}	-	23 {H}
Dibenz(a,h)anthracene	-	0.572 {F}	-
Di-n-butylphthalate	5.3 J {H}	13 J {H}	13 {H}
Indeno(1,2,3-cd)pyrene	-	1.81 {F}	-
Naphthalene	4.8 {H}	1.23 {H}	5.2 {H}
Phenanthrene	-	-	59 {H}
PCB			
PCBs (total)	0.87 J {H}	0.47 J {H}	0.83 J {H}
INORG			
Antimony	511 {GH}	32 {FH}	48.3 {H}
Arsenic	40.4 {GH}	7.1 {F}	-
Barium	3880 {H}	1120 {H}	2340 {H}
Cadmium	31.9 {H}	8 {H}	19.4 {H}
Copper	159 {H}	40.3 {H}	113 {H}
Lead	8570 {GH}	1470 {H}	2660 {GH}
Manganese	678 {H}	371 {H}	641 {H}
Mercury	1.7 {H}	0.27 {H}	0.61 {H}
Nickel	103 {H}	-	-
Selenium	5.4 {H}	2 {H}	4.7 {H}
Thallium	0.24 J {H}	0.1 J {H}	0.18 J {H}
Vanadium	11.3 {H}	-	-
Zinc	5590 {H}	1970 {H}	2780 {H}

SS-9	03/10/2016 Composite (0-1.5 ft BGS) mg/kg	03/10/2016 Shallow (0-0.5 ft BGS) mg/kg	03/10/2016 Deep (0.5-1.5 ft BGS) mg/kg
SVOC			
Benzo(a)anthracene	-	1.86 {F}	-
Benzo(a)pyrene	-	1.61 {FH}	-
Benzo(b)fluoranthene	-	1.68 {F}	-
Butylbenzylphthalate	2.7 J {H}	3.2 {H}	-
Dibenz(a,h)anthracene	-	0.258 {F}	-
Di-n-butylphthalate	-	1.7 J {H}	1.2 J {H}
Indeno(1,2,3-cd)pyrene	-	0.924 {F}	-
Naphthalene	0.23 J {H}	0.24 {H}	0.3 {H}/0.18 J {H}
PCB			
PCBs (total)	0.059 J {H}	0.446 J {H}	0.028 J {H}
INORG			
Antimony	1.7 J {H}	23 J {FH}	13.8 J {H}/2.5 J {H}
Arsenic	-	8.1 {F}	-
Barium	-	1340 {H}	-
Cadmium	4.8 {H}	14.1 {H}	1.9 {H}/1.1 {H}
Copper	61.9 {H}	78.7 {H}	47.3 {H}/33.9 {H}
Lead	607 {H}	1390 {H}	602 {H}/370 {H}
Mercury	5.9 {H}	0.62 {H}	2.1 {H}/2.6 {H}
Selenium	3.3 {H}	4.3 {H}	2.1 {H}/2.2 {H}
Thallium	0.22 J {H}	0.15 J {H}	0.2 J {H}/0.23 J {H}
Vanadium	17.6 {H}	14.1 {H}	16.5 {H}/23.8 {H}
Zinc	437 {H}	2040 {H}	530 {H}/338 {H}

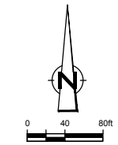


	RESULT EXCEEDS* CRITERIA INDICATED IN PARENTHESES
-	NO EXCEEDANCE/NOT ANALYZED REFER TO TABLES
-/-	PARENT RESULTS/DUPLICATE RESULT
*	AN EXCEEDANCE IS INDICATED IF THE RATIO OF THE DETECTED CONCENTRATION TO THE SCREENING LEVEL EXCEEDS 1.0.
INORG	INORGANIC (METALS)
J	ESTIMATE VALUE
NV	NO VALUE, CRITERIA COULD NOT BE CALCULATED
SVOC	SEMI-VOLATILE ORGANIC COMPOUND
UJ	NOT DETECTED; ASSOCIATED REPORTING LIMIT IS ESTIMATED.
USEPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
VOC	VOLATILE ORGANIC COMPOUND
ft BGS	FEET BELOW GROUND SURFACE
PCB	POLYCHLORINATED BIPHENYL

NOTES:

1. SITE-SPECIFIC RISK-BASED SCREENING LEVELS ARE BASED ON A CANCER RISK AND NON-CANCER HAZARD QUOTIENT OF 1E-6 AND 0.1, RESPECTIVELY.
2. DEVELOPED BY GM.
3. THE SOIL ECOLOGICAL SCREENING LEVEL IS THE MINIMUM OF THE USEPA OSWER ECOLOGICAL SOIL SCREENING LEVELS (AVIAN, INVERTEBRATE, MAMMALIAN, OR PLANT) AND THE USEPA REGION 5 ECOLOGICAL SCREENING LEVELS FOR SOIL.
4. WHEN ACID-VOLATILE SULFIDE IS PRESENT, CHROMIUM CAN ONLY EXIST IN THE CHROMIUM III OXIDATION STATE. THEREFORE, FOR SAMPLES WITH AVS DETECTIONS, CHROMIUM (TOTAL) HAS BEEN CONVERTED TO CHROMIUM III.
5. LANDSCAPER AND ECOLOGICAL SOIL SCREENING LEVELS ARE COMPARED TO SAMPLES WITH A BOTTOM DEPTH OF 2 FT OR LESS. RECREATOR SOIL SCREENING LEVELS ARE COMPARED TO SAMPLES WITH A BOTTOM DEPTH OF 0.5 FT OR LESS. A RELEVANT PATHWAY DOES NOT EXIST FOR SAMPLES COLLECTED FROM GREATER THAN 2 FT. SEE TABLES FOR MORE DETAILS.
6. REFER TO TABLE 3.1 FOR FULL ANALYTICAL SUMMARY AND FURTHER DETAILS.

	Site-specific Risk-based Screening Levels [1]		Ecological Criteria
	F	G	H
Chemical[6]	Recreator Soil Contact Screening Level (mg/kg)[2,5]	Landscaper Soil Contact Screening Level (mg/kg)[2]	Soil Ecological Screening Level (mg/kg)[3]
SVOC			
2-Methylnaphthalene	120	2100	3.2
Benzo(a)anthracene	0.72	44	5.2
Benzo(a)pyrene	0.072	4.4	1.5
Benzo(b)fluoranthene	0.72	44	60
bis(2-Ethylhexyl)phthalate	170	2600	0.93
Butylbenzylphthalate	1200	19000	0.24
Chrysene	72	4400	4.7
Dibenz(a,h)anthracene	0.072	4.4	18
Di-n-butylphthalate	3000	51000	0.15
Indeno(1,2,3-cd)pyrene	0.72	44	110
Naphthalene	200	290	0.099
Phenanthrene	840	14000	46
PCB			
PCBs (total)	0.55	8.9	0.00033
INORG[4]			
Antimony	15	340	0.27
Arsenic	1.9	32	18
Barium	7600	170000	330
Cadmium	34	350	0.36
Copper	1500	34000	28
Lead	4300	2200	11
Manganese	5300	3500	220
Mercury	11	95	0.1
Nickel	760	4700	38
Selenium	190	4200	0.52
Thallium	NV	NV	0.057
Vanadium	190	2700	7.8
Zinc	11000	260000	46



LEGEND

PROPERTY BOUNDARY

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SS-1 APPROXIMATE SEDIMENT SAMPLE LOCATION (NORMANDEAU ASSOCIATES, INC. - MARCH 9 AND 10, 2016)

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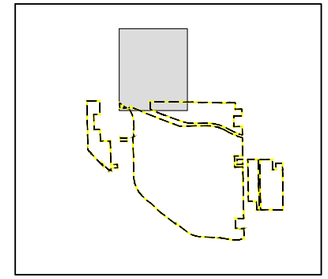


KEY PLAN

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

GM JANESVILLE ASSEMBLY PLANT
JANESVILLE, WISCONSIN

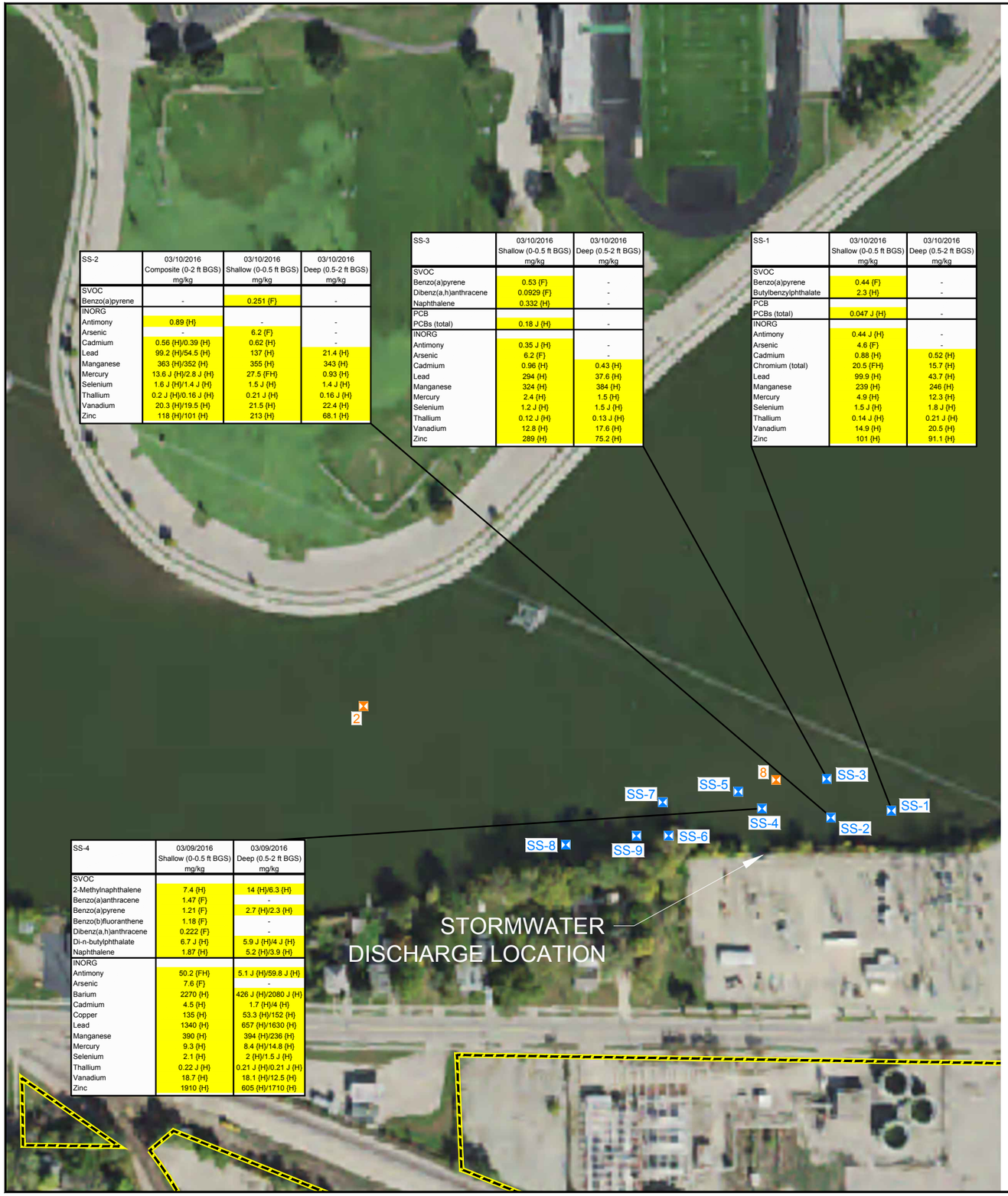
DRAFT SEDIMENT INVESTIGATION AND DATA EVALUATION REPORT

SUMMARY OF SEDIMENT ANALYTICAL RESULTS - EXCEEDANCES - WEST SOIL SCREENING (0 – 2 FT)

GHD

Source Reference:

Project Manager:	Reviewed By:	Date:	
J. CHARLTON	J. CHARLTON	MAY 2016	
Scale: AS SHOWN	Project Nº: 58505-01	Report Nº: 019	Drawing Nº: figure 4.3

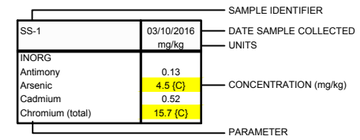


SS-2	03/10/2016 Composite (0-2 ft BGS) mg/kg	03/10/2016 Shallow (0-0.5 ft BGS) mg/kg	03/10/2016 Deep (0.5-2 ft BGS) mg/kg
SVOC			
Benzo(a)pyrene	-	0.251 {F}	-
INORG			
Antimony	0.89 {H}	-	-
Arsenic	-	6.2 {F}	-
Cadmium	0.56 {H}/0.39 {H}	0.62 {H}	-
Lead	99.2 {H}/54.5 {H}	137 {H}	21.4 {H}
Manganese	363 {H}/352 {H}	355 {H}	343 {H}
Mercury	13.6 J {H}/2.8 J {H}	27.5 {FH}	0.93 {H}
Selenium	1.6 J {H}/1.4 J {H}	1.5 J {H}	1.4 J {H}
Thallium	0.2 J {H}/0.16 J {H}	0.21 J {H}	0.16 J {H}
Vanadium	20.3 {H}/19.5 {H}	21.5 {H}	22.4 {H}
Zinc	118 {H}/101 {H}	213 {H}	68.1 {H}

SS-3	03/10/2016 Shallow (0-0.5 ft BGS) mg/kg	03/10/2016 Deep (0.5-2 ft BGS) mg/kg
SVOC		
Benzo(a)pyrene	0.53 {F}	-
Dibenz(a,h)anthracene	0.0929 {F}	-
Naphthalene	0.332 {H}	-
PCB		
PCBs (total)	0.18 J {H}	-
INORG		
Antimony	0.35 J {H}	-
Arsenic	6.2 {F}	-
Cadmium	0.96 {H}	0.43 {H}
Lead	294 {H}	37.6 {H}
Manganese	324 {H}	384 {H}
Mercury	2.4 {H}	1.5 {H}
Selenium	1.2 J {H}	1.5 J {H}
Thallium	0.12 J {H}	0.13 J {H}
Vanadium	12.8 {H}	17.6 {H}
Zinc	289 {H}	75.2 {H}

SS-1	03/10/2016 Shallow (0-0.5 ft BGS) mg/kg	03/10/2016 Deep (0.5-2 ft BGS) mg/kg
SVOC		
Benzo(a)pyrene	0.44 {F}	-
Butylbenzylphthalate	2.3 {H}	-
PCB		
PCBs (total)	0.047 J {H}	-
INORG		
Antimony	0.44 J {H}	-
Arsenic	4.6 {F}	-
Cadmium	0.88 {H}	0.52 {H}
Chromium (total)	20.5 {FH}	15.7 {H}
Lead	99.9 {H}	43.7 {H}
Manganese	239 {H}	246 {H}
Mercury	4.9 {H}	12.3 {H}
Selenium	1.5 J {H}	1.8 J {H}
Thallium	0.14 J {H}	0.21 J {H}
Vanadium	14.9 {H}	20.5 {H}
Zinc	101 {H}	91.1 {H}

SS-4	03/09/2016 Shallow (0-0.5 ft BGS) mg/kg	03/09/2016 Deep (0.5-2 ft BGS) mg/kg
SVOC		
2-Methylnaphthalene	7.4 {H}	14 {H}/6.3 {H}
Benzo(a)anthracene	1.47 {F}	-
Benzo(a)pyrene	1.21 {F}	2.7 {H}/2.3 {H}
Benzo(b)fluoranthene	1.18 {F}	-
Dibenz(a,h)anthracene	0.222 {F}	-
Di-n-butylphthalate	6.7 J {H}	5.9 J {H}/4 J {H}
Naphthalene	1.87 {H}	5.2 {H}/3.9 {H}
INORG		
Antimony	50.2 {FH}	5.1 J {H}/59.8 J {H}
Arsenic	7.6 {F}	-
Barium	2270 {H}	426 J {H}/2080 J {H}
Cadmium	4.5 {H}	1.7 {H}/4 {H}
Copper	135 {H}	53.3 {H}/152 {H}
Lead	1340 {H}	657 {H}/1630 {H}
Manganese	390 {H}	394 {H}/236 {H}
Mercury	9.3 {H}	8.4 {H}/14.8 {H}
Selenium	2.1 {H}	2 {H}/1.5 J {H}
Thallium	0.22 J {H}	0.21 J {H}/0.21 J {H}
Vanadium	18.7 {H}	18.1 {H}/12.5 {H}
Zinc	1910 {H}	605 {H}/1710 {H}

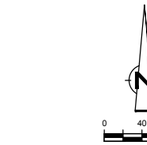


	RESULT EXCEEDS* CRITERIA INDICATED IN PARENTHESES
-	NO EXCEEDANCE/NOT ANALYZED REFER TO TABLES
-/-	PARENT RESULTS/DUPLICATE RESULT
*	AN EXCEEDANCE IS INDICATED IF THE RATIO OF THE DETECTED CONCENTRATION TO THE SCREENING LEVEL EXCEEDS 1.0.
INORG	INORGANIC (METALS)
J	ESTIMATE VALUE
NV	NO VALUE, CRITERIA COULD NOT BE CALCULATED
SVOC	SEMI-VOLATILE ORGANIC COMPOUND
UJ	NOT DETECTED; ASSOCIATED REPORTING LIMIT IS ESTIMATED.
USEPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
VOC	VOLATILE ORGANIC COMPOUND
ft BGS	FEET BELOW GROUND SURFACE
PCB	POLYCHLORINATED BIPHENYL

NOTES:

1. SITE-SPECIFIC RISK-BASED SCREENING LEVELS ARE BASED ON A CANCER RISK AND NON-CANCER HAZARD QUOTIENT OF 1E-6 AND 0.1, RESPECTIVELY.
2. DEVELOPED BY GM.
3. THE SOIL ECOLOGICAL SCREENING LEVEL IS THE MINIMUM OF THE USEPA OSWER ECOLOGICAL SOIL SCREENING LEVELS (AVIAN, INVERTEBRATE, MAMMALIAN, OR PLANT) AND THE USEPA REGION 5 ECOLOGICAL SCREENING LEVELS FOR SOIL.
4. WHEN ACID-VOLATILE SULFIDE IS PRESENT, CHROMIUM CAN ONLY EXIST IN THE CHROMIUM III OXIDATION STATE. THEREFORE, FOR SAMPLES WITH AVS DETECTIONS, CHROMIUM (TOTAL) HAS BEEN CONVERTED TO CHROMIUM III.
5. LANDSCAPER AND ECOLOGICAL SOIL SCREENING LEVELS ARE COMPARED TO SAMPLES WITH A BOTTOM DEPTH OF 2 FT OR LESS. RECREATOR SOIL SCREENING LEVELS ARE COMPARED TO SAMPLES WITH A BOTTOM DEPTH OF 0.5 FT OR LESS. A RELEVANT PATHWAY DOES NOT EXIST FOR SAMPLES COLLECTED FROM GREATER THAN 2 FT. SEE TABLES FOR MORE DETAILS.
6. REFER TO TABLE 3.1 FOR FULL ANALYTICAL SUMMARY AND FURTHER DETAILS.

	Site-specific Risk-based Screening Levels [1]		Ecological Criteria
	F	G	H
Chemical[6]	Recreator Soil Contact Screening Level (mg/kg)[2,5]	Landscaper Soil Contact Screening Level (mg/kg)[2]	Soil Ecological Screening Level (mg/kg)[3]
SVOC			
2-Methylnaphthalene	120	2100	3.2
Benzo(a)anthracene	0.72	44	5.2
Benzo(a)pyrene	0.072	4.4	1.5
Benzo(b)fluoranthene	0.72	44	60
Benzo(k)fluoranthene	7.2	440	150
Butylbenzylphthalate	1200	19000	0.24
Dibenz(a,h)anthracene	0.072	4.4	18
Di-n-butylphthalate	3000	51000	0.15
Naphthalene	200	290	0.099
PCB			
PCBs (total)	0.55	8.9	0.00033
INORG[4]			
Antimony	15	340	0.27
Arsenic	1.9	32	18
Barium	7600	170000	330
Cadmium	34	350	0.36
Chromium (total)	6.2	93	0.4
Copper	1500	34000	28
Lead	4300	2200	11
Manganese	5300	3500	220
Mercury	11	95	0.1
Selenium	190	4200	0.52
Thallium	NV	NV	0.057
Vanadium	190	2700	7.8
Zinc	11000	260000	46



LEGEND

PROPERTY BOUNDARY

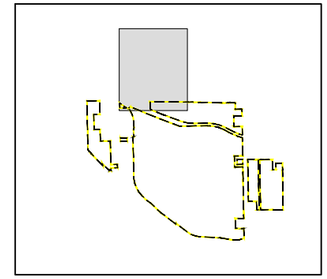
1 APPROXIMATE SEDIMENT SAMPLE LOCATION (INTER-FLUVE, INC - OCTOBER 30, 2015)

SS-1 APPROXIMATE SEDIMENT SAMPLE LOCATION (NORMANDEAU ASSOCIATES, INC. - MARCH 9 AND 10, 2016)

DRAFT

SOURCES:

- IMAGERY PROVIDED BY NAIP IMAGERY OF WISCONSIN, 2015 – U.S. DEPARTMENT OF AGRICULTURE (USDA) FARM SERVICE AGENCY, AERIAL PHOTOGRAPHY FIELD OFFICE.
- SEDIMENT SAMPLE LOCATIONS FROM MONTEREY DAM SEDIMENT ANALYSIS SEDIMENT ANALYSIS EXHIBIT , INTER-FLUVE, INC, DECEMBER 9, 2015.
- SEDIMENT SAMPLE LOCATIONS FROM MARCH 9 AND 10, 2016 SURVEY, NORMANDEAU ASSOCIATES, INC.



KEY PLAN

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

GM JANESVILLE ASSEMBLY PLANT
JANESVILLE, WISCONSIN

DRAFT SEDIMENT INVESTIGATION AND DATA EVALUATION REPORT

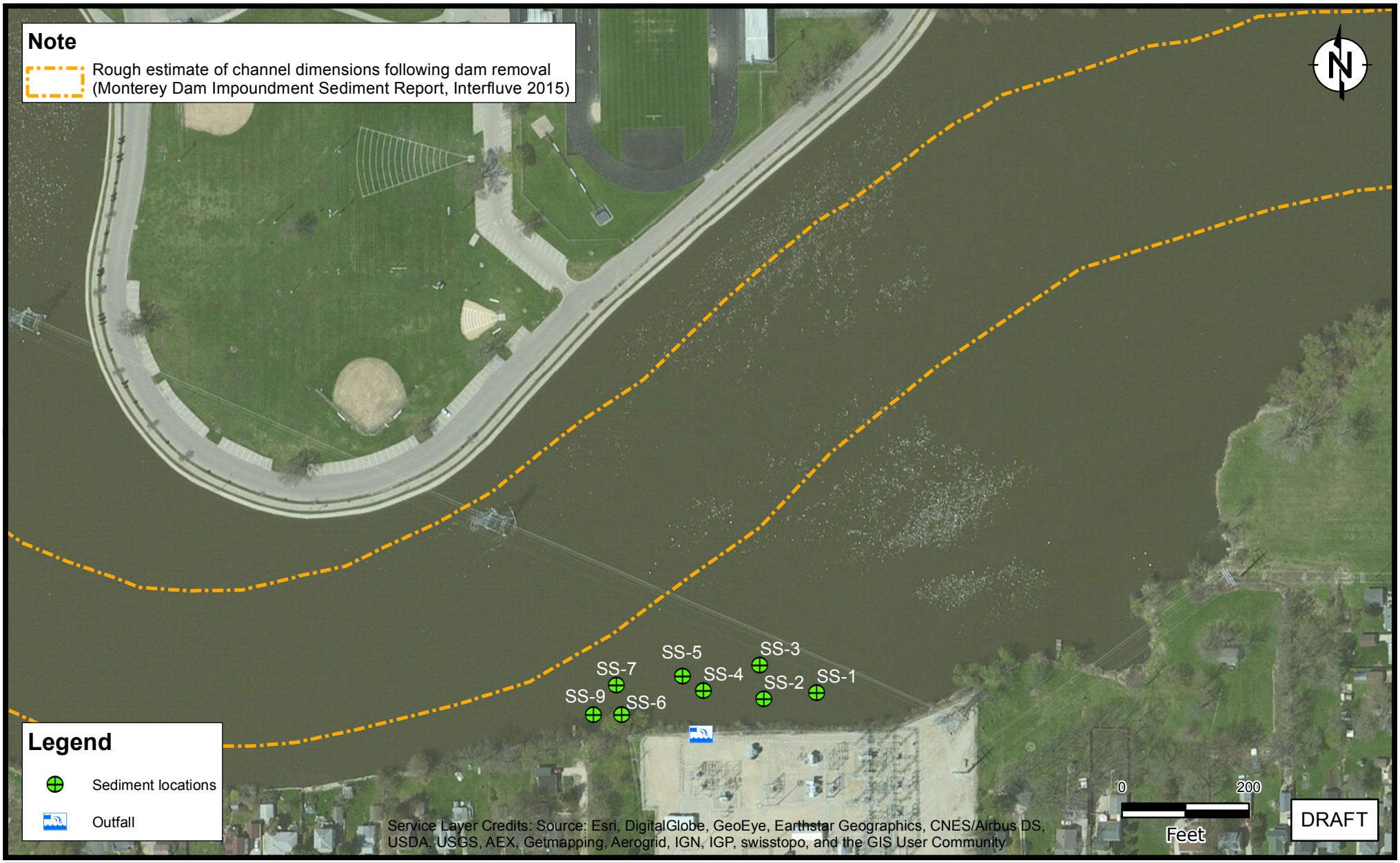
SUMMARY OF SEDIMENT ANALYTICAL RESULTS - EXCEEDANCES - EAST SOIL SCREENING (0 – 2 FT)

GHD

Source Reference:

Project Manager:	Reviewed By:	Date:	
J. CHARLTON	J. CHARLTON	MAY 2016	
Scale: AS SHOWN	Project Nº: 58505-01	Report Nº: 019	Drawing Nº: figure 4.4

58505-01(019)GN-WA007 MAY 30, 2016



RAMBOLL ENVIRON

DRAFTED BY: RD | DATE: 5/24/2016

Sediment Sampling Locations and Exposure Area

Janesville Assembly Plant

1000 General Motors Drive, Janesville, Wisconsin

FIGURE **4.5**

PROJECT: 0227748A

Table 2.1

Field Sample Key
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Identification	Sample Location	Date	Time	Matrix	Water Surface Elevation (NAVD 88)	Water Depth (ft)	Sample Depth (ft)	PID Reading (ppm)	Depth to Gravel (ft)	Parameters	Sample Description
SE-030916-JN-001	SS-6	3/9/2016	12:45	Sediment	761.728	5.4	0 - 0.5	16	2.3	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, Alkylated PAHs, AVS, SEM Metals, methylmercury, TOC, black carbon	Stormwater Discharge Sediment Investigation
SE-030916-JN-002	SS-6	3/9/2016	12:55	Sediment	761.728	5.4	0.5 - 2	22	2.3	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC	Stormwater Discharge Sediment Investigation
SE-030916-JN-003	SS-6	3/9/2016	13:10	Sediment	761.728	5.4	0 - 2	16	2.3	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC, TCLP Metals	Stormwater Discharge Sediment Investigation
SE-030916-JN-004	SS-7	3/9/2016	14:25	Sediment	761.572	7.7	0 - 0.5	0	2.8	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, Alkylated PAHs, AVS, SEM Metals, methylmercury, TOC, black carbon	Stormwater Discharge Sediment Investigation
SE-030916-JN-005	SS-7	3/9/2016	14:35	Sediment	761.572	7.7	0.5 - 2	0	2.8	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC	Stormwater Discharge Sediment Investigation
SE-030916-JN-006	SS-7	3/9/2016	14:45	Sediment	761.572	7.7	0 - 3	0	2.8	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC, TCLP Metals	Stormwater Discharge Sediment Investigation
SE-030916-JN-007	SS-4	3/9/2016	15:45	Sediment	761.613	3.3	0 - 0.5	88	4	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, Alkylated PAHs, AVS, SEM Metals, methylmercury, TOC, black carbon	Stormwater Discharge Sediment Investigation
SE-030916-JN-008	SS-4	3/9/2016	15:50	Sediment	761.613	3.3	0.5 - 2	162	4	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC	Stormwater Discharge Sediment Investigation
SE-030916-JN-009	SS-4	3/9/2016	15:55	Sediment	761.613	3.3	0.5 - 2	162	4	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC	Stormwater Discharge Sediment Investigation
SE-030916-JN-010	SS-4	3/9/2016	16:00	Sediment	761.613	3.3	0 - 4.08	88	4	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC, TCLP Metals	Stormwater Discharge Sediment Investigation
SE-031016-JN-011	SS-5	3/10/2016	9:35	Sediment	761.596	4.1	0 - 0.5	18	4.5	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, Alkylated PAHs, AVS, SEM Metals, methylmercury, TOC, black carbon	Stormwater Discharge Sediment Investigation
SE-031016-JN-012	SS-5	3/10/2016	9:40	Sediment	761.596	4.1	0.5 - 2	28	4.5	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC	Stormwater Discharge Sediment Investigation
SE-031016-JN-013	SS-5	3/10/2016	9:45	Sediment	761.596	4.1	0 - 2	18	4.5	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC, TCLP Metals	Stormwater Discharge Sediment Investigation
SE-031016-JN-014	SS-2	3/10/2016	10:35	Sediment	761.691	4.2	0 - 0.5	28	2	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, Alkylated PAHs, AVS, SEM Metals, methylmercury, TOC, black carbon	Stormwater Discharge Sediment Investigation
SE-031016-JN-015	SS-2	3/10/2016	10:40	Sediment	761.691	4.2	0.5 - 2	0	3	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC	Stormwater Discharge Sediment Investigation
SE-031016-JN-016	SS-2	3/10/2016	10:45	Sediment	761.691	4.2	0 - 2	28	3	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC, TCLP Metals	Stormwater Discharge Sediment Investigation
SE-031016-JN-017	SS-2	3/10/2016	10:50	Sediment	761.691	4.2	0 - 2	28	3	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC, TCLP Metals	Stormwater Discharge Sediment Investigation
SE-031016-JN-018	SS-3	3/10/2016	11:40	Sediment	761.679	4.5	0 - 0.5	150	3	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, Alkylated PAHs, AVS, SEM Metals, methylmercury, TOC, black carbon	Stormwater Discharge Sediment Investigation
SE-031016-JN-019	SS-3	3/10/2016	11:45	Sediment	761.679	4.5	0.5 - 2	7	3	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC	Stormwater Discharge Sediment Investigation
SE-031016-JN-020	SS-3	3/10/2016	11:50	Sediment	761.679	4.5	0 - 3.67	150	3	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC, TCLP Metals	Stormwater Discharge Sediment Investigation
SE-031016-JN-021	SS-1	3/10/2016	12:50	Sediment	761.671	4.1	0 - 0.5	0	3.5	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, Alkylated PAHs, AVS, SEM Metals, methylmercury, TOC, black carbon	Stormwater Discharge Sediment Investigation
SE-031016-JN-022	SS-1	3/10/2016	12:55	Sediment	761.671	4.1	0.5 - 2	0	3.5	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC	Stormwater Discharge Sediment Investigation
SE-031016-JN-023	SS-1	3/10/2016	13:00	Sediment	761.671	4.1	0 - 3.5	0	3.5	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC, TCLP Metals	Stormwater Discharge Sediment Investigation

Table 2.1

Field Sample Key
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Identification	Sample Location	Date	Time	Matrix	Water Surface Elevation (NAVD 88)	Water Depth (ft)	Sample Depth (ft)	PID Reading (ppm)	Depth to Gravel (ft)	Parameters	Sample Description
SE-031016-JN-024	SS-9	3/10/2016	14:05	Sediment	761.607	6.9	0 - 0.5	0	1.5	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, Alkylated PAHs, AVS, SEM Metals, methylmercury, TOC, black carbon	Stormwater Discharge Sediment Investigation
SE-031016-JN-025	SS-9	3/10/2016	14:10	Sediment	761.607	6.9	0.5 - 1.5	0	1.5	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC	Stormwater Discharge Sediment Investigation
SE-031016-JN-026	SS-9	3/10/2016	14:15	Sediment	761.607	6.9	0.5 - 1.5	0	1.5	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC	Stormwater Discharge Sediment Investigation
SE-031016-JN-027	SS-9	3/10/2016	14:20	Sediment	761.607	6.9	0 - 1.5	0	1.5	TCL VOCs + TMB, TCL SVOCs, TAL Metals, PCBs, TOC, TCLP Metals	Stormwater Discharge Sediment Investigation
TB-031016-JN-001	Trip Blank	3/10/2016	8:00	NA	NA	NA	NA	NA	NA	TCL VOCs + TMB	QA/QC

Notes:

AVS - Acid-volatile sulfide
ft - Feet
NA - Not applicable
NAVD 88 - North American vertical datum of 1988
PAHs - Polycyclic aromatic hydrocarbons
PCBs - Polychlorinated biphenyls
PID - Photoionization detector
ppm - Parts per million
QA/QC - Quality assurance/quality control
SEM - Simultaneously extracted metals
SVOCs - Semi volatile organic compounds
TAL - Target analyte list
TCL - Target compound list
TCLP - Toxicity characteristic leaching procedure
TMB - Trimethylbenzene
TOC - Total organic carbon
VOCs - Volatile organic compounds

Table 3.1

Summary of Sediment Analytical Results
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Location:										SS-1	SS-1	SS-1	SS-2	SS-2	SS-2	SS-2	SS-3	SS-3	SS-3
Sample Identification:										**SE-031016-JN-021**	**SE-031016-JN-023**	**SE-031016-JN-022**	**SE-031016-JN-014**	**SE-031016-JN-016**	**SE-031016-JN-017**	**SE-031016-JN-015**	**SE-031016-JN-018**	**SE-031016-JN-020**	**SE-031016-JN-019**
Sample Date:										**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**
Sample Depth:										**(0-0.5) ft BGS**	**(0-3.5) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-2) ft BGS**	**(0-2) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-3.67) ft BGS**	**(0.5-2) ft BGS**
Sample Type:										**Shallow**	**Composite**	**Deep**	**Shallow**	**Composite**	**Duplicate**	**Deep**	**Shallow**	**Composite**	**Deep**
Photoionization Detector (PID) Reading (ppm) [1]										**0**	**0**	**0**	**28**	**28**	**28**	**0**	**150**	**150**	**7**
Applicable Screening Criteria		**Sediment Screening Criteria (Sed)[2]**					**Recreator Screening Criteria (Rec) [3]**	**Soil Screening Criteria (Soil) [4]**		**Toxicity Characteristic Leaching Procedure (TCLP) Criteria [5]**	**Sed/Soil/Rec**	**TCLP**	**Soil**	**Sed/Soil/Rec**	**Soil/TCLP**	**Soil/TCLP**	**Soil**	**Sed/Soil/Rec**	**TCLP**	**Soil**
		Site-specific Risk-based Screening Levels [6]		**WDNR Criteria [7]**			**Site-specific Risk-based Screening Levels [6]**	**Site-specific Risk-based Screening Levels [6]**	**Ecological Criteria [8]**	**Regulatory Level [9]**										
Parameters	**Units**	**Recreator Sediment Contact Screening Level [10] a**	**Maintenance Worker Sediment Contact Screening Level [10] b**	**Sediment TEC [11] c**	**Sediment MEC [11] d**	**Sediment PEC [11] e**	**Recreator Soil Contact Screening Level [10] f**	**Landscaper Soil Contact Screening Level [10] g**	**Soil Ecological Screening Level h**	**TCLP i**										
Volatile Organic Compounds (VOCs)																				
1,1,1-Trichloroethane	mg/kg	2.7E+05	2.0E+07	2.1E-01	2.1E-01	2.1E-01	4.8E+04	1.2E+05	3.0E+01	NV	0.0012 U	0.0014 U	0.0014 U	0.0012 U	0.0014 U	0.0013 U	0.0012 U	0.0022 U	0.0011 U	0.0013 U
1,1,2,2-Tetrachloroethane	mg/kg	5.6E+01	3.6E+03	8.5E-01	8.5E-01	8.5E-01	1.6E+01	3.0E+02	1.3E-01	NV	0.00057 U	0.00068 U	0.00066 U	0.00059 U	0.00067 U	0.00061 U	0.00057 U	0.001 U	0.00054 U	0.00061 U
1,1,2-Trichloroethane	mg/kg	2.0E+02	1.3E+04	5.2E-01	5.2E-01	5.2E-01	4.2E+01	2.6E+02	2.9E+01	NV	0.00068 U	0.00081 U	0.00079 U	0.00071 U	0.0008 U	0.00073 U	0.00067 U	0.0012 U	0.00065 U	0.00073 U
1,1-Dichloroethane	mg/kg	2.7E+04	2.0E+06	5.8E-04	5.8E-04	5.8E-04	4.8E+03	1.2E+04	2.0E+01	NV	0.00063 U	0.00074 U	0.00073 U	0.00065 U	0.00073 U	0.00067 U	0.00062 U	0.0011 U	0.00059 U	0.00067 U
1,1-Dichloroethene	mg/kg	6.8E+03	5.1E+05	1.9E-02	1.9E-02	1.9E-02	1.4E+03	4.4E+03	8.3E+00	NV	0.0015 U	0.0017 U	0.0017 U	0.0015 U	0.0017 U	0.0016 U	0.0015 U	0.0027 U	0.0014 U	0.0016 U
1,2,4-Trichlorobenzene	mg/kg	3.9E+02	2.5E+04	8.0E-03	1.3E-02	1.8E-02	1.1E+02	1.5E+02	1.1E+01	NV	0.0007 U	0.00083 U	0.00081 U	0.00073 U	0.00082 U	0.00075 U	0.00069 U	0.0013 U	0.00066 U	0.00075 U
1,2,4-Trimethylbenzene	mg/kg	NV	NV	NV	NV	NV	2.5E+02	2.3E+02	NV	NV	0.0011 U	0.0013 U	0.0012 U	0.0011 U	0.0012 U	0.0011 U	0.0011 U	0.0019 U	0.001 U	0.0011 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	3.3E+00	8.9E+02	NV	NV	NV	1.9E-01	1.1E+00	3.5E-02	NV	0.005 U	0.0059 U	0.0058 U	0.0052 U	0.0058 U	0.0053 U	0.0049 U	0.009 U	0.0047 U	0.0053 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	5.6E+00	3.6E+02	NV	NV	NV	1.2E+00	7.0E+00	1.2E+00	NV	0.00098 U	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.00097 U	0.0018 U	0.00093 U	0.001 U
1,2-Dichlorobenzene	mg/kg	1.2E+04	9.2E+05	2.3E-02	2.9E-01	2.3E-02	2.4E+03	6.4E+03	3.0E+00	NV	0.00063 U	0.00074 U	0.00073 U	0.00065 U	0.00073 U	0.00067 U	0.00062 U	0.0011 U	0.00059 U	0.00067 U
1,2-Dichloroethane	mg/kg	1.2E+02	7.9E+03	2.6E-01	2.6E-01	2.6E-01	2.6E+01	1.6E+02	2.1E+01	NV	0.00085 U	0.001 U	0.00098 U	0.00088 U	0.00099 U	0.0009 U	0.00084 U	0.0015 U	0.0008 U	0.0009 U
1,2-Dichloropropane	mg/kg	3.1E+02	2.0E+04	3.3E-01	3.3E-01	3.3E-01	8.6E+01	1.0E+02	3.3E+01	NV	0.00026 U	0.00031 UJ	0.0003 U	0.00027 U	0.0003 U	0.00027 U	0.00026 U	0.00046 U	0.00024 U	0.00028 U
1,3,5-Trimethylbenzene	mg/kg	NV	NV	NV	NV	NV	4.0E+02	3.5E+02	NV	NV	0.00053 U	0.00063 U	0.00062 U	0.00056 U	0.00062 U	0.00057 U	0.00053 U	0.00096 U	0.00051 U	0.00057 U
1,3-Dichlorobenzene	mg/kg	2.7E+03	2.0E+05	1.3E+00	1.3E+00	1.3E+00	7.6E+02	1.7E+04	3.8E+01	NV	0.0013 U	0.0015 U	0.0015 U	0.0013 U	0.0015 U	0.0014 U	0.0013 U	0.0023 U	0.0012 U	0.0014 U
1,4-Dichlorobenzene	mg/kg	2.8E+02	1.8E+04	3.1E-02	6.1E-02	9.0E-02	7.8E+01	1.5E+03	5.5E-01	NV	0.00052 U	0.00061 U	0.0006 U	0.00054 U	0.0006 U	0.00055 U	0.00051 U	0.00093 U	0.00049 U	0.00055 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	8.2E+04	6.1E+06	4.2E-02	4.2E-02	4.2E-02	2.0E+04	1.2E+05	9.0E+01	NV	0.0021 U	0.0024 U	0.0024 U	0.0021 U	0.0024 U	0.0022 U	0.002 U	0.0037 U	0.002 U	0.0022 U
2-Hexanone	mg/kg	6.8E+02	5.1E+04	5.8E-02	5.8E-02	5.8E-02	1.6E+02	7.6E+02	1.3E+01	NV	0.0013 U	0.0015 U	0.0015 U	0.0013 U	0.0015 U	0.0013 U	0.0012 U	0.0023 U	0.0012 U	0.0013 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NV	NV	2.5E-02	2.5E-02	2.5E-02	9.6E+04	8.9E+04	4.4E+02	NV	0.0022 U	0.0027 U	0.0026 U	0.0023 U	0.0026 U	0.0024 U	0.0022 U	0.0041 U	0.0021 U	0.0024 U
Acetone	mg/kg	1.2E+05	9.2E+06	9.9E-03	9.9E-03	9.9E-03	3.3E+04	4.3E+05	2.5E+00	NV	0.011 U	0.012 U	0.012 U	**0.039 [cde]**	0.012 U	**0.044**	**0.036**	**0.069 J [cde]**	**0.075**	0.011 U
Benzene	mg/kg	2.0E+02	1.3E+04	5.7E-02	8.4E-02	1.1E-01	4.9E+01	4.1E+02	2.6E-01	NV	0.0017 U	0.002 U	0.0019 U	0.0017 U	0.0019 U	0.0018 U	0.0016 U	0.003 U	0.0016 U	0.0018 U
Bromodichloromethane	mg/kg	1.8E+02	1.2E+04	NV	NV	NV	5.0E+01	9.6E+02	5.4E-01	NV	0.00053 U	0.00063 U	0.00062 U	0.00056 U	0.00062 U	0.00057 U	0.00053 U	0.00096 U	0.00051 U	0.00057 U
Bromoform	mg/kg	1.4E+03	9.1E+04	4.9E-01	4.9E-01	4.9E-01	3.5E+02	3.5E+03	1.6E+01	NV	0.00044 U	0.00052 U	0.00051 U	0.00046 U	0.00052 U	0.00047 U	0.00044 U	0.0008 U	0.00042 U	0.00047 U
Bromomethane (Methyl bromide)	mg/kg	1.9E+02	1.4E+04	1.4E-03	1.4E-03	1.4E-03	3.7E+01	1.1E+02	2.4E-01	NV	0.00077 U	0.00092 U	0.0009 U	0.00081 U	0.0009 U	0.00082 U	0.00077 U	0.0014 U	0.00073 U	0.00083 U
Carbon disulfide	mg/kg	1.4E+04	1.0E+06	2.4E-02	2.4E-02	2.4E-02	3.1E+03	1.4E+04	9.4E-02	NV	0.0011 U	0.0013 U	0.0013 U	0.0011 U	0.0013 U	0.0012 U	0.0011 U	0.002 U	0.001 U	0.0012 U
Carbon tetrachloride	mg/kg	1.6E+02	1.0E+04	1.5E+00	1.5E+00	1.5E+00	4.1E+01	4.3E+02	3.0E+00	NV	0.0012 U	0.0014 U	0.0014 U	0.0012 U	0.0014 U	0.0013 U	0.0012 U	0.0022 U	0.0011 U	0.0013 U
Chlorobenzene	mg/kg	2.7E+03	2.0E+05	2.9E-01	2.9E-01	2.9E-01	5.0E+02	1.3E+03	1.3E+01	NV	0.00098 U	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.00097 U	0.0018 U	0.00093 U	0.001 U
Chloroethane	mg/kg	1.4E+04	1.0E+06	NV	NV	NV	3.7E+03	6.3E+04	NV	NV	0.00081 U	0.00096 U	0.00094 U	0.00084 U	0.00095 U	0.00086 U	0.0008 U	0.0015 U	0.00077 U	0.00086 U
Chloroform (Trichloromethane)	mg/kg	5.9E+02	3.8E+04	1.2E-01	1.2E-01	1.2E-01	7.1E+01	2.1E+02	1.2E+00	NV	0.00066 U	0.00078 U	0.00077 U	0.00069 U	0.00078 U	0.00071 U	0.00066 U	0.0012 U	0.00063 U	0.00071 U
Chloromethane (Methyl chloride)	mg/kg	NV	NV	NV	NV	NV	2.3E+03	2.2E+03	1.0E+01	NV	0.0015 U	0.0017 U	0.0017 U	0.0015 U	0.0017 U	0.0015 U	0.0014 U	0.0026 U	0.0014 U	0.0016 U
cis-1,2-Dichloroethene	mg/kg	2.7E+02	2.0E+04	NV	NV	NV	7.6E+01	1.7E+03	NV	NV	0.00052 U	0.00061 U	0.0006 U	0.00054 U	0.0006 U	0.00055 U	0.00051 U	0.00093 U	0.00049 U	0.00055 U
cis-1,3-Dichloropropene	mg/kg	1.1E+02	7.2E+03	NV	NV	NV	3.0E+01	4.1E+02	NV	NV	0.0013 U	0.0015 U	0.0015 U	0.0014 U	0.0015 U	0.0014 U	0.0013 U	0.0024 U	0.0012 U	0.0014 U
Cyclohexane	mg/kg	NV	NV	NV	NV	NV	1.5E+05	1.5E+05	NV	NV	0.00089 U	0.001 U	0.001 U	0.00092 U	0.001 U	0.00094 U	0.00088 U	0.0016 U	0.00084 U	0.00094 U
Dibromochloromethane	mg/kg	1.3E+02	8.5E+03	NV	NV	NV	3.7E+01	7.1E+02	2.1E+00	NV	0.00068 U	0.00081 U	0.00079 U	0.00071 U	0.0008 U	0.00073 U	0.00067 U	0.0012 U	0.00065 U	0.00073 U
Dichlorodifluoromethane (CFC-12)	mg/kg	2.7E+04	2.0E+06	NV	NV	NV	3.0E+03	4.8E+03	4.0E+01	NV	0.00052 U	0.00061 U	0.0006 U	0.00054 U	0.0006 U	0.00055 U	0.00051 U	0.00093 U	0.00049 U	0.00055 U
Ethylbenzene	mg/kg	1.4E+04	1.0E+06	1.8E-01	1.8E-01	1.8E-01	3.4E+03	2.1E+04	5.2E+00	NV	0.00059 U	0.0007 U	0.00068 U	0.00061 U	0.00069 U	0.00063 U	0.00058 U	0.0011 U	0.00056 U	0.00063 U
Isopropyl benzene	mg/kg	1.4E+04	1.0E+06	NV	NV	NV	2.9E+03	9.9E+03	NV	NV	0.00037 U	0.00044 U	0.00043 U	0.00038 U	0.00043 U	0.00039 U	0.00036 U	0.00066 U	0.00035 U	0.00039 U
Methyl acetate	mg/kg	1.4E+05	1.0E+07	NV	NV	NV	3.8E+04	8.5E+05	NV	NV	0.0037 U	0.0044 U	0.0043 U	0.0039 U	0.0043 U	0.0039 U	0.0037 U	0.0067 U	0.0035 U	0.004 U
Methyl cyclohexane	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0011 U	0.0013 U	0.0012 U	**0.0028 J**	0.0012 U	0.0011 U	0.0011 U	**0.039 J**	**0.0035 J**	0.0011 U
Methyl tert butyl ether (MTBE)	mg/kg	6.2E+03	4.0E+05	NV	NV	NV	1.5E+03	1.3E+04	NV	NV	0.00079 U	0.00094 U	0.00092 U	0.00083 U	0.00093 U	0.00084 U	0.00078 U	0.0014 U	0.00075 U	0.00085 U
Methylene chloride	mg/kg	8.2E+02	6.1E+04	1.6E-01	1.6E-01	1.6E-01	2.2E+02	3.8E+03	4.1E+00	NV	0.0014 U	0.0016 U	0.0016 U	0.0014 U	0.0016 U	0.0015 U	0.0013 U	0.0025 U	0.0013 U	0.0015 U
Styrene	mg/kg	2.7E+04	2.0E+06	2.5E-01	2.5E-01	2.5E-01	6.3E+03	2.8E+04	4.7E+00	NV	0.00074 U	0.00087 U	0.00085 U	0.00077 U	0.00086 U	0.00078 U	0.00073 U	0.0013 U	0.0007 U	0.00079 U
Tetrachloroethene	mg/kg	8.2E+02	6.1E+04	9.9E-01	9.9E-01	9.9E-01	1.9E+02	8.5E+02	9.9E+00	NV	0.0015 U	0.0017 U	0.0017 U	0.0015 U	0.0017 U	0.0016 U	0.0015 U	0.0027 U	0.0014 U	0.0016 U
Toluene	mg/kg	1.1E+04	8.2E+05	8.9E-01	1.3E+00	1.8E+00	3.0E+03	4.5E+04	5.5E+00	NV	0.0005 U	0.00059 U	0.00058 U	0.00052 U	0.00058 U	0.00053 U	0.00049 U	0.0009 U	0.00047 U	0.00053 U
trans-1,2-Dichloroethene	mg/kg	2.7E+03	2.0E+05	6.5E-01	6.5E-01	6.5E-01	7.6E+02	1.7E+04	7.8E-01	NV	0.00059 U	0.0007 U	0.00068 U	0.00061 U	0.00069 U	0.00063 U	0.00058 U	0.0011 U	0.00056 U	0.00063 U
trans-1,3-Dichloropropene	mg/kg	1.1E+02	7.2E+03	NV	NV	NV	3.0E+01	4.1E+02	NV	NV	0.00053 U	0.00063 U	0.00062 U	0.00056 U	0.00062 U	0.00057 U	0.00053 U	0.00096 U	0.00051 U	0.00057 U
Trichloroethene	mg/kg	6.8E+01	5.1E+03	1.1E-01	1.1E-01	1.1E-01	1.4E+01	4.6E+01	1.2E+01	NV	0.0007 U	0.00083 U	0.00081 U	0.00073 U	0.00082 U	0.00075 U	0.00069 U	0.0013 U	0.00066 U	0.00075 U
Trichlorofluoromethane (CFC-11)	mg/kg	4.1E+04	3.1E+06	NV	NV	NV	6.9E+03	1.6E+04	1.6E+01	NV	0.00053 U	0.00063 U	0.00062 U	0.00056 U	0.00062 U	0.00057 U	0.00053 U	0.00096 U	0.00051 U	0.00057 U
Trifluorotrichloroethane (CFC-113)	mg/kg	4.1E+06	3.1E+08	NV	NV	NV	4.5E+05	7.2E+05	NV	NV	0.00077 U	0.00092 U	0.0009 U	0.00081 U	0.0009 U	0.00082 U	0.00077 U	0.0014 U	0.00073 U	0.00083 U
Vinyl chloride	mg/kg	1.6E+01	9.9E+02	2.0E-01	2.0E-01	2.0E-01	4.3E+00	7.7E+01	6.5E-01	NV	0.00055 U	0.00065 U	0.00064 U	0.00058 U	0.00065 U	0.00059 U	0.00055 U	0.001 U	0.00052 U	0.00059 U
Xylenes (total)	mg/kg	2.7E+04	2.0E+06	2.5E-02	3.8E-02	5.0E-02	2.0E+03	2.6E+03	1.0E+01	NV	0.001 U	0.0012 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.00099 U	0.0018 U	0.00094 U	0.0011 U
Semi-Volatile Organic Compounds (SVOCs)																				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	3.8E+03	1.8E+05	NV	NV	NV	1.2E+03	2.1E+04	2.0E+01	NV	0.04 U	0.021 U	0.021 U	0.19 U	0.083 U	0.021 U	0.019 U	0.078 U	0.091 U	0.019 U
2,4,5-Trichlorophenol	mg/kg	9.6E+03	4.4E+05	NV	NV	NV	3.0E+03	5.1E+04	1.4E+01	NV	0.1 U	0.056 U	0.056 U	0.51 U	0.22 U	0.055 U	0.051 U	0.2 U	0.24 U	0.051 U
2,4,6-Trichlorophenol	mg/kg	9.6E+01	4.4E+03	2.1E-01	2.1E-01	2.1E-01	3.0E+01	5.1E+02	9.9E+00	NV	0.037 U	0.02 U	0.02 U	0.18 U	0.078 U	0.02 U	0.018 U	0.073 U	0.086 U	0.018 U
2,4-Dichlorophenol	mg/kg	2.9E+02	1.3E+04	8.2E-02	8.2E-02	8.2E-02	8.9E+01	1.5E+03	8.8E+01	NV	0.083 U	0.045 U	0.045 U	0.41 U	0.17 U	0.044 U	0.041 U	0.16 U	0.19 U	0.041 U
2,4-Dimethylphenol	mg/kg	1.9E+03	8.8E+04	2.9E-01	3.0E-01	2.9E-01	5.9E+02	1.0E+04	1.0E-02	NV	0.083 U	0.045 U	0.045 U	0.41 U	0.17 U	0.044 U	0.041 U	0.16 U	0.19 U	0.041 U
2,4-Dinitrophenol	mg/kg	1.9E+02	8.8E+03	6.2E-03	6.2E-03	6.2E-03	5.9E+01	1.0E+03	6.1E-02	NV	0.087 U	0.047 U	0.047 U	0.43 U	0.18 U	0.046 U	0.043 U	0.17 U	0.2 U	0.043 U
2,4-Dinitrotoluene	mg/kg	7.8E+00	4.5E+02	1.4E-02	1.4E-02	1.4E-02	3.5E+00	5.3E+01	1.3E+00	NV	0.071 U	0.038 U	0.038 U	0.35 U	0.15 U	0.038 U	0.035 U	0.14 U	0.16 U	0.035 U
2,6-Dinitrotoluene	mg/kg	7.8E+00	4.5E+02	4.0E-02	4.0E-02	4.0E-02	3.5E+00	5.3E+01	3.3E-02	NV	0.087 U	0.047 U	0.047 U	0.43 U	0.18 U	0.046 U	0.043 U	0.17 U	0.2 U	0.043 U
2-Chloronaphthalene	mg/kg	7.7E+03	3.5E+05	4.2E-01	4.2E-01	4.2E-01	2.4E+03	4.1E+04	1.2E-02	NV	0.0019 U	0.001 U	0.001 U	0.0091 U	0.0039 U	0.00099 U	0.00092 U	0.0037 U	0.0043 U	0.00092 U
2-Chlorophenol	mg/kg	4.8E+02	2.2E+04	3.2E-02	3.2E-02	3.2E-02	1.5E+02	2.6E+03	2.4E-01	NV	0.034 U	0.018 U	0.018 U	0.17 U	0.071 U	0.018 U	0.017 U	0.067 U	0.079 U	0.017 U
2-Methylnaphthalene	mg/kg	3.8E+02	1.8E+04	2.0E-02	1.1E-01	2.0E-01	1.2E+02	2.1E+03	3.2E+00	NV	**0.023 J [c]**	**0.0087 J**	**0.03**	0.01 U	**0.04 J**	**0.022**	0.001 U	**0.1 [c]**	**0.1**	0.001 U
2-Methylphenol	mg/kg	4.8E+03	2.2E+05	6.7E+00	5.5E-02	6.7E+00	1.5E+03	2.6E+04	4.0E+01	NV	0.046 U	0.025 U	0.025 U	0.22 U	0.096 U	0.024 U	0.022 U	0.09 U	0.11 U	0.023 U

Table 3.1

Summary of Sediment Analytical Results
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Location:										SS-1	SS-1	SS-1	SS-2	SS-2	SS-2	SS-2	SS-3	SS-3	SS-3
Sample Identification:										**SE-031016-JN-021**	**SE-031016-JN-023**	**SE-031016-JN-022**	**SE-031016-JN-014**	**SE-031016-JN-016**	**SE-031016-JN-017**	**SE-031016-JN-015**	**SE-031016-JN-018**	**SE-031016-JN-020**	**SE-031016-JN-019**
Sample Date:										**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**
Sample Depth:										**(0-0.5) ft BGS**	**(0-3.5) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-2) ft BGS**	**(0-2) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-3.67) ft BGS**	**(0.5-2) ft BGS**
Sample Type:										**Shallow**	**Composite**	**Deep**	**Shallow**	**Composite**	**Duplicate**	**Deep**	**Shallow**	**Composite**	**Deep**
Photoionization Detector (PID) Reading (ppm) [1]										**0**	**0**	**0**	**28**	**28**	**28**	**0**	**150**	**150**	**7**
Applicable Screening Criteria		**Sediment Screening Criteria (Sed)[2]**					**Recreator Screening Criteria (Rec) [3]**	**Soil Screening Criteria (Soil) [4]**		**Toxicity Characteristic Leaching Procedure (TCLP) Criteria [5]**	**Sed/Soil/Rec**	**TCLP**	**Soil**	**Sed/Soil/Rec**	**Soil/TCLP**	**Soil/TCLP**	**Soil**	**Sed/Soil/Rec**	**TCLP**	**Soil**
		Site-specific Risk-based Screening Levels [6]		**WDNR Criteria [7]**			**Site-specific Risk-based Screening Levels [6]**	**Site-specific Risk-based Screening Levels [6]**	**Ecological Criteria [8]**	**Regulatory Level [9]**										
Parameters	**Units**	**Recreator Sediment Contact Screening Level [10] a**	**Maintenance Worker Sediment Contact Screening Level [10] b**	**Sediment TEC [11] c**	**Sediment MEC [11] d**	**Sediment PEC [11] e**	**Recreator Soil Contact Screening Level [10] f**	**Landscaper Soil Contact Screening Level [10] g**	**Soil Ecological Screening Level h**	**TCLP i**										
Semi-Volatile Organic Compounds (SVOCs) (Cont.d')																				
2-Nitroaniline	mg/kg	NV	NV	NV	NV	NV	2.4E+02	1.8E+02	7.4E+01	NV	0.038 U	0.02 U	0.021 U	0.18 U	0.079 U	0.02 U	0.019 U	0.074 U	0.088 U	0.019 U
2-Nitrophenol	mg/kg	NV	NV	NV	NV	NV	9.1E+01	7.0E+01	1.6E+00	NV	0.035 U	0.019 U	0.019 U	0.17 U	0.072 U	0.018 U	0.017 U	0.068 U	0.08 U	0.017 U
3&4-Methylphenol	mg/kg	4.8E+02	2.2E+04	NV	NV	NV	1.5E+02	2.6E+03	NV	NV	0.083 U	0.045 U	0.045 U	0.41 U	0.17 U	**0.077 J**	0.041 U	0.16 U	0.19 U	0.041 U
3,3'-Dichlorobenzidine	mg/kg	1.2E+01	6.9E+02	1.3E-01	1.3E-01	1.3E-01	5.2E+00	8.0E+01	6.5E-01	NV	0.075 U	0.04 U	0.041 U	0.37 U	0.16 U	0.04 U	0.037 U	0.15 U	0.17 U	0.037 U
3-Nitroaniline	mg/kg	NV	NV	NV	NV	NV	NV	NV	3.2E+00	NV	0.067 U	0.036 U	0.036 U	0.32 U	0.14 U	0.035 U	0.033 U	0.13 U	0.15 U	0.033 U
4,6-Dinitro-2-methylphenol	mg/kg	7.7E+01	3.5E+03	1.0E-01	1.0E-01	1.0E-01	2.4E+01	4.1E+02	1.4E-01	NV	0.038 U	0.021 U	0.021 U	0.19 U	0.08 U	0.02 U	0.019 U	0.075 U	0.089 U	0.019 U
4-Bromophenyl phenyl ether	mg/kg	NV	NV	1.6E+00	1.6E+00	1.6E+00	NV	NV	NV	NV	0.054 U	0.029 U	0.029 U	0.26 U	0.11 U	0.029 U	0.026 U	0.11 U	0.13 U	0.027 U
4-Chloro-3-methylphenol	mg/kg	1.9E+05	8.8E+06	3.9E-01	3.9E-01	3.9E-01	5.9E+04	1.0E+06	8.0E+00	NV	0.087 U	0.047 U	0.047 U	0.43 U	0.18 U	0.046 U	0.043 U	0.17 U	0.2 U	0.043 U
4-Chloroaniline	mg/kg	2.7E+01	1.5E+03	1.5E-01	1.5E-01	1.5E-01	1.2E+01	1.8E+02	1.1E+00	NV	0.071 U	0.038 U	0.038 U	0.35 U	0.15 U	0.038 U	0.035 U	0.14 U	0.16 U	0.035 U
4-Chlorophenyl phenyl ether	mg/kg									NV	0.054 U	0.029 U	0.029 U	0.26 U	0.11 U	0.029 U	0.026 U	0.11 U	0.13 U	0.027 U
4-Nitroaniline	mg/kg	2.7E+02	1.5E+04	NV	NV	NV	1.2E+02	1.7E+03	2.2E+01	NV	0.11 U	0.058 U	0.059 U	0.53 U	0.23 U	0.057 U	0.053 U	0.21 U	0.25 U	0.053 U
4-Nitrophenol	mg/kg	NV	NV	1.3E-02	1.3E-02	1.3E-02	NV	NV	5.1E+00	NV	0.071 U	0.038 U	0.038 U	0.35 U	0.15 U	0.038 U	0.035 U	0.14 U	0.16 U	0.035 U
Acenaphthene	mg/kg	5.3E+03	2.3E+05	6.7E-03	4.8E-02	8.9E-02	1.7E+03	2.8E+04	6.8E+02	NV	--	0.0017 U	**0.051**	--	0.0066 U	**0.013 J**	0.0015 U	--	**0.057 J**	0.0016 U
Acenaphthylene	mg/kg	2.6E+03	1.1E+05	5.9E-03	6.7E-02	1.3E-01	8.4E+02	1.4E+04	6.8E+02	NV	--	**0.011 J**	**0.032**	--	**0.035 J**	**0.02**	0.00071 U	--	0.0034 U	**0.0085 J**
Acetophenone	mg/kg	9.6E+03	4.4E+05	NV	NV	NV	3.0E+03	5.1E+04	3.0E+02	NV	0.038 U	0.021 U	0.021 U	0.19 U	0.08 U	0.02 U	0.019 U	0.075 U	0.089 U	0.019 U
Anthracene	mg/kg	2.6E+04	1.1E+06	5.7E-02	4.5E-01	8.5E-01	8.4E+03	1.4E+05	1.5E+03	NV	--	**0.025**	**0.15**	--	**0.076**	**0.053**	**0.0083 J**	--	**0.14**	**0.024**
Atrazine	mg/kg	2.4E+01	1.4E+03	NV	NV	NV	1.1E+01	1.6E+02	NV	NV	0.038 U	0.02 U	0.021 U	0.18 U	0.079 U	0.02 U	0.019 U	0.074 U	0.088 U	0.019 U
Benzaldehyde	mg/kg	9.6E+03	4.4E+05	NV	NV	NV	3.0E+03	5.1E+04	NV	NV	0.05 U	0.027 U	0.027 U	0.24 U	0.1 U	**0.038 J**	0.024 U	0.098 U	0.12 U	0.025 U
Benzo(a)anthracene	mg/kg	1.9E+00	9.8E+02	1.1E-01	5.8E-01	1.1E+00	7.2E-01	4.4E+01	5.2E+00	NV	--	**0.086**	**0.31**	--	**0.26**	**0.15**	**0.024**	--	**0.3**	**0.056**
Benzo(a)pyrene	mg/kg	1.9E-01	9.8E+01	1.5E-01	8.0E-01	1.5E+00	7.2E-02	4.4E+00	1.5E+00	NV	--	**0.082**	**0.24**	--	**0.24**	**0.13**	**0.019**	--	**0.26**	**0.049**
Benzo(b)fluoranthene	mg/kg	1.9E+00	9.8E+02	2.4E-01	6.8E+00	1.3E+01	7.2E-01	4.4E+01	6.0E+01	NV	--	**0.1**	**0.27**	--	**0.27**	**0.18**	**0.025**	--	**0.29**	**0.049**
Benzo(g,h,i)perylene	mg/kg	2.6E+03	1.1E+05	1.7E-01	1.7E+00	3.2E+00	8.4E+02	1.4E+04	1.2E+02	NV	--	**0.06**	**0.15**	--	**0.15**	**0.095**	**0.01 J**	--	**0.17**	**0.03**
Benzo(k)fluoranthene	mg/kg	1.9E+01	9.8E+03	2.4E-01	6.8E+00	1.3E+01	7.2E+00	4.4E+02	1.5E+02	NV	--	**0.033**	**0.17**	--	**0.17 J**	**0.053 J**	0.0014 U	--	**0.15**	**0.031**
Biphenyl (1,1-Biphenyl)	mg/kg	6.5E+02	3.8E+04	NV	NV	NV	2.9E+02	4.4E+03	NV	NV	0.015 U	0.0078 U	0.0079 U	0.071 U	0.03 U	0.0077 U	0.0071 U	0.029 U	0.034 U	0.0072 U
bis(2-Chloroethoxy)methane	mg/kg	2.9E+02	1.3E+04	NV	NV	NV	8.9E+01	1.5E+03	3.0E-01	NV	0.092 U	0.049 U	0.05 U	0.45 U	0.19 U	0.049 U	0.045 U	0.18 U	0.21 U	0.045 U
bis(2-Chloroethyl)ether	mg/kg	4.8E+00	2.8E+02	3.5E+00	3.5E+00	3.5E+00	1.9E+00	1.5E+01	2.4E+01	NV	0.0083 U	0.0045 U	0.0045 U	0.041 U	0.017 U	0.0044 U	0.0041 U	0.016 U	0.019 U	0.0041 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	3.8E+02	2.2E+04	1.8E-01	1.8E-01	1.8E-01	1.7E+02	2.6E+03	9.3E-01	NV	0.079 U	0.042 U	0.043 U	0.39 U	0.17 U	0.042 U	0.039 U	0.16 U	0.18 U	0.039 U
Butyl benzylphthalate (BBP)	mg/kg	2.8E+03	1.6E+05	2.0E+00	2.0E+00	2.0E+00	1.2E+03	1.9E+04	2.4E-01	NV	**2.3[cdeh]**	**0.038 J**	0.023 U	0.2 U	0.087 U	0.022 U	0.02 U	**0.13 J**	0.096 U	0.021 U
Caprolactam	mg/kg	4.8E+04	2.2E+06	NV	NV	NV	2.4E+03	2.2E+03	NV	NV	0.15 U	0.083 U	0.083 U	0.75 U	0.32 U	0.082 U	0.075 U	0.3 U	0.36 U	0.076 U
Carbazole	mg/kg	2.7E+02	1.5E+04	NV	NV	NV	1.2E+02	1.8E+03	NV	NV	0.11 U	0.06 U	0.061 U	0.55 U	0.24 U	0.06 U	0.055 U	0.22 U	0.26 U	0.055 U
Chrysene	mg/kg	1.9E+02	9.8E+04	1.7E-01	7.3E-01	1.3E+00	7.2E+01	4.4E+03	4.7E+00	NV	--	**0.1**	**0.32**	--	**0.33**	**0.19**	**0.028**	--	**0.4**	**0.064**
Dibenz(a,h)anthracene	mg/kg	1.9E-01	9.8E+01	3.3E-02	8.4E-02	1.4E-01	7.2E-02	4.4E+00	1.8E+01	NV	--	0.0015 U	**0.035**	--	0.0057 U	0.0015 U	0.0013 U	--	0.0064 U	0.0014 U
Dibenzofuran	mg/kg	3.8E+02	1.8E+04	1.5E-01	3.7E-01	5.8E-01	1.2E+02	2.1E+03	NV	NV	0.0027 U	0.0015 U	**0.039 J**	0.013 U	0.0057 U	**0.019 J**	0.0013 U	**0.062 J**	0.0064 U	0.0014 U
Diethyl phthalate	mg/kg	7.7E+04	3.5E+06	6.1E-01	8.6E-01	1.1E+00	2.4E+04	4.1E+05	2.5E+01	NV	0.067 U	0.036 U	0.036 U	0.32 U	0.14 U	0.035 U	0.033 U	0.13 U	0.15 U	0.033 U
Dimethyl phthalate	mg/kg	NV	NV	5.3E-01	NV	5.3E-01	NV	NV	7.3E+02	NV	0.071 U	0.038 U	0.038 U	0.35 U	0.15 U	0.038 U	0.035 U	0.14 U	0.16 U	0.035 U
Di-n-butylphthalate (DBP)	mg/kg	9.6E+03	4.4E+05	2.2E+00	9.6E+00	1.7E+01	3.0E+03	5.1E+04	1.5E-01	NV	**0.15 J**	0.033 U	0.034 U	0.3 U	0.13 U	**0.034 J**	0.031 U	**0.13 J**	**0.17 J**	0.031 U
Di-n-octyl phthalate (DnOP)	mg/kg	3.8E+03	1.8E+05	5.8E-01	2.3E+01	4.5E+01	1.2E+03	2.1E+04	7.1E+02	NV	0.033 U	0.018 U	0.018 U	0.16 U	0.069 U	0.017 U	0.016 U	0.064 U	0.076 U	0.016 U
Fluoranthene	mg/kg	3.5E+03	1.5E+05	4.2E-01	1.3E+00	2.2E+00	1.1E+03	1.8E+04	1.2E+02	NV	--	**0.19**	**0.69**	--	**0.6**	**0.35**	**0.045**	--	**0.7**	**0.12**
Fluorene	mg/kg	3.5E+03	1.5E+05	7.7E-02	3.1E-01	5.4E-01	1.1E+03	1.8E+04	1.2E+02	NV	--	**0.014 J**	**0.081**	--	0.0046 U	**0.028**	0.0011 U	--	**0.052 J**	**0.014**
Hexachlorobenzene	mg/kg	3.3E+00	1.9E+02	2.0E-02	2.0E-02	2.0E-02	1.4E+00	1.9E+01	2.0E-01	NV	0.0087 U	0.0047 U	0.0047 U	0.043 U	0.018 U	0.0046 U	0.0043 U	0.017 U	0.02 U	0.0043 U
Hexachlorobutadiene	mg/kg	6.8E+01	4.0E+03	2.7E-02	2.7E-02	2.7E-02	2.8E+01	2.8E+02	4.0E-02	NV	0.023 U	0.013 U	0.013 U	0.11 U	0.049 U	0.012 U	0.011 U	0.046 U	0.054 U	0.011 U
Hexachlorocyclopentadiene	mg/kg	5.7E+02	2.6E+04	9.0E-01	9.0E-01	9.0E-01	5.0E+01	5.3E+01	7.6E-01	NV	0.034 U	R	0.018 U	0.16 U	0.071 U	0.018 U	0.016 U	0.066 U	0.078 U	0.017 U
Hexachloroethane	mg/kg	6.7E+01	3.1E+03	5.8E-01	5.8E-01	5.8E-01	2.1E+01	3.3E+02	6.0E-01	NV	0.037 U	0.02 U	0.02 U	0.18 U	0.078 U	0.02 U	0.018 U	0.073 U	0.087 U	0.018 U
Indeno(1,2,3-cd)pyrene	mg/kg	1.9E+00	9.8E+02	2.0E-01	1.7E+00	3.2E+00	7.2E-01	4.4E+01	1.1E+02	NV	--	**0.052**	**0.12**	--	**0.14**	**0.079**	**0.012 J**	--	**0.14**	**0.023**
Isophorone	mg/kg	5.6E+03	3.2E+05	4.3E-01	4.3E-01	4.3E-01	2.5E+03	3.8E+04	1.4E+02	NV	0.054 U	0.029 U	**0.031 J**	0.26 U	0.11 U	0.029 U	0.026 U	0.11 U	0.13 U	0.027 U
Naphthalene	mg/kg	1.8E+03	7.5E+04	1.8E-01	3.7E-01	5.6E-01	2.0E+02	2.9E+02	9.9E-02	NV	--	**0.012 J**	**0.033**	--	**0.059**	**0.033**	0.0017 U	--	**0.15**	**0.0091 J**
Nitrobenzene	mg/kg	1.9E+02	8.8E+03	1.5E-01	1.5E-01	1.5E-01	5.6E+01	2.6E+02	1.3E+00	NV	0.0092 U	0.0049 U	0.005 U	0.045 U	0.019 U	0.0049 U	0.0045 U	0.018 U	0.021 U	0.0045 U
N-Nitrosodi-n-propylamine	mg/kg	7.6E-01	4.4E+01	NV	NV	NV	3.4E-01	5.1E+00	5.4E-01	NV	0.026 U	0.014 U	0.014 U	0.13 U	0.055 U	0.014 U	0.013 U	0.051 U	0.061 U	0.013 U
N-Nitrosodiphenylamine	mg/kg	1.1E+03	6.3E+04	NV	NV	NV	4.8E+02	7.3E+03	5.5E-01	NV	0.087 U	0.047 U	0.047 U	0.43 U	0.18 U	0.046 U	0.043 U	0.17 U	0.2 U	0.043 U
Pentachlorophenol	mg/kg	7.5E+00	4.2E+02	1.5E-01	1.8E-01	2.0E-01	4.3E+00	5.6E+01	2.1E+00	NV	0.038 U	0.02 U	0.021 U	0.18 U	0.079 U	0.02 U	0.019 U	0.074 U	0.088 U	0.019 U
Phenanthrene	mg/kg	2.6E+03	1.1E+05	2.0E-01	6.9E-01	1.2E+00	8.4E+02	1.4E+04	4.6E+01	NV	--	**0.11**	**0.55**	--	**0.36**	**0.25**	**0.036**	--	**0.54**	**0.098**
Phenol	mg/kg	2.9E+04	1.3E+06	4.2E+00	8.1E+00	1.2E+01	8.9E+03	1.5E+05	1.2E+02	NV	0.03 U	0.016 U	0.016 U	0.15 U	0.064 U	**0.032 J**	**0.026 J**	0.06 U	0.07 U	**0.024 J**
Pyrene	mg/kg	2.6E+03	1.1E+05	2.0E-01	8.6E-01	1.5E+00	8.4E+02	1.4E+04	7.9E+01	NV	--	**0.19**	**0.67**	--	**0.58**	**0.36**	**0.049**	--	**0.66**	**0.12**
Selected Ion Monitoring (SIM) SVOCs [13]																				
Acenaphthene	mg/kg	5.3E+03	2.3E+05	6.7E-03	4.8E-02	8.9E-02	1.7E+03	2.8E+04	6.8E+02	NV	**0.0408[c]**	--	--	**0.0248[c]**	--	--	--	**0.124[cde]**	--	--
Acenaphthylene	mg/kg	2.6E+03	1.1E+05	5.9E-03	6.7E-02	1.3E-01	8.4E+02	1.4E+04	6.8E+02	NV	**0.0873[cd]**	--	--	**0.0891[cd]**	--	--	--	**0.071[cd]**	--	--
Anthracene	mg/kg	2.6E+04	1.1E+06	5.7E-02	4.5E-01	8.5E-01	8.4E+03	1.4E+05	1.5E+03	NV	**0.178[c]**	--	--	**0.106[c]**	--	--	--	**0.321[c]**	--	--
Benzo(a)anthracene	mg/kg	1.9E+00	9.8E+02	1.1E-01	5.8E-01	1.1E+00	7.2E-01	4.4E+01	5.2E+00	NV	**0.396[c]**	--	--	**0.212[c]**	--	--	--	**0.57[c]**	--	--
Benzo(a)pyrene	mg/kg	1.9E-01	9.8E+01	1.5E-01	8.0E-01	1.5E+00	7.2E-02	4.4E+00	1.5E+00	NV	**0.44[ac]**	--	--	**0.251[ac]**	--	--	--	**0.53[ac]**	--	--
Benzo(b)fluoranthene	mg/kg	1.9E+00	9.8E+02	2.4E-01	6.8E+00	1.3E+01	7.2E-01	4.4E+01	6.0E+01	NV	**0.335[c]**	--	--	**0.2**	--	--	--	**0.488[c]**	--	--
Benzo(e)pyrene	mg/kg	NV	NV	1.5E-01	8.0E-01	1.5E+00	NV	NV	NV	NV	**0.258[c]**	--	--	**0.158[c]**	--	--	--	**0.367[c]**	--	--

Table 3.1

Summary of Sediment Analytical Results
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Location:											SS-1	SS-1	SS-1	SS-2	SS-2	SS-2	SS-2	SS-3	SS-3	SS-3
Sample Identification:											SE-031016-JN-021	SE-031016-JN-023	SE-031016-JN-022	SE-031016-JN-014	SE-031016-JN-016	SE-031016-JN-017	SE-031016-JN-015	SE-031016-JN-018	SE-031016-JN-020	SE-031016-JN-019
Sample Date:											3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:											(0-0.5) ft BGS	(0-3.5) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-3.67) ft BGS	(0.5-2) ft BGS
Sample Type:											Shallow	Composite	Deep	Shallow	Composite	Duplicate	Deep	Shallow	Composite	Deep
Photoionization Detector (PID) Reading (ppm) [1]											0	0	0	28	28	28	0	150	150	7
Applicable Screening Criteria		**Sediment Screening Criteria (Sed)**[2]					**Recreator Screening Criteria (Rec)** [3]	**Soil Screening Criteria (Soil)** [4]		**Toxicity Characteristic Leaching Procedure (TCLP) Criteria** [5]	Sed/Soil/Rec	TCLP	Soil	Sed/Soil/Rec	Soil/TCLP	Soil/TCLP	Soil	Sed/Soil/Rec	TCLP	Soil
		Site-specific Risk-based Screening Levels [6]		**WDNR Criteria** [7]			**Site-specific Risk-based Screening Levels** [6]	**Site-specific Risk-based Screening Levels** [6]	**Ecological Criteria** [8]	**Regulatory Level** [9]										
Parameters	**Units**	**Recreator Sediment Contact Screening Level** [10] **a**	**Maintenance Worker Sediment Contact Screening Level** [10] **b**	**Sediment TEC** [11] **c**	**Sediment MEC** [11] **d**	**Sediment PEC** [11] **e**	**Recreator Soil Contact Screening Level** [10] **f**	**Landscaper Soil Contact Screening Level** [10] **g**	**Soil Ecological Screening Level h**	**TCLP i**										
Selected Ion Monitoring (SIM) SVOCs (Cont.d')																				
Benzo(g,h,i)perylene	mg/kg	2.6E+03	1.1E+05	1.7E-01	1.7E+00	3.2E+00	8.4E+02	1.4E+04	1.2E+02	NV	0.24[c]	--	--	0.152	--	--	--	0.313[c]	--	--
Benzo(j)fluoranthene/Benzo(k)fluoranthene	mg/kg	1.9E+01	9.8E+03	2.4E-01	6.8E+00	1.3E+01	7.2E+00	4.4E+02	1.5E+02	NV	0.349[c]	--	--	0.196	--	--	--	0.442[c]	--	--
C1-Benzo(a)anthracenes/chrysenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.169	--	--	0.149	--	--	--	0.622	--	--
C1-Fluoranthenes/Pyrenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.356	--	--	0.224	--	--	--	0.86	--	--
C1-Fluorenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.027	--	--	0.0239	--	--	--	0.138	--	--
C1-Naphthalenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0189	--	--	0.0226	--	--	--	0.18	--	--
C1-Phenanthrenes/Anthracenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.218	--	--	0.181	--	--	--	0.992	--	--
C2-Benzo(a)anthracenes/chrysenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0737	--	--	0.0961	--	--	--	0.552	--	--
C2-Fluorenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0323	--	--	0.0515	--	--	--	0.406	--	--
C2-Naphthalenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0408	--	--	0.0539	--	--	--	0.749	--	--
C2-Phenanthrenes/Anthracenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.111	--	--	0.174	--	--	--	1.71	--	--
C3-Benzo(a)anthracenes/chrysenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0347	--	--	0.0641	--	--	--	0.426	--	--
C3-Fluorenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0584	--	--	0.0921	--	--	--	0.665	--	--
C3-Naphthalenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0386	--	--	0.0515	--	--	--	0.826	--	--
C3-Phenanthrenes/Anthracenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0569	--	--	0.135	--	--	--	1.73	--	--
C4-Benzo(a)anthracenes/chrysenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0254	--	--	0.0438	--	--	--	0.324	--	--
C4-Naphthalenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0228	--	--	0.0589	--	--	--	0.503	--	--
C4-Phenanthrenes/Anthracenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0327	--	--	0.0816	--	--	--	1.01	--	--
Chrysene/Triphenylene	mg/kg	1.9E+02	9.8E+04	1.7E-01	7.3E-01	1.3E+00	7.2E+01	4.4E+03	4.7E+00	NV	0.433[c]	--	--	0.252[c]	--	--	--	0.761[c]	--	--
Dibenz(a,h)anthracene	mg/kg	1.9E-01	9.8E+01	3.3E-02	8.4E-02	1.4E-01	7.2E-02	4.4E+00	1.8E+01	NV	0.0667[c]	--	--	0.0447[c]	--	--	--	0.0929[cd]	--	--
Fluoranthene	mg/kg	3.5E+03	1.5E+05	4.2E-01	1.3E+00	2.2E+00	1.1E+03	1.8E+04	1.2E+02	NV	0.879[c]	--	--	0.445[c]	--	--	--	1.25[c]	--	--
Fluorene	mg/kg	3.5E+03	1.5E+05	7.7E-02	3.1E-01	5.4E-01	1.1E+03	1.8E+04	1.2E+02	NV	0.0518	--	--	0.0289	--	--	--	0.136[c]	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	1.9E+00	9.8E+02	2.0E-01	1.7E+00	3.2E+00	7.2E-01	4.4E+01	1.1E+02	NV	0.227[c]	--	--	0.141	--	--	--	0.295[c]	--	--
Naphthalene	mg/kg	1.8E+03	7.5E+04	1.8E-01	3.7E-01	5.6E-01	2.0E+02	2.9E+02	9.9E-02	NV	0.0203	--	--	0.0236	--	--	--	0.332[ch]	--	--
Perylene	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.201	--	--	0.28	--	--	--	0.221	--	--
Phenanthrene	mg/kg	2.6E+03	1.1E+05	2.0E-01	6.9E-01	1.2E+00	8.4E+02	1.4E+04	4.6E+01	NV	0.478[c]	--	--	0.309[c]	--	--	--	1.09[cd]	--	--
Pyrene	mg/kg	2.6E+03	1.1E+05	2.0E-01	8.6E-01	1.5E+00	8.4E+02	1.4E+04	7.9E+01	NV	0.756[c]	--	--	0.403[c]	--	--	--	1.13[cd]	--	--
Total PAHs	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	4.6549	1.065	3.872	2.8681	3.27	1.984	0.2563	7.3309	4.009	0.6956
Metals																				
Antimony	mg/kg	5.5E+01	4.1E+03	2.0E+00	1.4E+01	2.5E+01	1.5E+01	3.4E+02	2.7E-01	NV	0.44 J[h]	0.12 J	0.13 J	0.27 J	0.17 J	0.89[h]	0.078 J	0.35 J[h]	0.57 J	0.082 J
Arsenic	mg/kg	5.6E+00	3.4E+02	9.8E+00	2.1E+01	3.3E+01	1.9E+00	3.2E+01	1.8E+01	NV	4.6[f]	3.5	4.5	6.2[af]	5.2	5.6	3.9	6.2[af]	6.2	3.8
Barium	mg/kg	2.7E+04	2.0E+06	NV	NV	NV	7.6E+03	1.7E+05	3.3E+02	NV	89.5	101	113	153	136	128	142	171	156	116
Beryllium	mg/kg	2.7E+02	2.0E+04	NV	NV	NV	7.6E+01	7.9E+02	2.1E+01	NV	0.38 J	0.64 J	0.57 J	0.53	0.68	0.49	0.57	0.31 J	0.58 J	0.44
Cadmium	mg/kg	1.2E+02	6.7E+03	9.9E-01	3.0E+00	5.0E+00	3.4E+01	3.5E+02	3.6E-01	NV	0.88[h]	0.42	0.52[h]	0.62[h]	0.39[h]	0.56[h]	0.29 J	0.96[h]	0.77	0.43[h]
Chromium (total)	mg/kg	2.2E+01	1.4E+03	4.3E+01	7.7E+01	1.1E+02	6.2E+00	9.3E+01	4.0E-01	NV	20.5[fh]	16.3	15.7[h]	NA [12]	NA [12]	NA [12]	NA [12]	NA [12]	NA [12]	NA [12]
Chromium III	mg/kg	2.1E+05	1.5E+07	NV	NV	NV	5.7E+04	2.8E+05	NV	NV	NA	NA	NA	20.4	16.8	17.6	17.0	20.0	19.0	15.1
Cobalt	mg/kg	4.1E+01	3.1E+03	5.0E+01	5.0E+01	5.0E+01	1.1E+01	1.6E+02	1.3E+01	NV	5.0	5.4	6.0	5.7	6.1	7.3	5.9	3.9	5.1	5.6
Copper	mg/kg	5.5E+03	4.1E+05	3.2E+01	9.1E+01	1.5E+02	1.5E+03	3.4E+04	2.8E+01	NV	16.7	13.7	18.3	26.4	18.0	20.8	15.4	27.1	25.0	15.2
Lead	mg/kg	4.3E+03	NV	3.6E+01	8.3E+01	1.3E+02	4.3E+03	2.2E+03	1.1E+01	NV	99.9[cdh]	26.1	43.7[h]	137[cdeh]	54.5[h]	99.2[h]	21.4[h]	294[cdeh]	213	37.6[h]
Manganese	mg/kg	1.9E+04	1.4E+06	4.6E+02	7.8E+02	1.1E+03	5.3E+03	3.5E+03	2.2E+02	NV	239[h]	242	246[h]	355[h]	352[h]	363[h]	343[h]	324[h]	409	384[h]
Mercury	mg/kg	4.1E+01	3.1E+03	1.8E-01	6.4E-01	1.1E+00	1.1E+01	9.5E+01	1.0E-01	NV	4.9[cdeh]	3.1	12.3[h]	27.5[cdefh]	2.8 J[h]	13.6 J[h]	0.93[h]	2.4[cdeh]	3.1	1.5[h]
Methyl mercury	mg/kg	1.4E+01	1.0E+03	1.0E-05	1.0E-05	1.0E-05	3.8E+00	8.5E+01	1.6E-03	NV	0.0015[cde]	--	--	0.00097[cde]	--	--	--	0.0012[cde]	--	--
Nickel	mg/kg	2.7E+03	2.0E+05	2.3E+01	3.6E+01	4.9E+01	7.6E+02	4.7E+03	3.8E+01	NV	11.6	11.8	12.8	13.7	12.7	13.3	13.5	8.5	10.6	11.4
Selenium	mg/kg	6.8E+02	5.1E+04	NV	NV	NV	1.9E+02	4.2E+03	5.2E-01	NV	1.5 J[h]	1.7 J	1.8 J[h]	1.5 J[h]	1.4 J[h]	1.6 J[h]	1.4 J[h]	1.2 J[h]	1.6 J	1.5 J[h]
Silver	mg/kg	6.8E+02	5.1E+04	1.6E+00	1.9E+00	2.2E+00	1.9E+02	6.2E+02	4.2E+00	NV	0.24 J	0.11 J	0.15 J	0.15 J	0.097 J	0.14 J	0.080 J	0.19 J	0.18 J	0.077 J
Thallium	mg/kg	NV	NV	NV	NV	NV	NV	NV	5.7E-02	NV	0.14 J[h]	0.20 J	0.21 J[h]	0.21 J[h]	0.16 J[h]	0.20 J[h]	0.16 J[h]	0.12 J[h]	0.19 J	0.13 J[h]
Vanadium	mg/kg	6.8E+02	5.1E+04	NV	NV	NV	1.9E+02	2.7E+03	7.8E+00	NV	14.9[h]	20.2	20.5[h]	21.5[h]	19.5[h]	20.3[h]	22.4[h]	12.8[h]	17.8	17.6[h]
Zinc	mg/kg	4.1E+04	3.1E+06	1.2E+02	2.9E+02	4.6E+02	1.1E+04	2.6E+05	4.6E+01	NV	101[h]	61.9	91.1[h]	213[ch]	101[h]	118[h]	68.1[h]	289[ch]	203	75.2[h]
Simultaneously Extracted Metals (SEM)																				
Cadmium	mg/kg	1.2E+02	6.7E+03	9.9E-01	3.0E+00	5.0E+00	3.4E+01	3.5E+02	3.6E-01	NV	0.94[h]	--	--	0.64[h]	--	--	--	0.80[h]	--	--
Copper	mg/kg	5.5E+03	4.1E+05	3.2E+01	9.1E+01	1.5E+02	1.5E+03	3.4E+04	2.8E+01	NV	17.0 J	--	--	12.6 J	--	--	--	10 J	--	--
Lead	mg/kg	4.3E+03	NV	3.6E+01	8.3E+01	1.3E+02	4.3E+03	2.2E+03	1.1E+01	NV	83.5[ch]	--	--	101[cdh]	--	--	--	120[cdh]	--	--
Mercury	mg/kg	4.1E+01	3.1E+03	1.8E-01	6.4E-01	1.1E+00	1.1E+01	9.5E+01	1.0E-01	NV	0.033	--	--	0.0029 U	--	--	--	0.0023 J	--	--
Nickel	mg/kg	2.7E+03	2.0E+05	2.3E+01	3.6E+01	4.9E+01	7.6E+02	4.7E+03	3.8E+01	NV	7.9	--	--	7.6	--	--	--	4.5	--	--
Silver	mg/kg	6.8E+02	5.1E+04	1.6E+00	1.9E+00	2.2E+00	1.9E+02	6.2E+02	4.2E+00	NV	R	--	--	R	--	--	--	R	--	--
SEM/Acid-volatile sulfide ratio (AVS)	none	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00100 NC	--	--	0.220	--	--	--	0.243	--	--
Zinc	mg/kg	4.1E+04	3.1E+06	1.2E+02	2.9E+02	4.6E+02	1.1E+04	2.6E+05	4.6E+01	NV	91.0[h]	--	--	123[h]	--	--	--	115[h]	--	--

Table 3.1

Summary of Sediment Analytical Results
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Location:										SS-1	SS-1	SS-1	SS-2	SS-2	SS-2	SS-2	SS-3	SS-3	SS-3
Sample Identification:										**SE-031016-JN-021**	**SE-031016-JN-023**	**SE-031016-JN-022**	**SE-031016-JN-014**	**SE-031016-JN-016**	**SE-031016-JN-017**	**SE-031016-JN-015**	**SE-031016-JN-018**	**SE-031016-JN-020**	**SE-031016-JN-019**
Sample Date:										**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**
Sample Depth:										**(0-0.5) ft BGS**	**(0-3.5) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-2) ft BGS**	**(0-2) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-3.67) ft BGS**	**(0.5-2) ft BGS**
Sample Type:										**Shallow**	**Composite**	**Deep**	**Shallow**	**Composite**	**Duplicate**	**Deep**	**Shallow**	**Composite**	**Deep**
Photoionization Detector (PID) Reading (ppm) [1]										**0**	**0**	**0**	**28**	**28**	**28**	**0**	**150**	**150**	**7**
Applicable Screening Criteria		**Sediment Screening Criteria (Sed)[2]**					**Recreator Screening Criteria (Rec) [3]**	**Soil Screening Criteria (Soil) [4]**		**Toxicity Characteristic Leaching Procedure (TCLP) Criteria [5]**	**Sed/Soil/Rec**	**TCLP**	**Soil**	**Sed/Soil/Rec**	**Soil/TCLP**	**Soil/TCLP**	**Soil**	**Sed/Soil/Rec**	**TCLP**	**Soil**
		Site-specific Risk-based Screening Levels [6]		**WDNR Criteria [7]**			**Site-specific Risk-based Screening Levels [6]**	**Site-specific Risk-based Screening Levels [6]**	**Ecological Criteria [8]**	**Regulatory Level [9]**									
Parameters	**Units**	**Recreator Sediment Contact Screening Level [10]**	**Maintenance Worker Sediment Contact Screening Level [10]**	**Sediment TEC [11]**	**Sediment MEC [11]**	**Sediment PEC [11]**	**Recreator Soil Contact Screening Level [10]**	**Landscaper Soil Contact Screening Level [10]**	**Soil Ecological Screening Level**	**TCLP**									
		a	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**									
TCLP Metals																			
Arsenic	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	5.0E+00	--	**0.0076 J**	--	--	**0.030 J**	**0.025 J**	--	--	**0.036 J**	--
Barium	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	1.0E+02	--	**0.75 J**	--	--	**1.2 J**	**1.1 J**	--	--	**1.2 J**	--
Cadmium	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	1.0E+00	--	**0.00061 J**	--	--	**0.0031 J**	**0.0033 J**	--	--	**0.0049 J**	--
Chromium	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	5.0E+00	--	**0.0035 J**	--	--	**0.0044 J**	**0.0046 J**	--	--	**0.0060 J**	--
Lead	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	5.0E+00	--	0.0019 U	--	--	**0.078 J**	**0.046 J**	--	--	**0.18 J**	--
Mercury	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	2.0E-01	--	0.000090 U	--	--	0.000090 U	0.000090 U	--	--	0.000090 U	--
Selenium	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	1.0E+00	--	0.0040 U	--	--	0.0040 U	0.0040 U	--	--	0.0040 U	--
Silver	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	5.0E+00	--	0.00092 U	--	--	**0.0010 J**	**0.0015 J**	--	--	**0.0014 J**	--
Polychlorinated Biphenyls (PCBs)																			
Aroclor-1016 (PCB-1016)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.025 U	0.14 U	0.027 U	0.024 U	0.027 U	0.026 U	0.024 U	0.024 U	0.023 U	0.024 U
Aroclor-1221 (PCB-1221)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.034 U	0.18 U	0.035 U	0.032 U	0.036 U	0.035 U	0.032 U	0.032 U	0.031 U	0.032 U
Aroclor-1232 (PCB-1232)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.042 U	0.23 U	0.044 U	0.04 U	0.045 U	0.043 U	0.041 U	0.04 U	0.038 U	0.04 U
Aroclor-1242 (PCB-1242)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.023 U	0.12 U	0.024 U	0.022 U	0.025 U	0.024 U	0.022 U	0.022 U	0.021 U	0.022 U
Aroclor-1248 (PCB-1248)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.017 U	0.09 U	0.018 U	0.016 U	0.018 U	0.017 U	0.016 U	0.016 U	0.015 U	0.016 U
Aroclor-1254 (PCB-1254)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**0.047 J**	0.16 U	0.031 U	0.028 U	0.031 U	0.03 U	0.028 U	**0.18 J**	0.027 U	0.028 U
Aroclor-1260 (PCB-1260)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.019 U	0.1 U	0.02 U	0.018 U	0.02 U	0.02 U	0.018 U	0.018 U	0.017 U	0.018 U
Aroclor-1262 (PCB-1262)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.021 U	0.11 U	0.022 U	0.02 U	0.022 U	0.022 U	0.02 U	0.02 U	0.019 U	0.02 U
Aroclor-1268 (PCB-1268)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.027 U	0.15 U	0.029 U	0.026 U	0.029 U	0.028 U	0.026 U	0.026 U	0.025 U	0.026 U
Total PCBs	mg/kg	1.7E+00	7.2E+01	6.0E-02	3.7E-01	6.8E-01	5.5E-01	8.9E+00	3.3E-04	NV	**0.047 J[h]**	ND	ND	ND	ND	ND	ND	**0.18 J[ch]**	ND	ND
General Chemistry																			
Black carbon	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**21000**	--	--	**13600**	--	--	--	**11400**	--	--
Sulfide (acid soluble) [12]	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	7.1 U	--	--	**393**	--	--	--	**340**	--	--
Sulfide (acid soluble) [12]	umol/g	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.22 U	--	--	**12.3**	--	--	--	**10.6**	--	--
Total organic carbon (TOC)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**46300**	**66800**	**49100**	**71900**	**64100**	**53400**	**51000**	**46100**	**43800**	**60300**
Total solids	%	NV	NV	NV	NV	NV	NV	NV	NV	NV	**38.8**	--	--	**42.8**	--	--	--	**52.6**	--	--

Notes:

(1) - For composite sediment samples, the highest measured PID reading is indicated
(2) - Sediment screening levels are only compared to samples with a bottom depth of 0.5 ft or less.
(3) - Recreator soil screening levels are compared to samples with a bottom depth of 0.5 ft or less.
(4) - Landscaper and ecological soil screening levels are compared to samples with a bottom depth of 2 ft or less.
(5) - A relevant pathway does not exist for samples collected from greater than 2 ft. Samples collected from all depths were compared to the TCLP Criteria for potential disposal purposes.
(6) - Site-specific risk-based screening levels are based on a cancer risk and non-cancer hazard quotient of 1E-6 and 0.1, respectively.
(7) - Consensus-Based Sediment Quality Guidelines: Recommendations For Use and Application (Wisconsin Department of Natural Resources [WDNR], 2003)
(8) - The soil ecological screening level is the minimum of the USEPA OSWER ecological soil screening levels (avian, invertebrate, mammalian, or plant) and the Region 5 ecological screening levels for soil.
(9) - Table 2 Maximum Concentration of Contaminants for the Toxicity Characteristic , Section (s.) NR 661.24, Wisconsin Administrative Code (Wis. Adm. Code), October 2013
(10) - Developed by General Motors LLC (GM)
(11) - Each screening criterion from the Sediment Quality Guidelines (7) is used when available; if no other criterion is available, USEPA Region 5 Ecological Screening Levels (ESLs) is used
(12) - When acid-volatile sulfide (AVS) is present, chromium can only exist in the trivalent chromium oxidation state. Therefore, for samples with AVS detections, chromium (total) has been converted to trivalent chromium.
(13) - Alkylated PAHs analyzed as part of SIM SVOCs but not considered as part of the SVOC analysis were not included on Figures 4.1 to 4.4 of the Sediment Investigation Report. These alkylated PAHs are further discussed in Section 4 of the report.

Detections are bolded

99.9[cd] Result exceeds* criteria indicated.

* - An exceedance is indicated if the ratio of the detected concentration to the screening level exceeds 1.0.
- Not Analyzed
B - Compound was found in the blank and sample
J - Estimated concentration.
MEC - Midpoint effect concentration, if concentration is > MEC and ≤ PEC, level 3 concern
mg/kg - milligrams per kilogram
mg/L - milligrams per liter
NA - Not applicable
NC - Not calculated; therefore, the limit of detection was reported
NV - No value. Criterion for analytes is either not promulgated or could not be calculated
PEC - Probable effect concentration, if concentration > PEC, level 4 concern
ppm - parts per million
R - Rejected.
TEC - Threshold effect concentration, if concentration > TEC and ≤ MEC, level 2 concern. If concentration ≤ TEC, level 1 concern
U - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated.
umol/g - micro mols per gram
USEPA - United States Environmental Protection Agency

Table 3.1

Summary of Sediment Analytical Results
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Location:										SS-4	SS-4	SS-4	SS-4	SS-5	SS-5	SS-5	SS-6	SS-6	SS-6
Sample Identification:										SE-030916-JN-007	SE-030916-JN-010	SE-030916-JN-008	SE-030916-JN-009	SE-031016-JN-011	SE-031016-JN-013	SE-031016-JN-012	SE-030916-JN-001	SE-030916-JN-003	SE-030916-JN-002
Sample Date:										3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/10/2016	3/10/2016	3/10/2016	3/9/2016	3/9/2016	3/9/2016
Sample Depth:										(0-0.5) ft BGS	(0-4.08) ft BGS	(0.5-2) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS
Sample Type:										Shallow	Composite	Deep	Duplicate	Shallow	Composite	Deep	Shallow	Composite	Deep
Photoionization Detector (PID) Reading (ppm) [1]										88	162	162	162	18	28	28	16	22	22
Applicable Screening Criteria		**Sediment Screening Criteria (Sed)**[2]					**Recreator Screening Criteria (Rec)** [3]	**Soil Screening Criteria (Soil)** [4]		**Toxicity Characteristic Leaching Procedure (TCLP) Criteria** [5]	Sed/Soil/Rec	TCLP	Soil	Soil	Sed/Soil/Rec	Soil/TCLP	Soil	Sed/Soil/Rec	Soil/TCLP	Soil
		Site-specific Risk-based Screening Levels [6]		**WDNR Criteria** [7]			**Site-specific Risk-based Screening Levels** [6]	**Site-specific Risk-based Screening Levels** [6]	**Ecological Criteria** [8]	**Regulatory Level** [9]									
Parameters	**Units**	**Recreator Sediment Contact Screening Level** [10] **a**	**Maintenance Worker Sediment Contact Screening Level** [10] **b**	**Sediment TEC** [11] **c**	**Sediment MEC** [11] **d**	**Sediment PEC** [11] **e**	**Recreator Soil Contact Screening Level** [10] **f**	**Landscaper Soil Contact Screening Level** [10] **g**	**Soil Ecological Screening Level h**	**TCLP i**										
Volatile Organic Compounds (VOCs)																				
1,1,1-Trichloroethane	mg/kg	2.7E+05	2.0E+07	2.1E-01	2.1E-01	2.1E-01	4.8E+04	1.2E+05	3.0E+01	NV	0.082 U	0.074 U	0.069 U	0.079 U	0.0077 U	0.1 U	0.077 U	0.0021 U	0.01 U	0.013 U
1,1,2,2-Tetrachloroethane	mg/kg	5.6E+01	3.6E+03	8.5E-01	8.5E-01	8.5E-01	1.6E+01	3.0E+02	1.3E-01	NV	0.076 U	0.069 U	0.064 U	0.074 U	0.0037 U	0.097 U	0.071 U	0.001 U	0.005 U	0.0063 U
1,1,2-Trichloroethane	mg/kg	2.0E+02	1.3E+04	5.2E-01	5.2E-01	5.2E-01	4.2E+01	2.6E+02	2.9E+01	NV	0.058 U	0.052 U	0.048 U	0.056 U	0.0044 U	0.073 U	0.054 U	0.0012 U	0.0059 U	0.0075 U
1,1-Dichloroethane	mg/kg	2.7E+04	2.0E+06	5.8E-04	5.8E-04	5.8E-04	4.8E+03	1.2E+04	2.0E+01	NV	0.11 U	0.096 U	0.089 U	0.1 U	0.004 U	0.14 U	0.099 U	0.0011 U	0.0055 U	0.0069 U
1,1-Dichloroethene	mg/kg	6.8E+03	5.1E+05	1.9E-02	1.9E-02	1.9E-02	1.4E+03	4.4E+03	8.3E+00	NV	0.091 U	0.083 U	0.076 U	0.088 U	0.0095 U	0.12 U	0.085 U	0.0026 U	0.013 U	0.016 U
1,2,4-Trichlorobenzene	mg/kg	3.9E+02	2.5E+04	8.0E-03	1.3E-02	1.8E-02	1.1E+02	1.5E+02	1.1E+01	NV	0.091 U	0.083 U	0.076 U	0.088 U	0.0045 U	0.12 U	**0.13 J**	0.0012 U	0.0061 U	0.0077 U
1,2,4-Trimethylbenzene	mg/kg	NV	NV	NV	NV	NV	2.5E+02	2.3E+02	NV	NV	**4.2**	**0.38 J**	**0.45 J**	**0.35 J**	**0.6**	**16**	**7.7**	0.0019 U	0.0093 U	0.012 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	3.3E+00	8.9E+02	NV	NV	NV	1.9E-01	1.1E+00	3.5E-02	NV	0.21 U	0.2 U	0.18 U	0.21 U	0.032 U	0.27 U	0.2 U	0.0088 U	0.043 U	0.055 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	5.6E+00	3.6E+02	NV	NV	NV	1.2E+00	7.0E+00	1.2E+00	NV	0.097 U	0.088 U	0.081 U	0.094 U	0.0063 U	0.12 U	0.091 U	0.0017 U	0.0085 U	0.011 U
1,2-Dichlorobenzene	mg/kg	1.2E+04	9.2E+05	2.3E-02	2.9E-01	2.3E-02	2.4E+03	6.4E+03	3.0E+00	NV	0.058 U	0.052 U	0.048 U	0.056 U	0.004 U	0.073 U	0.054 U	0.0011 U	0.0055 U	0.0069 U
1,2-Dichloroethane	mg/kg	1.2E+02	7.9E+03	2.6E-01	2.6E-01	2.6E-01	2.6E+01	1.6E+02	2.1E+01	NV	0.03 U	0.028 U	0.025 U	0.029 U	0.0054 U	0.039 U	0.028 U	0.0015 U	0.0074 U	0.0093 U
1,2-Dichloropropane	mg/kg	3.1E+02	2.0E+04	3.3E-01	3.3E-01	3.3E-01	8.6E+01	1.0E+02	3.3E+01	NV	0.097 U	0.088 U	0.081 U	0.094 U	0.0017 U	0.12 U	0.091 U	0.00045 U	0.0022 U	0.0028 U
1,3,5-Trimethylbenzene	mg/kg	NV	NV	NV	NV	NV	4.0E+02	3.5E+02	NV	NV	**2.3**	**0.15 J**	**0.18 J**	**0.15 J**	**0.25**	**5.9**	**3.2**	0.00094 U	0.0046 U	0.0059 U
1,3-Dichlorobenzene	mg/kg	2.7E+03	2.0E+05	1.3E+00	1.3E+00	1.3E+00	7.6E+02	1.7E+04	3.8E+01	NV	0.091 U	0.083 U	0.076 U	0.088 U	0.0082 U	0.12 U	0.085 U	0.0022 U	0.011 U	0.014 U
1,4-Dichlorobenzene	mg/kg	2.8E+02	1.8E+04	3.1E-02	6.1E-02	9.0E-02	7.8E+01	1.5E+03	5.5E-01	NV	0.12 U	0.11 U	0.1 U	0.12 U	0.0033 U	0.16 U	0.12 U	0.00091 U	0.0045 U	0.0057 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	8.2E+04	6.1E+06	4.2E-02	4.2E-02	4.2E-02	2.0E+04	1.2E+05	9.0E+01	NV	0.22 U	0.2 U	0.19 U	0.21 U	**0.023 J**	0.28 U	0.21 U	0.0036 U	0.018 U	0.023 U
2-Hexanone	mg/kg	6.8E+02	5.1E+04	5.8E-02	5.8E-02	5.8E-02	1.6E+02	7.6E+02	1.3E+01	NV	0.25 U	0.23 U	0.21 U	0.25 U	0.008 U	0.32 U	0.24 U	0.0022 U	0.011 U	0.014 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NV	NV	2.5E-02	2.5E-02	2.5E-02	9.6E+04	8.9E+04	4.4E+02	NV	0.17 U	0.15 U	0.14 U	0.16 U	0.014 U	0.22 U	0.16 U	0.0039 U	0.02 U	0.025 U
Acetone	mg/kg	1.2E+05	9.2E+06	9.9E-03	9.9E-03	9.9E-03	3.3E+04	4.3E+05	2.5E+00	NV	0.68 U	0.62 U	0.58 U	0.67 U	**0.13 J**[cde]	0.87 U	0.64 U	**0.097 J**[cde]	**0.3 J**	**0.3 J**
Benzene	mg/kg	2.0E+02	1.3E+04	5.7E-02	8.4E-02	1.1E-01	4.9E+01	4.1E+02	2.6E-01	NV	0.027 U	0.025 U	0.023 U	0.026 U	0.011 U	0.035 U	0.026 U	0.0029 U	0.014 U	0.018 U
Bromodichloromethane	mg/kg	1.8E+02	1.2E+04	NV	NV	NV	5.0E+01	9.6E+02	5.4E-01	NV	0.12 U	0.1 U	0.097 U	0.11 U	0.0034 U	0.15 U	0.11 U	0.00094 U	0.0046 U	0.0059 U
Bromoform	mg/kg	1.4E+03	9.1E+04	4.9E-01	4.9E-01	4.9E-01	3.5E+02	3.5E+03	1.6E+01	NV	0.18 U	0.17 U	0.16 U	0.18 U	0.0028 U	0.24 U	0.17 U	0.00078 U	0.0038 U	0.0049 U
Bromomethane (Methyl bromide)	mg/kg	1.9E+02	1.4E+04	1.4E-03	1.4E-03	1.4E-03	3.7E+01	1.1E+02	2.4E-01	NV	0.15 U	0.14 U	R	0.15 U	0.005 U	0.2 U	0.14 U	0.0014 U	0.0067 U	0.0085 U
Carbon disulfide	mg/kg	1.4E+04	1.0E+06	2.4E-02	2.4E-02	2.4E-02	3.1E+03	1.4E+04	9.4E-02	NV	0.17 U	0.15 U	R	0.16 U	0.007 U	0.22 U	0.16 U	0.0019 U	0.0095 U	0.012 U
Carbon tetrachloride	mg/kg	1.6E+02	1.0E+04	1.5E+00	1.5E+00	1.5E+00	4.1E+01	4.3E+02	3.0E+00	NV	0.054 U	0.05 U	0.046 U	0.053 U	0.0077 U	0.07 U	0.051 U	0.0021 U	0.01 U	0.013 U
Chlorobenzene	mg/kg	2.7E+03	2.0E+05	2.9E-01	2.9E-01	2.9E-01	5.0E+02	1.3E+03	1.3E+01	NV	0.039 U	0.036 U	0.033 U	0.038 U	0.0063 U	0.05 U	0.037 U	0.0017 U	0.0085 U	0.011 U
Chloroethane	mg/kg	1.4E+04	1.0E+06	NV	NV	NV	3.7E+03	6.3E+04	NV	NV	0.15 U	0.14 U	0.13 U	0.15 U	0.0052 U	0.2 U	0.14 U	0.0014 U	0.0071 U	0.0089 U
Chloroform (Trichloromethane)	mg/kg	5.9E+02	3.8E+04	1.2E-01	1.2E-01	1.2E-01	7.1E+01	2.1E+02	1.2E+00	NV	0.11 U	0.099 U	0.092 U	0.11 U	0.0043 U	0.14 U	0.1 U	0.0012 U	0.0058 U	0.0073 U
Chloromethane (Methyl chloride)	mg/kg	NV	NV	NV	NV	NV	2.3E+03	2.2E+03	1.0E+01	NV	0.15 U	0.13 U	0.12 U	0.14 U	0.0093 U	0.19 U	0.14 U	0.0026 U	0.013 U	0.016 U
cis-1,2-Dichloroethene	mg/kg	2.7E+02	2.0E+04	NV	NV	NV	7.6E+01	1.7E+03	NV	NV	0.12 U	0.1 U	0.097 U	0.11 U	0.0033 U	0.15 U	0.11 U	0.00091 U	0.0045 U	0.0057 U
cis-1,3-Dichloropropene	mg/kg	1.1E+02	7.2E+03	NV	NV	NV	3.0E+01	4.1E+02	NV	NV	0.067 U	0.061 U	0.056 U	0.065 U	0.0084 U	0.085 U	0.062 U	0.0023 U	0.011 U	0.014 U
Cyclohexane	mg/kg	NV	NV	NV	NV	NV	1.5E+05	1.5E+05	NV	NV	**0.28 J**	**0.15 J**	**0.17 J**	**0.16 J**	**0.084 J**	0.12 U	0.085 U	**0.028 J**	**0.069 J**	**0.09 J**
Dibromochloromethane	mg/kg	1.3E+02	8.5E+03	NV	NV	NV	3.7E+01	7.1E+02	2.1E+00	NV	0.061 U	0.055 U	0.051 U	0.059 U	0.0044 U	0.077 U	0.057 U	0.0012 U	0.0059 U	0.0075 U
Dichlorodifluoromethane (CFC-12)	mg/kg	2.7E+04	2.0E+06	NV	NV	NV	3.0E+03	4.8E+03	4.0E+01	NV	0.18 U	0.17 U	R	0.18 U	0.0033 U	0.24 U	0.17 U	0.00091 U	0.0045 U	0.0057 U
Ethylbenzene	mg/kg	1.4E+04	1.0E+06	1.8E-01	1.8E-01	1.8E-01	3.4E+03	2.1E+04	5.2E+00	NV	0.11 U	0.096 U	0.089 U	0.1 U	0.0038 U	0.14 U	0.099 U	0.001 U	0.0051 U	0.0065 U
Isopropyl benzene	mg/kg	1.4E+04	1.0E+06	NV	NV	NV	2.9E+03	9.9E+03	NV	NV	**0.49 J**	**0.37 J**	**0.53 J**	**0.49 J**	**0.14**	**1**	**0.63 J**	**0.067 J**	**0.23 J**	**0.22 J**
Methyl acetate	mg/kg	1.4E+05	1.0E+07	NV	NV	NV	3.8E+04	8.5E+05	NV	NV	**0.22 J**	**0.29 J**	**0.23 J**	**0.23 J**	0.024 U	0.21 U	0.16 U	0.0065 U	0.032 U	0.041 U
Methyl cyclohexane	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**2.3**	**1.3 J**	**1.4 J**	**1.3 J**	**0.39**	**2 J**	**0.8 J**	**0.45 J**	**1.5 J**	**1.8 J**
Methyl tert butyl ether (MTBE)	mg/kg	6.2E+03	4.0E+05	NV	NV	NV	1.5E+03	1.3E+04	NV	NV	0.091 U	0.083 U	0.076 U	0.088 U	0.0051 U	0.12 U	0.085 U	0.0014 U	0.0069 U	0.0087 U
Methylene chloride	mg/kg	8.2E+02	6.1E+04	1.6E-01	1.6E-01	1.6E-01	2.2E+02	3.8E+03	4.1E+00	NV	0.26 U	0.23 U	0.22 U	0.25 U	0.0087 U	**0.38 J**	**0.3 J**	0.0024 U	0.012 U	0.015 U
Styrene	mg/kg	2.7E+04	2.0E+06	2.5E-01	2.5E-01	2.5E-01	6.3E+03	2.8E+04	4.7E+00	NV	0.082 U	0.074 U	0.069 U	0.079 U	0.0047 U	0.1 U	0.077 U	0.0013 U	0.0064 U	0.0081 U
Tetrachloroethene	mg/kg	8.2E+02	6.1E+04	9.9E-01	9.9E-01	9.9E-01	1.9E+02	8.5E+02	9.9E+00	NV	0.082 U	0.074 U	0.069 U	0.079 U	0.0095 U	0.1 U	0.077 U	0.0026 U	0.013 U	0.016 U
Toluene	mg/kg	1.1E+04	8.2E+05	8.9E-01	1.3E+00	1.8E+00	3.0E+03	4.5E+04	5.5E+00	NV	0.03 U	0.028 U	0.025 U	0.029 U	0.0032 U	0.039 U	0.028 U	0.00087 U	0.0043 U	0.0055 U
trans-1,2-Dichloroethene	mg/kg	2.7E+03	2.0E+05	6.5E-01	6.5E-01	6.5E-01	7.6E+02	1.7E+04	7.8E-01	NV	0.079 U	0.072 U	0.066 UJ	0.077 U	0.0038 U	0.1 U	0.074 U	0.001 U	0.0051 U	0.0065 U
trans-1,3-Dichloropropene	mg/kg	1.1E+02	7.2E+03	NV	NV	NV	3.0E+01	4.1E+02	NV	NV	0.079 U	0.072 U	0.066 U	0.077 U	0.0034 U	0.1 U	0.074 U	0.00094 U	0.0046 U	0.0059 U
Trichloroethene	mg/kg	6.8E+01	5.1E+03	1.1E-01	1.1E-01	1.1E-01	1.4E+01	4.6E+01	1.2E+01	NV	0.12 U	0.11 U	0.099 U	0.11 U	0.0045 U	0.15 U	0.11 U	0.0012 U	0.0061 U	0.0077 U
Trichlorofluoromethane (CFC-11)	mg/kg	4.1E+04	3.1E+06	NV	NV	NV	6.9E+03	1.6E+04	1.6E+01	NV	0.11 U	0.096 U	0.089 U	0.1 U	0.0034 U	0.14 U	0.099 U	0.00094 U	0.0046 U	0.0059 U
Trifluorotrichloroethane (CFC-113)	mg/kg	4.1E+06	3.1E+08	NV	NV	NV	4.5E+05	7.2E+05	NV	NV	0.13 U	0.12 U	0.11 UJ	0.12 U	0.005 U	0.16 U	0.12 U	0.0014 U	0.0067 U	0.0085 U
Vinyl chloride	mg/kg	1.6E+01	9.9E+02	2.0E-01	2.0E-01	2.0E-01	4.3E+00	7.7E+01	6.5E-01	NV	0.051 U	0.047 U	0.043 U	0.05 U	0.0035 U	0.066 U	0.048 U	0.00097 U	0.0048 U	0.0061 U
Xylenes (total)	mg/kg	2.7E+04	2.0E+06	2.5E-02	3.8E-02	5.0E-02	2.0E+03	2.6E+03	1.0E+01	NV	**0.94 J**[cde]	**0.15 J**	**0.12 J**	**0.14 J**	**0.053 J**[cde]	**2.4**	**1.5**	0.0017 U	0.0087 U	0.011 U
Semi-Volatile Organic Compounds (SVOCs)																				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	3.8E+03	1.8E+05	NV	NV	NV	1.2E+03	2.1E+04	2.0E+01	NV	1 U	0.37 U	0.87 U	0.98 U	2.4 U	2.1 U	1.5 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	mg/kg	9.6E+03	4.4E+05	NV	NV	NV	3.0E+03	5.1E+04	1.4E+01	NV	2.7 U	0.98 U	2.3 U	2.6 U	6.4 U	5.5 U	3.8 U	2.8 U	2.7 U	2.7 U
2,4,6-Trichlorophenol	mg/kg	9.6E+01	4.4E+03	2.1E-01	2.1E-01	2.1E-01	3.0E+01	5.1E+02	9.9E+00	NV	0.95 U	0.35 U	0.81 U	0.92 U	2.3 U	2 U	1.4 U	0.98 U	0.97 U	0.95 U
2,4-Dichlorophenol	mg/kg	2.9E+02	1.3E+04	8.2E-02	8.2E-02	8.2E-02	8.9E+01	1.5E+03	8.8E+01	NV	2.1 U	0.78 U	1.8 U	2.1 U	5.1 U	4.4 U	3.1 U	2.2 U	2.2 U	2.1 U
2,4-Dimethylphenol	mg/kg	1.9E+03	8.8E+04	2.9E-01	3.0E-01	2.9E-01	5.9E+02	1.0E+04	1.0E-02	NV	2.1 U	0.78 U	1.8 U	2.1 U	5.1 U	4.4 U	3.1 U	2.2 U	2.2 U	2.1 U
2,4-Dinitrophenol	mg/kg	1.9E+02	8.8E+03	6.2E-03	6.2E-03	6.2E-03	5.9E+01	1.0E+03	6.1E-02	NV	2.2 UJ	0.82 UJ	1.9 UJ	2.2 UJ	5.3 U	4.6 U	3.2 U	2.3 UJ	2.3 UJ	2.2 UJ
2,4-Dinitrotoluene	mg/kg	7.8E+00	4.5E+02	1.4E-02	1.4E-02	1.4E-02	3.5E+00	5.3E+01	1.3E+00	NV	1.8 U	0.66 U	1.6 U	1.8 U	4.3 U	3.8 U	2.6 U	1.9 U	1.8 U	1.8 U
2,6-Dinitrotoluene	mg/kg	7.8E+00	4.5E+02	4.0E-02	4.0E-02	4.0E-02	3.5E+00	5.3E+01	3.3E-02	NV	2.2 U	0.82 U	1.9 U	2.2 U	5.3 U	4.6 U	3.2 U	2.3 U	2.3 U	2.2 U
2-Chloronaphthalene	mg/kg	7.7E+03	3.5E+05	4.2E-01	4.2E-01	4.2E-01	2.4E+03	4.1E+04	1.2E-02	NV	0.048 U	0.018 U	0.041 U	0.047 U	0.11 U	0.1 U	0.069 U	0.05 U	0.049 U	0.048 U
2-Chlorophenol	mg/kg	4.8E+02	2.2E+04	3.2E-02	3.2E-02	3.2E-02	1.5E+02	2.6E+03	2.4E-01	NV	0.87 U	0.32 U	0.75 U	0.85 U	2.1 U	1.8 U	1.3 U	0.9 U	0.89 U	0.88 U
2-Methylnaphthalene	mg/kg	3.8E+02	1.8E+04	2.0E-02	1.1E-01	2.0E-01	1.2E+02	2.1E+03	3.2E+00	NV	**7.4**[cdeh]	**3.3**	**6.3**[h]	**14**[h]	**1.3 J**[cde]	**3.3**	**3.5**[h]	**0.61 J**[cde]	**4.4**[h]	**4.2**[h]
2-Methylphenol	mg/kg	4.8E+03	2.2E+05	6.7E+00	5.5E-02	6.7E+00	1.5E+03	2.6E+04	4.0E+01	NV	1.2 U	0.43 U	1 U	1.1 U	2.8 U	2.4 U	1.7 U	1.2 U	1.2 U	1.2 U

Table 3.1

Summary of Sediment Analytical Results
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Location:										SS-4	SS-4	SS-4	SS-4	SS-5	SS-5	SS-5	SS-6	SS-6	SS-6
Sample Identification:										**SE-030916-JN-007**	**SE-030916-JN-010**	**SE-030916-JN-008**	**SE-030916-JN-009**	**SE-031016-JN-011**	**SE-031016-JN-013**	**SE-031016-JN-012**	**SE-030916-JN-001**	**SE-030916-JN-003**	**SE-030916-JN-002**
Sample Date:										**3/9/2016**	**3/9/2016**	**3/9/2016**	**3/9/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/9/2016**	**3/9/2016**	**3/9/2016**
Sample Depth:										**(0-0.5) ft BGS**	**(0-4.08) ft BGS**	**(0.5-2) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-2) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-2) ft BGS**	**(0.5-2) ft BGS**
Sample Type:										**Shallow**	**Composite**	**Deep**	**Duplicate**	**Shallow**	**Composite**	**Deep**	**Shallow**	**Composite**	**Deep**
Photoionization Detector (PID) Reading (ppm) [1]										**88**	**162**	**162**	**162**	**18**	**28**	**28**	**16**	**22**	**22**
Applicable Screening Criteria		**Sediment Screening Criteria (Sed)[2]**					**Recreator Screening Criteria (Rec) [3]**	**Soil Screening Criteria (Soil) [4]**		**Toxicity Characteristic Leaching Procedure (TCLP) Criteria [5]**	**Sed/Soil/Rec**	**TCLP**	**Soil**	**Soil**	**Sed/Soil/Rec**	**Soil/TCLP**	**Soil**	**Sed/Soil/Rec**	**Soil/TCLP**	**Soil**
		Site-specific Risk-based Screening Levels [6]		**WDNR Criteria [7]**			**Site-specific Risk-based Screening Levels [6]**	**Site-specific Risk-based Screening Levels [6]**	**Ecological Criteria [8]**	**Regulatory Level [9]**									
Parameters	**Units**	**Recreator Sediment Contact Screening Level [10] a**	**Maintenance Worker Sediment Contact Screening Level [10] b**	**Sediment TEC [11] c**	**Sediment MEC [11] d**	**Sediment PEC [11] e**	**Recreator Soil Contact Screening Level [10] f**	**Landscaper Soil Contact Screening Level [10] g**	**Soil Ecological Screening Level h**	**TCLP i**									
Semi-Volatile Organic Compounds (SVOCs) (Cont.d')																			
2-Nitroaniline	mg/kg	NV	NV	NV	NV	NV	2.4E+02	1.8E+02	7.4E+01	NV	0.97 U	0.36 U	0.83 U	0.94 U	2.3 U	2 U	1.4 U	1 U	0.99 U	0.97 U
2-Nitrophenol	mg/kg	NV	NV	NV	NV	NV	9.1E+01	7.0E+01	1.6E+00	NV	0.88 U	0.32 U	0.76 U	0.86 U	2.1 U	1.8 U	1.3 U	0.91 U	0.9 U	0.89 U
3&4-Methylphenol	mg/kg	4.8E+02	2.2E+04	NV	NV	NV	1.5E+02	2.6E+03	NV	NV	2.1 U	0.78 U	1.8 U	2.1 U	5.1 U	4.4 U	3.1 U	2.2 U	2.2 U	2.1 U
3,3'-Dichlorobenzidine	mg/kg	1.2E+01	6.9E+02	1.3E-01	1.3E-01	1.3E-01	5.2E+00	8.0E+01	6.5E-01	NV	1.9 U	0.7 U	1.6 U	1.9 U	4.6 U	4 U	2.8 U	2 U	2 U	1.9 U
3-Nitroaniline	mg/kg	NV	NV	NV	NV	NV	NV	NV	3.2E+00	NV	1.7 U	0.62 U	1.5 U	1.7 U	4.1 U	3.5 U	2.5 U	1.8 U	1.7 U	1.7 U
4,6-Dinitro-2-methylphenol	mg/kg	7.7E+01	3.5E+03	1.0E-01	1.0E-01	1.0E-01	2.4E+01	4.1E+02	1.4E-01	NV	0.98 U	0.36 U	0.84 U	0.95 U	2.3 U	2 U	1.4 U	1 U	1 U	0.98 U
4-Bromophenyl phenyl ether	mg/kg	NV	NV	1.6E+00	1.6E+00	1.6E+00	NV	NV	NV	NV	1.4 U	0.51 U	1.2 U	1.3 U	3.3 U	2.9 U	2 U	1.4 U	1.4 U	1.4 U
4-Chloro-3-methylphenol	mg/kg	1.9E+05	8.8E+06	3.9E-01	3.9E-01	3.9E-01	5.9E+04	1.0E+06	8.0E+00	NV	2.2 U	0.82 U	1.9 U	2.2 U	5.3 U	4.6 U	3.2 U	2.3 U	2.3 U	2.2 U
4-Chloroaniline	mg/kg	2.7E+01	1.5E+03	1.5E-01	1.5E-01	1.5E-01	1.2E+01	1.8E+02	1.1E+00	NV	1.8 U	0.66 U	1.6 U	1.8 U	4.3 U	3.8 U	2.6 U	1.9 U	1.8 U	1.8 U
4-Chlorophenyl phenyl ether	mg/kg									NV	1.4 U	0.51 U	1.2 U	1.3 U	3.3 U	2.9 U	2 U	1.4 U	1.4 U	1.4 U
4-Nitroaniline	mg/kg	2.7E+02	1.5E+04	NV	NV	NV	1.2E+02	1.7E+03	2.2E+01	NV	2.8 U	1 U	2.4 U	2.7 U	6.6 U	5.8 U	4 U	2.9 U	2.8 U	2.8 U
4-Nitrophenol	mg/kg	NV	NV	1.3E-02	1.3E-02	1.3E-02	NV	NV	5.1E+00	NV	1.8 U	0.66 U	1.6 U	1.8 U	4.3 U	3.8 U	2.6 U	1.9 U	1.8 U	1.8 U
Acenaphthene	mg/kg	5.3E+03	2.3E+05	6.7E-03	4.8E-02	8.9E-02	1.7E+03	2.8E+04	6.8E+02	NV	--	**0.49**	**1**	**1.1**	--	**2.3**	**7.1**	--	**1.4**	**4.5**
Acenaphthylene	mg/kg	2.6E+03	1.1E+05	5.9E-03	6.7E-02	1.3E-01	8.4E+02	1.4E+04	6.8E+02	NV	--	0.014 U	0.032 U	0.036 U	--	0.077 U	0.054 U	--	**0.45 J**	**0.38 J**
Acetophenone	mg/kg	9.6E+03	4.4E+05	NV	NV	NV	3.0E+03	5.1E+04	3.0E+02	NV	0.98 U	0.36 U	0.84 U	0.95 U	2.3 U	2 U	1.4 U	1 U	1 U	0.98 U
Anthracene	mg/kg	2.6E+04	1.1E+06	5.7E-02	4.5E-01	8.5E-01	8.4E+03	1.4E+05	1.5E+03	NV	--	**0.83**	**1.5**	**1.7**	--	**4.6**	**12**	--	**1.8**	**7.5**
Atrazine	mg/kg	2.4E+01	1.4E+03	NV	NV	NV	1.1E+01	1.6E+02	NV	NV	0.97 U	0.36 U	0.83 U	0.94 U	2.3 U	2 U	1.4 U	1 U	0.99 U	0.97 U
Benzaldehyde	mg/kg	9.6E+03	4.4E+05	NV	NV	NV	3.0E+03	5.1E+04	NV	NV	1.3 U	0.47 U	1.1 U	1.2 U	3.1 U	2.7 U	1.8 U	1.3 U	1.3 U	1.3 U
Benzo(a)anthracene	mg/kg	1.9E+00	9.8E+02	1.1E-01	5.8E-01	1.1E+00	7.2E-01	4.4E+01	5.2E+00	NV	--	**1.4**	**2.8**	**3.6**	--	**11[h]**	**20[h]**	--	**4.2**	**14[h]**
Benzo(a)pyrene	mg/kg	1.9E-01	9.8E+01	1.5E-01	8.0E-01	1.5E+00	7.2E-02	4.4E+00	1.5E+00	NV	--	**0.99**	**2.3[h]**	**2.7[h]**	--	**7.6[gh]**	**15[gh]**	--	**3[h]**	**12[gh]**
Benzo(b)fluoranthene	mg/kg	1.9E+00	9.8E+02	2.4E-01	6.8E+00	1.3E+01	7.2E-01	4.4E+01	6.0E+01	NV	--	**1.3**	**2.7**	**3.3**	--	**12**	**23**	--	**3.9**	**16**
Benzo(g,h,i)perylene	mg/kg	2.6E+03	1.1E+05	1.7E-01	1.7E+00	3.2E+00	8.4E+02	1.4E+04	1.2E+02	NV	--	**0.48**	**1.1**	**1.1**	--	**6.4**	**9**	--	**1.6**	**6.4**
Benzo(k)fluoranthene	mg/kg	1.9E+01	9.8E+03	2.4E-01	6.8E+00	1.3E+01	7.2E+00	4.4E+02	1.5E+02	NV	--	**0.46**	**1.3**	**0.91**	--	**4.5**	**9.1**	--	**1.2**	**6.9**
Biphenyl (1,1-Biphenyl)	mg/kg	6.5E+02	3.8E+04	NV	NV	NV	2.9E+02	4.4E+03	NV	NV	**0.48 J**	**0.26 J**	**0.43 J**	**0.57 J**	0.89 U	0.77 U	0.54 U	0.39 U	0.38 U	**0.59 J**
bis(2-Chloroethoxy)methane	mg/kg	2.9E+02	1.3E+04	NV	NV	NV	8.9E+01	1.5E+03	3.0E-01	NV	2.3 U	0.86 U	2 U	2.3 U	5.6 U	4.9 U	3.4 U	2.4 U	2.4 U	2.3 U
bis(2-Chloroethyl)ether	mg/kg	4.8E+00	2.8E+02	3.5E+00	3.5E+00	3.5E+00	1.9E+00	1.5E+01	2.4E+01	NV	0.21 U	0.078 U	0.18 U	0.21 U	0.51 U	0.44 U	0.31 U	0.22 U	0.22 U	0.21 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	3.8E+02	2.2E+04	1.8E-01	1.8E-01	1.8E-01	1.7E+02	2.6E+03	9.3E-01	NV	2 U	0.74 U	1.7 U	2 U	4.8 U	**27[h]**	2.9 U	**12[cdeh]**	**11[h]**	2 U
Butyl benzylphthalate (BBP)	mg/kg	2.8E+03	1.6E+05	2.0E+00	2.0E+00	2.0E+00	1.2E+03	1.9E+04	2.4E-01	NV	1.1 U	0.39 U	0.91 U	1 U	**290[cdeh]**	**56[h]**	**3.1 J[h]**	**70[cdeh]**	1.1 U	1.1 U
Caprolactam	mg/kg	4.8E+04	2.2E+06	NV	NV	NV	2.4E+03	2.2E+03	NV	NV	3.9 U	1.4 U	3.4 U	3.8 U	9.4 U	8.2 U	5.7 U	4.1 U	**28 J**	4 U
Carbazole	mg/kg	2.7E+02	1.5E+04	NV	NV	NV	1.2E+02	1.8E+03	NV	NV	2.9 U	1.1 U	2.5 U	2.8 U	6.9 U	6 U	**8.8**	3 U	2.9 U	**3.7 J**
Chrysene	mg/kg	1.9E+02	9.8E+04	1.7E-01	7.3E-01	1.3E+00	7.2E+01	4.4E+03	4.7E+00	NV	--	**2.1**	**4.2**	**4.6**	--	**12[h]**	**23[h]**	--	**5.4[h]**	**14[h]**
Dibenz(a,h)anthracene	mg/kg	1.9E-01	9.8E+01	3.3E-02	8.4E-02	1.4E-01	7.2E-02	4.4E+00	1.8E+01	NV	--	**0.17 J**	0.06 U	0.068 U	--	0.15 U	**2.6**	--	0.072 U	**2.2**
Dibenzofuran	mg/kg	3.8E+02	1.8E+04	1.5E-01	3.7E-01	5.8E-01	1.2E+02	2.1E+03	NV	NV	**1.9 J[cde]**	**0.39 J**	**0.85 J**	**1.1 J**	0.17 U	0.15 U	**3.8 J**	0.073 U	**0.88 J**	**2.9 J**
Diethyl phthalate	mg/kg	7.7E+04	3.5E+06	6.1E-01	8.6E-01	1.1E+00	2.4E+04	4.1E+05	2.5E+01	NV	1.7 U	0.62 U	1.5 U	1.7 U	4.1 U	3.5 U	2.5 U	1.8 U	1.7 U	1.7 U
Dimethyl phthalate	mg/kg	NV	NV	5.3E-01	NV	5.3E-01	NV	NV	7.3E+02	NV	1.8 U	0.66 U	1.6 U	1.8 U	4.3 U	3.8 U	2.6 U	1.9 U	1.8 U	1.8 U
Di-n-butylphthalate (DBP)	mg/kg	9.6E+03	4.4E+05	2.2E+00	9.6E+00	1.7E+01	3.0E+03	5.1E+04	1.5E-01	NV	**6.7 J[ch]**	**3**	**4 J[h]**	**5.9 J[h]**	**13 J[cdh]**	**5.3 J[h]**	**13[h]**	**2.3 J[h]**	**4.1 J[h]**	**3.4 J[h]**
Di-n-octyl phthalate (DnOP)	mg/kg	3.8E+03	1.8E+05	5.8E-01	2.3E+01	4.5E+01	1.2E+03	2.1E+04	7.1E+02	NV	0.84 U	0.31 U	0.72 U	0.82 U	2 U	1.7 U	1.2 U	0.87 U	0.86 U	0.84 U
Fluoranthene	mg/kg	3.5E+03	1.5E+05	4.2E-01	1.3E+00	2.2E+00	1.1E+03	1.8E+04	1.2E+02	NV	--	**2.9**	**6**	**6.6**	--	**27**	**60**	--	**9.5**	**34**
Fluorene	mg/kg	3.5E+03	1.5E+05	7.7E-02	3.1E-01	5.4E-01	1.1E+03	1.8E+04	1.2E+02	NV	--	**0.67**	**1.5**	**1.9**	--	**2.5**	**7.8**	--	**1.8**	**5.5**
Hexachlorobenzene	mg/kg	3.3E+00	1.9E+02	2.0E-02	2.0E-02	2.0E-02	1.4E+00	1.9E+01	2.0E-01	NV	0.22 U	0.082 U	0.19 U	0.22 U	0.53 U	0.46 U	0.32 U	0.23 U	0.23 U	0.22 U
Hexachlorobutadiene	mg/kg	6.8E+01	4.0E+03	2.7E-02	2.7E-02	2.7E-02	2.8E+01	2.8E+02	4.0E-02	NV	0.6 U	0.22 U	0.51 U	0.58 U	1.4 U	1.2 U	0.86 U	0.62 U	0.61 U	0.6 U
Hexachlorocyclopentadiene	mg/kg	5.7E+02	2.6E+04	9.0E-01	9.0E-01	9.0E-01	5.0E+01	5.3E+01	7.6E-01	NV	0.86 U	0.32 U	0.74 U	0.84 U	2.1 U	1.8 U	1.2 U	0.89 U	0.88 U	0.87 U
Hexachloroethane	mg/kg	6.7E+01	3.1E+03	5.8E-01	5.8E-01	5.8E-01	2.1E+01	3.3E+02	6.0E-01	NV	0.96 U	0.35 U	0.82 U	0.93 U	2.3 U	2 U	1.4 U	0.99 U	0.98 U	0.96 U
Indeno(1,2,3-cd)pyrene	mg/kg	1.9E+00	9.8E+02	2.0E-01	1.7E+00	3.2E+00	7.2E-01	4.4E+01	1.1E+02	NV	--	**0.42**	**1.2**	**1**	--	**4.3**	**8.2**	--	**1.5**	**5.8**
Isophorone	mg/kg	5.6E+03	3.2E+05	4.3E-01	4.3E-01	4.3E-01	2.5E+03	3.8E+04	1.4E+02	NV	1.4 U	0.51 U	1.2 U	1.3 U	3.3 U	2.9 U	2 U	1.4 U	1.4 U	1.4 U
Naphthalene	mg/kg	1.8E+03	7.5E+04	1.8E-01	3.7E-01	5.6E-01	2.0E+02	2.9E+02	9.9E-02	NV	--	**1.5**	**3.9[h]**	**5.2[h]**	--	**4.8[h]**	**5.2[h]**	--	**2.2[h]**	**2.6[h]**
Nitrobenzene	mg/kg	1.9E+02	8.8E+03	1.5E-01	1.5E-01	1.5E-01	5.6E+01	2.6E+02	1.3E+00	NV	0.23 U	0.086 U	0.2 U	0.23 U	0.56 U	0.49 U	0.34 U	0.24 U	0.24 U	0.23 U
N-Nitrosodi-n-propylamine	mg/kg	7.6E-01	4.4E+01	NV	NV	NV	3.4E-01	5.1E+00	5.4E-01	NV	0.67 U	0.25 U	0.58 U	0.65 U	1.6 U	1.4 U	0.97 U	0.69 U	0.68 U	0.67 U
N-Nitrosodiphenylamine	mg/kg	1.1E+03	6.3E+04	NV	NV	NV	4.8E+02	7.3E+03	5.5E-01	NV	2.2 U	0.82 U	1.9 U	2.2 U	5.3 U	4.6 U	3.2 U	2.3 U	2.3 U	2.2 U
Pentachlorophenol	mg/kg	7.5E+00	4.2E+02	1.5E-01	1.8E-01	2.0E-01	4.3E+00	5.6E+01	2.1E+00	NV	0.97 U	0.36 U	0.83 U	0.94 U	2.3 U	2 U	1.4 U	1 U	0.99 U	0.97 U
Phenanthrene	mg/kg	2.6E+03	1.1E+05	2.0E-01	6.9E-01	1.2E+00	8.4E+02	1.4E+04	4.6E+01	NV	--	**3.5**	**7.3**	**9.3**	--	**22**	**59[h]**	--	**11**	**37**
Phenol	mg/kg	2.9E+04	1.3E+06	4.2E+00	8.1E+00	1.2E+01	8.9E+03	1.5E+05	1.2E+02	NV	0.78 U	0.28 U	0.67 U	0.76 U	1.9 U	1.6 U	1.1 U	0.8 U	0.79 U	0.78 U
Pyrene	mg/kg	2.6E+03	1.1E+05	2.0E-01	8.6E-01	1.5E+00	8.4E+02	1.4E+04	7.9E+01	NV	--	**2.7**	**6.1**	**7.9**	--	**21**	**44**	--	**9**	**30**
Selected Ion Monitoring (SIM) SVOCs [13]																				
Acenaphthene	mg/kg	5.3E+03	2.3E+05	6.7E-03	4.8E-02	8.9E-02	1.7E+03	2.8E+04	6.8E+02	NV	**0.512[cde]**	--	--	--	**0.994[cde]**	--	--	**0.381[cde]**	--	--
Acenaphthylene	mg/kg	2.6E+03	1.1E+05	5.9E-03	6.7E-02	1.3E-01	8.4E+02	1.4E+04	6.8E+02	NV	**0.277[cde]**	--	--	--	**0.131[cd]**	--	--	**0.131[cd]**	--	--
Anthracene	mg/kg	2.6E+04	1.1E+06	5.7E-02	4.5E-01	8.5E-01	8.4E+03	1.4E+05	1.5E+03	NV	**1.1[cde]**	--	--	--	**2.16[cde]**	--	--	**0.924[cde]**	--	--
Benzo(a)anthracene	mg/kg	1.9E+00	9.8E+02	1.1E-01	5.8E-01	1.1E+00	7.2E-01	4.4E+01	5.2E+00	NV	**1.47[cdef]**	--	--	--	**3.76[acdef]**	--	--	**1.41[cdef]**	--	--
Benzo(a)pyrene	mg/kg	1.9E-01	9.8E+01	1.5E-01	8.0E-01	1.5E+00	7.2E-02	4.4E+00	1.5E+00	NV	**1.21[acd]**	--	--	--	**3.51[acdeh]**	--	--	**1.08[acd]**	--	--
Benzo(b)fluoranthene	mg/kg	1.9E+00	9.8E+02	2.4E-01	6.8E+00	1.3E+01	7.2E-01	4.4E+01	6.0E+01	NV	**1.18[cf]**	--	--	--	**2.99[acf]**	--	--	**1.36[cf]**	--	--
Benzo(e)pyrene	mg/kg	NV	NV	1.5E-01	8.0E-01	1.5E+00	NV	NV	NV	NV	**0.981[cd]**	--	--	--	**2.21[cde]**	--	--	**0.926[cd]**	--	--

Table 3.1

Summary of Sediment Analytical Results
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Location:											SS-4	SS-4	SS-4	SS-4	SS-5	SS-5	SS-5	SS-6	SS-6	SS-6
Sample Identification:											SE-030916-JN-007	SE-030916-JN-010	SE-030916-JN-008	SE-030916-JN-009	SE-031016-JN-011	SE-031016-JN-013	SE-031016-JN-012	SE-030916-JN-001	SE-030916-JN-003	SE-030916-JN-002
Sample Date:											3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/10/2016	3/10/2016	3/10/2016	3/9/2016	3/9/2016	3/9/2016
Sample Depth:											(0-0.5) ft BGS	(0-4.08) ft BGS	(0.5-2) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS
Sample Type:											Shallow	Composite	Deep	Duplicate	Shallow	Composite	Deep	Shallow	Composite	Deep
Photoionization Detector (PID) Reading (ppm) [1]											88	162	162	162	18	28	28	16	22	22
Applicable Screening Criteria		Sediment Screening Criteria (Sed)[2]					Recreator Screening Criteria (Rec) [3]	Soil Screening Criteria (Soil) [4]		Toxicity Characteristic Leaching Procedure (TCLP) Criteria [5]	Sed/Soil/Rec	TCLP	Soil	Soil	Sed/Soil/Rec	Soil/TCLP	Soil	Sed/Soil/Rec	Soil/TCLP	Soil
		Site-specific Risk-based Screening Levels [6]		WDNR Criteria [7]			Site-specific Risk-based Screening Levels [6]	Site-specific Risk-based Screening Levels [6]	Ecological Criteria [8]	Regulatory Level [9]										
Parameters	Units	Recreator Sediment Contact Screening Level [10] a	Maintenance Worker Sediment Contact Screening Level [10] b	Sediment TEC [11] c	Sediment MEC [11] d	Sediment PEC [11] e	Recreator Soil Contact Screening Level [10] f	Landscaper Soil Contact Screening Level [10] g	Soil Ecological Screening Level h	TCLP i										
Selected Ion Monitoring (SIM) SVOCs (Cont.d')																				
Benzo(g,h,i)perylene	mg/kg	2.6E+03	1.1E+05	1.7E-01	1.7E+00	3.2E+00	8.4E+02	1.4E+04	1.2E+02	NV	0.707[c]	--	--	--	1.87[cd]	--	--	0.708[c]	--	--
Benzo(j)fluoranthene/Benzo(k)fluoranthene	mg/kg	1.9E+01	9.8E+03	2.4E-01	6.8E+00	1.3E+01	7.2E+00	4.4E+02	1.5E+02	NV	1.1[c]	--	--	--	3.14[c]	--	--	0.97[c]	--	--
C1-Benzo(a)anthracenes/chrysenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	3.47	--	--	--	1.73	--	--	1.73	--	--
C1-Fluoranthenes/Pyrenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	3.8	--	--	--	3.19	--	--	2.63	--	--
C1-Fluorenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.27	--	--	--	0.392	--	--	0.96	--	--
C1-Naphthalenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	4.11	--	--	--	0.897	--	--	1.22	--	--
C1-Phenanthrenes/Anthracenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	6.58	--	--	--	2.98	--	--	6.15	--	--
C2-Benzo(a)anthracenes/chrysenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	3.76	--	--	--	1.21	--	--	2.48	--	--
C2-Fluorenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	4.27	--	--	--	0.904	--	--	3.16	--	--
C2-Naphthalenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	7.49	--	--	--	1.4	--	--	3.59	--	--
C2-Phenanthrenes/Anthracenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	14	--	--	--	3.36	--	--	10.6	--	--
C3-Benzo(a)anthracenes/chrysenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.89	--	--	--	0.911	--	--	1.99	--	--
C3-Fluorenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	7.94	--	--	--	1.85	--	--	4.5	--	--
C3-Naphthalenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	7.62	--	--	--	1.38	--	--	4.11	--	--
C3-Phenanthrenes/Anthracenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	15.7	--	--	--	2.99	--	--	9.08	--	--
C4-Benzo(a)anthracenes/chrysenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.08	--	--	--	0.54	--	--	1.16	--	--
C4-Naphthalenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	6.92	--	--	--	1.38	--	--	4.39	--	--
C4-Phenanthrenes/Anthracenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	8.69	--	--	--	1.89	--	--	4.74	--	--
Chrysene/Triphenylene	mg/kg	1.9E+02	9.8E+04	1.7E-01	7.3E-01	1.3E+00	7.2E+01	4.4E+03	4.7E+00	NV	2.76[cde]	--	--	--	4.22[cde]	--	--	2.37[cde]	--	--
Dibenz(a,h)anthracene	mg/kg	1.9E-01	9.8E+01	3.3E-02	8.4E-02	1.4E-01	7.2E-02	4.4E+00	1.8E+01	NV	0.222[acde]	--	--	--	0.572[acde]	--	--	0.195[acde]	--	--
Fluoranthene	mg/kg	3.5E+03	1.5E+05	4.2E-01	1.3E+00	2.2E+00	1.1E+03	1.8E+04	1.2E+02	NV	3.2[cde]	--	--	--	9.63[cde]	--	--	4.22[cde]	--	--
Fluorene	mg/kg	3.5E+03	1.5E+05	7.7E-02	3.1E-01	5.4E-01	1.1E+03	1.8E+04	1.2E+02	NV	0.876[cde]	--	--	--	1.31[cde]	--	--	0.837[cde]	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	1.9E+00	9.8E+02	2.0E-01	1.7E+00	3.2E+00	7.2E-01	4.4E+01	1.1E+02	NV	0.637[c]	--	--	--	1.81[cdf]	--	--	0.612[c]	--	--
Naphthalene	mg/kg	1.8E+03	7.5E+04	1.8E-01	3.7E-01	5.6E-01	2.0E+02	2.9E+02	9.9E-02	NV	1.87[cdeh]	--	--	--	1.23[cdeh]	--	--	0.489[cdh]	--	--
Perylene	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.402	--	--	--	1.06	--	--	0.575	--	--
Phenanthrene	mg/kg	2.6E+03	1.1E+05	2.0E-01	6.9E-01	1.2E+00	8.4E+02	1.4E+04	4.6E+01	NV	3.94[cde]	--	--	--	9.09[cde]	--	--	5.67[cde]	--	--
Pyrene	mg/kg	2.6E+03	1.1E+05	2.0E-01	8.6E-01	1.5E+00	8.4E+02	1.4E+04	7.9E+01	NV	3.29[cde]	--	--	--	7.37[cde]	--	--	3.24[cde]	--	--
Total PAHs	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	21.874	19.91	42.9	50.91	49.697	142	305	22.758	57.95	198.78
Metals																				
Antimony	mg/kg	5.5E+01	4.1E+03	2.0E+00	1.4E+01	2.5E+01	1.5E+01	3.4E+02	2.7E-01	NV	50.2[cdefh]	17.2	59.8 J[h]	5.1 J[h]	32.0[cdefh]	511[gh]	48.3[h]	30.6[cdefh]	15.0[h]	35.9[h]
Arsenic	mg/kg	5.6E+00	3.4E+02	9.8E+00	2.1E+01	3.3E+01	1.9E+00	3.2E+01	1.8E+01	NV	7.6[af]	16.3	11.9	10.7	7.1[af]	40.4[gh]	14.7	10.2[af]	8.4	9.0
Barium	mg/kg	2.7E+04	2.0E+06	NV	NV	NV	7.6E+03	1.7E+05	3.3E+02	NV	2270[h]	1550	2080 J[h]	426 J[h]	1120[h]	3880[h]	2340[h]	1140[h]	1010[h]	945[h]
Beryllium	mg/kg	2.7E+02	2.0E+04	NV	NV	NV	7.6E+01	7.9E+02	2.1E+01	NV	0.56	0.53	0.40	0.47	0.17 J	0.38 J	0.39	0.25 J	0.48	0.47
Cadmium	mg/kg	1.2E+02	6.7E+03	9.9E-01	3.0E+00	5.0E+00	3.4E+01	3.5E+02	3.6E-01	NV	4.5[cdh]	3.9	4.0[h]	1.7[h]	8.0[cdeh]	31.9[h]	19.4[h]	57.9[cdefh]	7.6[h]	4.1[h]
Chromium (total)	mg/kg	2.2E+01	1.4E+03	4.3E+01	7.7E+01	1.1E+02	6.2E+00	9.3E+01	4.0E-01	NV	NA [12]	NA [12]	NA [12]	NA [12]	NA [12]	NA [12]	NA [12]	NA [12]	NA [12]	NA [12]
Chromium III	mg/kg	2.1E+05	1.5E+07	NV	NV	NV	5.7E+04	2.8E+05	NV	NV	181 J	164 J	197 J	51.7 J	176	746	272	261 J	102 J	113 J
Cobalt	mg/kg	4.1E+01	3.1E+03	5.0E+01	5.0E+01	5.0E+01	1.1E+01	1.6E+02	1.3E+01	NV	5.9	5.9	4.3	5.0	3.8	9.3	10.6	5.2	5.9	6.0
Copper	mg/kg	5.5E+03	4.1E+05	3.2E+01	9.1E+01	1.5E+02	1.5E+03	3.4E+04	2.8E+01	NV	135[cdh]	106	152[h]	53.3[h]	40.3[ch]	159[h]	113[h]	50.8[ch]	88.7[h]	91.8[h]
Lead	mg/kg	4.3E+03	NV	3.6E+01	8.3E+01	1.3E+02	4.3E+03	2.2E+03	1.1E+01	NV	1340[cdeh]	1280	1630[h]	657[h]	1470[cdeh]	8570[gh]	2660[gh]	1870[cdeh]	637[h]	706[h]
Manganese	mg/kg	1.9E+04	1.4E+06	4.6E+02	7.8E+02	1.1E+03	5.3E+03	3.5E+03	2.2E+02	NV	390[h]	377	236[h]	394[h]	371[h]	678[h]	641[h]	548[ch]	525[h]	629[h]
Mercury	mg/kg	4.1E+01	3.1E+03	1.8E-01	6.4E-01	1.1E+00	1.1E+01	9.5E+01	1.0E-01	NV	9.3[cdeh]	15.2	14.8[h]	8.4[h]	0.27[ch]	1.7[h]	0.61[h]	0.46[ch]	1.6[h]	7.2[h]
Methyl mercury	mg/kg	1.4E+01	1.0E+03	1.0E-05	1.0E-05	1.0E-05	3.8E+00	8.5E+01	1.6E-03	NV	0.0014[cde]	--	--	--	0.00022[cde]	--	--	0.00024[cde]	--	--
Nickel	mg/kg	2.7E+03	2.0E+05	2.3E+01	3.6E+01	4.9E+01	7.6E+02	4.7E+03	3.8E+01	NV	14.8	13.8	13.6	12.3	29.2[c]	103[h]	21.0	12.7	15.0	14.7
Selenium	mg/kg	6.8E+02	5.1E+04	NV	NV	NV	1.9E+02	4.2E+03	5.2E-01	NV	2.1[h]	2.0	1.5 J[h]	2.0[h]	2.0[h]	5.4[h]	4.7[h]	15.1[h]	3.2[h]	2.2[h]
Silver	mg/kg	6.8E+02	5.1E+04	1.6E+00	1.9E+00	2.2E+00	1.9E+02	6.2E+02	4.2E+00	NV	0.22 J	0.20 J	0.23 J	0.29 J	0.21 J	1.3	0.40	0.34	0.26 J	0.22 J
Thallium	mg/kg	NV	NV	NV	NV	NV	NV	NV	5.7E-02	NV	0.22 J[h]	0.23 J	0.21 J[h]	0.21 J[h]	0.10 J[h]	0.24 J[h]	0.18 J[h]	0.11 J[h]	0.21 J[h]	0.23 J[h]
Vanadium	mg/kg	6.8E+02	5.1E+04	NV	NV	NV	1.9E+02	2.7E+03	7.8E+00	NV	18.7[h]	17.9	12.5[h]	18.1[h]	0.040 U	11.3[h]	5.6	10.0[h]	14.4[h]	14.2[h]
Zinc	mg/kg	4.1E+04	3.1E+06	1.2E+02	2.9E+02	4.6E+02	1.1E+04	2.6E+05	4.6E+01	NV	1910[cdeh]	1750	1710[h]	605[h]	1970[cdeh]	5590[h]	2780[h]	904[cdeh]	1250[h]	1140[h]
Simultaneously Extracted Metals (SEM)																				
Cadmium	mg/kg	1.2E+02	6.7E+03	9.9E-01	3.0E+00	5.0E+00	3.4E+01	3.5E+02	3.6E-01	NV	5.6[cdeh]	--	--	--	4.6[cdh]	--	--	3.7[cdh]	--	--
Copper	mg/kg	5.5E+03	4.1E+05	3.2E+01	9.1E+01	1.5E+02	1.5E+03	3.4E+04	2.8E+01	NV	138[cdh]	--	--	--	11.6 J	--	--	24.8	--	--
Lead	mg/kg	4.3E+03	NV	3.6E+01	8.3E+01	1.3E+02	4.3E+03	2.2E+03	1.1E+01	NV	1940[cdeh]	--	--	--	3560[cdegh]	--	--	839[cdeh]	--	--
Mercury	mg/kg	4.1E+01	3.1E+03	1.8E-01	6.4E-01	1.1E+00	1.1E+01	9.5E+01	1.0E-01	NV	0.0027 U	--	--	--	0.0047 J	--	--	0.0031 U	--	--
Nickel	mg/kg	2.7E+03	2.0E+05	2.3E+01	3.6E+01	4.9E+01	7.6E+02	4.7E+03	3.8E+01	NV	10.2	--	--	--	58.8[cdeh]	--	--	7.4	--	--
Silver	mg/kg	6.8E+02	5.1E+04	1.6E+00	1.9E+00	2.2E+00	1.9E+02	6.2E+02	4.2E+00	NV	0.18 U	--	--	--	R	--	--	0.082 U	--	--
SEM/Acid-volatile sulfide ratio (AVS)	none	NV	NV	NV	NV	NV	NV	NV	NV	NV	3.28	--	--	--	3.48	--	--	1.68	--	--
Zinc	mg/kg	4.1E+04	3.1E+06	1.2E+02	2.9E+02	4.6E+02	1.1E+04	2.6E+05	4.6E+01	NV	2960[cdeh]	--	--	--	2690[cdeh]	--	--	2080[cdeh]	--	--

Table 3.1

Summary of Sediment Analytical Results
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Location:										**SS-4**	**SS-4**	**SS-4**	**SS-4**	**SS-5**	**SS-5**	**SS-5**	**SS-6**	**SS-6**	**SS-6**
Sample Identification:										**SE-030916-JN-007**	**SE-030916-JN-010**	**SE-030916-JN-008**	**SE-030916-JN-009**	**SE-031016-JN-011**	**SE-031016-JN-013**	**SE-031016-JN-012**	**SE-030916-JN-001**	**SE-030916-JN-003**	**SE-030916-JN-002**
Sample Date:										**3/9/2016**	**3/9/2016**	**3/9/2016**	**3/9/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/9/2016**	**3/9/2016**	**3/9/2016**
Sample Depth:										**(0-0.5) ft BGS**	**(0-4.08) ft BGS**	**(0.5-2) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-2) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-2) ft BGS**	**(0.5-2) ft BGS**
Sample Type:										**Shallow**	**Composite**	**Deep**	**Duplicate**	**Shallow**	**Composite**	**Deep**	**Shallow**	**Composite**	**Deep**
Photoionization Detector (PID) Reading (ppm) [1]										**88**	**162**	**162**	**162**	**18**	**28**	**28**	**16**	**22**	**22**
Applicable Screening Criteria		**Sediment Screening Criteria (Sed)[2]**					**Recreator Screening Criteria (Rec) [3]**	**Soil Screening Criteria (Soil) [4]**		**Toxicity Characteristic Leaching Procedure (TCLP) Criteria [5]**	**Sed/Soil/Rec**	**TCLP**	**Soil**	**Soil**	**Sed/Soil/Rec**	**Soil/TCLP**	**Soil**	**Sed/Soil/Rec**	**Soil/TCLP**	**Soil**
		Site-specific Risk-based Screening Levels [6]		**WDNR Criteria [7]**			**Site-specific Risk-based Screening Levels [6]**	**Site-specific Risk-based Screening Levels [6]**	**Ecological Criteria [8]**	**Regulatory Level [9]**										
Parameters	**Units**	**Recreator Sediment Contact Screening Level [10] a**	**Maintenance Worker Sediment Contact Screening Level [10] b**	**Sediment TEC [11] c**	**Sediment MEC [11] d**	**Sediment PEC [11] e**	**Recreator Soil Contact Screening Level [10] f**	**Landscaper Soil Contact Screening Level [10] g**	**Soil Ecological Screening Level h**	**TCLP i**										
TCLP Metals																				
Arsenic	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	5.0E+00	--	**0.067 J**	--	--	--	**0.027 J**	--	--	**0.028 J**	--
Barium	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	1.0E+02	--	**1.2 J**	--	--	--	**0.17 J**	--	--	**0.61 JB**	--
Cadmium	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	1.0E+00	--	**0.011 J**	--	--	--	**0.0016 J**	--	--	**0.00070 J**	--
Chromium	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	5.0E+00	--	**0.0054 J**	--	--	--	**0.013 J**	--	--	**0.00055 JB**	--
Lead	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	5.0E+00	--	**1.2**	--	--	--	**0.19 J**	--	--	**0.11 J**	--
Mercury	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	2.0E-01	--	**0.00013 J**	--	--	--	0.000090 U	--	--	0.000090 U	--
Selenium	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	1.0E+00	--	0.0040 U	--	--	--	0.0040 U	--	--	0.0040 U	--
Silver	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	5.0E+00	--	0.00092 U	--	--	--	**0.0013 J**	--	--	**0.0019 J**	--
Polychlorinated Biphenyls (PCBs)																				
Aroclor-1016 (PCB-1016)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.13 U	0.046 U	0.044 U	0.12 U	0.075 U	0.15 U	0.025 U	0.41 U	0.13 U	0.13 U
Aroclor-1221 (PCB-1221)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.17 U	0.062 U	0.058 U	0.17 U	0.1 U	0.2 U	0.034 U	0.55 U	0.18 U	0.17 U
Aroclor-1232 (PCB-1232)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.21 U	0.077 U	0.073 U	0.21 U	0.13 U	0.25 U	0.042 U	0.69 U	0.22 U	0.21 U
Aroclor-1242 (PCB-1242)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.12 U	0.042 U	0.04 U	0.11 U	0.069 U	0.13 U	0.023 U	0.38 UJ	0.12 U	0.12 U
Aroclor-1248 (PCB-1248)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.084 U	0.031 U	0.029 U	0.083 U	0.05 U	0.098 U	0.017 U	0.27 U	0.089 U	0.085 U
Aroclor-1254 (PCB-1254)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.15 U	0.054 U	0.051 U	0.15 U	**0.14 J**	**0.2 J**	**0.27 J**	0.48 U	0.16 U	0.15 U
Aroclor-1260 (PCB-1260)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.095 U	0.035 U	0.033 U	0.094 U	0.056 U	0.11 U	0.019 U	0.31 U	0.1 U	0.096 U
Aroclor-1262 (PCB-1262)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.11 U	0.039 U	0.036 U	0.1 U	0.063 U	0.12 U	0.021 U	0.34 U	0.11 U	0.11 U
Aroclor-1268 (PCB-1268)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.14 UJ	0.05 UJ	0.047 UJ	0.14 UJ	**0.33**	**0.67**	**0.56 J**	**1.2**	0.14 UJ	0.14 UJ
Total PCBs	mg/kg	1.7E+00	7.2E+01	6.0E-02	3.7E-01	6.8E-01	5.5E-01	8.9E+00	3.3E-04	NV	ND	ND	ND	ND	**0.47 J[cdh]**	**0.87 J[h]**	**0.83 J[h]**	**1.2[cdefh]**	ND	ND
General Chemistry																				
Black carbon	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**27900**	--	--	--	**9240**	--	--	**12100**	--	--
Sulfide (acid soluble) [12]	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**558**	--	--	--	**549**	--	--	**693**	--	--
Sulfide (acid soluble) [12]	umol/g	NV	NV	NV	NV	NV	NV	NV	NV	NV	**17.4**	--	--	--	**17.1**	--	--	**21.6**	--	--
Total organic carbon (TOC)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**80700**	**114000**	**162000**	**399000**	**78800**	**176000**	**101000**	**53500**	**96200**	**89500**
Total solids	%	NV	NV	NV	NV	NV	NV	NV	NV	NV	**51.3**	--	--	--	**76.5**	--	--	**41.8**	--	--

Notes:

(1) - For composite sediment samples, the highest measured PID reading is indicated
(2) - Sediment screening levels are only compared to samples with a bottom depth of 0.5 ft or less.
(3) - Recreator soil screening levels are compared to samples with a bottom depth of 0.5 ft or less.
(4) - Landscaper and ecological soil screening levels are compared to samples with a bottom depth of 2 ft or less.
(5) - A relevant pathway does not exist for samples collected from greater than 2 ft. Samples collected from all depths were compared to the TCLP Criteria for potential disposal purposes.
(6) - Site-specific risk-based screening levels are based on a cancer risk and non-cancer hazard quotient of 1E-6 and 0.1, respectively.
(7) - Consensus-Based Sediment Quality Guidelines: Recommendations For Use and Application (Wisconsin Department of Natural Resources [WDNR], 2003)
(8) - The soil ecological screening level is the minimum of the USEPA OSWER ecological soil screening levels (avian, invertebrate, mammalian, or plant) and the Region 5 ecological screening levels for soil.
(9) - Table 2 Maximum Concentration of Contaminants for the Toxicity Characteristic , Section (s.) NR 661.24, Wisconsin Administrative Code (Wis. Adm. Code), October 2013
(10) - Developed by General Motors LLC (GM)
(11) - Each screening criterion from the Sediment Quality Guidelines (7) is used when available; if no other criterion is available, USEPA Region 5 Ecological Screening Levels (ESLs) is used
(12) - When acid-volatile sulfide (AVS) is present, chromium can only exist in the trivalent chromium oxidation state. Therefore, for samples with AVS detections, chromium (total) has been converted to trivalent chromium.
(13) - Alkylated PAHs analyzed as part of SIM SVOCs but not considered as part of the SVOC analysis were not included on Figures 4.1 to 4.4 of the Sediment Investigation Report. These alkylated PAHs are further discussed in Section 4 of the report.
Detections are bolded
99.9[cd] Result exceeds* criteria indicated.
* - An exceedance is indicated if the ratio of the detected concentration to the screening level exceeds 1.0.
- Not Analyzed
B - Compound was found in the blank and sample
J - Estimated concentration.
MEC - Midpoint effect concentration, if concentration is > MEC and ≤ PEC, level 3 concern
mg/kg - milligrams per kilogram
mg/L - milligrams per liter
NA - Not applicable
NC - Not calculated; therefore, the limit of detection was reported
NV - No value. Criterion for analytes is either not promulgated or could not be calculated
PEC - Probable effect concentration, if concentration > PEC, level 4 concern
ppm - parts per million
R - Rejected.
TEC - Threshold effect concentration, if concentration > TEC and ≤ MEC, level 2 concern. If concentration ≤ TEC, level 1 concern
U - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated.
umol/g - micro mols per gram
USEPA - United States Environmental Protection Agency

Table 3.1

Summary of Sediment Analytical Results
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Location:											SS-7	SS-7	SS-7	SS-9	SS-9	SS-9	SS-9
Sample Identification:											SE-030916-JN-004	SE-030916-JN-006	SE-030916-JN-005	SE-031016-JN-024	SE-031016-JN-027	SE-031016-JN-025	SE-031016-JN-026
Sample Date:											3/9/2016	3/9/2016	3/9/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:											(0-0.5) ft BGS	(0-3) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-1.5) ft BGS	(0.5-1.5) ft BGS	(0.5-1.5) ft BGS
Sample Type:											Shallow	Composite	Deep	Shallow	Composite	Deep	Duplicate
Photoionization Detector (PID) Reading (ppm) [1]											0	0	0	0	0	0	0
Applicable Screening Criteria		Sediment Screening Criteria (Sed)[2]					Recreator Screening Criteria (Rec) [3]	Soil Screening Criteria (Soil) [4]		Toxicity Characteristic Leaching Procedure (TCLP) Criteria [5]	Sed/Soil/Rec	TCLP	Soil	Sed/Soil/Rec	Soil/TCLP	Soil	Soil
		Site-specific Risk-based Screening Levels [6]		WDNR Criteria [7]			Site-specific Risk-based Screening Levels [6]	Site-specific Risk-based Screening Levels [6]	Ecological Criteria [8]	Regulatory Level [9]							
Parameters	Units	Recreator Sediment Contact Screening Level [10] a	Maintenance Worker Sediment Contact Screening Level [10] b	Sediment TEC [11] c	Sediment MEC [11] d	Sediment PEC [11] e	Recreator Soil Contact Screening Level [10] f	Landscaper Soil Contact Screening Level [10] g	Soil Ecological Screening Level h	TCLP i							
Volatile Organic Compounds (VOCs)																	
1,1,1-Trichloroethane	mg/kg	2.7E+05	2.0E+07	2.1E-01	2.1E-01	2.1E-01	4.8E+04	1.2E+05	3.0E+01	NV	0.0015 U	0.0037 U	0.0011 U	0.0013 U	0.0012 U	0.0067 U	0.0013 U
1,1,2,2-Tetrachloroethane	mg/kg	5.6E+01	3.6E+03	8.5E-01	8.5E-01	8.5E-01	1.6E+01	3.0E+02	1.3E-01	NV	0.00071 U	0.0018 U	0.00054 U	0.00063 U	0.00059 U	0.0032 U	0.00064 U
1,1,2-Trichloroethane	mg/kg	2.0E+02	1.3E+04	5.2E-01	5.2E-01	5.2E-01	4.2E+01	2.6E+02	2.9E+01	NV	0.00084 U	0.0021 U	0.00064 U	0.00075 U	0.0007 U	0.0038 U	0.00077 U
1,1-Dichloroethane	mg/kg	2.7E+04	2.0E+06	5.8E-04	5.8E-04	5.8E-04	4.8E+03	1.2E+04	2.0E+01	NV	0.00077 U	0.0019 U	0.00059 U	0.00069 U	0.00064 U	0.0035 U	0.00071 U
1,1-Dichloroethene	mg/kg	6.8E+03	5.1E+05	1.9E-02	1.9E-02	1.9E-02	1.4E+03	4.4E+03	8.3E+00	NV	0.0018 U	0.0046 U	0.0014 U	0.0016 U	0.0015 U	0.0083 U	0.0017 U
1,2,4-Trichlorobenzene	mg/kg	3.9E+02	2.5E+04	8.0E-03	1.3E-02	1.8E-02	1.1E+02	1.5E+02	1.1E+01	NV	0.00086 U	0.0022 U	0.00066 U	0.00077 U	R	0.0039 U	0.00079 U
1,2,4-Trimethylbenzene	mg/kg	NV	NV	NV	NV	NV	2.5E+02	2.3E+02	NV	NV	0.0013 U	0.0033 U	0.001 U	0.0012 U	0.0011 U	0.006 U	0.0012 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	3.3E+00	8.9E+02	NV	NV	NV	1.9E-01	1.1E+00	3.5E-02	NV	0.0062 U	0.015 U	0.0047 U	0.0055 U	0.0051 U	0.028 U	0.0056 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	5.6E+00	3.6E+02	NV	NV	NV	1.2E+00	7.0E+00	1.2E+00	NV	0.0012 U	0.003 U	0.00092 U	0.0011 U	0.001 U	0.0055 U	0.0011 U
1,2-Dichlorobenzene	mg/kg	1.2E+04	9.2E+05	2.3E-02	2.9E-01	2.3E-02	2.4E+03	6.4E+03	3.0E+00	NV	0.00077 U	0.0019 U	0.00059 U	0.00069 U	0.00064 U	0.0035 U	0.00071 U
1,2-Dichloroethane	mg/kg	1.2E+02	7.9E+03	2.6E-01	2.6E-01	2.6E-01	2.6E+01	1.6E+02	2.1E+01	NV	0.001 U	0.0026 U	0.0008 U	0.00094 U	0.00087 U	0.0048 U	0.00095 U
1,2-Dichloropropane	mg/kg	3.1E+02	2.0E+04	3.3E-01	3.3E-01	3.3E-01	8.6E+01	1.0E+02	3.3E+01	NV	0.00032 U	0.0008 U	0.00024 U	0.00028 U	0.00027 U	0.0015 U	0.00029 U
1,3,5-Trimethylbenzene	mg/kg	NV	NV	NV	NV	NV	4.0E+02	3.5E+02	NV	NV	0.00066 U	0.0017 U	0.0005 U	0.00059 U	0.00055 U	0.003 U	0.0006 U
1,3-Dichlorobenzene	mg/kg	2.7E+03	2.0E+05	1.3E+00	1.3E+00	1.3E+00	7.6E+02	1.7E+04	3.8E+01	NV	0.0016 U	0.0039 U	0.0012 U	0.0014 U	0.0013 U	0.0071 U	0.0014 U
1,4-Dichlorobenzene	mg/kg	2.8E+02	1.8E+04	3.1E-02	6.1E-02	9.0E-02	7.8E+01	1.5E+03	5.5E-01	NV	0.00064 U	0.0016 U	0.00048 U	0.00057 U	0.00053 U	0.0029 U	0.00058 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	8.2E+04	6.1E+06	4.2E-02	4.2E-02	4.2E-02	2.0E+04	1.2E+05	9.0E+01	NV	0.0025 U	0.0064 U	0.0019 U	0.0023 U	0.0021 U	0.012 U	0.0023 U
2-Hexanone	mg/kg	6.8E+02	5.1E+04	5.8E-02	5.8E-02	5.8E-02	1.6E+02	7.6E+02	1.3E+01	NV	0.0015 U	0.0039 U	0.0012 U	0.0014 U	0.0013 U	0.007 U	0.0014 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NV	NV	2.5E-02	2.5E-02	2.5E-02	9.6E+04	8.9E+04	4.4E+02	NV	0.0028 U	0.007 U	0.0021 U	0.0025 U	0.0023 U	0.013 U	0.0025 U
Acetone	mg/kg	1.2E+05	9.2E+06	9.9E-03	9.9E-03	9.9E-03	3.3E+04	4.3E+05	2.5E+00	NV	0.013 U	**0.074 J**	**0.033 J**	0.012 U	0.011 U	0.059 U	**0.05**
Benzene	mg/kg	2.0E+02	1.3E+04	5.7E-02	8.4E-02	1.1E-01	4.9E+01	4.1E+02	2.6E-01	NV	0.002 U	0.0051 U	0.0016 U	0.0018 U	0.0017 U	0.0093 U	0.0019 U
Bromodichloromethane	mg/kg	1.8E+02	1.2E+04	NV	NV	NV	5.0E+01	9.6E+02	5.4E-01	NV	0.00066 U	0.0017 U	0.0005 U	0.00059 U	0.00055 U	0.003 U	0.0006 U
Bromoform	mg/kg	1.4E+03	9.1E+04	4.9E-01	4.9E-01	4.9E-01	3.5E+02	3.5E+03	1.6E+01	NV	0.00055 U	0.0014 U	0.00041 U	0.00049 U	0.00045 U	0.0025 U	0.0005 U
Bromomethane (Methyl bromide)	mg/kg	1.9E+02	1.4E+04	1.4E-03	1.4E-03	1.4E-03	3.7E+01	1.1E+02	2.4E-01	NV	0.00096 U	0.0024 U	0.00073 U	0.00085 U	0.0008 U	0.0044 U	0.00087 U
Carbon disulfide	mg/kg	1.4E+04	1.0E+06	2.4E-02	2.4E-02	2.4E-02	3.1E+03	1.4E+04	9.4E-02	NV	0.0013 U	0.0034 U	0.001 U	0.0012 U	**0.0023 J**	**0.025 J**	**0.0038 J**
Carbon tetrachloride	mg/kg	1.6E+02	1.0E+04	1.5E+00	1.5E+00	1.5E+00	4.1E+01	4.3E+02	3.0E+00	NV	0.0015 U	0.0037 U	0.0011 U	0.0013 U	0.0012 U	0.0067 U	0.0013 U
Chlorobenzene	mg/kg	2.7E+03	2.0E+05	2.9E-01	2.9E-01	2.9E-01	5.0E+02	1.3E+03	1.3E+01	NV	0.0012 U	0.003 U	0.00092 U	0.0011 U	0.001 U	0.0055 U	0.0011 U
Chloroethane	mg/kg	1.4E+04	1.0E+06	NV	NV	NV	3.7E+03	6.3E+04	NV	NV	0.001 U	0.0025 U	0.00076 U	0.0009 U	0.00083 U	0.0046 U	0.00091 U
Chloroform (Trichloromethane)	mg/kg	5.9E+02	3.8E+04	1.2E-01	1.2E-01	1.2E-01	7.1E+01	2.1E+02	1.2E+00	NV	0.00082 U	0.0021 U	0.00062 U	0.00073 U	0.00068 U	0.0037 U	0.00075 U
Chloromethane (Methyl chloride)	mg/kg	NV	NV	NV	NV	NV	2.3E+03	2.2E+03	1.0E+01	NV	0.0018 U	0.0045 U	0.0014 U	0.0016 U	0.0015 U	0.0082 U	0.0016 U
cis-1,2-Dichloroethene	mg/kg	2.7E+02	2.0E+04	NV	NV	NV	7.6E+01	1.7E+03	NV	NV	0.00064 U	0.0016 U	0.00048 U	0.00057 U	0.00053 U	0.0029 U	0.00058 U
cis-1,3-Dichloropropene	mg/kg	1.1E+02	7.2E+03	NV	NV	NV	3.0E+01	4.1E+02	NV	NV	0.0016 U	0.0041 U	0.0012 U	0.0014 U	0.0013 U	0.0074 U	0.0015 U
Cyclohexane	mg/kg	NV	NV	NV	NV	NV	1.5E+05	1.5E+05	NV	NV	0.0011 U	0.0027 U	0.00083 U	0.00098 U	0.00091 U	0.005 U	0.001 U
Dibromochloromethane	mg/kg	1.3E+02	8.5E+03	NV	NV	NV	3.7E+01	7.1E+02	2.1E+00	NV	0.00084 U	0.0021 U	0.00064 U	0.00075 U	0.0007 U	0.0038 U	0.00077 U
Dichlorodifluoromethane (CFC-12)	mg/kg	2.7E+04	2.0E+06	NV	NV	NV	3.0E+03	4.8E+03	4.0E+01	NV	0.00064 U	0.0016 U	0.00048 U	0.00057 U	0.00053 U	0.0029 U	0.00058 U
Ethylbenzene	mg/kg	1.4E+04	1.0E+06	1.8E-01	1.8E-01	1.8E-01	3.4E+03	2.1E+04	5.2E+00	NV	0.00073 U	0.0018 U	0.00055 U	0.00065 U	0.00061 U	0.0033 U	0.00066 U
Isopropyl benzene	mg/kg	1.4E+04	1.0E+06	NV	NV	NV	2.9E+03	9.9E+03	NV	NV	0.00046 U	0.0011 U	0.00035 U	0.00041 U	0.00038 U	0.0021 U	0.00042 U
Methyl acetate	mg/kg	1.4E+05	1.0E+07	NV	NV	NV	3.8E+04	8.5E+05	NV	NV	0.0046 U	0.011 U	0.0035 U	0.0041 U	0.0038 U	0.021 U	0.0042 U
Methyl cyclohexane	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0013 U	**0.022 J**	**0.083 J**	0.0012 U	**0.0027 J**	0.006 U	0.0012 U
Methyl tert butyl ether (MTBE)	mg/kg	6.2E+03	4.0E+05	NV	NV	NV	1.5E+03	1.3E+04	NV	NV	0.00098 U	0.0025 U	0.00074 U	0.00088 U	0.00081 U	0.0045 U	0.00089 U
Methylene chloride	mg/kg	8.2E+02	6.1E+04	1.6E-01	1.6E-01	1.6E-01	2.2E+02	3.8E+03	4.1E+00	NV	0.0017 U	0.0042 U	0.0013 U	0.0015 U	0.0014 U	0.0077 U	0.0015 U
Styrene	mg/kg	2.7E+04	2.0E+06	2.5E-01	2.5E-01	2.5E-01	6.3E+03	2.8E+04	4.7E+00	NV	0.00091 U	0.0023 U	0.00069 U	0.00081 U	0.00076 U	0.0041 U	0.00083 U
Tetrachloroethene	mg/kg	8.2E+02	6.1E+04	9.9E-01	9.9E-01	9.9E-01	1.9E+02	8.5E+02	9.9E+00	NV	0.0018 U	0.0046 U	0.0014 U	0.0016 U	0.0015 U	0.0083 U	0.0017 U
Toluene	mg/kg	1.1E+04	8.2E+05	8.9E-01	1.3E+00	1.8E+00	3.0E+03	4.5E+04	5.5E+00	NV	0.00061 U	0.0015 U	0.00047 U	0.00055 U	0.00051 U	0.0028 U	0.00056 U
trans-1,2-Dichloroethene	mg/kg	2.7E+03	2.0E+05	6.5E-01	6.5E-01	6.5E-01	7.6E+02	1.7E+04	7.8E-01	NV	0.00073 U	0.0018 U	0.00055 U	0.00065 U	0.00061 U	0.0033 U	0.00066 U
trans-1,3-Dichloropropene	mg/kg	1.1E+02	7.2E+03	NV	NV	NV	3.0E+01	4.1E+02	NV	NV	0.00066 U	0.0017 U	0.0005 U	0.00059 U	0.00055 U	0.003 U	0.0006 U
Trichloroethene	mg/kg	6.8E+01	5.1E+03	1.1E-01	1.1E-01	1.1E-01	1.4E+01	4.6E+01	1.2E+01	NV	0.00086 U	0.0022 U	0.00066 U	0.00077 U	0.00072 U	0.0039 U	0.00079 U
Trichlorofluoromethane (CFC-11)	mg/kg	4.1E+04	3.1E+06	NV	NV	NV	6.9E+03	1.6E+04	1.6E+01	NV	0.00066 U	0.0017 U	0.0005 U	0.00059 U	0.00055 U	0.003 U	0.0006 U
Trifluorotrichloroethane (CFC-113)	mg/kg	4.1E+06	3.1E+08	NV	NV	NV	4.5E+05	7.2E+05	NV	NV	0.00096 U	0.0024 U	0.00073 U	0.00085 U	0.0008 UJ	0.0044 U	0.00087 U
Vinyl chloride	mg/kg	1.6E+01	9.9E+02	2.0E-01	2.0E-01	2.0E-01	4.3E+00	7.7E+01	6.5E-01	NV	0.00068 U	0.0017 U	0.00052 U	0.00061 U	0.00057 U	0.0031 U	0.00062 U
Xylenes (total)	mg/kg	2.7E+04	2.0E+06	2.5E-02	3.8E-02	5.0E-02	2.0E+03	2.6E+03	1.0E+01	NV	0.0012 U	0.0031 U	0.00093 U	0.0011 U	0.001 U	0.0056 U	0.0011 U
Semi-Volatile Organic Compounds (SVOCs)																	
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	3.8E+03	1.8E+05	NV	NV	NV	1.2E+03	2.1E+04	2.0E+01	NV	0.45 U	0.3 U	0.47 U	0.4 U	0.5 U	0.43 U	0.42 U
2,4,5-Trichlorophenol	mg/kg	9.6E+03	4.4E+05	NV	NV	NV	3.0E+03	5.1E+04	1.4E+01	NV	1.2 U	0.78 U	1.2 U	1 U	1.3 U	1.1 U	1.1 U
2,4,6-Trichlorophenol	mg/kg	9.6E+01	4.4E+03	2.1E-01	2.1E-01	2.1E-01	3.0E+01	5.1E+02	9.9E+00	NV	0.42 U	0.28 U	0.44 U	0.37 U	0.47 U	0.4 U	0.4 U
2,4-Dichlorophenol	mg/kg	2.9E+02	1.3E+04	8.2E-02	8.2E-02	8.2E-02	8.9E+01	1.5E+03	8.8E+01	NV	0.95 U	0.63 U	0.98 U	0.84 U	1 U	0.91 U	0.89 U
2,4-Dimethylphenol	mg/kg	1.9E+03	8.8E+04	2.9E-01	3.0E-01	2.9E-01	5.9E+02	1.0E+04	1.0E-02	NV	0.95 U	0.63 U	0.98 U	0.84 U	1 U	0.91 U	0.89 U
2,4-Dinitrophenol	mg/kg	1.9E+02	8.8E+03	6.2E-03	6.2E-03	6.2E-03	5.9E+01	1.0E+03	6.1E-02	NV	1 UJ	0.66 UJ	1 UJ	0.88 U	1.1 U	0.95 U	0.94 U
2,4-Dinitrotoluene	mg/kg	7.8E+00	4.5E+02	1.4E-02	1.4E-02	1.4E-02	3.5E+00	5.3E+01	1.3E+00	NV	0.81 U	0.53 U	0.84 U	0.71 U	0.89 U	0.77 U	0.76 U
2,6-Dinitrotoluene	mg/kg	7.8E+00	4.5E+02	4.0E-02	4.0E-02	4.0E-02	3.5E+00	5.3E+01	3.3E-02	NV	1 U	0.66 U	1 U	0.88 U	1.1 U	0.95 U	0.94 U
2-Chloronaphthalene	mg/kg	7.7E+03	3.5E+05	4.2E-01	4.2E-01	4.2E-01	2.4E+03	4.1E+04	1.2E-02	NV	0.021 U	0.014 U	0.022 U	0.019 U	0.024 U	0.02 U	0.02 U
2-Chlorophenol	mg/kg	4.8E+02	2.2E+04	3.2E-02	3.2E-02	3.2E-02	1.5E+02	2.6E+03	2.4E-01	NV	0.39 U	0.26 U	0.4 U	0.34 U	0.43 U	0.37 U	0.37 U
2-Methylnaphthalene	mg/kg	3.8E+02	1.8E+04	2.0E-02	1.1E-01	2.0E-01	1.2E+02	2.1E+03	3.2E+00	NV	**0.73[cde]**	**0.61**	**0.47**	**0.36[cde]**	0.026 U	**0.23 J**	**0.4**
2-Methylphenol	mg/kg	4.8E+03	2.2E+05	6.7E+00	5.5E-02	6.7E+00	1.5E+03	2.6E+04	4.0E+01	NV	0.52 U	0.34 U	0.54 U	0.46 U	0.58 U	0.5 U	0.49 U

Table 3.1

Summary of Sediment Analytical Results
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Location:											SS-7	SS-7	SS-7	SS-9	SS-9	SS-9	SS-9
Sample Identification:											SE-030916-JN-004	SE-030916-JN-006	SE-030916-JN-005	SE-031016-JN-024	SE-031016-JN-027	SE-031016-JN-025	SE-031016-JN-026
Sample Date:											3/9/2016	3/9/2016	3/9/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:											(0-0.5) ft BGS	(0-3) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-1.5) ft BGS	(0.5-1.5) ft BGS	(0.5-1.5) ft BGS
Sample Type:											Shallow	Composite	Deep	Shallow	Composite	Deep	Duplicate
Photoionization Detector (PID) Reading (ppm) [1]											0	0	0	0	0	0	0
Applicable Screening Criteria		Sediment Screening Criteria (Sed)[2]					Recreator Screening Criteria (Rec) [3]	Soil Screening Criteria (Soil) [4]		Toxicity Characteristic Leaching Procedure (TCLP) Criteria [5]	Sed/Soil/Rec	TCLP	Soil	Sed/Soil/Rec	Soil/TCLP	Soil	Soil
		Site-specific Risk-based Screening Levels [6]		WDNR Criteria [7]			Site-specific Risk-based Screening Levels [6]	Site-specific Risk-based Screening Levels [6]	Ecological Criteria [8]	Regulatory Level [9]							
Parameters	Units	Recreator Sediment Contact Screening Level [10] a	Maintenance Worker Sediment Contact Screening Level [10] b	Sediment TEC [11] c	Sediment MEC [11] d	Sediment PEC [11] e	Recreator Soil Contact Screening Level [10] f	Landscaper Soil Contact Screening Level [10] g	Soil Ecological Screening Level h	TCLP i							
Semi-Volatile Organic Compounds (SVOCs) (Cont.d')																	
2-Nitroaniline	mg/kg	NV	NV	NV	NV	NV	2.4E+02	1.8E+02	7.4E+01	NV	0.43 U	0.29 U	0.45 U	0.38 U	0.48 U	0.41 U	0.41 U
2-Nitrophenol	mg/kg	NV	NV	NV	NV	NV	9.1E+01	7.0E+01	1.6E+00	NV	0.39 U	0.26 U	0.41 U	0.35 U	0.44 U	0.38 U	0.37 U
3&4-Methylphenol	mg/kg	4.8E+02	2.2E+04	NV	NV	NV	1.5E+02	2.6E+03	NV	NV	0.95 U	0.63 U	0.98 U	0.84 U	1 U	0.91 U	0.89 U
3,3'-Dichlorobenzidine	mg/kg	1.2E+01	6.9E+02	1.3E-01	1.3E-01	1.3E-01	5.2E+00	8.0E+01	6.5E-01	NV	0.85 U	0.56 U	0.88 U	0.75 U	0.94 U	0.82 U	0.81 U
3-Nitroaniline	mg/kg	NV	NV	NV	NV	NV	NV	NV	3.2E+00	NV	0.76 U	0.5 U	0.79 U	0.67 U	0.84 U	0.73 U	0.72 U
4,6-Dinitro-2-methylphenol	mg/kg	7.7E+01	3.5E+03	1.0E-01	1.0E-01	1.0E-01	2.4E+01	4.1E+02	1.4E-01	NV	0.44 U	0.29 U	0.45 U	0.38 U	0.48 U	0.42 U	0.41 U
4-Bromophenyl phenyl ether	mg/kg	NV	NV	1.6E+00	1.6E+00	1.6E+00	NV	NV	NV	NV	0.62 U	0.41 U	0.64 U	0.54 U	0.68 U	0.59 U	0.58 U
4-Chloro-3-methylphenol	mg/kg	1.9E+05	8.8E+06	3.9E-01	3.9E-01	3.9E-01	5.9E+04	1.0E+06	8.0E+00	NV	1 U	0.66 U	1 U	0.88 U	1.1 U	0.95 U	0.94 U
4-Chloroaniline	mg/kg	2.7E+01	1.5E+03	1.5E-01	1.5E-01	1.5E-01	1.2E+01	1.8E+02	1.1E+00	NV	0.81 U	0.53 U	0.84 U	0.71 U	0.89 U	0.77 U	0.76 U
4-Chlorophenyl phenyl ether	mg/kg									NV	0.62 U	0.41 U	0.64 U	0.54 U	0.68 U	0.59 U	0.58 U
4-Nitroaniline	mg/kg	2.7E+02	1.5E+04	NV	NV	NV	1.2E+02	1.7E+03	2.2E+01	NV	1.2 U	0.81 U	1.3 U	1.1 U	1.4 U	1.2 U	1.2 U
4-Nitrophenol	mg/kg	NV	NV	1.3E-02	1.3E-02	1.3E-02	NV	NV	5.1E+00	NV	0.81 U	0.53 U	0.84 U	0.71 U	0.89 U	0.77 U	0.76 U
Acenaphthene	mg/kg	5.3E+03	2.3E+05	6.7E-03	4.8E-02	8.9E-02	1.7E+03	2.8E+04	6.8E+02	NV	--	0.024 U	**0.29 J**	--	**0.21 J**	0.034 U	0.034 U
Acenaphthylene	mg/kg	2.6E+03	1.1E+05	5.9E-03	6.7E-02	1.3E-01	8.4E+02	1.4E+04	6.8E+02	NV	--	0.011 U	0.017 U	--	0.018 U	0.016 U	0.016 U
Acetophenone	mg/kg	9.6E+03	4.4E+05	NV	NV	NV	3.0E+03	5.1E+04	3.0E+02	NV	0.44 U	0.29 U	0.45 U	0.38 U	0.48 U	0.42 U	0.41 U
Anthracene	mg/kg	2.6E+04	1.1E+06	5.7E-02	4.5E-01	8.5E-01	8.4E+03	1.4E+05	1.5E+03	NV	--	**0.42**	**0.41**	--	**0.43**	**0.26 J**	**0.36**
Atrazine	mg/kg	2.4E+01	1.4E+03	NV	NV	NV	1.1E+01	1.6E+02	NV	NV	0.43 U	0.29 U	0.45 U	0.38 U	0.48 U	0.41 U	0.41 U
Benzaldehyde	mg/kg	9.6E+03	4.4E+05	NV	NV	NV	3.0E+03	5.1E+04	NV	NV	0.57 U	0.38 U	0.59 U	0.5 U	0.63 U	0.54 U	0.54 U
Benzo(a)anthracene	mg/kg	1.9E+00	9.8E+02	1.1E-01	5.8E-01	1.1E+00	7.2E-01	4.4E+01	5.2E+00	NV	--	**1.1**	**0.84**	--	**0.88**	**0.74**	**1.2**
Benzo(a)pyrene	mg/kg	1.9E-01	9.8E+01	1.5E-01	8.0E-01	1.5E+00	7.2E-02	4.4E+00	1.5E+00	NV	--	**0.98**	**0.66**	--	**0.76**	**0.44**	**1**
Benzo(b)fluoranthene	mg/kg	1.9E+00	9.8E+02	2.4E-01	6.8E+00	1.3E+01	7.2E-01	4.4E+01	6.0E+01	NV	--	**1.5**	**0.65**	--	**1.1**	**0.77**	**1.2**
Benzo(g,h,i)perylene	mg/kg	2.6E+03	1.1E+05	1.7E-01	1.7E+00	3.2E+00	8.4E+02	1.4E+04	1.2E+02	NV	--	**0.56**	**0.35**	--	**0.59**	**0.45**	**0.61**
Benzo(k)fluoranthene	mg/kg	1.9E+01	9.8E+03	2.4E-01	6.8E+00	1.3E+01	7.2E+00	4.4E+02	1.5E+02	NV	--	**0.36**	**0.33**	--	**0.36**	**0.3**	**0.7**
Biphenyl (1,1-Biphenyl)	mg/kg	6.5E+02	3.8E+04	NV	NV	NV	2.9E+02	4.4E+03	NV	NV	0.17 U	0.11 U	0.17 U	0.15 U	0.18 U	0.16 U	0.16 U
bis(2-Chloroethoxy)methane	mg/kg	2.9E+02	1.3E+04	NV	NV	NV	8.9E+01	1.5E+03	3.0E-01	NV	1 U	0.69 U	1.1 U	0.92 U	1.2 U	1 U	0.98 U
bis(2-Chloroethyl)ether	mg/kg	4.8E+00	2.8E+02	3.5E+00	3.5E+00	3.5E+00	1.9E+00	1.5E+01	2.4E+01	NV	0.095 U	0.063 U	0.098 U	0.084 U	0.1 U	0.091 U	0.089 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	3.8E+02	2.2E+04	1.8E-01	1.8E-01	1.8E-01	1.7E+02	2.6E+03	9.3E-01	NV	**9.2**[cdeh]	**1.8 J**	0.93 U	0.79 U	1 U	0.86 U	0.85 U
Butyl benzylphthalate (BBP)	mg/kg	2.8E+03	1.6E+05	2.0E+00	2.0E+00	2.0E+00	1.2E+03	1.9E+04	2.4E-01	NV	**1.6 J**[h]	**4.4**	0.49 U	**3.2**[cdeh]	**2.7 J**[h]	0.45 U	0.45 U
Caprolactam	mg/kg	4.8E+04	2.2E+06	NV	NV	NV	2.4E+03	2.2E+03	NV	NV	1.8 U	1.2 U	1.8 U	1.5 U	1.9 U	1.7 U	1.7 U
Carbazole	mg/kg	2.7E+02	1.5E+04	NV	NV	NV	1.2E+02	1.8E+03	NV	NV	1.3 U	0.85 U	1.3 U	1.1 U	1.4 U	1.2 U	1.2 U
Chrysene	mg/kg	1.9E+02	9.8E+04	1.7E-01	7.3E-01	1.3E+00	7.2E+01	4.4E+03	4.7E+00	NV	--	**1.6**	**0.94**	--	**1.4**	**0.92**	**1.4**
Dibenz(a,h)anthracene	mg/kg	1.9E-01	9.8E+01	3.3E-02	8.4E-02	1.4E-01	7.2E-02	4.4E+00	1.8E+01	NV	--	0.021 U	0.032 U	--	0.035 U	0.03 U	0.03 U
Dibenzofuran	mg/kg	3.8E+02	1.8E+04	1.5E-01	3.7E-01	5.8E-01	1.2E+02	2.1E+03	NV	NV	0.031 U	0.021 U	0.032 U	0.028 U	0.035 U	0.03 U	0.03 U
Diethyl phthalate	mg/kg	7.7E+04	3.5E+06	6.1E-01	8.6E-01	1.1E+00	2.4E+04	4.1E+05	2.5E+01	NV	0.76 U	0.5 U	0.79 U	0.67 U	0.84 U	0.73 U	0.72 U
Dimethyl phthalate	mg/kg	NV	NV	5.3E-01	NV	5.3E-01	NV	NV	7.3E+02	NV	0.81 U	0.53 U	0.84 U	0.71 U	0.89 U	0.77 U	0.76 U
Di-n-butylphthalate (DBP)	mg/kg	9.6E+03	4.4E+05	2.2E+00	9.6E+00	1.7E+01	3.0E+03	5.1E+04	1.5E-01	NV	**2.4 J**[ch]	**2.4**	**1.2 J**[h]	**1.7 J**[h]	0.79 U	0.68 U	**1.2 J**[h]
Di-n-octyl phthalate (DnOP)	mg/kg	3.8E+03	1.8E+05	5.8E-01	2.3E+01	4.5E+01	1.2E+03	2.1E+04	7.1E+02	NV	0.38 U	0.25 U	0.39 U	0.33 U	0.41 U	0.36 U	0.35 U
Fluoranthene	mg/kg	3.5E+03	1.5E+05	4.2E-01	1.3E+00	2.2E+00	1.1E+03	1.8E+04	1.2E+02	NV	--	**2.8**	**2**	--	**4.5**	**1.7**	**2.9**
Fluorene	mg/kg	3.5E+03	1.5E+05	7.7E-02	3.1E-01	5.4E-01	1.1E+03	1.8E+04	1.2E+02	NV	--	**0.23**	0.026 U	--	**0.26 J**	0.024 U	0.024 U
Hexachlorobenzene	mg/kg	3.3E+00	1.9E+02	2.0E-02	2.0E-02	2.0E-02	1.4E+00	1.9E+01	2.0E-01	NV	0.1 U	0.066 U	0.1 U	0.088 U	0.11 U	0.095 U	0.094 U
Hexachlorobutadiene	mg/kg	6.8E+01	4.0E+03	2.7E-02	2.7E-02	2.7E-02	2.8E+01	2.8E+02	4.0E-02	NV	0.27 U	0.18 U	0.28 U	0.23 U	0.29 U	0.25 U	0.25 U
Hexachlorocyclopentadiene	mg/kg	5.7E+02	2.6E+04	9.0E-01	9.0E-01	9.0E-01	5.0E+01	5.3E+01	7.6E-01	NV	0.38 U	0.25 U	0.4 U	0.34 U	0.42 U	0.37 U	0.36 U
Hexachloroethane	mg/kg	6.7E+01	3.1E+03	5.8E-01	5.8E-01	5.8E-01	2.1E+01	3.3E+02	6.0E-01	NV	0.43 U	0.28 U	0.44 U	0.38 U	0.47 U	0.41 U	0.4 U
Indeno(1,2,3-cd)pyrene	mg/kg	1.9E+00	9.8E+02	2.0E-01	1.7E+00	3.2E+00	7.2E-01	4.4E+01	1.1E+02	NV	--	**0.53**	**0.31 J**	--	**0.51**	0.016 U	0.016 U
Isophorone	mg/kg	5.6E+03	3.2E+05	4.3E-01	4.3E-01	4.3E-01	2.5E+03	3.8E+04	1.4E+02	NV	0.62 U	0.41 U	0.64 U	0.54 U	0.68 U	0.59 U	0.58 U
Naphthalene	mg/kg	1.8E+03	7.5E+04	1.8E-01	3.7E-01	5.6E-01	2.0E+02	2.9E+02	9.9E-02	NV	--	**0.37**	**0.38**[h]	--	**0.23 J**[h]	**0.18 J**[h]	**0.3**[h]
Nitrobenzene	mg/kg	1.9E+02	8.8E+03	1.5E-01	1.5E-01	1.5E-01	5.6E+01	2.6E+02	1.3E+00	NV	0.1 U	0.069 U	0.11 U	0.092 U	0.12 U	0.1 U	0.098 U
N-Nitrosodi-n-propylamine	mg/kg	7.6E-01	4.4E+01	NV	NV	NV	3.4E-01	5.1E+00	5.4E-01	NV	0.3 U	0.2 U	0.31 U	0.26 U	0.33 U	0.29 U	0.28 U
N-Nitrosodiphenylamine	mg/kg	1.1E+03	6.3E+04	NV	NV	NV	4.8E+02	7.3E+03	5.5E-01	NV	1 U	0.66 U	1 U	0.88 U	1.1 U	0.95 U	0.94 U
Pentachlorophenol	mg/kg	7.5E+00	4.2E+02	1.5E-01	1.8E-01	2.0E-01	4.3E+00	5.6E+01	2.1E+00	NV	0.43 U	0.29 U	0.45 U	0.38 U	0.48 U	0.41 U	0.41 U
Phenanthrene	mg/kg	2.6E+03	1.1E+05	2.0E-01	6.9E-01	1.2E+00	8.4E+02	1.4E+04	4.6E+01	NV	--	**1.7**	**1.1**	--	**1.2**	**0.5**	**0.7**
Phenol	mg/kg	2.9E+04	1.3E+06	4.2E+00	8.1E+00	1.2E+01	8.9E+03	1.5E+05	1.2E+02	NV	0.35 U	0.23 U	0.36 U	0.3 U	0.38 U	0.33 U	0.33 U
Pyrene	mg/kg	2.6E+03	1.1E+05	2.0E-01	8.6E-01	1.5E+00	8.4E+02	1.4E+04	7.9E+01	NV	--	**2.6**	**1.7**	--	**2.3**	**2**	**2.6**
Selected Ion Monitoring (SIM) SVOCs [13]																	
Acenaphthene	mg/kg	5.3E+03	2.3E+05	6.7E-03	4.8E-02	8.9E-02	1.7E+03	2.8E+04	6.8E+02	NV	**0.237**[cde]	--	--	**0.413**[cde]	--	--	--
Acenaphthylene	mg/kg	2.6E+03	1.1E+05	5.9E-03	6.7E-02	1.3E-01	8.4E+02	1.4E+04	6.8E+02	NV	**0.168**[cde]	--	--	**0.144**[cde]	--	--	--
Anthracene	mg/kg	2.6E+04	1.1E+06	5.7E-02	4.5E-01	8.5E-01	8.4E+03	1.4E+05	1.5E+03	NV	**0.995**[cde]	--	--	**0.968**[cde]	--	--	--
Benzo(a)anthracene	mg/kg	1.9E+00	9.8E+02	1.1E-01	5.8E-01	1.1E+00	7.2E-01	4.4E+01	5.2E+00	NV	**1.96**[acdef]	--	--	**1.86**[cdef]	--	--	--
Benzo(a)pyrene	mg/kg	1.9E-01	9.8E+01	1.5E-01	8.0E-01	1.5E+00	7.2E-02	4.4E+00	1.5E+00	NV	**1.73**[acdeh]	--	--	**1.61**[acdeh]	--	--	--
Benzo(b)fluoranthene	mg/kg	1.9E+00	9.8E+02	2.4E-01	6.8E+00	1.3E+01	7.2E-01	4.4E+01	6.0E+01	NV	**1.78**[cf]	--	--	**1.68**[cf]	--	--	--
Benzo(e)pyrene	mg/kg	NV	NV	1.5E-01	8.0E-01	1.5E+00	NV	NV	NV	NV	**1.3**[cd]	--	--	**1.21**[cd]	--	--	--

Table 3.1

Summary of Sediment Analytical Results
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Location:											SS-7	SS-7	SS-7	SS-9	SS-9	SS-9	SS-9
Sample Identification:											SE-030916-JN-004	SE-030916-JN-006	SE-030916-JN-005	SE-031016-JN-024	SE-031016-JN-027	SE-031016-JN-025	SE-031016-JN-026
Sample Date:											3/9/2016	3/9/2016	3/9/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:											(0-0.5) ft BGS	(0-3) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-1.5) ft BGS	(0.5-1.5) ft BGS	(0.5-1.5) ft BGS
Sample Type:											Shallow	Composite	Deep	Shallow	Composite	Deep	Duplicate
Photoionization Detector (PID) Reading (ppm) [1]											0	0	0	0	0	0	0
Applicable Screening Criteria		Sediment Screening Criteria (Sed)[2]					Recreator Screening Criteria (Rec) [3]	Soil Screening Criteria (Soil) [4]		Toxicity Characteristic Leaching Procedure (TCLP) Criteria [5]	Sed/Soil/Rec	TCLP	Soil	Sed/Soil/Rec	Soil/TCLP	Soil	Soil
		Site-specific Risk-based Screening Levels [6]		WDNR Criteria [7]			Site-specific Risk-based Screening Levels [6]	Site-specific Risk-based Screening Levels [6]	Ecological Criteria [8]	Regulatory Level [9]							
Parameters	Units	Recreator Sediment Contact Screening Level [10] a	Maintenance Worker Sediment Contact Screening Level [10] b	Sediment TEC [11] c	Sediment MEC [11] d	Sediment PEC [11] e	Recreator Soil Contact Screening Level [10] f	Landscaper Soil Contact Screening Level [10] g	Soil Ecological Screening Level h	TCLP i							
Selected Ion Monitoring (SIM) SVOCs (Cont.d')																	
Benzo(g,h,i)perylene	mg/kg	2.6E+03	1.1E+05	1.7E-01	1.7E+00	3.2E+00	8.4E+02	1.4E+04	1.2E+02	NV	**1.1**[c]	--	--	**1.08**[c]	--	--	--
Benzo(j)fluoranthene/Benzo(k)fluoranthene	mg/kg	1.9E+01	9.8E+03	2.4E-01	6.8E+00	1.3E+01	7.2E+00	4.4E+02	1.5E+02	NV	**1.48**[c]	--	--	**1.38**[c]	--	--	--
C1-Benzo(a)anthracenes/chrysenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**2.5**	--	--	**2.18**	--	--	--
C1-Fluoranthenes/Pyrenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**3.55**	--	--	**3.32**	--	--	--
C1-Fluorenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**1.11**	--	--	**0.893**	--	--	--
C1-Naphthalenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**0.805**	--	--	**0.204**	--	--	--
C1-Phenanthrenes/Anthracenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**4.98**	--	--	**4.9**	--	--	--
C2-Benzo(a)anthracenes/chrysenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**2.65**	--	--	**2.55**	--	--	--
C2-Fluorenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**3.85**	--	--	**2.66**	--	--	--
C2-Naphthalenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**1.76**	--	--	**2.42**	--	--	--
C2-Phenanthrenes/Anthracenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**11**	--	--	**8.95**	--	--	--
C3-Benzo(a)anthracenes/chrysenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**2.04**	--	--	**1.94**	--	--	--
C3-Fluorenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**6.36**	--	--	**4.78**	--	--	--
C3-Naphthalenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**3.41**	--	--	**3.7**	--	--	--
C3-Phenanthrenes/Anthracenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**11.9**	--	--	**9.45**	--	--	--
C4-Benzo(a)anthracenes/chrysenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**1.78**	--	--	**1.44**	--	--	--
C4-Naphthalenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**3.95**	--	--	**3.88**	--	--	--
C4-Phenanthrenes/Anthracenes	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**6.17**	--	--	**6.06**	--	--	--
Chrysene/Triphenylene	mg/kg	1.9E+02	9.8E+04	1.7E-01	7.3E-01	1.3E+00	7.2E+01	4.4E+03	4.7E+00	NV	**3.06**[cde]	--	--	**2.82**[cde]	--	--	--
Dibenz(a,h)anthracene	mg/kg	1.9E-01	9.8E+01	3.3E-02	8.4E-02	1.4E-01	7.2E-02	4.4E+00	1.8E+01	NV	**0.292**[acde]	--	--	**0.258**[acde]	--	--	--
Fluoranthene	mg/kg	3.5E+03	1.5E+05	4.2E-01	1.3E+00	2.2E+00	1.1E+03	1.8E+04	1.2E+02	NV	**4.93**[cde]	--	--	**4.79**[cde]	--	--	--
Fluorene	mg/kg	3.5E+03	1.5E+05	7.7E-02	3.1E-01	5.4E-01	1.1E+03	1.8E+04	1.2E+02	NV	**0.506**[cd]	--	--	**0.596**[cde]	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	1.9E+00	9.8E+02	2.0E-01	1.7E+00	3.2E+00	7.2E-01	4.4E+01	1.1E+02	NV	**0.951**[cf]	--	--	**0.924**[cf]	--	--	--
Naphthalene	mg/kg	1.8E+03	7.5E+04	1.8E-01	3.7E-01	5.6E-01	2.0E+02	2.9E+02	9.9E-02	NV	**0.37**[ch]	--	--	**0.24**[ch]	--	--	--
Perylene	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**0.681**	--	--	**0.684**	--	--	--
Phenanthrene	mg/kg	2.6E+03	1.1E+05	2.0E-01	6.9E-01	1.2E+00	8.4E+02	1.4E+04	4.6E+01	NV	**2.66**[cde]	--	--	**4.78**[cde]	--	--	--
Pyrene	mg/kg	2.6E+03	1.1E+05	2.0E-01	8.6E-01	1.5E+00	8.4E+02	1.4E+04	7.9E+01	NV	**4.45**[cde]	--	--	**4.18**[cde]	--	--	--
Total PAHs	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**24.11**	**14.75**	**9.96**	**25.417**	**14.73**	**8.26**	**12.97**
Metals																	
Antimony	mg/kg	5.5E+01	4.1E+03	2.0E+00	1.4E+01	2.5E+01	1.5E+01	3.4E+02	2.7E-01	NV	**33.4**[cdefh]	**22.4**	**15.8**[h]	**23.0 J**[cdfh]	**1.7 J**[h]	**2.5 J**[h]	**13.8 J**[h]
Arsenic	mg/kg	5.6E+00	3.4E+02	9.8E+00	2.1E+01	3.3E+01	1.9E+00	3.2E+01	1.8E+01	NV	**9.3**[af]	**7.8**	**6.3**	**8.1**[af]	**10**	**12.0**	**6.7**
Barium	mg/kg	2.7E+04	2.0E+06	NV	NV	NV	7.6E+03	1.7E+05	3.3E+02	NV	**1520**[h]	**465**	**530**[h]	**1340**[h]	**250**	**175**	**317**
Beryllium	mg/kg	2.7E+02	2.0E+04	NV	NV	NV	7.6E+01	7.9E+02	2.1E+01	NV	**0.30 J**	**0.28**	**0.40**	**0.36 J**	**0.49 J**	**0.56 J**	**0.48 J**
Cadmium	mg/kg	1.2E+02	6.7E+03	9.9E-01	3.0E+00	5.0E+00	3.4E+01	3.5E+02	3.6E-01	NV	**9.7**[cdeh]	**2.6**	**3.4**[h]	**14.1**[cdeh]	**4.8**[h]	**1.1**[h]	**1.9**[h]
Chromium (total)	mg/kg	2.2E+01	1.4E+03	4.3E+01	7.7E+01	1.1E+02	6.2E+00	9.3E+01	4.0E-01	NV	NA [12]	NA [12]	NA [12]	NA [12]	NA [12]	NA [12]	NA [12]
Chromium III	mg/kg	2.1E+05	1.5E+07	NV	NV	NV	5.7E+04	2.8E+05	NV	NV	**152 J**	**66.8 J**	**119 J**	**183**	**40.4**	**31.0**	**65.1**
Cobalt	mg/kg	4.1E+01	3.1E+03	5.0E+01	5.0E+01	5.0E+01	1.1E+01	1.6E+02	1.3E+01	NV	**4.5**	**3.3**	**4.5**	**6.1**	**4.9**	**5.9**	**5.2**
Copper	mg/kg	5.5E+03	4.1E+05	3.2E+01	9.1E+01	1.5E+02	1.5E+03	3.4E+04	2.8E+01	NV	**93.9**[ch]	**41.4**	**51.6**[h]	**78.7**[ch]	**61.9**[h]	**33.9**[h]	**47.3**[h]
Lead	mg/kg	4.3E+03	NV	3.6E+01	8.3E+01	1.3E+02	4.3E+03	2.2E+03	1.1E+01	NV	**1880**[cdeh]	**950**	**583**[h]	**1390**[cdeh]	**607**[h]	**370**[h]	**602**[h]
Manganese	mg/kg	1.9E+04	1.4E+06	4.6E+02	7.8E+02	1.1E+03	5.3E+03	3.5E+03	2.2E+02	NV	**357**[h]	**237**	**342**[h]	**218**	**200**	**180**	**185**
Mercury	mg/kg	4.1E+01	3.1E+03	1.8E-01	6.4E-01	1.1E+00	1.1E+01	9.5E+01	1.0E-01	NV	**1.3**[cdeh]	**0.77**	**2.7**[h]	**0.62**[ch]	**5.9**[h]	**2.6**[h]	**2.1**[h]
Methyl mercury	mg/kg	1.4E+01	1.0E+03	1.0E-05	1.0E-05	1.0E-05	3.8E+00	8.5E+01	1.6E-03	NV	**0.00047**[cde]	--	--	**0.00048**[cde]	--	--	--
Nickel	mg/kg	2.7E+03	2.0E+05	2.3E+01	3.6E+01	4.9E+01	7.6E+02	4.7E+03	3.8E+01	NV	**13.5**	**8.6**	**11.3**	**14.7**	**12.9**	**14.4**	**12.9**
Selenium	mg/kg	6.8E+02	5.1E+04	NV	NV	NV	1.9E+02	4.2E+03	5.2E-01	NV	**2.3**[h]	**1.4**	**1.7 J**[h]	**4.3**[h]	**3.3**[h]	**2.2**[h]	**2.1**[h]
Silver	mg/kg	6.8E+02	5.1E+04	1.6E+00	1.9E+00	2.2E+00	1.9E+02	6.2E+02	4.2E+00	NV	**0.35 J**	**0.24**	**0.33 J**	**0.25 J**	**0.26 J**	**0.25 J**	**0.25 J**
Thallium	mg/kg	NV	NV	NV	NV	NV	NV	NV	5.7E-02	NV	**0.14 J**[h]	**0.11 J**	**0.14 J**[h]	**0.15 J**[h]	**0.22 J**[h]	**0.23 J**[h]	**0.20 J**[h]
Vanadium	mg/kg	6.8E+02	5.1E+04	NV	NV	NV	1.9E+02	2.7E+03	7.8E+00	NV	**9.2**[h]	**10.1**	**11.3**[h]	**14.1**[h]	**17.6**[h]	**23.8**[h]	**16.5**[h]
Zinc	mg/kg	4.1E+04	3.1E+06	1.2E+02	2.9E+02	4.6E+02	1.1E+04	2.6E+05	4.6E+01	NV	**1480**[cdeh]	**584**	**641**[h]	**2040**[cdeh]	**437**[h]	**338**[h]	**530**[h]
Simultaneously Extracted Metals (SEM)																	
Cadmium	mg/kg	1.2E+02	6.7E+03	9.9E-01	3.0E+00	5.0E+00	3.4E+01	3.5E+02	3.6E-01	NV	**3.2**[cdh]	--	--	**12.5**[cdeh]	--	--	--
Copper	mg/kg	5.5E+03	4.1E+05	3.2E+01	9.1E+01	1.5E+02	1.5E+03	3.4E+04	2.8E+01	NV	**55.1**[ch]	--	--	**46.9 J**[ch]	--	--	--
Lead	mg/kg	4.3E+03	NV	3.6E+01	8.3E+01	1.3E+02	4.3E+03	2.2E+03	1.1E+01	NV	**1800**[cdeh]	--	--	**1230**[cdeh]	--	--	--
Mercury	mg/kg	4.1E+01	3.1E+03	1.8E-01	6.4E-01	1.1E+00	1.1E+01	9.5E+01	1.0E-01	NV	**0.0030 J**	--	--	0.0025 U	--	--	--
Nickel	mg/kg	2.7E+03	2.0E+05	2.3E+01	3.6E+01	4.9E+01	7.6E+02	4.7E+03	3.8E+01	NV	**6.1**	--	--	**5.7**	--	--	--
Silver	mg/kg	6.8E+02	5.1E+04	1.6E+00	1.9E+00	2.2E+00	1.9E+02	6.2E+02	4.2E+00	NV	0.032 U	--	--	R	--	--	--
SEM/Acid-volatile sulfide ratio (AVS)	none	NV	NV	NV	NV	NV	NV	NV	NV	NV	**6.81**	--	--	**3.13**	--	--	--
Zinc	mg/kg	4.1E+04	3.1E+06	1.2E+02	2.9E+02	4.6E+02	1.1E+04	2.6E+05	4.6E+01	NV	**1010**[cdeh]	--	--	**1060**[cdeh]	--	--	--

Table 3.1

Summary of Sediment Analytical Results
Draft Sediment Investigation and Data Evaluation Report
GM Janesville Assembly Plant
Janesville, Wisconsin

Sample Location:											SS-7	SS-7	SS-7	SS-9	SS-9	SS-9	SS-9
Sample Identification:											SE-030916-JN-004	SE-030916-JN-006	SE-030916-JN-005	SE-031016-JN-024	SE-031016-JN-027	SE-031016-JN-025	SE-031016-JN-026
Sample Date:											3/9/2016	3/9/2016	3/9/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:											(0-0.5) ft BGS	(0-3) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-1.5) ft BGS	(0.5-1.5) ft BGS	(0.5-1.5) ft BGS
Sample Type:											Shallow	Composite	Deep	Shallow	Composite	Deep	Duplicate
Photoionization Detector (PID) Reading (ppm) [1]											0	0	0	0	0	0	0
Applicable Screening Criteria		Sediment Screening Criteria (Sed)[2]					Recreator Screening Criteria (Rec) [3]	Soil Screening Criteria (Soil) [4]		Toxicity Characteristic Leaching Procedure (TCLP) Criteria [5]	Sed/Soil/Rec	TCLP	Soil	Sed/Soil/Rec	Soil/TCLP	Soil	Soil
		Site-specific Risk-based Screening Levels [6]		WDNR Criteria [7]			Site-specific Risk-based Screening Levels [6]	Site-specific Risk-based Screening Levels [6]	Ecological Criteria [8]	Regulatory Level [9]							
Parameters	Units	Recreator Sediment Contact Screening Level [10] a	Maintenance Worker Sediment Contact Screening Level [10] b	Sediment TEC [11] c	Sediment MEC [11] d	Sediment PEC [11] e	Recreator Soil Contact Screening Level [10] f	Landscaper Soil Contact Screening Level [10] g	Soil Ecological Screening Level h	TCLP i							
TCLP Metals																	
Arsenic	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	5.0E+00	--	**0.025 JB**	--	--	**0.012 J**	--	--
Barium	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	1.0E+02	--	**0.87 JB**	--	--	**0.86 J**	--	--
Cadmium	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	1.0E+00	--	**0.00015 J**	--	--	**0.00016 J**	--	--
Chromium	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	5.0E+00	--	**0.00055 JB**	--	--	**0.0038 J**	--	--
Lead	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	5.0E+00	--	**0.052 J**	--	--	**0.055 J**	--	--
Mercury	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	2.0E-01	--	0.000090 U	--	--	0.000090 U	--	--
Selenium	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	1.0E+00	--	0.0040 U	--	--	0.0040 U	--	--
Silver	mg/L	NV	NV	NV	NV	NV	NV	NV	NV	5.0E+00	--	0.00092 U	--	--	0.00092 U	--	--
Polychlorinated Biphenyls (PCBs)																	
Aroclor-1016 (PCB-1016)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.14 U	0.094 U	0.11 U	0.026 U	0.025 U	0.026 U	0.026 U
Aroclor-1221 (PCB-1221)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.19 U	0.12 U	0.15 U	0.034 U	0.033 U	0.035 U	0.035 U
Aroclor-1232 (PCB-1232)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.23 U	0.16 U	0.19 U	0.043 U	0.041 U	0.044 U	0.043 U
Aroclor-1242 (PCB-1242)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.13 UJ	0.086 U	0.11 U	0.023 U	0.023 U	0.024 U	0.024 U
Aroclor-1248 (PCB-1248)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.094 U	0.062 U	0.076 U	0.017 U	0.017 U	0.018 U	0.017 U
Aroclor-1254 (PCB-1254)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**0.21 J**	0.11 U	0.13 U	**0.066 J**	0.029 U	0.031 U	0.03 U
Aroclor-1260 (PCB-1260)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.11 U	0.07 U	0.086 U	0.019 U	0.019 U	0.02 U	0.02 U
Aroclor-1262 (PCB-1262)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.12 U	0.078 U	0.096 U	0.021 U	0.021 U	0.022 U	0.022 U
Aroclor-1268 (PCB-1268)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**0.6**	0.1 UJ	0.12 UJ	**0.38 J**	**0.059 J**	0.029 U	**0.028 J**
Total PCBs	mg/kg	1.7E+00	7.2E+01	6.0E-02	3.7E-01	6.8E-01	5.5E-01	8.9E+00	3.3E-04	NV	**0.81 J^{cdefh}**	ND	ND	**0.446 J^{cdh}**	**0.059 J^{h}**	ND	**0.028 J^{h}**
General Chemistry																	
Black carbon	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**16100**	--	--	**9200**	--	--	--
Sulfide (acid soluble) [12]	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**118**	--	--	**237**	--	--	--
Sulfide (acid soluble) [12]	umol/g	NV	NV	NV	NV	NV	NV	NV	NV	NV	**3.7**	--	--	**7.4**	--	--	--
Total organic carbon (TOC)	mg/kg	NV	NV	NV	NV	NV	NV	NV	NV	NV	**109000**	**43200**	**22700**	**131000**	**72000**	**66500**	**90800**
Total solids	%	NV	NV	NV	NV	NV	NV	NV	NV	NV	**48.8**	--	--	**46.8**	--	--	--

Notes:

(1) - For composite sediment samples, the highest measured PID reading is indicated
(2) - Sediment screening levels are only compared to samples with a bottom depth of 0.5 ft or less.
(3) - Recreator soil screening levels are compared to samples with a bottom depth of 0.5 ft or less.
(4) - Landscaper and ecological soil screening levels are compared to samples with a bottom depth of 2 ft or less.
(5) - A relevant pathway does not exist for samples collected from greater than 2 ft. Samples collected from all depths were compared to the TCLP Criteria for potential disposal purposes.
(6) - Site-specific risk-based screening levels are based on a cancer risk and non-cancer hazard quotient of 1E-6 and 0.1, respectively.
(7) - Consensus-Based Sediment Quality Guidelines: Recommendations For Use and Application (Wisconsin Department of Natural Resources [WDNR], 2003)
(8) - The soil ecological screening level is the minimum of the USEPA OSWER ecological soil screening levels (avian, invertebrate, mammalian, or plant) and the Region 5 ecological screening levels for soil.
(9) - Table 2 Maximum Concentration of Contaminants for the Toxicity Characteristic , Section (s.) NR 661.24, Wisconsin Administrative Code (Wis. Adm. Code), October 2013
(10) - Developed by General Motors LLC (GM)
(11) - Each screening criterion from the Sediment Quality Guidelines (7) is used when available; if no other criterion is available, USEPA Region 5 Ecological Screening Levels (ESLs) is used
(12) - When acid-volatile sulfide (AVS) is present, chromium can only exist in the trivalent chromium oxidation state. Therefore, for samples with AVS detections, chromium (total) has been converted to trivalent chromium.
(13) - Alkylated PAHs analyzed as part of SIM SVOCs but not considered as part of the SVOC analysis were not included on Figures 4.1 to 4.4 of the Sediment Investigation Report. These alkylated PAHs are further discussed in Section 4 of the report.
Detections are bolded
99.9^{cd} Result exceeds* criteria indicated.
* - An exceedance is indicated if the ratio of the detected concentration to the screening level exceeds 1.0.
- Not Analyzed
B - Compound was found in the blank and sample
J - Estimated concentration.
MEC - Midpoint effect concentration, if concentration is > MEC and ≤ PEC, level 3 concern
mg/kg - milligrams per kilogram
mg/L - milligrams per liter
NA - Not applicable
NC - Not calculated; therefore, the limit of detection was reported
NV - No value. Criterion for analytes is either not promulgated or could not be calculated
PEC - Probable effect concentration, if concentration > PEC, level 4 concern
ppm - parts per million
R - Rejected.
TEC - Threshold effect concentration, if concentration > TEC and ≤ MEC, level 2 concern. If concentration ≤ TEC, level 1 concern
U - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated.
umol/g - micro mols per gram
USEPA - United States Environmental Protection Agency

Appendices

Appendix A
Photograph Log

Photo 1 Core Processing Area Established on Rock River North Shore (March 9 and 10, 2016)

Photo 2 Coring Vessel Outfitted with A-Frame, Electric Winch, Generator, and all Necessary Sediment Coring and Collection Tools (March 9 and 10, 2016)

Site Photographs

Photo 3 Sediment Core Sample Collection (March 9 and 10, 2016)

Photo 4 Sediment Core Sample Collection (March 9 and 10, 2016)

Site Photographs

Photo 5 Sediment Core Samples from Sample Location SS-08 (March 9 and 10, 2016)

Photo 6 Sediment Core Sample from Sample Location SS-08 where Hard Refusal Occurred (March 9 and 10, 2016)

Site Photographs

Appendix B
Field Procedure and Core Processing Methods

Appendix B Field Procedure and Core Processing Methods

1. Introduction

The following appendix summarizes the Field Procedures and Core Processing Methods utilized during the Sediment Investigation completed by GHD Services Inc. (GHD) on March 9 and 10, 2016 at the Former General Motors LLC (GM) Janesville Assembly Plant located at 1000 General Motors Drive in Janesville, Rock Country, Wisconsin (Site) on behalf of GM. Section 2 outlines the field procedures used to collect the sediment core samples in the field. Section 3 details the core processing methods applied to split, log, and subsample the sediment cores for laboratory analysis.

2. Field Procedure

Sediment core samples were collected using an electrically powered vibracorer which is lowered through the water column under winch control and penetrates the sediment by means of its weight and powered vibration.

The following steps outline the procedures used for the vibracorer in the field:

1. Maneuver the sampling vessel to the proposed sampling location using Differential Global Positioning System (DGPS) and R8 Global Navigation Satellite System (GNSS) Real Time Kinematic (RTK) Global Positioning System (GPS) and deploy a marker buoy at the location; record the water depth using a lead line or calibrated fathometer.
2. Check to ensure that the clear, semi-rigid cellulose acetate butyrate (CAB) disposable tubing is securely fastened to the powerhead of the vibracorer.
3. Insert a disposable core catcher into the end of the barrel so that the catcher fingers will extend into the tubing, and then screw the cutter head onto the bottom of the core barrel until the shoulder snugs against the end of the tubing. Tighten the cutter head with a spanner or strap wrench.
4. Start the electrical generator, but **DO NOT** yet energize the corer.
5. Signal the winch operator to hoist the corer and swing it over the stern or side of the vessel at the marked sampling location. Reposition the vessel if necessary. Record the water depth using a lead line or calibrated fathometer.
6. Signal the winch operator to lower the corer through the water column. Determine the depth of the corer in the water column and track its subsequent penetration into the sediment by either marking the winch line in 1 ft increments or by attaching a flexible tape measure to the powerhead.
7. When the cutter head is within approximately 10 ft of the bottom, energize the corer by actuating the circuit breaker on the generator control panel.
8. Slow the descent speed of the corer in order to determine when the core nose enters the sediment. Maintain tension on the winch line throughout the coring process to keep the corer from toppling over. The worker monitoring the penetration of the corer into the sediment will signal the winch operator when to pay out more line.

9. If refusal is encountered or if the measured distance to the tip of the core nose indicates that project depth has been reached, stop paying out line and de-energize the corer. Do not power down the generator. Refusal is indicated by less than 6 inches of penetration in a given 30-second interval.
10. Signal the winch operator to bring the winch line taut. Maneuver the boom or the boat until the winch pulley is directly above the corer, as indicated by the winch line being as close to true vertical as possible.
11. Record the position of the actual coring location. The navigation antenna may be mounted on the winch boom near the pulley to place it directly over the corer.
12. Signal the winch operator to retrieve the corer. If the corer is stuck in the bottom, energize the power head while maintaining tension on the winch line. To reduce the risk of losing sediment from the core barrel, de-energize the corer as soon as it shows any sign of vertical movement. As soon as retrieval of the corer is underway, power down the generator. Swing the corer over the deck and lower it to a holding rack. Note and record the length of smearing on the outside of the core barrel, which gives an indication of the amount of penetration.
13. Use a spanner or strap wrench to unscrew the cutter head and remove it. The catcher may stay inside the cutter head or remain attached to sediment inside the tubing. Retain any sediment in the cutter head and core catcher for examination and possible use.
14. Remove the disposable catcher, if necessary, and immediately cap the bottom end of the core tubing with a plastic cap. Secure the bottom cap with duct tape. Immediately cap the top of the core liner.
15. If the core is to be cut into sections, draw a mark on the outside of the core liner where the cut will be made to cut off the bottommost section. Apply duct tape and use a permanent marker to mark the sections on both sides of the location of the future cut. Mark arrows pointing toward the top end of the core, write the core ID, write date and time, and indicate the depth interval spanned by the sections in terms of ft below mudline.
16. Cut the core at the section boundary using power shears loaded with a decontaminated blade. Another person will be at the ready to immediately cap both the exposed ends and secure with duct tape.
17. Repeat the cutting procedure if more sections need to be cut.
18. Remove the cap from the top end of the top-most section and drain the water. Draining may be accomplished by drilling a hole through the core liner just above the top of the sediment or by gently tipping the section to empty the water out the top. Care must be taken to avoid loss of sediments during decanting, particularly "soupy" sediments with high water content.
19. After decanting, cut off the excess plastic tubing, cap the end at the sediment interface, and secure the cap with duct tape.
20. Evaluate the appearance and length of the core sample by examination through the clear plastic core tubing. Note any stratigraphic intervals or other salient features on the core collection log sheet.
21. Store the core sections at 4°C (±2°C) in a refrigerator or iced cooler for subsampling and further processing (see below).
22. Complete any additional entries on the coring field form.

Core Acceptance Criteria. Acceptance criteria for sediment core samples are as follows:

- The core penetrated to target depth.
- The core did not suffer significant sample-induced compaction or loss of material (i.e., recovery greater than 60 percent, as measured by recovery length divided by penetration length).
- Cored material did not extend out the top of the core tube or contact any part of the sampling apparatus at the top of the core tube.
- There are no obstructions in the cored material that might have blocked the subsequent entry of sediment into the core tube, which may have resulted in an incomplete and biased core section.

If sample acceptance criteria are not achieved, the sample was to be rejected and a repeated deployment will be made within 20 ft of the original location. If redeployment did not result in an acceptable sample according to these criteria, the Project Manager would relocate the proposed core sample.

3. Core Processing

The following steps outline the general procedures followed when cores were split, logged, and subsampled for laboratory analysis.

1. All equipment coming into contact with sediment will be decontaminated before use with each sample to avoid cross contamination.
2. Cut the core tubing longitudinally on opposite sides using power shears. Pull away the top half of the core tubing to expose the sediment sample.
3. Log and describe the sediment on a core log form according to standard ASTM soil description procedures. Core logs should include:
    a. Visual grain size classification
    b. Color
    c. Consistency (stiffness or denseness)
    d. Odor
    e. Presence of debris
    f. Presence of biological activity (e.g., detritus, shells tubes, bioturbation, live or dead organisms).
    g. Presence of oil sheen
    h. Any other unusual or distinguishing characteristics
4. After the sediment description is complete, subsample the core into intervals (0-0.5 ft, 0.5-2 ft, and 2–6 ft; based on in situ conditions). The ex situ core intervals will be corrected for compaction, and therefore may be somewhat less than these intervals in actual length.
5. Homogenize each depth interval using a stainless steel mixing spoon or an electric drill with a stainless steel paddle.
6. Collect samples of the homogenized sediment as appropriate for chemical analysis. Label sample jars and place them in refrigerators or coolers with blue ice to maintain sediment at 4°C until dispatched under chain of custody to the appropriate laboratory. Samples designated for archiving will be frozen for possible future analysis.

Appendix C
Sediment Stratigraphic Log

VISUAL CLASSIFICATION OF SEDIMENT CORE

Project Name: GM Janesville Assembly Plant
GHD Project No: 058505
Project Location: Janesville, Wisconsin
Date: 03/10/2016

Location ID: (N) 245024.88
(E) 2231396.2
Core ID: SS-1
Water Depth/Elevation of Core: 4.1 ft / 757.571 ft amsl
Cored Length: 3' 6"
Core Recovery: 3' 3"
No. of Attempts: 7

Core Pushed By: Normandeau Associates, Inc.
Core Logged By: K. Duwal
Type of Core: Piston Core Sample (0-0.5ft)/Vibracore
Diameter of Core: 3"
Other:

PID (PPM)	PID Interval (ft)	Sample Interval (ft)	Sample Number	Classification and Remarks (Soil Type, Main/Secondary Components, Density, Consistency, Color, Moisture Content, Odor, and Supplemental Descriptions)
0	0-0.5	0-0.5	JN-021	ML-SILT SEDIMENT, some sand, lots of vegetative material (sticks, roots, etc), dark brown
0	0.5-2	0.5-2	JN-022	@ 1' decrease in sand content
0	2-3.5	0-3.5 comp.	JN-023 MS/MSD	@ 2' firmer
				@ 3.5' GP-GRAVEL, river bed material, with sand, coarse grained

VISUAL CLASSIFICATION OF SEDIMENT CORE

Project Name: GM Janesville Assembly Plant
GHD Project No: 058505
Project Location: Janesville, Wisconsin
Date: 03/10/2016

Location ID: (N 245014.41
(E) 2231313
Core ID: SS-2
Water Depth/Elevation of Core: 4.2 ft / 757.491 ft amsl
Cored Length: 3' 2"
Core Recovery: 2' 11"
No. of Attempts: 7

Core Pushed By: Normandeau Associates, Inc.
Core Logged By: K. Duwal
Type of Core: Piston Core Sample (0-0.5ft)/Vibracore
Diameter of Core: 3"
Other:

PID (PPM)	PID Interval (ft)	Sample Interval (ft)	Sample Number	Classification and Remarks (Soil Type, Main/Secondary Components, Density, Consistency, Color, Moisture Content, Odor, and Supplemental Descriptions)
28	0-0.5	0-0.5	JN-014	ML-SILT SEDIMENT, little sand, some vegetative material, soft, dark gray, sheen, odor
0	0.5-2	0.5-2	JN-015	@ 0.5' decrease in sand content, gray/brown, no odor, no sheen
0	2-3	0-2 comp.	JN-016/ JN-017 DUP.	@ 2' firmer
				@ 3' GP-GRAVEL, river bed material, with sand, coarse grained

VISUAL CLASSIFICATION OF SEDIMENT CORE

Project Name: GM Janesville Assembly Plant
GHD Project No: 058505
Project Location: Janesville, Wisconsin
Date: 03/10/2016

Location ID: (N 245067.86
(E) 2231306.6
Core ID: SS-3
Water Depth/Elevation of Core: 4.5 ft / 757.179 ft amsl
Cored Length: 3' 8"
Core Recovery: 3' 4"
No. of Attempts: 7

Core Pushed By: Normandeau Associates, Inc.
Core Logged By: K. Duwal
Type of Core: Piston Core Sample (0-0.5ft)/Vibracore
Diameter of Core: 3"
Other:

PID (PPM)	PID Interval (ft)	Sample Interval (ft)	Sample Number	Classification and Remarks (Soil Type, Main/Secondary Components, Density, Consistency, Color, Moisture Content, Odor, and Supplemental Descriptions)
150	0-0.5	0-0.5	JN-018	ML-SILT SEDIMENT, lots of vegetative material intermixed, dark gray, sheen, strong odor
7	0.5-2	0.5-2	JN-019	@ 0.5' dark gray/dark brown, less odor, no sheen
0	2-3.67	0-3.67 comp.	JN-020	@ 2' firmer
				@ 3.5' GP-GRAVEL, gravel river bed material, coarse grained, wood fragment intermixed

VISUAL CLASSIFICATION OF SEDIMENT CORE

Project Name: GM Janesville Assembly Plant | **GHD Project No:** 058505

Project Location: Janesville, Wisconsin | **Date:** 03/9/2016

Location ID: (N 245025.86 | **Core Pushed By:** Normandeau Associates, Inc.

(E) 2231217.9 | **Core Logged By:** K. Duwal

Core ID: SS-4 | **Type of Core:** Piston Core Sample (0-0.5ft)/Vibracore

Water Depth/Elevation of Core: 3.3 ft / 758.313 ft amsl | **Diameter of Core:** 3"

Cored Length: 4' 1" | **Other:**

Core Recovery: 3' 10"

No. of Attempts: 5

PID (PPM)	PID Interval (ft)	Sample Interval (ft)	Sample Number	Classification and Remarks (Soil Type, Main/Secondary Components, Density, Consistency, Color, Moisture Content, Odor, and Supplemental Descriptions)
88	0-0.5	0-0.5	JN-007	ML-SILT SEDIMENT, gravel at surface, lots of vegetative material, dark gray, odor, sheen
162	0.5-2	0.5-2	JN-008/ JN-009 DUP.	@ 0.5' reddish brown staining, stronger odor, sheen
24	2-4	0-4.08 comp.	JN-010	@ 1.5' less odor, less sheen
				@ 2.5' firmer
				@ 4' GP-GRAVEL, gravel river bed material, coarse grained

VISUAL CLASSIFICATION OF SEDIMENT CORE

Project Name: GM Janesville Assembly Plant | **GHD Project No:** 058505

Project Location: Janesville, Wisconsin | **Date:** 03/10/2016

Location ID: (N 245048.85 | **Core Pushed By:** Normandeau Associates, Inc.

(E) 2231184.7 | **Core Logged By:** K. Duwal

Core ID: SS-5 | **Type of Core:** Piston Core Sample (0-0.5ft)/Vibracore

Water Depth/Elevation of Core: 4.1 ft/ 757.496 ft amsl | **Diameter of Core:** 3"

Cored Length: 4' 6" | **Other:**

Core Recovery: 4' 2"

No. of Attempts: 7

PID (PPM)	PID Interval (ft)	Sample Interval (ft)	Sample Number	Classification and Remarks (Soil Type, Main/Secondary Components, Density, Consistency, Color, Moisture Content, Odor, and Supplemental Descriptions)
18	0-0.5	0-0.5	JN-011	SP/GP-SAND/GRAVEL
28	0.5-2	0.5-2	JN-012	@ 2" ML/CL-SILT/CLAY SEDIMENT, little to some sand, dark gray/olive, odor, slight sheen
35	2-3	0-2 comp.	JN-013 MS/MSD	@2.5' darker color, stronger odor
1	3-4.5			@ 3' SP-SAND, with small shell pieces, fine grained, tan/brown, no odor, no sheen
				@ 4.5'GP-GRAVEL, gravel river bed material, with sand, coarse grained

VISUAL CLASSIFICATION OF SEDIMENT CORE

Project Name: GM Janesville Assembly Plant
GHD Project No: 058505
Project Location: Janesville, Wisconsin
Date: 03/9/2016

Location ID: (N 244986.98
(E) 2231089.5
Core ID: SS-6
Water Depth/Elevation of Core: 5.4 ft / 756.328 ft amsl
Cored Length: 3' 2"
Core Recovery: 2' 10"
No. of Attempts: 5

Core Pushed By: Normandeau Associates, Inc.
Core Logged By: K. Duwal
Type of Core: Piston Core Sample (0-0.5ft)/Vibracore
Diameter of Core: 3"
Other:

PID (PPM)	PID Interval (ft)	Sample Interval (ft)	Sample Number	Classification and Remarks (Soil Type, Main/Secondary Components, Density, Consistency, Color, Moisture Content, Odor, and Supplemental Descriptions)
16	0-0.5	0-0.5	JN-001	ML-SILT SEDIMENT, with vegetative material, trace to little sand, dark gray/olive, odor, sheen
22	0.5-2	0.5-2	JN-002	@ 2.3' GP-GRAVEL, river bed material, shell pieces and silt sediment intermixed, rust-colored, odor, sheen
60	2.3-3	0-2 comp.	JN-003	

VISUAL CLASSIFICATION OF SEDIMENT CORE

Project Name: GM Janesville Assembly Plant
GHD Project No: 058505
Project Location: Janesville, Wisconsin
Date: 03/9/2016

Location ID: (N) 245033.12
(E) 2231080.9
Core Pushed By: Normandeau Associates, Inc.
Core Logged By: K. Duwal
Core ID: SS-7
Type of Core: Piston Core Sample (0-0.5ft)/Vibracore
Water Depth/Elevation of Core: 7.7 ft / 753.872 ft amsl
Diameter of Core: 3"
Cored Length: 3'
Other:
Core Recovery: 2' 10"
No. of Attempts: 5

PID (PPM)	PID Interval (ft)	Sample Interval (ft)	Sample Number	Classification and Remarks (Soil Type, Main/Secondary Components, Density, Consistency, Color, Moisture Content, Odor, and Supplemental Descriptions)
0	0-0.5	0-0.5	JN-004	SM-SILT/SAND SEDIMENT, brown/gray
0	0.5-2	0.5-2	JN-005	@ 0.8' SP-SAND, fine grained, little medium grained, brown
0	2-3	0-3 comp.	JN-006	@ 1.7' SM-SILT/SAND SEDIMENT, fine grained, brown
				@ 2.8' GP/SP-GRAVEL/SAND, river bed material, coarse grained, brown

VISUAL CLASSIFICATION OF SEDIMENT CORE

Project Name: GM Janesville Assembly Plant	**GHD Project No:** 058505
Project Location: Janesville, Wisconsin	**Date:** 03/9/2016

Location ID: (N):	**Core Pushed By:** Normandeau Associates, Inc.
(E):	**Core Logged By:** K. Duwal
Core ID: SS-8	**Type of Core:** Piston Core Sample (0-0.5ft)/Vibracore
Water Depth/Elevation of Core: 8.3 ft / 753.417 ft amsl	**Diameter of Core:** 3"
Cored Length: 10"	**Other:**
Core Recovery: 10"	
No. of Attempts: 2	

PID (PPM)	PID Interval (ft)	Sample Interval (ft)	Sample Number	Classification and Remarks (Soil Type, Main/Secondary Components, Density, Consistency, Color, Moisture Content, Odor, and Supplemental Descriptions)
				GP/SP-GRAVEL/SAND, river bed material, coarse grained, tan/brown, no sediment
				No samples collected

VISUAL CLASSIFICATION OF SEDIMENT CORE

Project Name: GM Janesville Assembly Plant | **GHD Project No:** 058505

Project Location: Janesville, Wisconsin | **Date:** 03/10/2016

Location ID: (N 244986.41 | **Core Pushed By:** Normandeau Associates, Inc.

(E) 2231045 | **Core Logged By:** K. Duwal

Core ID: SS-9 | **Type of Core:** Piston Core Sample (0-0.5ft)/Vibracore

Water Depth/Elevation of Core: 6.9 ft / 754.707 ft amsl | **Diameter of Core:** 3"

Cored Length: 18" | **Other:**

Core Recovery: 16"

No. of Attempts: 9

PID (PPM)	PID Interval (ft)	Sample Interval (ft)	Sample Number	Classification and Remarks (Soil Type, Main/Secondary Components, Density, Consistency, Color, Moisture Content, Odor, and Supplemental Descriptions)
0	0-0.5	0-0.5	JN-024	OL-VEGETATIVE MATERIAL, wood, reeds, sticks
0	0.5-1.5	0.5-1.5	JN-025/ JN-026 DUP.	@ 0.2' ML-SILT SEDIMENT, with varying amounts of sandy material intermixed throughout, dark gray/dark brown
		0-1.5 comp.	JN-027	@ 1.5' SP/GP-SAND/GRAVEL, river bed material, coarse grained

Appendix D
Validation Memorandum and Laboratory Analytical Reports

Memorandum

To:	Julie Charlton	Ref. No.:	058507-108014
From:	Kathy Shaw/cs/163-NF	Date:	April 29, 2016
cc:	Lisa Clements		

Re: Data Quality Assessment & Innovative Validation
Phase II ESA – Sediment Sampling
General Motors Janesville Assembly Plant
Janesville, Wisconsin
March 2016

1. Introduction

This document details a validation of analytical results for sediment samples collected in support of Phase II ESA Sediment Sampling at the General Motors Janesville Assembly Plant Site during March 2016. The samples were submitted to TestAmerica Laboratories, Inc., located in North Canton, Ohio, and SGS Accutest Laboratories located in Dayton, New Jersey. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Full Contract Laboratory Program (CLP) equivalent raw data deliverables were provided by the laboratory. Evaluation of the data was based on information obtained from the finished data sheets, raw data, chain of custody forms, calibration data, blank data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spike (MS) samples, and field quality assurance/quality control (QA/QC) samples. One of the laboratory data packages received full Level IV full validation. Evaluation of this data report was based on all the above information plus calibration criteria and recalculations of the raw data The assessment of analytical and in-house data included checks for: data consistency (by observing comparability of duplicate analyses), adherence to accuracy and precision criteria, and transmittal errors.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

i) QAPP - General Motors Janesville Assembly Plant, Janesville, Wisconsin, September 2014

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review", USEPA 540-R-10-011, January 2010

iii) "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-08-01, June 2008

Items ii) and iii) will subsequently be referred to as the "Guidelines" in this Memorandum.

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2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3. Gas Chromatography/Mass Spectrometer (GC/MS) – Tuning and Mass Calibration (Instrument Performance Check) and Inductively Coupled Plasma/Mass Spectrometer (ICP/MS)

3.1 Organic Analyses

Prior to volatile organic compound (VOC) and semi-volatile organic compound (SVOC) analysis, GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, methods require the analysis of specific tuning compounds bromofluorobenzene (BFB) and decafluorotriphenylphosphine (DFTPP), respectively. The resulting spectra must meet the criteria cited in the methods before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument.

Tuning compounds were analyzed at the required frequency throughout VOC and SVOC analysis periods. All tuning criteria were met indicating that proper optimization of the instrumentation was achieved.

3.2 Inorganic Analyses

To ensure adequate mass resolution, identification, and to some degree, sensitivity, the performance of each ICP/MS instrument used for metals analyses is checked prior to calibration and initiating an analysis sequence through the analysis of a tuning solution.

Instrument performance check data were reviewed. The tuning solution was analyzed at the required frequency throughout the analyses. The results of all instrument performance checks were within the method acceptance criteria indicating that proper optimization of the instrumentation was achieved.

4. Initial Calibration - Organic Analyses

4.1 GC/MS

To quantify VOCs and SVOCs of interest in samples, calibration of the GC/MS over a specific concentration range must be performed. Initially, a five-point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific concentration range. Linearity of the calibration curve and instrument sensitivity are evaluated against the following criteria:

i) All relative response factors (RRFs) must be greater than or equal to 0.050 (greater than or equal to 0.010 for compounds that exhibit poor response).

ii) The percent relative standard deviation (%RSD) values must not exceed 20.0 percent (40.0 percent for compounds that exhibit poor response) or a minimum correlation coefficient (R) and minimum coefficient of determination (R^2) of 0.99 if linear and quadratic equation calibration curves are used.

The initial calibration data for VOCs and SVOCs were reviewed. All compounds met the above criteria for sensitivity and linearity.

4.2 GC

In order to quantify organic compounds of interest by GC, calibration of the gas chromatograph over a specific concentration range must be performed. Initially, a calibration curve consisting of a minimum of five concentration levels is analyzed for all single component compounds of interest and for polychlorinated biphenyls (PCB) (Aroclors 1016 and 1260), and methyl mercury. A single calibration standard is analyzed for all other multi-response compounds. Linearity of the calibration curve is acceptable if all RSD values are less than or equal to 20.0 percent or if the correlation coefficient (R) is 0.99 or greater for linear regression curves.

Retention time windows are also calculated from the initial calibration analyses. These windows are then used to identify all compounds of interest in subsequent analyses.

All initial calibration standards were analyzed at the required frequencies. All retention time, peak resolution, and linearity criteria were satisfied as specified in the methods.

5. Initial Calibration – Inorganic Analyses

Initial calibration of the instruments ensures that they are capable of producing satisfactory quantitative data at the beginning of a series of analyses. For ICP/MS analysis, a calibration blank and at least one standard must be analyzed at each wavelength to establish the analytical curve. For mercury atomic absorption (AA) analyses, a calibration blank and a minimum of five standards must be analyzed to establish the analytical curve, and resulting correlation coefficients (R) must be 0.995 or greater. For instrumental general chemistry analyses total organic carbon (TOC) and acid volatile sulfides (AVS), a calibration blank and a minimum of five (this could vary by method) standards must be analyzed to establish the analytical curve and resulting correlation coefficients (R) must be 0.995 or greater.

After the analyses of the calibration curves, an initial calibration verification (ICV) standard must be analyzed to verify the analytical accuracy of the calibration curves. All analyte recoveries from the analyses of the ICVs must be within the following control limits:

Analytical Method	Parameter	Control Limits
Cold Vapor AA	Mercury	80 - 120%
Instrumental Wet Chemistry	Lloyd Kahn – TOC	85 - 115%
	Acid Volatile Sulfides	85 - 115%

Upon review of the data, it was determined that the calibration curves and ICVs were analyzed at the proper frequencies and that all of the above-specified criteria were met. The laboratory effectively demonstrated that the instrumentation used for metals and general chemistry analyses were properly calibrated prior to sample analysis.

6. Continuing Calibration - Organic Analyses

6.1 GC/MS

To ensure that instrument calibration for VOC and SVOC analyses is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours.

The following criteria were employed to evaluate continuing calibration data:

i) All RRF values must be greater than or equal to 0.050 (greater than or equal to 0.010 for compounds that exhibit poor response)

ii) Percent difference (%D) values must not exceed 25.0 percent (40.0 percent for compounds that exhibit poor response)

The calibration standards were analyzed at the required frequency, and the results met the above criteria for instrument sensitivity. Some SVOC continuing calibration standard results indicated variability in instrument response for various compounds yielding a high %D. Associated results affected by the change in instrument response are qualified in Table 4.

6.2 GC

To ensure that the calibration of the instrument for organic analyses by GC is valid throughout the sample analysis period, continuing calibration standards are analyzed and evaluated on a regular basis. To evaluate the continued linearity of the calibration, %D values are calculated for each compound. As specified in the methods, all %D values should not exceed 15 percent. To ensure that compound retention times do not vary over the analysis period, all retention times for continuing calibration compounds must fall within the established retention time windows.

All continuing calibration standards were analyzed at the required frequency. The PCB continuing calibration standard results indicated variability in instrument response for various compounds yielding a high %D. Associated results affected by the change in instrument response are qualified in Table 4.

7. Continuing Calibration - Inorganic Analyses

To ensure that instrument calibration is acceptable throughout the sample analysis period, continuing calibration verification (CCV) standards are analyzed on a regular basis. Each CCV is deemed acceptable if all analyte recoveries are within the control limits specified above for the ICVs. If some of the CCV analyte recoveries are outside the control limits, samples analyzed before and after the CCV, up until the previous and proceeding CCV analyses, are affected.

For this study, CCVs were analyzed at the proper frequency. All analyte recoveries reported for the CCVs were within the specified limits.

8. Contract Required Detection Limit (CRDL) Standard Analyses

To verify the linearity of the ICP/MS calibration near the detection limit, a standard is analyzed which contains the ICP/MS analytes at specified concentrations. This standard must be analyzed at the beginning and end of each sample analysis run or a minimum of twice per 8-hour period.

CRDL recoveries were evaluated using the criteria specified in the October 2004 "Guidelines". The CRDL recoveries were acceptable.

9. Laboratory Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures. Additionally, initial and continuing calibration blanks (ICBs/CCBs) are routinely analyzed after each ICV/CCV for the inorganic parameters.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

9.1 Organic Analyses

Low concentrations of VOCs and SVOCs were detected in some method blanks indicating the potential for laboratory contamination. Several of the associated samples contained similar concentrations of VOCs and SVOCs; the results were assumed to be a reflection of laboratory contamination and were qualified non-detect in Table 5.

9.2 Inorganic Analyses

Upon review of the ICBs, CCBs, and method blanks, it was noted that metal concentrations were observed above the method detection limit (MDL). Most investigative samples associated with the low level detections reported either non-detect concentrations or concentrations significantly greater than the associated laboratory blank concentrations for the analytes of interest. These sample results were not impacted by the contamination detected.

10. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for VOC, SVOC and PCB determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Each individual surrogate compound is expected to meet the laboratory control limits with the exception of SVOC analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fraction is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. Most of the surrogate recoveries met the laboratory criteria.

Due to necessary sample dilutions, surrogate recoveries could not be reported for some samples.

Surrogate percent recovery values were outside of control limits for some VOC and PCB results. All associated detected results were qualified as estimated in Table 6 as follows:

i) Detect results associated with high surrogate recoveries were qualified as estimated

11. Internal Standards (IS) Analyses

IS data were evaluated for all VOC, SVOC, and ICP/MS metals sample analyses.

11.1 Organics Analyses

To ensure that changes in the GC/MS sensitivity and response do not affect sample analysis results IS compounds are added to each sample prior to analysis. All results are then calculated as a ratio of the IS responses.

The sample IS results were evaluated against the following criteria:

i) The retention time of the IS must not vary more than ±30 seconds from the associated calibration standard

ii) IS area counts must not vary by more than a factor of two (-50 percent to +200 percent) from the associated calibration standard

All organic IS recoveries and retention times met the above criteria.

11.2 Inorganic Analyses

IS elements were added to all samples prior to metals analysis by ICP/MS. Overall instrument stability and performance for metals analyses were monitored using the IS intensity data. IS recoveries were assessed using control limits of 60-125 percent.

All inorganic IS recoveries were acceptable, demonstrating adequate analytical performance.

12. Laboratory Control Sample Analyses

The LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, the LCS was analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

12.1 Organic Analyses

The LCS contained all compounds of interest. All LCS recoveries were within the laboratory control limits demonstrating acceptable analytical accuracy.

12.2 Inorganic Analyses

The LCS contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS recoveries were within the control limits demonstrating acceptable analytical accuracy.

13. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with known concentrations of the analytes of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed.

MS/MSD analyses were performed as specified in Table 1.

If only the MS or MSD recovery was outside of control limits, no qualification of the data was performed based on the acceptable recovery of the companion spike and the acceptable RPD.

Due to necessary sample dilutions some sample spike recoveries could not be reported. Additionally, if the original sample concentration was significantly greater than the spiking concentration (>4X) the MS/MSD recoveries are unable to be assessed. Since the accuracy could not be adequately determined, accuracy was considered not calculable.

13.1 Organic Analyses

The MS/MSD samples were spiked with all compounds of interest. All percent recoveries and RPD values were within the laboratory control limits demonstrating acceptable analytical accuracy and precision with the exception of the samples qualified in Table 7.

Samples associated with outlying recoveries were qualified as follows:

i) Non-detect results associated with low MS/MSD recoveries greater than ten percent were qualified as estimated

ii) Non-detect results associated with MS or MSD recoveries less than ten percent were rejected due to the demonstrated poor analytical efficiency

iii) Positive sample results associated with high RPDs were qualified as estimated

13.2 Inorganic Analyses

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines". All percent recoveries and RPD values were within the control limits demonstrating acceptable analytical accuracy and precision with the exception of the samples qualified in Table 7.

Samples associated with outlying recoveries were qualified as follows:

i) Non-detect results associated with low MS/MSD recoveries greater than ten percent were qualified as estimated

ii) Non-detect results associated with MS or MSD recoveries less than thirty percent were rejected due to the demonstrated poor analytical efficiency

iii) Positive sample results associated with high RPDs were qualified as estimated

14. ICP Interference Check Sample Analysis (ICS)

To verify that the laboratory has established proper inter-element and background correction factors, ICSs are analyzed. These samples contain high concentrations of aluminum, calcium, magnesium, and iron and are analyzed at the beginning and end of each sample analysis period. The ICSs are evaluated against recovery control limits of 80 to 120 percent.

ICS analysis results were evaluated for all samples using the criteria in the "Guidelines". All ICS recoveries and results were acceptable.

15. Field QA/QC Samples

The field QA/QC consisted of 2 trip blank samples, and 3 field duplicate sample sets.

15.1 Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, 2 trip blanks were submitted to the laboratory for VOC analysis. Low level concentrations of methylene chloride were detected in the trip blanks. All of the associated sample results were non-detect and were not impacted by field contamination.

15.2 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, 3 field duplicate samples were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 100 percent for sediment samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is two times the RL value for sediment samples.

The metals results for sample did show some variability. The original and duplicate sample results were qualified as estimated in Table 8.

16. Analyte Reporting

The laboratory reported detected results down to the laboratory's MDL for each analyte. Positive analyte detections less than the RL but greater than the adjusted MDL were qualified as estimated (J) in Table 2

unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the laboratory's adjusted MDL. The MDLs were adjusted per sample weight and or percent moisture in Table 2.

All soil results were reported on a dry weight basis.

17. Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and mass spectra were evaluated according to the identification criteria established by the methods. The samples identified in Table 1 were reviewed. The organic compounds reported adhered to the specified identification criteria.

18. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific exceptions and qualifications noted herein.

Table 1

Sample Collection and Analysis Summary
Phase II ESA - Sediment Sampling
General Motors Janesville Assembly Plant
Janesville, Wisconsin
March 2016

							Analysis/Parameters										
Sample Identification	**Location**	**Matrix**	**Initial Sample Depth (ft. bgs.)**	**Final Sample Depth (ft. bgs.)**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**PCB**	**TCL VOC + TMB**	**TCL SVOC**	**Alkylated PAHs**	**TOC**	**AVS/SEM Metals**	**TAL Metals***	**Methyl Mercury**	**Black Carbon**	**AVS Sulfide**	
TB-030916-JN-001	--	Water	--	--	03/09/2016	0:00		X									Trip Blank
SE-030916-JN-001	**SS-6**	**Sediment**	**0**	**0.5**	**03/09/2016**	**12:45**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	
SE-030916-JN-002	**SS-6**	**Sediment**	**0.5**	**2**	**03/09/2016**	**12:55**	**X**	**X**	**X**		**X**		**X**				
SE-030916-JN-003	**SS-6**	**Sediment**	**0**	**2**	**03/09/2016**	**13:10**	**X**	**X**	**X**		**X**		**X**				
SE-030916-JN-004	**SS-7**	**Sediment**	**0**	**0.5**	**03/09/2016**	**14:25**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	
SE-030916-JN-005	**SS-7**	**Sediment**	**0.5**	**2**	**03/09/2016**	**14:35**	**X**	**X**	**X**		**X**		**X**				
SE-030916-JN-006	**SS-7**	**Sediment**	**0**	**3**	**03/09/2016**	**14:45**	**X**	**X**	**X**		**X**		**X**				
SE-030916-JN-007	**SS-4**	**Sediment**	**0**	**0.5**	**03/09/2016**	**15:45**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	
SE-030916-JN-008	**SS-4**	**Sediment**	**0.5**	**2**	**03/09/2016**	**15:50**	**X**	**X**	**X**		**X**		**X**				**MS/MSD**
SE-030916-JN-009	**SS-4**	**Sediment**	**0.5**	**2**	**03/09/2016**	**15:55**	**X**	**X**	**X**		**X**		**X**				**FD (SS-4(0.5-2))**
SE-030916-JN-010	**SS-4**	**Sediment**	**0**	**4.08**	**03/09/2016**	**16:00**	**X**	**X**	**X**		**X**		**X**				
TB-031016-JN-001	--	Water	--	--	03/10/2016	8:00		X					X				Trip Blank
SE-031016-JN-011	SS-5	Sediment	0	0.5	03/10/2016	9:35	X	X	X	X	X	X	X	X	X	X	
SE-031016-JN-012	SS-5	Sediment	0.5	2	03/10/2016	9:40	X	X	X		X		X				
SE-031016-JN-013	SS-5	Sediment	0	2	03/10/2016	9:45	X	X	X	X	X		X				MS/MSD
SE-031016-JN-014	SS-2	Sediment	0	0.5	03/10/2016	10:35	X	X	X		X	X	X	X	X	X	
SE-031016-JN-015	SS-2	Sediment	0.5	2	03/10/2016	10:40	X	X	X		X		X				
SE-031016-JN-016	SS-2	Sediment	0	2	03/10/2016	10:45	X	X	X		X		X				
SE-031016-JN-017	SS-2	Sediment	0	2	03/10/2016	10:50	X	X	X		X		X				FD (SS-2(0-2))
SE-031016-JN-018	SS-3	Sediment	0	0.5	03/10/2016	11:40	X	X	X	X	X	X	X	X	X	X	
SE-031016-JN-019	SS-3	Sediment	0.5	2	03/10/2016	11:45	X	X	X		X		X				
SE-031016-JN-020	SS-3	Sediment	0	3.67	03/10/2016	11:50	X	X	X		X		X				
SE-031016-JN-021	SS-1	Sediment	0	0.5	03/10/2016	12:50	X	X	X	X	X	X	X	X	X	X	
SE-031016-JN-022	SS-1	Sediment	0.5	2	03/10/2016	12:55	X	X	X		X		X				
SE-031016-JN-023	SS-1	Sediment	0	3.5	03/10/2016	13:00	X	X	X		X		X				MS/MSD
SE-031016-JN-024	SS-9	Sediment	0	0.5	03/10/2016	14:05	X	X	X	X	X	X	X	X	X	X	
SE-031016-JN-025	SS-9	Sediment	0.5	1.5	03/10/2016	14:10	X	X	X		X		X				
SE-031016-JN-026	SS-9	Sediment	0.5	1.5	03/10/2016	14:15	X	X	X		X		X				FD (SS-9(0.5-1.5))
SE-031016-JN-027	SS-9	Sediment	0	1.5	03/10/2016	14:20	X	X	X		X		X				MS/MSD

The samples in bold font received Tier II full validation

Notes:

AVS - Acid-volatile sulfide ratio
FD - Field Duplicate Sample of sample in parenthesis
ft. bgs. - Feet below ground surface
MS/MSD - Matrix Spike/Matrix Spike Duplicate
SEM - Simultaneously Extracted Metals
SVOC - Semi-volatile Organic Compounds
TAL* - Target Analyte List - less earth metals
TCL - Target Compound List
TOC - Total Organic Carbon
VOC - Volatile Organic Compounds
PCB - Polychlorinated Biphenyl

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-1	SS-1	SS-1	SS-2	SS-2	SS-2	SS-2
Sample Identification:		SE-031016-JN-021	SE-031016-JN-023	SE-031016-JN-022	SE-031016-JN-014	SE-031016-JN-016	SE-031016-JN-017	SE-031016-JN-015
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:		(0-0.5) ft BGS	(0-3.5) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS
Sample Type:							Duplicate	
	Units							
Metals								
Antimony	mg/kg	0.44 J	0.12 J	0.13 J	0.27 J	0.17 J	0.89	0.078 J
Arsenic	mg/kg	4.6	3.5	4.5	6.2	5.2	5.6	3.9
Barium	mg/kg	89.5	101	113	153	136	128	142
Beryllium	mg/kg	0.38 J	0.64 J	0.57 J	0.53	0.68	0.49	0.57
Cadmium	mg/kg	0.88	0.42	0.52	0.62	0.39	0.56	0.29 J
Chromium	mg/kg	20.5	16.3	15.7	20.4	16.8	17.6	17.0
Cobalt	mg/kg	5.0	5.4	6.0	5.7	6.1	7.3	5.9
Copper	mg/kg	16.7	13.7	18.3	26.4	18.0	20.8	15.4
Lead	mg/kg	99.9	26.1	43.7	137	54.5	99.2	21.4
Manganese	mg/kg	239	242	246	355	352	363	343
Mercury	mg/kg	4.9	3.1	12.3	27.5	2.8 J	13.6 J	0.93
Methyl mercury	mg/kg	0.0015	--	--	0.00097	--	--	--
Nickel	mg/kg	11.6	11.8	12.8	13.7	12.7	13.3	13.5
Selenium	mg/kg	1.5 J	1.7 J	1.8 J	1.5 J	1.4 J	1.6 J	1.4 J
Silver	mg/kg	0.24 J	0.11 J	0.15 J	0.15 J	0.097 J	0.14 J	0.080 J
Thallium	mg/kg	0.14 J	0.20 J	0.21 J	0.21 J	0.16 J	0.20 J	0.16 J
Vanadium	mg/kg	14.9	20.2	20.5	21.5	19.5	20.3	22.4
Zinc	mg/kg	101	61.9	91.1	213	101	118	68.1
Polychorinated Biphenyls								
Cadmium	mg/kg	0.94	--	--	0.64	--	--	--
Copper	mg/kg	17.0 J	--	--	12.6 J	--	--	--
Lead	mg/kg	83.5	--	--	101	--	--	--
Mercury	mg/kg	0.033	--	--	0.0029 U	--	--	--
Nickel	mg/kg	7.9	--	--	7.6	--	--	--
Silver	mg/kg	R	--	--	R	--	--	--
Zinc	mg/kg	91.0	--	--	123	--	--	--
SEM/Acid-volatile sulfide ratio (AVS)	none	0.00100	--	--	0.220	--	--	--
Cadmium	umol/g	0.0084	--	--	0.0057	--	--	--
Copper	umol/g	0.27 J	--	--	0.20 J	--	--	--
Lead	umol/g	0.40	--	--	0.49	--	--	--
Mercury	umol/g	0.00016	--	--	0.000014 U	--	--	--
Nickel	umol/g	0.13	--	--	0.13	--	--	--
Silver	umol/g	R	--	--	R	--	--	--
Zinc	umol/g	1.4	--	--	1.9	--	--	--

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-1	SS-1	SS-1	SS-2	SS-2	SS-2	SS-2
Sample Identification:		SE-031016-JN-021	SE-031016-JN-023	SE-031016-JN-022	SE-031016-JN-014	SE-031016-JN-016	SE-031016-JN-017	SE-031016-JN-015
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:		(0-0.5) ft BGS	(0-3.5) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS
Sample Type:							Duplicate	
	Units							
Polychorinated Biphenyls								
Aroclor-1016 (PCB-1016)	mg/kg	0.025 U	0.14 U	0.027 U	0.024 U	0.027 U	0.026 U	0.024 U
Aroclor-1221 (PCB-1221)	mg/kg	0.034 U	0.18 U	0.035 U	0.032 U	0.036 U	0.035 U	0.032 U
Aroclor-1232 (PCB-1232)	mg/kg	0.042 U	0.23 U	0.044 U	0.04 U	0.045 U	0.043 U	0.041 U
Aroclor-1242 (PCB-1242)	mg/kg	0.023 U	0.12 U	0.024 U	0.022 U	0.025 U	0.024 U	0.022 U
Aroclor-1248 (PCB-1248)	mg/kg	0.017 U	0.09 U	0.018 U	0.016 U	0.018 U	0.017 U	0.016 U
Aroclor-1254 (PCB-1254)	mg/kg	0.047 J	0.16 U	0.031 U	0.028 U	0.031 U	0.03 U	0.028 U
Aroclor-1260 (PCB-1260)	mg/kg	0.019 U	0.1 U	0.02 U	0.018 U	0.02 U	0.02 U	0.018 U
Aroclor-1262 (PCB-1262)	mg/kg	0.021 U	0.11 U	0.022 U	0.02 U	0.022 U	0.022 U	0.02 U
Aroclor-1268 (PCB-1268)	mg/kg	0.027 U	0.15 U	0.029 U	0.026 U	0.029 U	0.028 U	0.026 U
Total PCBs	mg/kg	0.047 J	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds								
2,2'-Oxybis(1-chloropropane)	mg/kg	0.04 U	0.021 U	0.021 U	0.19 U	0.083 U	0.021 U	0.019 U
2,4,5-Trichlorophenol	mg/kg	0.1 U	0.056 U	0.056 U	0.51 U	0.22 U	0.055 U	0.051 U
2,4,6-Trichlorophenol	mg/kg	0.037 U	0.02 U	0.02 U	0.18 U	0.078 U	0.02 U	0.018 U
2,4-Dichlorophenol	mg/kg	0.083 U	0.045 U	0.045 U	0.41 U	0.17 U	0.044 U	0.041 U
2,4-Dimethylphenol	mg/kg	0.083 U	0.045 U	0.045 U	0.41 U	0.17 U	0.044 U	0.041 U
2,4-Dinitrophenol	mg/kg	0.087 U	0.047 U	0.047 U	0.43 U	0.18 U	0.046 U	0.043 U
2,4-Dinitrotoluene	mg/kg	0.071 U	0.038 U	0.038 U	0.35 U	0.15 U	0.038 U	0.035 U
2,6-Dinitrotoluene	mg/kg	0.087 U	0.047 U	0.047 U	0.43 U	0.18 U	0.046 U	0.043 U
2-Chloronaphthalene	mg/kg	0.0019 U	0.001 U	0.001 U	0.0091 U	0.0039 U	0.00099 U	0.00092 U
2-Chlorophenol	mg/kg	0.034 U	0.018 U	0.018 U	0.17 U	0.071 U	0.018 U	0.017 U
2-Methylnaphthalene	mg/kg	0.023 J	0.0087 J	0.03	0.01 U	0.04 J	0.022	0.001 U
2-Methylphenol	mg/kg	0.046 U	0.025 U	0.025 U	0.22 U	0.096 U	0.024 U	0.022 U
2-Nitroaniline	mg/kg	0.038 U	0.02 U	0.021 U	0.18 U	0.079 U	0.02 U	0.019 U
2-Nitrophenol	mg/kg	0.035 U	0.019 U	0.019 U	0.17 U	0.072 U	0.018 U	0.017 U
3&4-Methylphenol	mg/kg	0.083 U	0.045 U	0.045 U	0.41 U	0.17 U	0.077 J	0.041 U
3,3'-Dichlorobenzidine	mg/kg	0.075 U	0.04 U	0.041 U	0.37 U	0.16 U	0.04 U	0.037 U
3-Nitroaniline	mg/kg	0.067 U	0.036 U	0.036 U	0.32 U	0.14 U	0.035 U	0.033 U
4,6-Dinitro-2-methylphenol	mg/kg	0.038 U	0.021 U	0.021 U	0.19 U	0.08 U	0.02 U	0.019 U
4-Bromophenyl phenyl ether	mg/kg	0.054 U	0.029 U	0.029 U	0.26 U	0.11 U	0.029 U	0.026 U
4-Chloro-3-methylphenol	mg/kg	0.087 U	0.047 U	0.047 U	0.43 U	0.18 U	0.046 U	0.043 U
4-Chloroaniline	mg/kg	0.071 U	0.038 U	0.038 U	0.35 U	0.15 U	0.038 U	0.035 U
4-Chlorophenyl phenyl ether	mg/kg	0.054 U	0.029 U	0.029 U	0.26 U	0.11 U	0.029 U	0.026 U
4-Nitroaniline	mg/kg	0.11 U	0.058 U	0.059 U	0.53 U	0.23 U	0.057 U	0.053 U
4-Nitrophenol	mg/kg	0.071 U	0.038 U	0.038 U	0.35 U	0.15 U	0.038 U	0.035 U
Acenaphthene	mg/kg	0.0408	0.0017 U	0.051	0.0248	0.0066 U	0.013 J	0.0015 U
Acenaphthylene	mg/kg	0.0873	0.011 J	0.032	0.0891	0.035 J	0.02	0.00071 U

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-1	SS-1	SS-1	SS-2	SS-2	SS-2	SS-2
Sample Identification:		SE-031016-JN-021	SE-031016-JN-023	SE-031016-JN-022	SE-031016-JN-014	SE-031016-JN-016	SE-031016-JN-017	SE-031016-JN-015
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:		(0-0.5) ft BGS	(0-3.5) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS
Sample Type:							Duplicate	
	Units							
Semi-Volatile Organic Compounds								
Acetophenone	mg/kg	0.038 U	0.021 U	0.021 U	0.19 U	0.08 U	0.02 U	0.019 U
Anthracene	mg/kg	0.178	0.025	0.15	0.106	0.076	0.053	0.0083 J
Atrazine	mg/kg	0.038 U	0.02 U	0.021 U	0.18 U	0.079 U	0.02 U	0.019 U
Benzaldehyde	mg/kg	0.05 U	0.027 U	0.027 U	0.24 U	0.1 U	0.038 J	0.024 U
Benzo(a)anthracene	mg/kg	0.396	0.086	0.31	0.212	0.26	0.15	0.024
Benzo(a)pyrene	mg/kg	0.44	0.082	0.24	0.251	0.24	0.13	0.019
Benzo(b)fluoranthene	mg/kg	0.335	0.1	0.27	0.2	0.27	0.18	0.025
Benzo(g,h,i)perylene	mg/kg	0.24	0.06	0.15	0.152	0.15	0.095	0.01 J
Benzo(k)fluoranthene	mg/kg	--	0.033	0.17	--	0.17 J	0.053 J	0.0014 U
Biphenyl (1,1-Biphenyl)	mg/kg	0.015 U	0.0078 U	0.0079 U	0.071 U	0.03 U	0.0077 U	0.0071 U
bis(2-Chloroethoxy)methane	mg/kg	0.092 U	0.049 U	0.05 U	0.45 U	0.19 U	0.049 U	0.045 U
bis(2-Chloroethyl)ether	mg/kg	0.0083 U	0.0045 U	0.0045 U	0.041 U	0.017 U	0.0044 U	0.0041 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.079 U	0.042 U	0.043 U	0.39 U	0.17 U	0.042 U	0.039 U
Butyl benzylphthalate (BBP)	mg/kg	2.3	0.038 J	0.023 U	0.2 U	0.087 U	0.022 U	0.02 U
Caprolactam	mg/kg	0.15 U	0.083 U	0.083 U	0.75 U	0.32 U	0.082 U	0.075 U
Carbazole	mg/kg	0.11 U	0.06 U	0.061 U	0.55 U	0.24 U	0.06 U	0.055 U
Chrysene	mg/kg	--	0.1	0.32	--	0.33	0.19	0.028
Dibenz(a,h)anthracene	mg/kg	0.0667	0.0015 U	0.035	0.0447	0.0057 U	0.0015 U	0.0013 U
Dibenzofuran	mg/kg	0.0027 U	0.0015 U	0.039 J	0.013 U	0.0057 U	0.019 J	0.0013 U
Diethyl phthalate	mg/kg	0.067 U	0.036 U	0.036 U	0.32 U	0.14 U	0.035 U	0.033 U
Dimethyl phthalate	mg/kg	0.071 U	0.038 U	0.038 U	0.35 U	0.15 U	0.038 U	0.035 U
Di-n-butylphthalate (DBP)	mg/kg	0.15 J	0.033 U	0.034 U	0.3 U	0.13 U	0.034 J	0.031 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.033 U	0.018 U	0.018 U	0.16 U	0.069 U	0.017 U	0.016 U
Fluoranthene	mg/kg	0.879	0.19	0.69	0.445	0.6	0.35	0.045
Fluorene	mg/kg	0.0518	0.014 J	0.081	0.0289	0.0046 U	0.028	0.0011 U
Hexachlorobenzene	mg/kg	0.0087 U	0.0047 U	0.0047 U	0.043 U	0.018 U	0.0046 U	0.0043 U
Hexachlorobutadiene	mg/kg	0.023 U	0.013 U	0.013 U	0.11 U	0.049 U	0.012 U	0.011 U
Hexachlorocyclopentadiene	mg/kg	0.034 U	R	0.018 U	0.16 U	0.071 U	0.018 U	0.016 U
Hexachloroethane	mg/kg	0.037 U	0.02 U	0.02 U	0.18 U	0.078 U	0.02 U	0.018 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.227	0.052	0.12	0.141	0.14	0.079	0.012 J
Isophorone	mg/kg	0.054 U	0.029 U	0.031 J	0.26 U	0.11 U	0.029 U	0.026 U
Naphthalene	mg/kg	0.0203	0.012 J	0.033	0.0236	0.059	0.033	0.0017 U
Nitrobenzene	mg/kg	0.0092 U	0.0049 U	0.005 U	0.045 U	0.019 U	0.0049 U	0.0045 U
N-Nitrosodi-n-propylamine	mg/kg	0.026 U	0.014 U	0.014 U	0.13 U	0.055 U	0.014 U	0.013 U
N-Nitrosodiphenylamine	mg/kg	0.087 U	0.047 U	0.047 U	0.43 U	0.18 U	0.046 U	0.043 U
Pentachlorophenol	mg/kg	0.038 U	0.02 U	0.021 U	0.18 U	0.079 U	0.02 U	0.019 U
Phenanthrene	mg/kg	0.478	0.11	0.55	0.309	0.36	0.25	0.036
Phenol	mg/kg	0.03 U	0.016 U	0.016 U	0.15 U	0.064 U	0.032 J	0.026 J
Pyrene	mg/kg	0.756	0.19	0.67	0.403	0.58	0.36	0.049

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-1	SS-1	SS-1	SS-2	SS-2	SS-2	SS-2
Sample Identification:		SE-031016-JN-021	SE-031016-JN-023	SE-031016-JN-022	SE-031016-JN-014	SE-031016-JN-016	SE-031016-JN-017	SE-031016-JN-015
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:		(0-0.5) ft BGS	(0-3.5) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS
Sample Type:							Duplicate	
	Units							
Alkylated Polycyclic Aromatic Hydrocarbons								
Benzo(j)fluoranthene/Benzo(k)fluoranthene	mg/kg	0.349	--	--	0.196	--	--	--
Benzo(e)pyrene	mg/kg	0.258	--	--	0.158	--	--	--
C1-Benzo(a)anthracenes/chrysenes	mg/kg	0.169	--	--	0.149	--	--	--
C1-Fluoranthenes/Pyrenes	mg/kg	0.356	--	--	0.224	--	--	--
C1-Fluorenes	mg/kg	0.027	--	--	0.0239	--	--	--
C1-Naphthalenes	mg/kg	0.0189	--	--	0.0226	--	--	--
C1-Phenanthrenes/Anthracenes	mg/kg	0.218	--	--	0.181	--	--	--
C2-Benzo(a)anthracenes/chrysenes	mg/kg	0.0737	--	--	0.0961	--	--	--
C2-Fluorenes	mg/kg	0.0323	--	--	0.0515	--	--	--
C2-Naphthalenes	mg/kg	0.0408	--	--	0.0539	--	--	--
C2-Phenanthrenes/Anthracenes	mg/kg	0.111	--	--	0.174	--	--	--
C3-Benzo(a)anthracenes/chrysenes	mg/kg	0.0347	--	--	0.0641	--	--	--
C3-Fluorenes	mg/kg	0.0584	--	--	0.0921	--	--	--
C3-Naphthalenes	mg/kg	0.0386	--	--	0.0515	--	--	--
C3-Phenanthrenes/Anthracenes	mg/kg	0.0569	--	--	0.135	--	--	--
C4-Benzo(a)anthracenes/chrysenes	mg/kg	0.0254	--	--	0.0438	--	--	--
C4-Naphthalenes	mg/kg	0.0228	--	--	0.0589	--	--	--
C4-Phenanthrenes/Anthracenes	mg/kg	0.0327	--	--	0.0816	--	--	--
Chrysene/Triphenylene	mg/kg	0.433	--	--	0.252	--	--	--
Perylene	mg/kg	0.201	--	--	0.28	--	--	--

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-1	SS-1	SS-1	SS-2	SS-2	SS-2	SS-2
Sample Identification:		SE-031016-JN-021	SE-031016-JN-023	SE-031016-JN-022	SE-031016-JN-014	SE-031016-JN-016	SE-031016-JN-017	SE-031016-JN-015
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:		(0-0.5) ft BGS	(0-3.5) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS
Sample Type:							Duplicate	
	Units							
Volatile Organic Compounds								
1,1,1-Trichloroethane	mg/kg	0.0012 U	0.0014 U	0.0014 U	0.0012 U	0.0014 U	0.0013 U	0.0012 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00057 U	0.00068 U	0.00066 U	0.00059 U	0.00067 U	0.00061 U	0.00057 U
1,1,2-Trichloroethane	mg/kg	0.00068 U	0.00081 U	0.00079 U	0.00071 U	0.0008 U	0.00073 U	0.00067 U
1,1-Dichloroethane	mg/kg	0.00063 U	0.00074 U	0.00073 U	0.00065 U	0.00073 U	0.00067 U	0.00062 U
1,1-Dichloroethene	mg/kg	0.0015 U	0.0017 U	0.0017 U	0.0015 U	0.0017 U	0.0016 U	0.0015 U
1,2,4-Trichlorobenzene	mg/kg	0.0007 U	0.00083 U	0.00081 U	0.00073 U	0.00082 U	0.00075 U	0.00069 U
1,2,4-Trimethylbenzene	mg/kg	0.0011 U	0.0013 U	0.0012 U	0.0011 U	0.0012 U	0.0011 U	0.0011 U
1,2-Dibromo-3-chloropropane	mg/kg	0.005 U	0.0059 U	0.0058 U	0.0052 U	0.0058 U	0.0053 U	0.0049 U
1,2-Dibromoethane	mg/kg	0.00098 U	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.00097 U
1,2-Dichlorobenzene	mg/kg	0.00063 U	0.00074 U	0.00073 U	0.00065 U	0.00073 U	0.00067 U	0.00062 U
1,2-Dichloroethane	mg/kg	0.00085 U	0.001 U	0.00098 U	0.00088 U	0.00099 U	0.0009 U	0.00084 U
1,2-Dichloropropane	mg/kg	0.00026 U	0.00031 UJ	0.0003 U	0.00027 U	0.0003 U	0.00027 U	0.00026 U
1,3,5-Trimethylbenzene	mg/kg	0.00053 U	0.00063 U	0.00062 U	0.00056 U	0.00062 U	0.00057 U	0.00053 U
1,3-Dichlorobenzene	mg/kg	0.0013 U	0.0015 U	0.0015 U	0.0013 U	0.0015 U	0.0014 U	0.0013 U
1,4-Dichlorobenzene	mg/kg	0.00052 U	0.00061 U	0.0006 U	0.00054 U	0.0006 U	0.00055 U	0.00051 U
(Methyl ethyl ketone) (MEK)	mg/kg	0.0021 U	0.0024 U	0.0024 U	0.0021 U	0.0024 U	0.0022 U	0.002 U
2-Hexanone	mg/kg	0.0013 U	0.0015 U	0.0015 U	0.0013 U	0.0015 U	0.0013 U	0.0012 U
4-Methyl-2-pentanone	mg/kg	0.0022 U	0.0027 U	0.0026 U	0.0023 U	0.0026 U	0.0024 U	0.0022 U
Acetone	mg/kg	0.011 U	0.012 U	0.012 U	0.039	0.012 U	0.044	0.036
Benzene	mg/kg	0.0017 U	0.002 U	0.0019 U	0.0017 U	0.0019 U	0.0018 U	0.0016 U
Bromodichloromethane	mg/kg	0.00053 U	0.00063 U	0.00062 U	0.00056 U	0.00062 U	0.00057 U	0.00053 U
Bromoform	mg/kg	0.00044 U	0.00052 U	0.00051 U	0.00046 U	0.00052 U	0.00047 U	0.00044 U
Bromomethane (Methyl bromide)	mg/kg	0.00077 U	0.00092 U	0.0009 U	0.00081 U	0.0009 U	0.00082 U	0.00077 U
Carbon disulfide	mg/kg	0.0011 U	0.0013 U	0.0013 U	0.0011 U	0.0013 U	0.0012 U	0.0011 U
Carbon tetrachloride	mg/kg	0.0012 U	0.0014 U	0.0014 U	0.0012 U	0.0014 U	0.0013 U	0.0012 U
Chlorobenzene	mg/kg	0.00098 U	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.00097 U
Chloroethane	mg/kg	0.00081 U	0.00096 U	0.00094 U	0.00084 U	0.00095 U	0.00086 U	0.0008 U
Chloroform (Trichloromethane)	mg/kg	0.00066 U	0.00078 U	0.00077 U	0.00069 U	0.00078 U	0.00071 U	0.00066 U
Chloromethane (Methyl chloride)	mg/kg	0.0015 U	0.0017 U	0.0017 U	0.0015 U	0.0017 U	0.0015 U	0.0014 U
cis-1,2-Dichloroethene	mg/kg	0.00052 U	0.00061 U	0.0006 U	0.00054 U	0.0006 U	0.00055 U	0.00051 U
cis-1,3-Dichloropropene	mg/kg	0.0013 U	0.0015 U	0.0015 U	0.0014 U	0.0015 U	0.0014 U	0.0013 U
Cyclohexane	mg/kg	0.00089 U	0.001 U	0.001 U	0.00092 U	0.001 U	0.00094 U	0.00088 U
Dibromochloromethane	mg/kg	0.00068 U	0.00081 U	0.00079 U	0.00071 U	0.0008 U	0.00073 U	0.00067 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.00052 U	0.00061 U	0.0006 U	0.00054 U	0.0006 U	0.00055 U	0.00051 U
Ethylbenzene	mg/kg	0.00059 U	0.0007 U	0.00068 U	0.00061 U	0.00069 U	0.00063 U	0.00058 U
Isopropyl benzene	mg/kg	0.00037 U	0.00044 U	0.00043 U	0.00038 U	0.00043 U	0.00039 U	0.00036 U
Methyl acetate	mg/kg	0.0037 U	0.0044 U	0.0043 U	0.0039 U	0.0043 U	0.0039 U	0.0037 U
Methyl cyclohexane	mg/kg	0.0011 U	0.0013 U	0.0012 U	0.0028 J	0.0012 U	0.0011 U	0.0011 U

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-1	SS-1	SS-1	SS-2	SS-2	SS-2	SS-2
Sample Identification:		SE-031016-JN-021	SE-031016-JN-023	SE-031016-JN-022	SE-031016-JN-014	SE-031016-JN-016	SE-031016-JN-017	SE-031016-JN-015
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:		(0-0.5) ft BGS	(0-3.5) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS
Sample Type:							Duplicate	
	Units							
Methyl tert butyl ether (MTBE)	mg/kg	0.00079 U	0.00094 U	0.00092 U	0.00083 U	0.00093 U	0.00084 U	0.00078 U
Methylene chloride	mg/kg	0.0014 U	0.0016 U	0.0016 U	0.0014 U	0.0016 U	0.0015 U	0.0013 U
Styrene	mg/kg	0.00074 U	0.00087 U	0.00085 U	0.00077 U	0.00086 U	0.00078 U	0.00073 U
Tetrachloroethene	mg/kg	0.0015 U	0.0017 U	0.0017 U	0.0015 U	0.0017 U	0.0016 U	0.0015 U
Toluene	mg/kg	0.0005 U	0.00059 U	0.00058 U	0.00052 U	0.00058 U	0.00053 U	0.00049 U
trans-1,2-Dichloroethene	mg/kg	0.00059 U	0.0007 U	0.00068 U	0.00061 U	0.00069 U	0.00063 U	0.00058 U
trans-1,3-Dichloropropene	mg/kg	0.00053 U	0.00063 U	0.00062 U	0.00056 U	0.00062 U	0.00057 U	0.00053 U
Trichloroethene	mg/kg	0.0007 U	0.00083 U	0.00081 U	0.00073 U	0.00082 U	0.00075 U	0.00069 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.00053 U	0.00063 U	0.00062 U	0.00056 U	0.00062 U	0.00057 U	0.00053 U
Trifluorotrichloroethane (CFC-113)	mg/kg	0.00077 U	0.00092 U	0.0009 U	0.00081 U	0.0009 U	0.00082 U	0.00077 U
Vinyl chloride	mg/kg	0.00055 U	0.00065 U	0.00064 U	0.00058 U	0.00065 U	0.00059 U	0.00055 U
Xylenes (total)	mg/kg	0.001 U	0.0012 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.00099 U
General Chemistry								
Black carbon	mg/kg	21000	--	--	13600	--	--	--
Sulfide (acid soluble)	mg/kg	7.1 U	--	--	393	--	--	--
Sulfide (acid soluble)	umol/g	0.22 U	--	--	12.3	--	--	--
Total organic carbon (TOC)	mg/kg	46300	66800	49100	71900	64100	53400	51000
Total solids	%	38.8	--	--	42.8	--	--	--

Notes:

U - Not detected at the associated reporting limit
J - Estimated concentration
UJ - Not detected; associated reporting limit is estimated
R - Rejected

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-3	SS-3	SS-3	SS-4	SS-4	SS-4	SS-4
Sample Identification:		SE-031016-JN-018	SE-031016-JN-020	SE-031016-JN-019	SE-030916-JN-007	SE-030916-JN-010	SE-030916-JN-008	SE-030916-JN-009
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016
Sample Depth:		(0-0.5) ft BGS	(0-3.67) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-4.08) ft BGS	(0.5-2) ft BGS	(0.5-2) ft BGS
Sample Type:								Duplicate
	Units							
Metals								
Antimony	mg/kg	0.35 J	0.57 J	0.082 J	50.2	17.2	59.8 J	5.1 J
Arsenic	mg/kg	6.2	6.2	3.8	7.6	16.3	11.9	10.7
Barium	mg/kg	171	156	116	2270	1550	2080 J	426 J
Beryllium	mg/kg	0.31 J	0.58 J	0.44	0.56	0.53	0.40	0.47
Cadmium	mg/kg	0.96	0.77	0.43	4.5	3.9	4.0	1.7
Chromium	mg/kg	20.0	19.0	15.1	181 J	164 J	197 J	51.7 J
Cobalt	mg/kg	3.9	5.1	5.6	5.9	5.9	4.3	5.0
Copper	mg/kg	27.1	25.0	15.2	135	106	152	53.3
Lead	mg/kg	294	213	37.6	1340	1280	1630	657
Manganese	mg/kg	324	409	384	390	377	236	394
Mercury	mg/kg	2.4	3.1	1.5	9.3	15.2	14.8	8.4
Methyl mercury	mg/kg	0.0012	--	--	0.0014	--	--	--
Nickel	mg/kg	8.5	10.6	11.4	14.8	13.8	13.6	12.3
Selenium	mg/kg	1.2 J	1.6 J	1.5 J	2.1	2.0	1.5 J	2.0
Silver	mg/kg	0.19 J	0.18 J	0.077 J	0.22 J	0.20 J	0.23 J	0.29 J
Thallium	mg/kg	0.12 J	0.19 J	0.13 J	0.22 J	0.23 J	0.21 J	0.21 J
Vanadium	mg/kg	12.8	17.8	17.6	18.7	17.9	12.5	18.1
Zinc	mg/kg	289	203	75.2	1910	1750	1710	605
Polychorinated Biphenyls								
Cadmium	mg/kg	0.80	--	--	5.6	--	--	--
Copper	mg/kg	10 J	--	--	138	--	--	--
Lead	mg/kg	120	--	--	1940	--	--	--
Mercury	mg/kg	0.0023 J	--	--	0.0027 U	--	--	--
Nickel	mg/kg	4.5	--	--	10.2	--	--	--
Silver	mg/kg	R	--	--	0.18 U	--	--	--
Zinc	mg/kg	115	--	--	2960	--	--	--
SEM/Acid-volatile sulfide ratio (AVS)	none	0.243	--	--	3.28	--	--	--
Cadmium	umol/g	0.0071	--	--	0.050	--	--	--
Copper	umol/g	0.16 J	--	--	2.2	--	--	--
Lead	umol/g	0.58	--	--	9.4	--	--	--
Mercury	umol/g	0.000011 J	--	--	0.000014 U	--	--	--
Nickel	umol/g	0.077	--	--	0.17	--	--	--
Silver	umol/g	R	--	--	0.0017 U	--	--	--
Zinc	umol/g	1.8	--	--	45.3	--	--	--

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-3	SS-3	SS-3	SS-4	SS-4	SS-4	SS-4
Sample Identification:		SE-031016-JN-018	SE-031016-JN-020	SE-031016-JN-019	SE-030916-JN-007	SE-030916-JN-010	SE-030916-JN-008	SE-030916-JN-009
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016
Sample Depth:		(0-0.5) ft BGS	(0-3.67) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-4.08) ft BGS	(0.5-2) ft BGS	(0.5-2) ft BGS
Sample Type:								Duplicate
	Units							
Polychorinated Biphenyls								
Aroclor-1016 (PCB-1016)	mg/kg	0.024 U	0.023 U	0.024 U	0.13 U	0.046 U	0.044 U	0.12 U
Aroclor-1221 (PCB-1221)	mg/kg	0.032 U	0.031 U	0.032 U	0.17 U	0.062 U	0.058 U	0.17 U
Aroclor-1232 (PCB-1232)	mg/kg	0.04 U	0.038 U	0.04 U	0.21 U	0.077 U	0.073 U	0.21 U
Aroclor-1242 (PCB-1242)	mg/kg	0.022 U	0.021 U	0.022 U	0.12 U	0.042 U	0.04 U	0.11 U
Aroclor-1248 (PCB-1248)	mg/kg	0.016 U	0.015 U	0.016 U	0.084 U	0.031 U	0.029 U	0.083 U
Aroclor-1254 (PCB-1254)	mg/kg	0.18 J	0.027 U	0.028 U	0.15 U	0.054 U	0.051 U	0.15 U
Aroclor-1260 (PCB-1260)	mg/kg	0.018 U	0.017 U	0.018 U	0.095 U	0.035 U	0.033 U	0.094 U
Aroclor-1262 (PCB-1262)	mg/kg	0.02 U	0.019 U	0.02 U	0.11 U	0.039 U	0.036 U	0.1 U
Aroclor-1268 (PCB-1268)	mg/kg	0.026 U	0.025 U	0.026 U	0.14 UJ	0.05 UJ	0.047 UJ	0.14 UJ
Total PCBs	mg/kg	0.18 J	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds								
2,2'-Oxybis(1-chloropropane)	mg/kg	0.078 U	0.091 U	0.019 U	1 U	0.37 U	0.87 U	0.98 U
2,4,5-Trichlorophenol	mg/kg	0.2 U	0.24 U	0.051 U	2.7 U	0.98 U	2.3 U	2.6 U
2,4,6-Trichlorophenol	mg/kg	0.073 U	0.086 U	0.018 U	0.95 U	0.35 U	0.81 U	0.92 U
2,4-Dichlorophenol	mg/kg	0.16 U	0.19 U	0.041 U	2.1 U	0.78 U	1.8 U	2.1 U
2,4-Dimethylphenol	mg/kg	0.16 U	0.19 U	0.041 U	2.1 U	0.78 U	1.8 U	2.1 U
2,4-Dinitrophenol	mg/kg	0.17 U	0.2 U	0.043 U	2.2 UJ	0.82 UJ	1.9 UJ	2.2 UJ
2,4-Dinitrotoluene	mg/kg	0.14 U	0.16 U	0.035 U	1.8 U	0.66 U	1.6 U	1.8 U
2,6-Dinitrotoluene	mg/kg	0.17 U	0.2 U	0.043 U	2.2 U	0.82 U	1.9 U	2.2 U
2-Chloronaphthalene	mg/kg	0.0037 U	0.0043 U	0.00092 U	0.048 U	0.018 U	0.041 U	0.047 U
2-Chlorophenol	mg/kg	0.067 U	0.079 U	0.017 U	0.87 U	0.32 U	0.75 U	0.85 U
2-Methylnaphthalene	mg/kg	0.1	0.1	0.001 U	7.4	3.3	6.3	14
2-Methylphenol	mg/kg	0.09 U	0.11 U	0.023 U	1.2 U	0.43 U	1 U	1.1 U
2-Nitroaniline	mg/kg	0.074 U	0.088 U	0.019 U	0.97 U	0.36 U	0.83 U	0.94 U
2-Nitrophenol	mg/kg	0.068 U	0.08 U	0.017 U	0.88 U	0.32 U	0.76 U	0.86 U
3&4-Methylphenol	mg/kg	0.16 U	0.19 U	0.041 U	2.1 U	0.78 U	1.8 U	2.1 U
3,3'-Dichlorobenzidine	mg/kg	0.15 U	0.17 U	0.037 U	1.9 U	0.7 U	1.6 U	1.9 U
3-Nitroaniline	mg/kg	0.13 U	0.15 U	0.033 U	1.7 U	0.62 U	1.5 U	1.7 U
4,6-Dinitro-2-methylphenol	mg/kg	0.075 U	0.089 U	0.019 U	0.98 U	0.36 U	0.84 U	0.95 U
4-Bromophenyl phenyl ether	mg/kg	0.11 U	0.13 U	0.027 U	1.4 U	0.51 U	1.2 U	1.3 U
4-Chloro-3-methylphenol	mg/kg	0.17 U	0.2 U	0.043 U	2.2 U	0.82 U	1.9 U	2.2 U
4-Chloroaniline	mg/kg	0.14 U	0.16 U	0.035 U	1.8 U	0.66 U	1.6 U	1.8 U
4-Chlorophenyl phenyl ether	mg/kg	0.11 U	0.13 U	0.027 U	1.4 U	0.51 U	1.2 U	1.3 U
4-Nitroaniline	mg/kg	0.21 U	0.25 U	0.053 U	2.8 U	1 U	2.4 U	2.7 U
4-Nitrophenol	mg/kg	0.14 U	0.16 U	0.035 U	1.8 U	0.66 U	1.6 U	1.8 U
Acenaphthene	mg/kg	0.124	0.057 J	0.0016 U	0.512	0.49	1	1.1
Acenaphthylene	mg/kg	0.071	0.0034 U	0.0085 J	0.277	0.014 U	0.032 U	0.036 U

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-3	SS-3	SS-3	SS-4	SS-4	SS-4	SS-4
Sample Identification:		SE-031016-JN-018	SE-031016-JN-020	SE-031016-JN-019	SE-030916-JN-007	SE-030916-JN-010	SE-030916-JN-008	SE-030916-JN-009
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016
Sample Depth:		(0-0.5) ft BGS	(0-3.67) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-4.08) ft BGS	(0.5-2) ft BGS	(0.5-2) ft BGS
Sample Type:								Duplicate
	Units							
Semi-Volatile Organic Compounds								
Acetophenone	mg/kg	0.075 U	0.089 U	0.019 U	0.98 U	0.36 U	0.84 U	0.95 U
Anthracene	mg/kg	0.321	0.14	0.024	1.1	0.83	1.5	1.7
Atrazine	mg/kg	0.074 U	0.088 U	0.019 U	0.97 U	0.36 U	0.83 U	0.94 U
Benzaldehyde	mg/kg	0.098 U	0.12 U	0.025 U	1.3 U	0.47 U	1.1 U	1.2 U
Benzo(a)anthracene	mg/kg	0.57	0.3	0.056	1.47	1.4	2.8	3.6
Benzo(a)pyrene	mg/kg	0.53	0.26	0.049	1.21	0.99	2.3	2.7
Benzo(b)fluoranthene	mg/kg	0.488	0.29	0.049	1.18	1.3	2.7	3.3
Benzo(g,h,i)perylene	mg/kg	0.313	0.17	0.03	0.707	0.48	1.1	1.1
Benzo(k)fluoranthene	mg/kg	--	0.15	0.031	--	0.46	1.3	0.91
Biphenyl (1,1-Biphenyl)	mg/kg	0.029 U	0.034 U	0.0072 U	0.48 J	0.26 J	0.43 J	0.57 J
bis(2-Chloroethoxy)methane	mg/kg	0.18 U	0.21 U	0.045 U	2.3 U	0.86 U	2 U	2.3 U
bis(2-Chloroethyl)ether	mg/kg	0.016 U	0.019 U	0.0041 U	0.21 U	0.078 U	0.18 U	0.21 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.16 U	0.18 U	0.039 U	2 U	0.74 U	1.7 U	2 U
Butyl benzylphthalate (BBP)	mg/kg	0.13 J	0.096 U	0.021 U	1.1 U	0.39 U	0.91 U	1 U
Caprolactam	mg/kg	0.3 U	0.36 U	0.076 U	3.9 U	1.4 U	3.4 U	3.8 U
Carbazole	mg/kg	0.22 U	0.26 U	0.055 U	2.9 U	1.1 U	2.5 U	2.8 U
Chrysene	mg/kg	--	0.4	0.064	--	2.1	4.2	4.6
Dibenz(a,h)anthracene	mg/kg	0.0929	0.0064 U	0.0014 U	0.222	0.17 J	0.06 U	0.068 U
Dibenzofuran	mg/kg	0.062 J	0.0064 U	0.0014 U	1.9 J	0.39 J	0.85 J	1.1 J
Diethyl phthalate	mg/kg	0.13 U	0.15 U	0.033 U	1.7 U	0.62 U	1.5 U	1.7 U
Dimethyl phthalate	mg/kg	0.14 U	0.16 U	0.035 U	1.8 U	0.66 U	1.6 U	1.8 U
Di-n-butylphthalate (DBP)	mg/kg	0.13 J	0.17 J	0.031 U	6.7 J	3	4 J	5.9 J
Di-n-octyl phthalate (DnOP)	mg/kg	0.064 U	0.076 U	0.016 U	0.84 U	0.31 U	0.72 U	0.82 U
Fluoranthene	mg/kg	1.25	0.7	0.12	3.2	2.9	6	6.6
Fluorene	mg/kg	0.136	0.052 J	0.014	0.876	0.67	1.5	1.9
Hexachlorobenzene	mg/kg	0.017 U	0.02 U	0.0043 U	0.22 U	0.082 U	0.19 U	0.22 U
Hexachlorobutadiene	mg/kg	0.046 U	0.054 U	0.011 U	0.6 U	0.22 U	0.51 U	0.58 U
Hexachlorocyclopentadiene	mg/kg	0.066 U	0.078 U	0.017 U	0.86 U	0.32 U	0.74 U	0.84 U
Hexachloroethane	mg/kg	0.073 U	0.087 U	0.018 U	0.96 U	0.35 U	0.82 U	0.93 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.295	0.14	0.023	0.637	0.42	1.2	1
Isophorone	mg/kg	0.11 U	0.13 U	0.027 U	1.4 U	0.51 U	1.2 U	1.3 U
Naphthalene	mg/kg	0.332	0.15	0.0091 J	1.87	1.5	3.9	5.2
Nitrobenzene	mg/kg	0.018 U	0.021 U	0.0045 U	0.23 U	0.086 U	0.2 U	0.23 U
N-Nitrosodi-n-propylamine	mg/kg	0.051 U	0.061 U	0.013 U	0.67 U	0.25 U	0.58 U	0.65 U
N-Nitrosodiphenylamine	mg/kg	0.17 U	0.2 U	0.043 U	2.2 U	0.82 U	1.9 U	2.2 U
Pentachlorophenol	mg/kg	0.074 U	0.088 U	0.019 U	0.97 U	0.36 U	0.83 U	0.94 U
Phenanthrene	mg/kg	1.09	0.54	0.098	3.94	3.5	7.3	9.3
Phenol	mg/kg	0.06 U	0.07 U	0.024 J	0.78 U	0.28 U	0.67 U	0.76 U
Pyrene	mg/kg	1.13	0.66	0.12	3.29	2.7	6.1	7.9

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-3	SS-3	SS-3	SS-4	SS-4	SS-4	SS-4
Sample Identification:		SE-031016-JN-018	SE-031016-JN-020	SE-031016-JN-019	SE-030916-JN-007	SE-030916-JN-010	SE-030916-JN-008	SE-030916-JN-009
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016
Sample Depth:		(0-0.5) ft BGS	(0-3.67) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-4.08) ft BGS	(0.5-2) ft BGS	(0.5-2) ft BGS
Sample Type:								Duplicate
	Units							
Alkylated Polycyclic Aromatic Hydrocarbons								
Benzo(j)fluoranthene/Benzo(k)fluoranthene	mg/kg	0.442	--	--	1.1	--	--	--
Benzo(e)pyrene	mg/kg	0.367	--	--	0.981	--	--	--
C1-Benzo(a)anthracenes/chrysenes	mg/kg	0.622	--	--	3.47	--	--	--
C1-Fluoranthenes/Pyrenes	mg/kg	0.86	--	--	3.8	--	--	--
C1-Fluorenes	mg/kg	0.138	--	--	1.27	--	--	--
C1-Naphthalenes	mg/kg	0.18	--	--	4.11	--	--	--
C1-Phenanthrenes/Anthracenes	mg/kg	0.992	--	--	6.58	--	--	--
C2-Benzo(a)anthracenes/chrysenes	mg/kg	0.552	--	--	3.76	--	--	--
C2-Fluorenes	mg/kg	0.406	--	--	4.27	--	--	--
C2-Naphthalenes	mg/kg	0.749	--	--	7.49	--	--	--
C2-Phenanthrenes/Anthracenes	mg/kg	1.71	--	--	14	--	--	--
C3-Benzo(a)anthracenes/chrysenes	mg/kg	0.426	--	--	2.89	--	--	--
C3-Fluorenes	mg/kg	0.665	--	--	7.94	--	--	--
C3-Naphthalenes	mg/kg	0.826	--	--	7.62	--	--	--
C3-Phenanthrenes/Anthracenes	mg/kg	1.73	--	--	15.7	--	--	--
C4-Benzo(a)anthracenes/chrysenes	mg/kg	0.324	--	--	2.08	--	--	--
C4-Naphthalenes	mg/kg	0.503	--	--	6.92	--	--	--
C4-Phenanthrenes/Anthracenes	mg/kg	1.01	--	--	8.69	--	--	--
Chrysene/Triphenylene	mg/kg	0.761	--	--	2.76	--	--	--
Perylene	mg/kg	0.221	--	--	0.402	--	--	--

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		**SS-3**	**SS-3**	**SS-3**	**SS-4**	**SS-4**	**SS-4**	**SS-4**
Sample Identification:		**SE-031016-JN-018**	**SE-031016-JN-020**	**SE-031016-JN-019**	**SE-030916-JN-007**	**SE-030916-JN-010**	**SE-030916-JN-008**	**SE-030916-JN-009**
Sample Date:		**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/9/2016**	**3/9/2016**	**3/9/2016**	**3/9/2016**
Sample Depth:		**(0-0.5) ft BGS**	**(0-3.67) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-4.08) ft BGS**	**(0.5-2) ft BGS**	**(0.5-2) ft BGS**
Sample Type:								**Duplicate**
	Units							
Volatile Organic Compounds								
1,1,1-Trichloroethane	mg/kg	0.0022 U	0.0011 U	0.0013 U	0.082 U	0.074 U	0.069 U	0.079 U
1,1,2,2-Tetrachloroethane	mg/kg	0.001 U	0.00054 U	0.00061 U	0.076 U	0.069 U	0.064 U	0.074 U
1,1,2-Trichloroethane	mg/kg	0.0012 U	0.00065 U	0.00073 U	0.058 U	0.052 U	0.048 U	0.056 U
1,1-Dichloroethane	mg/kg	0.0011 U	0.00059 U	0.00067 U	0.11 U	0.096 U	0.089 U	0.1 U
1,1-Dichloroethene	mg/kg	0.0027 U	0.0014 U	0.0016 U	0.091 U	0.083 U	0.076 U	0.088 U
1,2,4-Trichlorobenzene	mg/kg	0.0013 U	0.00066 U	0.00075 U	0.091 U	0.083 U	0.076 U	0.088 U
1,2,4-Trimethylbenzene	mg/kg	0.0019 U	0.001 U	0.0011 U	4.2	0.38 J	0.45 J	0.35 J
1,2-Dibromo-3-chloropropane	mg/kg	0.009 U	0.0047 U	0.0053 U	0.21 U	0.2 U	0.18 U	0.21 U
1,2-Dibromoethane	mg/kg	0.0018 U	0.00093 U	0.001 U	0.097 U	0.088 U	0.081 U	0.094 U
1,2-Dichlorobenzene	mg/kg	0.0011 U	0.00059 U	0.00067 U	0.058 U	0.052 U	0.048 U	0.056 U
1,2-Dichloroethane	mg/kg	0.0015 U	0.0008 U	0.0009 U	0.03 U	0.028 U	0.025 U	0.029 U
1,2-Dichloropropane	mg/kg	0.00046 U	0.00024 U	0.00028 U	0.097 U	0.088 U	0.081 U	0.094 U
1,3,5-Trimethylbenzene	mg/kg	0.00096 U	0.00051 U	0.00057 U	2.3	0.15 J	0.18 J	0.15 J
1,3-Dichlorobenzene	mg/kg	0.0023 U	0.0012 U	0.0014 U	0.091 U	0.083 U	0.076 U	0.088 U
1,4-Dichlorobenzene	mg/kg	0.00093 U	0.00049 U	0.00055 U	0.12 U	0.11 U	0.1 U	0.12 U
(Methyl ethyl ketone) (MEK)	mg/kg	0.0037 U	0.002 U	0.0022 U	0.22 U	0.2 U	0.19 U	0.21 U
2-Hexanone	mg/kg	0.0023 U	0.0012 U	0.0013 U	0.25 U	0.23 U	0.21 U	0.25 U
4-Methyl-2-pentanone	mg/kg	0.0041 U	0.0021 U	0.0024 U	0.17 U	0.15 U	0.14 U	0.16 U
Acetone	mg/kg	0.069 J	0.075	0.011 U	0.68 U	0.62 U	0.58 U	0.67 U
Benzene	mg/kg	0.003 U	0.0016 U	0.0018 U	0.027 U	0.025 U	0.023 U	0.026 U
Bromodichloromethane	mg/kg	0.00096 U	0.00051 U	0.00057 U	0.12 U	0.1 U	0.097 U	0.11 U
Bromoform	mg/kg	0.0008 U	0.00042 U	0.00047 U	0.18 U	0.17 U	0.16 U	0.18 U
Bromomethane (Methyl bromide)	mg/kg	0.0014 U	0.00073 U	0.00083 U	0.15 U	0.14 U	R	0.15 U
Carbon disulfide	mg/kg	0.002 U	0.001 U	0.0012 U	0.17 U	0.15 U	R	0.16 U
Carbon tetrachloride	mg/kg	0.0022 U	0.0011 U	0.0013 U	0.054 U	0.05 U	0.046 U	0.053 U
Chlorobenzene	mg/kg	0.0018 U	0.00093 U	0.001 U	0.039 U	0.036 U	0.033 U	0.038 U
Chloroethane	mg/kg	0.0015 U	0.00077 U	0.00086 U	0.15 U	0.14 U	0.13 U	0.15 U
Chloroform (Trichloromethane)	mg/kg	0.0012 U	0.00063 U	0.00071 U	0.11 U	0.099 U	0.092 U	0.11 U
Chloromethane (Methyl chloride)	mg/kg	0.0026 U	0.0014 U	0.0016 U	0.15 U	0.13 U	0.12 U	0.14 U
cis-1,2-Dichloroethene	mg/kg	0.00093 U	0.00049 U	0.00055 U	0.12 U	0.1 U	0.097 U	0.11 U
cis-1,3-Dichloropropene	mg/kg	0.0024 U	0.0012 U	0.0014 U	0.067 U	0.061 U	0.056 U	0.065 U
Cyclohexane	mg/kg	0.0016 U	0.00084 U	0.00094 U	0.28 J	0.15 J	0.17 J	0.16 J
Dibromochloromethane	mg/kg	0.0012 U	0.00065 U	0.00073 U	0.061 U	0.055 U	0.051 U	0.059 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.00093 U	0.00049 U	0.00055 U	0.18 U	0.17 U	R	0.18 U
Ethylbenzene	mg/kg	0.0011 U	0.00056 U	0.00063 U	0.11 U	0.096 U	0.089 U	0.1 U
Isopropyl benzene	mg/kg	0.00066 U	0.00035 U	0.00039 U	0.49 J	0.37 J	0.53 J	0.49 J
Methyl acetate	mg/kg	0.0067 U	0.0035 U	0.004 U	0.22 J	0.29 J	0.23 J	0.23 J
Methyl cyclohexane	mg/kg	0.039 J	0.0035 J	0.0011 U	2.3	1.3 J	1.4 J	1.3 J

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-3	SS-3	SS-3	SS-4	SS-4	SS-4	SS-4
Sample Identification:		SE-031016-JN-018	SE-031016-JN-020	SE-031016-JN-019	SE-030916-JN-007	SE-030916-JN-010	SE-030916-JN-008	SE-030916-JN-009
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016
Sample Depth:		(0-0.5) ft BGS	(0-3.67) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-4.08) ft BGS	(0.5-2) ft BGS	(0.5-2) ft BGS
Sample Type:								Duplicate
	Units							
Methyl tert butyl ether (MTBE)	mg/kg	0.0014 U	0.00075 U	0.00085 U	0.091 U	0.083 U	0.076 U	0.088 U
Methylene chloride	mg/kg	0.0025 U	0.0013 U	0.0015 U	0.26 U	0.23 U	0.22 U	0.25 U
Styrene	mg/kg	0.0013 U	0.0007 U	0.00079 U	0.082 U	0.074 U	0.069 U	0.079 U
Tetrachloroethene	mg/kg	0.0027 U	0.0014 U	0.0016 U	0.082 U	0.074 U	0.069 U	0.079 U
Toluene	mg/kg	0.0009 U	0.00047 U	0.00053 U	0.03 U	0.028 U	0.025 U	0.029 U
trans-1,2-Dichloroethene	mg/kg	0.0011 U	0.00056 U	0.00063 U	0.079 U	0.072 U	0.066 UJ	0.077 U
trans-1,3-Dichloropropene	mg/kg	0.00096 U	0.00051 U	0.00057 U	0.079 U	0.072 U	0.066 U	0.077 U
Trichloroethene	mg/kg	0.0013 U	0.00066 U	0.00075 U	0.12 U	0.11 U	0.099 U	0.11 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.00096 U	0.00051 U	0.00057 U	0.11 U	0.096 U	0.089 U	0.1 U
Trifluorotrichloroethane (CFC-113)	mg/kg	0.0014 U	0.00073 U	0.00083 U	0.13 U	0.12 U	0.11 UJ	0.12 U
Vinyl chloride	mg/kg	0.001 U	0.00052 U	0.00059 U	0.051 U	0.047 U	0.043 U	0.05 U
Xylenes (total)	mg/kg	0.0018 U	0.00094 U	0.0011 U	0.94 J	0.15 J	0.12 J	0.14 J
General Chemistry								
Black carbon	mg/kg	11400	--	--	27900	--	--	--
Sulfide (acid soluble)	mg/kg	340	--	--	558	--	--	--
Sulfide (acid soluble)	umol/g	10.6	--	--	17.4	--	--	--
Total organic carbon (TOC)	mg/kg	46100	43800	60300	80700	114000	162000	399000
Total solids	%	52.6	--	--	51.3	--	--	--

Notes:

U - Not detected at the associated reporting limit
J - Estimated concentration
UJ - Not detected; associated reporting limit is estimated
R - Rejected

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-5	SS-5	SS-5	SS-6	SS-6	SS-6	SS-7
Sample Identification:		SE-031016-JN-011	SE-031016-JN-013	SE-031016-JN-012	SE-030916-JN-001	SE-030916-JN-003	SE-030916-JN-002	SE-030916-JN-004
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016
Sample Depth:		(0-0.5) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS
Sample Type:								
	Units							
Metals								
Antimony	mg/kg	32.0	511	48.3	30.6	15.0	35.9	33.4
Arsenic	mg/kg	7.1	40.4	14.7	10.2	8.4	9.0	9.3
Barium	mg/kg	1120	3880	2340	1140	1010	945	1520
Beryllium	mg/kg	0.17 J	0.38 J	0.39	0.25 J	0.48	0.47	0.30 J
Cadmium	mg/kg	8.0	31.9	19.4	57.9	7.6	4.1	9.7
Chromium	mg/kg	176	746	272	261 J	102 J	113 J	152 J
Cobalt	mg/kg	3.8	9.3	10.6	5.2	5.9	6.0	4.5
Copper	mg/kg	40.3	159	113	50.8	88.7	91.8	93.9
Lead	mg/kg	1470	8570	2660	1870	637	706	1880
Manganese	mg/kg	371	678	641	548	525	629	357
Mercury	mg/kg	0.27	1.7	0.61	0.46	1.6	7.2	1.3
Methyl mercury	mg/kg	0.00022	--	--	0.00024	--	--	0.00047
Nickel	mg/kg	29.2	103	21.0	12.7	15.0	14.7	13.5
Selenium	mg/kg	2.0	5.4	4.7	15.1	3.2	2.2	2.3
Silver	mg/kg	0.21 J	1.3	0.40	0.34	0.26 J	0.22 J	0.35 J
Thallium	mg/kg	0.10 J	0.24 J	0.18 J	0.11 J	0.21 J	0.23 J	0.14 J
Vanadium	mg/kg	0.040 U	11.3	5.6	10.0	14.4	14.2	9.2
Zinc	mg/kg	1970	5590	2780	904	1250	1140	1480
Polychorinated Biphenyls								
Cadmium	mg/kg	4.6	--	--	3.7	--	--	3.2
Copper	mg/kg	11.6 J	--	--	24.8	--	--	55.1
Lead	mg/kg	3560	--	--	839	--	--	1800
Mercury	mg/kg	0.0047 J	--	--	0.0031 U	--	--	0.0030 J
Nickel	mg/kg	58.8	--	--	7.4	--	--	6.1
Silver	mg/kg	R	--	--	0.082 U	--	--	0.032 U
Zinc	mg/kg	2690	--	--	2080	--	--	1010
SEM/Acid-volatile sulfide ratio (AVS)	none	3.48	--	--	1.68	--	--	6.81
Cadmium	umol/g	0.041	--	--	0.033	--	--	0.029
Copper	umol/g	0.18 J	--	--	0.39	--	--	0.87
Lead	umol/g	17.2	--	--	4.0	--	--	8.7
Mercury	umol/g	0.000024 J	--	--	0.000015 U	--	--	0.000015 J
Nickel	umol/g	1.0	--	--	0.13	--	--	0.10
Silver	umol/g	R	--	--	0.00076 U	--	--	0.00030 U
Zinc	umol/g	41.2	--	--	31.8	--	--	15.4

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-5	SS-5	SS-5	SS-6	SS-6	SS-6	SS-7
Sample Identification:		SE-031016-JN-011	SE-031016-JN-013	SE-031016-JN-012	SE-030916-JN-001	SE-030916-JN-003	SE-030916-JN-002	SE-030916-JN-004
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016
Sample Depth:		(0-0.5) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS
Sample Type:								
	Units							
Polychorinated Biphenyls								
Aroclor-1016 (PCB-1016)	mg/kg	0.075 U	0.15 U	0.025 U	0.41 U	0.13 U	0.13 U	0.14 U
Aroclor-1221 (PCB-1221)	mg/kg	0.1 U	0.2 U	0.034 U	0.55 U	0.18 U	0.17 U	0.19 U
Aroclor-1232 (PCB-1232)	mg/kg	0.13 U	0.25 U	0.042 U	0.69 U	0.22 U	0.21 U	0.23 U
Aroclor-1242 (PCB-1242)	mg/kg	0.069 U	0.13 U	0.023 U	0.38 UJ	0.12 U	0.12 U	0.13 UJ
Aroclor-1248 (PCB-1248)	mg/kg	0.05 U	0.098 U	0.017 U	0.27 U	0.089 U	0.085 U	0.094 U
Aroclor-1254 (PCB-1254)	mg/kg	0.14 J	0.2 J	0.27 J	0.48 U	0.16 U	0.15 U	0.21 J
Aroclor-1260 (PCB-1260)	mg/kg	0.056 U	0.11 U	0.019 U	0.31 U	0.1 U	0.096 U	0.11 U
Aroclor-1262 (PCB-1262)	mg/kg	0.063 U	0.12 U	0.021 U	0.34 U	0.11 U	0.11 U	0.12 U
Aroclor-1268 (PCB-1268)	mg/kg	0.33	0.67	0.56 J	1.2	0.14 UJ	0.14 UJ	0.6
Total PCBs	mg/kg	0.47 J	0.87 J	0.83 J	1.2	ND	ND	0.81 J
Semi-Volatile Organic Compounds								
2,2'-Oxybis(1-chloropropane)	mg/kg	2.4 U	2.1 U	1.5 U	1 U	1 U	1 U	0.45 U
2,4,5-Trichlorophenol	mg/kg	6.4 U	5.5 U	3.8 U	2.8 U	2.7 U	2.7 U	1.2 U
2,4,6-Trichlorophenol	mg/kg	2.3 U	2 U	1.4 U	0.98 U	0.97 U	0.95 U	0.42 U
2,4-Dichlorophenol	mg/kg	5.1 U	4.4 U	3.1 U	2.2 U	2.2 U	2.1 U	0.95 U
2,4-Dimethylphenol	mg/kg	5.1 U	4.4 U	3.1 U	2.2 U	2.2 U	2.1 U	0.95 U
2,4-Dinitrophenol	mg/kg	5.3 U	4.6 U	3.2 U	2.3 UJ	2.3 UJ	2.2 UJ	1 UJ
2,4-Dinitrotoluene	mg/kg	4.3 U	3.8 U	2.6 U	1.9 U	1.8 U	1.8 U	0.81 U
2,6-Dinitrotoluene	mg/kg	5.3 U	4.6 U	3.2 U	2.3 U	2.3 U	2.2 U	1 U
2-Chloronaphthalene	mg/kg	0.11 U	0.1 U	0.069 U	0.05 U	0.049 U	0.048 U	0.021 U
2-Chlorophenol	mg/kg	2.1 U	1.8 U	1.3 U	0.9 U	0.89 U	0.88 U	0.39 U
2-Methylnaphthalene	mg/kg	1.3 J	3.3	3.5	0.61 J	4.4	4.2	0.73
2-Methylphenol	mg/kg	2.8 U	2.4 U	1.7 U	1.2 U	1.2 U	1.2 U	0.52 U
2-Nitroaniline	mg/kg	2.3 U	2 U	1.4 U	1 U	0.99 U	0.97 U	0.43 U
2-Nitrophenol	mg/kg	2.1 U	1.8 U	1.3 U	0.91 U	0.9 U	0.89 U	0.39 U
3&4-Methylphenol	mg/kg	5.1 U	4.4 U	3.1 U	2.2 U	2.2 U	2.1 U	0.95 U
3,3'-Dichlorobenzidine	mg/kg	4.6 U	4 U	2.8 U	2 U	2 U	1.9 U	0.85 U
3-Nitroaniline	mg/kg	4.1 U	3.5 U	2.5 U	1.8 U	1.7 U	1.7 U	0.76 U
4,6-Dinitro-2-methylphenol	mg/kg	2.3 U	2 U	1.4 U	1 U	1 U	0.98 U	0.44 U
4-Bromophenyl phenyl ether	mg/kg	3.3 U	2.9 U	2 U	1.4 U	1.4 U	1.4 U	0.62 U
4-Chloro-3-methylphenol	mg/kg	5.3 U	4.6 U	3.2 U	2.3 U	2.3 U	2.2 U	1 U
4-Chloroaniline	mg/kg	4.3 U	3.8 U	2.6 U	1.9 U	1.8 U	1.8 U	0.81 U
4-Chlorophenyl phenyl ether	mg/kg	3.3 U	2.9 U	2 U	1.4 U	1.4 U	1.4 U	0.62 U
4-Nitroaniline	mg/kg	6.6 U	5.8 U	4 U	2.9 U	2.8 U	2.8 U	1.2 U
4-Nitrophenol	mg/kg	4.3 U	3.8 U	2.6 U	1.9 U	1.8 U	1.8 U	0.81 U
Acenaphthene	mg/kg	0.994	2.3	7.1	0.381	1.4	4.5	0.237
Acenaphthylene	mg/kg	0.131	0.077 U	0.054 U	0.131	0.45 J	0.38 J	0.168

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		**SS-5**	**SS-5**	**SS-5**	**SS-6**	**SS-6**	**SS-6**	**SS-7**
Sample Identification:		**SE-031016-JN-011**	**SE-031016-JN-013**	**SE-031016-JN-012**	**SE-030916-JN-001**	**SE-030916-JN-003**	**SE-030916-JN-002**	**SE-030916-JN-004**
Sample Date:		**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/9/2016**	**3/9/2016**	**3/9/2016**	**3/9/2016**
Sample Depth:		**(0-0.5) ft BGS**	**(0-2) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-2) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**
Sample Type:								
	Units							
Semi-Volatile Organic Compounds								
Acetophenone	mg/kg	2.3 U	2 U	1.4 U	1 U	1 U	0.98 U	0.44 U
Anthracene	mg/kg	2.16	4.6	12	0.924	1.8	7.5	0.995
Atrazine	mg/kg	2.3 U	2 U	1.4 U	1 U	0.99 U	0.97 U	0.43 U
Benzaldehyde	mg/kg	3.1 U	2.7 U	1.8 U	1.3 U	1.3 U	1.3 U	0.57 U
Benzo(a)anthracene	mg/kg	3.76	11	20	1.41	4.2	14	1.96
Benzo(a)pyrene	mg/kg	3.51	7.6	15	1.08	3	12	1.73
Benzo(b)fluoranthene	mg/kg	2.99	12	23	1.36	3.9	16	1.78
Benzo(g,h,i)perylene	mg/kg	1.87	6.4	9	0.708	1.6	6.4	1.1
Benzo(k)fluoranthene	mg/kg	--	4.5	9.1	--	1.2	6.9	--
Biphenyl (1,1-Biphenyl)	mg/kg	0.89 U	0.77 U	0.54 U	0.39 U	0.38 U	0.59 J	0.17 U
bis(2-Chloroethoxy)methane	mg/kg	5.6 U	4.9 U	3.4 U	2.4 U	2.4 U	2.3 U	1 U
bis(2-Chloroethyl)ether	mg/kg	0.51 U	0.44 U	0.31 U	0.22 U	0.22 U	0.21 U	0.095 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	4.8 U	27	2.9 U	12	11	2 U	9.2
Butyl benzylphthalate (BBP)	mg/kg	290	56	3.1 J	70	1.1 U	1.1 U	1.6 J
Caprolactam	mg/kg	9.4 U	8.2 U	5.7 U	4.1 U	28 J	4 U	1.8 U
Carbazole	mg/kg	6.9 U	6 U	8.8	3 U	2.9 U	3.7 J	1.3 U
Chrysene	mg/kg	--	12	23	--	5.4	14	--
Dibenz(a,h)anthracene	mg/kg	0.572	0.15 U	2.6	0.195	0.072 U	2.2	0.292
Dibenzofuran	mg/kg	0.17 U	0.15 U	3.8 J	0.073 U	0.88 J	2.9 J	0.031 U
Diethyl phthalate	mg/kg	4.1 U	3.5 U	2.5 U	1.8 U	1.7 U	1.7 U	0.76 U
Dimethyl phthalate	mg/kg	4.3 U	3.8 U	2.6 U	1.9 U	1.8 U	1.8 U	0.81 U
Di-n-butylphthalate (DBP)	mg/kg	13 J	5.3 J	13	2.3 J	4.1 J	3.4 J	2.4 J
Di-n-octyl phthalate (DnOP)	mg/kg	2 U	1.7 U	1.2 U	0.87 U	0.86 U	0.84 U	0.38 U
Fluoranthene	mg/kg	9.63	27	60	4.22	9.5	34	4.93
Fluorene	mg/kg	1.31	2.5	7.8	0.837	1.8	5.5	0.506
Hexachlorobenzene	mg/kg	0.53 U	0.46 U	0.32 U	0.23 U	0.23 U	0.22 U	0.1 U
Hexachlorobutadiene	mg/kg	1.4 U	1.2 U	0.86 U	0.62 U	0.61 U	0.6 U	0.27 U
Hexachlorocyclopentadiene	mg/kg	2.1 U	1.8 U	1.2 U	0.89 U	0.88 U	0.87 U	0.38 U
Hexachloroethane	mg/kg	2.3 U	2 U	1.4 U	0.99 U	0.98 U	0.96 U	0.43 U
Indeno(1,2,3-cd)pyrene	mg/kg	1.81	4.3	8.2	0.612	1.5	5.8	0.951
Isophorone	mg/kg	3.3 U	2.9 U	2 U	1.4 U	1.4 U	1.4 U	0.62 U
Naphthalene	mg/kg	1.23	4.8	5.2	0.489	2.2	2.6	0.37
Nitrobenzene	mg/kg	0.56 U	0.49 U	0.34 U	0.24 U	0.24 U	0.23 U	0.1 U
N-Nitrosodi-n-propylamine	mg/kg	1.6 U	1.4 U	0.97 U	0.69 U	0.68 U	0.67 U	0.3 U
N-Nitrosodiphenylamine	mg/kg	5.3 U	4.6 U	3.2 U	2.3 U	2.3 U	2.2 U	1 U
Pentachlorophenol	mg/kg	2.3 U	2 U	1.4 U	1 U	0.99 U	0.97 U	0.43 U
Phenanthrene	mg/kg	9.09	22	59	5.67	11	37	2.66
Phenol	mg/kg	1.9 U	1.6 U	1.1 U	0.8 U	0.79 U	0.78 U	0.35 U
Pyrene	mg/kg	7.37	21	44	3.24	9	30	4.45

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-5	SS-5	SS-5	SS-6	SS-6	SS-6	SS-7
Sample Identification:		SE-031016-JN-011	SE-031016-JN-013	SE-031016-JN-012	SE-030916-JN-001	SE-030916-JN-003	SE-030916-JN-002	SE-030916-JN-004
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016
Sample Depth:		(0-0.5) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS
Sample Type:								
	Units							
Alkylated Polycyclic Aromatic Hydrocarbons								
Benzo(j)fluoranthene/Benzo(k)fluoranthene	mg/kg	3.14	--	--	0.97	--	--	1.48
Benzo(e)pyrene	mg/kg	2.21	--	--	0.926	--	--	1.3
C1-Benzo(a)anthracenes/chrysenes	mg/kg	1.73	--	--	1.73	--	--	2.5
C1-Fluoranthenes/Pyrenes	mg/kg	3.19	--	--	2.63	--	--	3.55
C1-Fluorenes	mg/kg	0.392	--	--	0.96	--	--	1.11
C1-Naphthalenes	mg/kg	0.897	--	--	1.22	--	--	0.805
C1-Phenanthrenes/Anthracenes	mg/kg	2.98	--	--	6.15	--	--	4.98
C2-Benzo(a)anthracenes/chrysenes	mg/kg	1.21	--	--	2.48	--	--	2.65
C2-Fluorenes	mg/kg	0.904	--	--	3.16	--	--	3.85
C2-Naphthalenes	mg/kg	1.4	--	--	3.59	--	--	1.76
C2-Phenanthrenes/Anthracenes	mg/kg	3.36	--	--	10.6	--	--	11
C3-Benzo(a)anthracenes/chrysenes	mg/kg	0.911	--	--	1.99	--	--	2.04
C3-Fluorenes	mg/kg	1.85	--	--	4.5	--	--	6.36
C3-Naphthalenes	mg/kg	1.38	--	--	4.11	--	--	3.41
C3-Phenanthrenes/Anthracenes	mg/kg	2.99	--	--	9.08	--	--	11.9
C4-Benzo(a)anthracenes/chrysenes	mg/kg	0.54	--	--	1.16	--	--	1.78
C4-Naphthalenes	mg/kg	1.38	--	--	4.39	--	--	3.95
C4-Phenanthrenes/Anthracenes	mg/kg	1.89	--	--	4.74	--	--	6.17
Chrysene/Triphenylene	mg/kg	4.22	--	--	2.37	--	--	3.06
Perylene	mg/kg	1.06	--	--	0.575	--	--	0.681

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		**SS-5**	**SS-5**	**SS-5**	**SS-6**	**SS-6**	**SS-6**	**SS-7**
Sample Identification:		**SE-031016-JN-011**	**SE-031016-JN-013**	**SE-031016-JN-012**	**SE-030916-JN-001**	**SE-030916-JN-003**	**SE-030916-JN-002**	**SE-030916-JN-004**
Sample Date:		**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/9/2016**	**3/9/2016**	**3/9/2016**	**3/9/2016**
Sample Depth:		**(0-0.5) ft BGS**	**(0-2) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-2) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**
Sample Type:								
	Units							
Volatile Organic Compounds								
1,1,1-Trichloroethane	mg/kg	0.0077 U	0.1 U	0.077 U	0.0021 U	0.01 U	0.013 U	0.0015 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0037 U	0.097 U	0.071 U	0.001 U	0.005 U	0.0063 U	0.00071 U
1,1,2-Trichloroethane	mg/kg	0.0044 U	0.073 U	0.054 U	0.0012 U	0.0059 U	0.0075 U	0.00084 U
1,1-Dichloroethane	mg/kg	0.004 U	0.14 U	0.099 U	0.0011 U	0.0055 U	0.0069 U	0.00077 U
1,1-Dichloroethene	mg/kg	0.0095 U	0.12 U	0.085 U	0.0026 U	0.013 U	0.016 U	0.0018 U
1,2,4-Trichlorobenzene	mg/kg	0.0045 U	0.12 U	0.13 J	0.0012 U	0.0061 U	0.0077 U	0.00086 U
1,2,4-Trimethylbenzene	mg/kg	0.6	16	7.7	0.0019 U	0.0093 U	0.012 U	0.0013 U
1,2-Dibromo-3-chloropropane	mg/kg	0.032 U	0.27 U	0.2 U	0.0088 U	0.043 U	0.055 U	0.0062 U
1,2-Dibromoethane	mg/kg	0.0063 U	0.12 U	0.091 U	0.0017 U	0.0085 U	0.011 U	0.0012 U
1,2-Dichlorobenzene	mg/kg	0.004 U	0.073 U	0.054 U	0.0011 U	0.0055 U	0.0069 U	0.00077 U
1,2-Dichloroethane	mg/kg	0.0054 U	0.039 U	0.028 U	0.0015 U	0.0074 U	0.0093 U	0.001 U
1,2-Dichloropropane	mg/kg	0.0017 U	0.12 U	0.091 U	0.00045 U	0.0022 U	0.0028 U	0.00032 U
1,3,5-Trimethylbenzene	mg/kg	0.25	5.9	3.2	0.00094 U	0.0046 U	0.0059 U	0.00066 U
1,3-Dichlorobenzene	mg/kg	0.0082 U	0.12 U	0.085 U	0.0022 U	0.011 U	0.014 U	0.0016 U
1,4-Dichlorobenzene	mg/kg	0.0033 U	0.16 U	0.12 U	0.00091 U	0.0045 U	0.0057 U	0.00064 U
(Methyl ethyl ketone) (MEK)	mg/kg	0.023 J	0.28 U	0.21 U	0.0036 U	0.018 U	0.023 U	0.0025 U
2-Hexanone	mg/kg	0.008 U	0.32 U	0.24 U	0.0022 U	0.011 U	0.014 U	0.0015 U
4-Methyl-2-pentanone	mg/kg	0.014 U	0.22 U	0.16 U	0.0039 U	0.02 U	0.025 U	0.0028 U
Acetone	mg/kg	0.13 J	0.87 U	0.64 U	0.097 J	0.3 J	0.3 J	0.013 U
Benzene	mg/kg	0.011 U	0.035 U	0.026 U	0.0029 U	0.014 U	0.018 U	0.002 U
Bromodichloromethane	mg/kg	0.0034 U	0.15 U	0.11 U	0.00094 U	0.0046 U	0.0059 U	0.00066 U
Bromoform	mg/kg	0.0028 U	0.24 U	0.17 U	0.00078 U	0.0038 U	0.0049 U	0.00055 U
Bromomethane (Methyl bromide)	mg/kg	0.005 U	0.2 U	0.14 U	0.0014 U	0.0067 U	0.0085 U	0.00096 U
Carbon disulfide	mg/kg	0.007 U	0.22 U	0.16 U	0.0019 U	0.0095 U	0.012 U	0.0013 U
Carbon tetrachloride	mg/kg	0.0077 U	0.07 U	0.051 U	0.0021 U	0.01 U	0.013 U	0.0015 U
Chlorobenzene	mg/kg	0.0063 U	0.05 U	0.037 U	0.0017 U	0.0085 U	0.011 U	0.0012 U
Chloroethane	mg/kg	0.0052 U	0.2 U	0.14 U	0.0014 U	0.0071 U	0.0089 U	0.001 U
Chloroform (Trichloromethane)	mg/kg	0.0043 U	0.14 U	0.1 U	0.0012 U	0.0058 U	0.0073 U	0.00082 U
Chloromethane (Methyl chloride)	mg/kg	0.0093 U	0.19 U	0.14 U	0.0026 U	0.013 U	0.016 U	0.0018 U
cis-1,2-Dichloroethene	mg/kg	0.0033 U	0.15 U	0.11 U	0.00091 U	0.0045 U	0.0057 U	0.00064 U
cis-1,3-Dichloropropene	mg/kg	0.0084 U	0.085 U	0.062 U	0.0023 U	0.011 U	0.014 U	0.0016 U
Cyclohexane	mg/kg	0.084 J	0.12 U	0.085 U	0.028 J	0.069 J	0.09 J	0.0011 U
Dibromochloromethane	mg/kg	0.0044 U	0.077 U	0.057 U	0.0012 U	0.0059 U	0.0075 U	0.00084 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.0033 U	0.24 U	0.17 U	0.00091 U	0.0045 U	0.0057 U	0.00064 U
Ethylbenzene	mg/kg	0.0038 U	0.14 U	0.099 U	0.001 U	0.0051 U	0.0065 U	0.00073 U
Isopropyl benzene	mg/kg	0.14	1	0.63 J	0.067 J	0.23 J	0.22 J	0.00046 U
Methyl acetate	mg/kg	0.024 U	0.21 U	0.16 U	0.0065 U	0.032 U	0.041 U	0.0046 U
Methyl cyclohexane	mg/kg	0.39	2 J	0.8 J	0.45 J	1.5 J	1.8 J	0.0013 U

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-5	SS-5	SS-5	SS-6	SS-6	SS-6	SS-7
Sample Identification:		SE-031016-JN-011	SE-031016-JN-013	SE-031016-JN-012	SE-030916-JN-001	SE-030916-JN-003	SE-030916-JN-002	SE-030916-JN-004
Sample Date:		3/10/2016	3/10/2016	3/10/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016
Sample Depth:		(0-0.5) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-2) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS
Sample Type:								
	Units							
Methyl tert butyl ether (MTBE)	mg/kg	0.0051 U	0.12 U	0.085 U	0.0014 U	0.0069 U	0.0087 U	0.00098 U
Methylene chloride	mg/kg	0.0087 U	0.38 J	0.3 J	0.0024 U	0.012 U	0.015 U	0.0017 U
Styrene	mg/kg	0.0047 U	0.1 U	0.077 U	0.0013 U	0.0064 U	0.0081 U	0.00091 U
Tetrachloroethene	mg/kg	0.0095 U	0.1 U	0.077 U	0.0026 U	0.013 U	0.016 U	0.0018 U
Toluene	mg/kg	0.0032 U	0.039 U	0.028 U	0.00087 U	0.0043 U	0.0055 U	0.00061 U
trans-1,2-Dichloroethene	mg/kg	0.0038 U	0.1 U	0.074 U	0.001 U	0.0051 U	0.0065 U	0.00073 U
trans-1,3-Dichloropropene	mg/kg	0.0034 U	0.1 U	0.074 U	0.00094 U	0.0046 U	0.0059 U	0.00066 U
Trichloroethene	mg/kg	0.0045 U	0.15 U	0.11 U	0.0012 U	0.0061 U	0.0077 U	0.00086 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.0034 U	0.14 U	0.099 U	0.00094 U	0.0046 U	0.0059 U	0.00066 U
Trifluorotrichloroethane (CFC-113)	mg/kg	0.005 U	0.16 U	0.12 U	0.0014 U	0.0067 U	0.0085 U	0.00096 U
Vinyl chloride	mg/kg	0.0035 U	0.066 U	0.048 U	0.00097 U	0.0048 U	0.0061 U	0.00068 U
Xylenes (total)	mg/kg	0.053 J	2.4	1.5	0.0017 U	0.0087 U	0.011 U	0.0012 U
General Chemistry								
Black carbon	mg/kg	9240	--	--	12100	--	--	16100
Sulfide (acid soluble)	mg/kg	549	--	--	693	--	--	118
Sulfide (acid soluble)	umol/g	17.1	--	--	21.6	--	--	3.7
Total organic carbon (TOC)	mg/kg	78800	176000	101000	53500	96200	89500	109000
Total solids	%	76.5	--	--	41.8	--	--	48.8

Notes:

U - Not detected at the associated reporting limit
J - Estimated concentration
UJ - Not detected; associated reporting limit is estimated
R - Rejected

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-7	SS-7	SS-9	SS-9	SS-9	SS-9
Sample Identification:		SE-030916-JN-006	SE-030916-JN-005	SE-031016-JN-024	SE-031016-JN-027	SE-031016-JN-025	SE-031016-JN-026
Sample Date:		3/9/2016	3/9/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:		(0-3) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-1.5) ft BGS	(0.5-1.5) ft BGS	(0.5-1.5) ft BGS
Sample Type:							Duplicate
	Units						
Metals							
Antimony	mg/kg	22.4	15.8	23.0 J	1.7 J	2.5 J	13.8 J
Arsenic	mg/kg	7.8	6.3	8.1	10	12.0	6.7
Barium	mg/kg	465	530	1340	250	175	317
Beryllium	mg/kg	0.28	0.40	0.36 J	0.49 J	0.56 J	0.48 J
Cadmium	mg/kg	2.6	3.4	14.1	4.8	1.1	1.9
Chromium	mg/kg	66.8 J	119 J	183	40.4	31.0	65.1
Cobalt	mg/kg	3.3	4.5	6.1	4.9	5.9	5.2
Copper	mg/kg	41.4	51.6	78.7	61.9	33.9	47.3
Lead	mg/kg	950	583	1390	607	370	602
Manganese	mg/kg	237	342	218	200	180	185
Mercury	mg/kg	0.77	2.7	0.62	5.9	2.6	2.1
Methyl mercury	mg/kg	--	--	0.00048	--	--	--
Nickel	mg/kg	8.6	11.3	14.7	12.9	14.4	12.9
Selenium	mg/kg	1.4	1.7 J	4.3	3.3	2.2	2.1
Silver	mg/kg	0.24	0.33 J	0.25 J	0.26 J	0.25 J	0.25 J
Thallium	mg/kg	0.11 J	0.14 J	0.15 J	0.22 J	0.23 J	0.20 J
Vanadium	mg/kg	10.1	11.3	14.1	17.6	23.8	16.5
Zinc	mg/kg	584	641	2040	437	338	530
Polychorinated Biphenyls							
Cadmium	mg/kg	--	--	12.5	--	--	--
Copper	mg/kg	--	--	46.9 J	--	--	--
Lead	mg/kg	--	--	1230	--	--	--
Mercury	mg/kg	--	--	0.0025 U	--	--	--
Nickel	mg/kg	--	--	5.7	--	--	--
Silver	mg/kg	--	--	R	--	--	--
Zinc	mg/kg	--	--	1060	--	--	--
SEM/Acid-volatile sulfide ratio (AVS)	none	--	--	3.13	--	--	--
Cadmium	umol/g	--	--	0.11	--	--	--
Copper	umol/g	--	--	0.74 J	--	--	--
Lead	umol/g	--	--	5.9	--	--	--
Mercury	umol/g	--	--	0.000012 U	--	--	--
Nickel	umol/g	--	--	0.098	--	--	--
Silver	umol/g	--	--	R	--	--	--
Zinc	umol/g	--	--	16.3	--	--	--

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-7	SS-7	SS-9	SS-9	SS-9	SS-9
Sample Identification:		SE-030916-JN-006	SE-030916-JN-005	SE-031016-JN-024	SE-031016-JN-027	SE-031016-JN-025	SE-031016-JN-026
Sample Date:		3/9/2016	3/9/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:		(0-3) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-1.5) ft BGS	(0.5-1.5) ft BGS	(0.5-1.5) ft BGS
Sample Type:							Duplicate
	Units						
Polychorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/kg	0.094 U	0.11 U	0.026 U	0.025 U	0.026 U	0.026 U
Aroclor-1221 (PCB-1221)	mg/kg	0.12 U	0.15 U	0.034 U	0.033 U	0.035 U	0.035 U
Aroclor-1232 (PCB-1232)	mg/kg	0.16 U	0.19 U	0.043 U	0.041 U	0.044 U	0.043 U
Aroclor-1242 (PCB-1242)	mg/kg	0.086 U	0.11 U	0.023 U	0.023 U	0.024 U	0.024 U
Aroclor-1248 (PCB-1248)	mg/kg	0.062 U	0.076 U	0.017 U	0.017 U	0.018 U	0.017 U
Aroclor-1254 (PCB-1254)	mg/kg	0.11 U	0.13 U	0.066 J	0.029 U	0.031 U	0.03 U
Aroclor-1260 (PCB-1260)	mg/kg	0.07 U	0.086 U	0.019 U	0.019 U	0.02 U	0.02 U
Aroclor-1262 (PCB-1262)	mg/kg	0.078 U	0.096 U	0.021 U	0.021 U	0.022 U	0.022 U
Aroclor-1268 (PCB-1268)	mg/kg	0.1 UJ	0.12 UJ	0.38 J	0.059 J	0.029 U	0.028 J
Total PCBs	mg/kg	ND	ND	0.446 J	0.059 J	ND	0.028 J
Semi-Volatile Organic Compounds							
2,2'-Oxybis(1-chloropropane)	mg/kg	0.3 U	0.47 U	0.4 U	0.5 U	0.43 U	0.42 U
2,4,5-Trichlorophenol	mg/kg	0.78 U	1.2 U	1 U	1.3 U	1.1 U	1.1 U
2,4,6-Trichlorophenol	mg/kg	0.28 U	0.44 U	0.37 U	0.47 U	0.4 U	0.4 U
2,4-Dichlorophenol	mg/kg	0.63 U	0.98 U	0.84 U	1 U	0.91 U	0.89 U
2,4-Dimethylphenol	mg/kg	0.63 U	0.98 U	0.84 U	1 U	0.91 U	0.89 U
2,4-Dinitrophenol	mg/kg	0.66 UJ	1 UJ	0.88 U	1.1 U	0.95 U	0.94 U
2,4-Dinitrotoluene	mg/kg	0.53 U	0.84 U	0.71 U	0.89 U	0.77 U	0.76 U
2,6-Dinitrotoluene	mg/kg	0.66 U	1 U	0.88 U	1.1 U	0.95 U	0.94 U
2-Chloronaphthalene	mg/kg	0.014 U	0.022 U	0.019 U	0.024 U	0.02 U	0.02 U
2-Chlorophenol	mg/kg	0.26 U	0.4 U	0.34 U	0.43 U	0.37 U	0.37 U
2-Methylnaphthalene	mg/kg	0.61	0.47	0.36	0.026 U	0.23 J	0.4
2-Methylphenol	mg/kg	0.34 U	0.54 U	0.46 U	0.58 U	0.5 U	0.49 U
2-Nitroaniline	mg/kg	0.29 U	0.45 U	0.38 U	0.48 U	0.41 U	0.41 U
2-Nitrophenol	mg/kg	0.26 U	0.41 U	0.35 U	0.44 U	0.38 U	0.37 U
3&4-Methylphenol	mg/kg	0.63 U	0.98 U	0.84 U	1 U	0.91 U	0.89 U
3,3'-Dichlorobenzidine	mg/kg	0.56 U	0.88 U	0.75 U	0.94 U	0.82 U	0.81 U
3-Nitroaniline	mg/kg	0.5 U	0.79 U	0.67 U	0.84 U	0.73 U	0.72 U
4,6-Dinitro-2-methylphenol	mg/kg	0.29 U	0.45 U	0.38 U	0.48 U	0.42 U	0.41 U
4-Bromophenyl phenyl ether	mg/kg	0.41 U	0.64 U	0.54 U	0.68 U	0.59 U	0.58 U
4-Chloro-3-methylphenol	mg/kg	0.66 U	1 U	0.88 U	1.1 U	0.95 U	0.94 U
4-Chloroaniline	mg/kg	0.53 U	0.84 U	0.71 U	0.89 U	0.77 U	0.76 U
4-Chlorophenyl phenyl ether	mg/kg	0.41 U	0.64 U	0.54 U	0.68 U	0.59 U	0.58 U
4-Nitroaniline	mg/kg	0.81 U	1.3 U	1.1 U	1.4 U	1.2 U	1.2 U
4-Nitrophenol	mg/kg	0.53 U	0.84 U	0.71 U	0.89 U	0.77 U	0.76 U
Acenaphthene	mg/kg	0.024 U	0.29 J	0.413	0.21 J	0.034 U	0.034 U
Acenaphthylene	mg/kg	0.011 U	0.017 U	0.144	0.018 U	0.016 U	0.016 U

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-7	SS-7	SS-9	SS-9	SS-9	SS-9
Sample Identification:		SE-030916-JN-006	SE-030916-JN-005	SE-031016-JN-024	SE-031016-JN-027	SE-031016-JN-025	SE-031016-JN-026
Sample Date:		3/9/2016	3/9/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:		(0-3) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-1.5) ft BGS	(0.5-1.5) ft BGS	(0.5-1.5) ft BGS
Sample Type:							Duplicate
	Units						
Semi-Volatile Organic Compounds							
Acetophenone	mg/kg	0.29 U	0.45 U	0.38 U	0.48 U	0.42 U	0.41 U
Anthracene	mg/kg	0.42	0.41	0.968	0.43	0.26 J	0.36
Atrazine	mg/kg	0.29 U	0.45 U	0.38 U	0.48 U	0.41 U	0.41 U
Benzaldehyde	mg/kg	0.38 U	0.59 U	0.5 U	0.63 U	0.54 U	0.54 U
Benzo(a)anthracene	mg/kg	1.1	0.84	1.86	0.88	0.74	1.2
Benzo(a)pyrene	mg/kg	0.98	0.66	1.61	0.76	0.44	1
Benzo(b)fluoranthene	mg/kg	1.5	0.65	1.68	1.1	0.77	1.2
Benzo(g,h,i)perylene	mg/kg	0.56	0.35	1.08	0.59	0.45	0.61
Benzo(k)fluoranthene	mg/kg	0.36	0.33	--	0.36	0.3	0.7
Biphenyl (1,1-Biphenyl)	mg/kg	0.11 U	0.17 U	0.15 U	0.18 U	0.16 U	0.16 U
bis(2-Chloroethoxy)methane	mg/kg	0.69 U	1.1 U	0.92 U	1.2 U	1 U	0.98 U
bis(2-Chloroethyl)ether	mg/kg	0.063 U	0.098 U	0.084 U	0.1 U	0.091 U	0.089 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	1.8 J	0.93 U	0.79 U	1 U	0.86 U	0.85 U
Butyl benzylphthalate (BBP)	mg/kg	4.4	0.49 U	3.2	2.7 J	0.45 U	0.45 U
Caprolactam	mg/kg	1.2 U	1.8 U	1.5 U	1.9 U	1.7 U	1.7 U
Carbazole	mg/kg	0.85 U	1.3 U	1.1 U	1.4 U	1.2 U	1.2 U
Chrysene	mg/kg	1.6	0.94	--	1.4	0.92	1.4
Dibenz(a,h)anthracene	mg/kg	0.021 U	0.032 U	0.258	0.035 U	0.03 U	0.03 U
Dibenzofuran	mg/kg	0.021 U	0.032 U	0.028 U	0.035 U	0.03 U	0.03 U
Diethyl phthalate	mg/kg	0.5 U	0.79 U	0.67 U	0.84 U	0.73 U	0.72 U
Dimethyl phthalate	mg/kg	0.53 U	0.84 U	0.71 U	0.89 U	0.77 U	0.76 U
Di-n-butylphthalate (DBP)	mg/kg	2.4	1.2 J	1.7 J	0.79 U	0.68 U	1.2 J
Di-n-octyl phthalate (DnOP)	mg/kg	0.25 U	0.39 U	0.33 U	0.41 U	0.36 U	0.35 U
Fluoranthene	mg/kg	2.8	2	4.79	4.5	1.7	2.9
Fluorene	mg/kg	0.23	0.026 U	0.596	0.26 J	0.024 U	0.024 U
Hexachlorobenzene	mg/kg	0.066 U	0.1 U	0.088 U	0.11 U	0.095 U	0.094 U
Hexachlorobutadiene	mg/kg	0.18 U	0.28 U	0.23 U	0.29 U	0.25 U	0.25 U
Hexachlorocyclopentadiene	mg/kg	0.25 U	0.4 U	0.34 U	0.42 U	0.37 U	0.36 U
Hexachloroethane	mg/kg	0.28 U	0.44 U	0.38 U	0.47 U	0.41 U	0.4 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.53	0.31 J	0.924	0.51	0.016 U	0.016 U
Isophorone	mg/kg	0.41 U	0.64 U	0.54 U	0.68 U	0.59 U	0.58 U
Naphthalene	mg/kg	0.37	0.38	0.24	0.23 J	0.18 J	0.3
Nitrobenzene	mg/kg	0.069 U	0.11 U	0.092 U	0.12 U	0.1 U	0.098 U
N-Nitrosodi-n-propylamine	mg/kg	0.2 U	0.31 U	0.26 U	0.33 U	0.29 U	0.28 U
N-Nitrosodiphenylamine	mg/kg	0.66 U	1 U	0.88 U	1.1 U	0.95 U	0.94 U
Pentachlorophenol	mg/kg	0.29 U	0.45 U	0.38 U	0.48 U	0.41 U	0.41 U
Phenanthrene	mg/kg	1.7	1.1	4.78	1.2	0.5	0.7
Phenol	mg/kg	0.23 U	0.36 U	0.3 U	0.38 U	0.33 U	0.33 U
Pyrene	mg/kg	2.6	1.7	4.18	2.3	2	2.6

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-7	SS-7	SS-9	SS-9	SS-9	SS-9
Sample Identification:		SE-030916-JN-006	SE-030916-JN-005	SE-031016-JN-024	SE-031016-JN-027	SE-031016-JN-025	SE-031016-JN-026
Sample Date:		3/9/2016	3/9/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:		(0-3) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-1.5) ft BGS	(0.5-1.5) ft BGS	(0.5-1.5) ft BGS
Sample Type:							Duplicate
	Units						
Alkylated Polycyclic Aromatic Hydrocarbons							
Benzo(j)fluoranthene/Benzo(k)fluoranthene	mg/kg	--	--	1.38	--	--	--
Benzo(e)pyrene	mg/kg	--	--	1.21	--	--	--
C1-Benzo(a)anthracenes/chrysenes	mg/kg	--	--	2.18	--	--	--
C1-Fluoranthenes/Pyrenes	mg/kg	--	--	3.32	--	--	--
C1-Fluorenes	mg/kg	--	--	0.893	--	--	--
C1-Naphthalenes	mg/kg	--	--	0.204	--	--	--
C1-Phenanthrenes/Anthracenes	mg/kg	--	--	4.9	--	--	--
C2-Benzo(a)anthracenes/chrysenes	mg/kg	--	--	2.55	--	--	--
C2-Fluorenes	mg/kg	--	--	2.66	--	--	--
C2-Naphthalenes	mg/kg	--	--	2.42	--	--	--
C2-Phenanthrenes/Anthracenes	mg/kg	--	--	8.95	--	--	--
C3-Benzo(a)anthracenes/chrysenes	mg/kg	--	--	1.94	--	--	--
C3-Fluorenes	mg/kg	--	--	4.78	--	--	--
C3-Naphthalenes	mg/kg	--	--	3.7	--	--	--
C3-Phenanthrenes/Anthracenes	mg/kg	--	--	9.45	--	--	--
C4-Benzo(a)anthracenes/chrysenes	mg/kg	--	--	1.44	--	--	--
C4-Naphthalenes	mg/kg	--	--	3.88	--	--	--
C4-Phenanthrenes/Anthracenes	mg/kg	--	--	6.06	--	--	--
Chrysene/Triphenylene	mg/kg	--	--	2.82	--	--	--
Perylene	mg/kg	--	--	0.684	--	--	--

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		**SS-7**	**SS-7**	**SS-9**	**SS-9**	**SS-9**	**SS-9**
Sample Identification:		**SE-030916-JN-006**	**SE-030916-JN-005**	**SE-031016-JN-024**	**SE-031016-JN-027**	**SE-031016-JN-025**	**SE-031016-JN-026**
Sample Date:		**3/9/2016**	**3/9/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**	**3/10/2016**
Sample Depth:		**(0-3) ft BGS**	**(0.5-2) ft BGS**	**(0-0.5) ft BGS**	**(0-1.5) ft BGS**	**(0.5-1.5) ft BGS**	**(0.5-1.5) ft BGS**
Sample Type:							**Duplicate**
	Units						
Volatile Organic Compounds							
1,1,1-Trichloroethane	mg/kg	0.0037 U	0.0011 U	0.0013 U	0.0012 U	0.0067 U	0.0013 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0018 U	0.00054 U	0.00063 U	0.00059 U	0.0032 U	0.00064 U
1,1,2-Trichloroethane	mg/kg	0.0021 U	0.00064 U	0.00075 U	0.0007 U	0.0038 U	0.00077 U
1,1-Dichloroethane	mg/kg	0.0019 U	0.00059 U	0.00069 U	0.00064 U	0.0035 U	0.00071 U
1,1-Dichloroethene	mg/kg	0.0046 U	0.0014 U	0.0016 U	0.0015 U	0.0083 U	0.0017 U
1,2,4-Trichlorobenzene	mg/kg	0.0022 U	0.00066 U	0.00077 U	R	0.0039 U	0.00079 U
1,2,4-Trimethylbenzene	mg/kg	0.0033 U	0.001 U	0.0012 U	0.0011 U	0.006 U	0.0012 U
1,2-Dibromo-3-chloropropane	mg/kg	0.015 U	0.0047 U	0.0055 U	0.0051 U	0.028 U	0.0056 U
1,2-Dibromoethane	mg/kg	0.003 U	0.00092 U	0.0011 U	0.001 U	0.0055 U	0.0011 U
1,2-Dichlorobenzene	mg/kg	0.0019 U	0.00059 U	0.00069 U	0.00064 U	0.0035 U	0.00071 U
1,2-Dichloroethane	mg/kg	0.0026 U	0.0008 U	0.00094 U	0.00087 U	0.0048 U	0.00095 U
1,2-Dichloropropane	mg/kg	0.0008 U	0.00024 U	0.00028 U	0.00027 U	0.0015 U	0.00029 U
1,3,5-Trimethylbenzene	mg/kg	0.0017 U	0.0005 U	0.00059 U	0.00055 U	0.003 U	0.0006 U
1,3-Dichlorobenzene	mg/kg	0.0039 U	0.0012 U	0.0014 U	0.0013 U	0.0071 U	0.0014 U
1,4-Dichlorobenzene	mg/kg	0.0016 U	0.00048 U	0.00057 U	0.00053 U	0.0029 U	0.00058 U
(Methyl ethyl ketone) (MEK)	mg/kg	0.0064 U	0.0019 U	0.0023 U	0.0021 U	0.012 U	0.0023 U
2-Hexanone	mg/kg	0.0039 U	0.0012 U	0.0014 U	0.0013 U	0.007 U	0.0014 U
4-Methyl-2-pentanone	mg/kg	0.007 U	0.0021 U	0.0025 U	0.0023 U	0.013 U	0.0025 U
Acetone	mg/kg	0.074 J	0.033 J	0.012 U	0.011 U	0.059 U	0.05
Benzene	mg/kg	0.0051 U	0.0016 U	0.0018 U	0.0017 U	0.0093 U	0.0019 U
Bromodichloromethane	mg/kg	0.0017 U	0.0005 U	0.00059 U	0.00055 U	0.003 U	0.0006 U
Bromoform	mg/kg	0.0014 U	0.00041 U	0.00049 U	0.00045 U	0.0025 U	0.0005 U
Bromomethane (Methyl bromide)	mg/kg	0.0024 U	0.00073 U	0.00085 U	0.0008 U	0.0044 U	0.00087 U
Carbon disulfide	mg/kg	0.0034 U	0.001 U	0.0012 U	0.0023 J	0.025 J	0.0038 J
Carbon tetrachloride	mg/kg	0.0037 U	0.0011 U	0.0013 U	0.0012 U	0.0067 U	0.0013 U
Chlorobenzene	mg/kg	0.003 U	0.00092 U	0.0011 U	0.001 U	0.0055 U	0.0011 U
Chloroethane	mg/kg	0.0025 U	0.00076 U	0.0009 U	0.00083 U	0.0046 U	0.00091 U
Chloroform (Trichloromethane)	mg/kg	0.0021 U	0.00062 U	0.00073 U	0.00068 U	0.0037 U	0.00075 U
Chloromethane (Methyl chloride)	mg/kg	0.0045 U	0.0014 U	0.0016 U	0.0015 U	0.0082 U	0.0016 U
cis-1,2-Dichloroethene	mg/kg	0.0016 U	0.00048 U	0.00057 U	0.00053 U	0.0029 U	0.00058 U
cis-1,3-Dichloropropene	mg/kg	0.0041 U	0.0012 U	0.0014 U	0.0013 U	0.0074 U	0.0015 U
Cyclohexane	mg/kg	0.0027 U	0.00083 U	0.00098 U	0.00091 U	0.005 U	0.001 U
Dibromochloromethane	mg/kg	0.0021 U	0.00064 U	0.00075 U	0.0007 U	0.0038 U	0.00077 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.0016 U	0.00048 U	0.00057 U	0.00053 U	0.0029 U	0.00058 U
Ethylbenzene	mg/kg	0.0018 U	0.00055 U	0.00065 U	0.00061 U	0.0033 U	0.00066 U
Isopropyl benzene	mg/kg	0.0011 U	0.00035 U	0.00041 U	0.00038 U	0.0021 U	0.00042 U
Methyl acetate	mg/kg	0.011 U	0.0035 U	0.0041 U	0.0038 U	0.021 U	0.0042 U
Methyl cyclohexane	mg/kg	0.022 J	0.083 J	0.0012 U	0.0027 J	0.006 U	0.0012 U

Table 2

Analytical Results Summary
Phase II ESA-Sediment Sampling
General Motors Janewsville Assembly Plant
Janesville, Wisconsin
March 2016

Sample Location:		SS-7	SS-7	SS-9	SS-9	SS-9	SS-9
Sample Identification:		SE-030916-JN-006	SE-030916-JN-005	SE-031016-JN-024	SE-031016-JN-027	SE-031016-JN-025	SE-031016-JN-026
Sample Date:		3/9/2016	3/9/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
Sample Depth:		(0-3) ft BGS	(0.5-2) ft BGS	(0-0.5) ft BGS	(0-1.5) ft BGS	(0.5-1.5) ft BGS	(0.5-1.5) ft BGS
Sample Type:							Duplicate
	Units						
Methyl tert butyl ether (MTBE)	mg/kg	0.0025 U	0.00074 U	0.00088 U	0.00081 U	0.0045 U	0.00089 U
Methylene chloride	mg/kg	0.0042 U	0.0013 U	0.0015 U	0.0014 U	0.0077 U	0.0015 U
Styrene	mg/kg	0.0023 U	0.00069 U	0.00081 U	0.00076 U	0.0041 U	0.00083 U
Tetrachloroethene	mg/kg	0.0046 U	0.0014 U	0.0016 U	0.0015 U	0.0083 U	0.0017 U
Toluene	mg/kg	0.0015 U	0.00047 U	0.00055 U	0.00051 U	0.0028 U	0.00056 U
trans-1,2-Dichloroethene	mg/kg	0.0018 U	0.00055 U	0.00065 U	0.00061 U	0.0033 U	0.00066 U
trans-1,3-Dichloropropene	mg/kg	0.0017 U	0.0005 U	0.00059 U	0.00055 U	0.003 U	0.0006 U
Trichloroethene	mg/kg	0.0022 U	0.00066 U	0.00077 U	0.00072 U	0.0039 U	0.00079 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.0017 U	0.0005 U	0.00059 U	0.00055 U	0.003 U	0.0006 U
Trifluorotrichloroethane (CFC-113)	mg/kg	0.0024 U	0.00073 U	0.00085 U	0.0008 UJ	0.0044 U	0.00087 U
Vinyl chloride	mg/kg	0.0017 U	0.00052 U	0.00061 U	0.00057 U	0.0031 U	0.00062 U
Xylenes (total)	mg/kg	0.0031 U	0.00093 U	0.0011 U	0.001 U	0.0056 U	0.0011 U
General Chemistry							
Black carbon	mg/kg	--	--	9200	--	--	--
Sulfide (acid soluble)	mg/kg	--	--	237	--	--	--
Sulfide (acid soluble)	umol/g	--	--	7.4	--	--	--
Total organic carbon (TOC)	mg/kg	43200	22700	131000	72000	66500	90800
Total solids	%	--	--	46.8	--	--	--

Notes:

U - Not detected at the associated reporting limit
J - Estimated concentration
UJ - Not detected; associated reporting limit is estimated
R - Rejected

Table 3

Analytical Methods
Phase II ESA-Sediment Sampling
General Motors Janesville Assembly Plant
Janesville, Wisconsin
March 2016

Parameter	Method	Matrix	Preservation	Holding Time	
				Collection to Extraction (Days)	Collection or Extraction to Analysis (Days)
Volatile Organic Compounds (VOC)	SW-846 8260B	Water	pH < 2 and Iced, 0-6° C	-	14
		Sediment	Iced, 0-6° C	-	14
Semi-Volatile Organic Compounds (SVOC)	SW-846 8270C	Sediment	Iced, 0-6° C	14	40
Black Carbon	GUSTAFSSON 2001 MOD	Sediment	Iced, 0-6° C	-	28
Polychlorinated Biphenyls (PCB)	SW-846 8082	Sediment	Iced, 0-6° C	14	40
Metals	SW-846 6020/6010B	Sediment	Iced, 0-6° C	-	180
Simultaneously Extracted Metals (SEM)	EPA-821-R-100/6010	Sediment	Iced, 0-6° C	-	14
Mercury	SW-846 7471A	Sediment	Iced, 0-6° C	-	28
Methyl Mercury	EPA 1630	Sediment	Iced, 0-6° C	-	180
Total Organic Carbon (TOC)	Lloyd Kahn	Sediment	Iced, 0-6° C	-	14
Acid-volatile sulfide ratio (AVS)	EPA-821-R-100	Sediment	Iced, 0-6° C	-	14
Sulfide	EPA 376.1/SM 4500 S2	Sediment	Iced, 0-6° C	-	7

Notes:

Method References:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
GUSTAFSSON 2001 MOD - Gustafsson et al, 2001 Global Biogeochemical Cycles, Modified.

Table 4

Qualified Sample Results Due to Outlying Continuing Calibration Results
Phase II ESA - Sediment Sampling
General Motors Janesville Assembly Plant
Janesville, Wisconsin
March 2016

Parameter	Analyte	Calibration Date (mm/dd/yyyy)	%D	Associated Sample ID	Qualified Result	Units
PCB	PCB-1242	03/18/2016	15.9	SE-030916-JN-001	380 UJ	µg/kg
				SE-030916-JN-004	130 UJ	µg/kg
	PCB-1268	03/15/2016	16.74	SE-030916-JN-010	50 UJ	µg/kg
	PCB-1268	03/16/2016	16.36	SE-030916-JN-002	140 UJ	µg/kg
				SE-030916-JN-003	140 UJ	µg/kg
				SE-030916-JN-005	120 UJ	µg/kg
				SE-030916-JN-006	100 UJ	µg/kg
				SE-030916-JN-007	140 UJ	µg/kg
				SE-030916-JN-008	47 UJ	µg/kg
				SE-030916-JN-009	140 UJ	µg/kg
SVOC	2,4-Dinitrophenol	03/18/2016	49	SE-030916-JN-001	2300 UJ	µg/kg
				SE-030916-JN-010	820 UJ	µg/kg
				SE-030916-JN-002	2200 UJ	µg/kg
				SE-030916-JN-003	2300 UJ	µg/kg
				SE-030916-JN-004	1000 UJ	µg/kg
				SE-030916-JN-005	1000 UJ	µg/kg
				SE-030916-JN-006	660 UJ	µg/kg
				SE-030916-JN-007	2200 UJ	µg/kg
				SE-030916-JN-008	1900 UJ	µg/kg
				SE-030916-JN-009	2200 UJ	µg/kg

Notes:

%D - Percent difference
UJ - Not detected; associated reporting limit is estimated
PCB - Polychlorinated Biphenyl
SVOC - Semi-volatile Organic Compound

Table 5

Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Phase II ESA-Sediment Sampling
General Motors Janesville Assembly Plant
Janesville, Wisconsin
March 2016

Parameter	Analyte	Analysis Date (mm/dd/yyyy)	Blank Result	Sample ID	Original Result	Qualified Result	Units
VOC	2-Butanone	03/11/2016	1.63 J	SE-030916-JN-001	22 J	65 U	µg/kg
				SE-030916-JN-002	82 J	410 U	µg/kg
				SE-030916-JN-003	89 J	320 U	µg/kg
				SE-030916-JN-005	8.3 J	35 U	µg/kg
				SE-030916-JN-006	23 J	110 U	µg/kg
VOC	Methylene chloride	03/11/2016	12.3 J	SE-030916-JN-001	10 J	16 U	µg/kg
				SE-030916-JN-002	61 J	100 U	µg/kg
				SE-030916-JN-003	50 J	80 U	µg/kg
				SE-030916-JN-004	4.7 J	11 U	µg/kg
				SE-030916-JN-005	5.0 J	8.6 U	µg/kg
				SE-030916-JN-006	16 J	29 U	µg/kg
VOC	2-Butanone	03/14/2016	1.40 J	SE-031016-JN-020	22 J	35 U	µg/kg
				SE-031016-JN-024	4.8 J	41 U	µg/kg
				SE-031016-JN-014	10 J	38 U	µg/kg
				SE-031016-JN-015	11 J	36 U	µg/kg
				SE-031016-JN-016	10 J	43 U	µg/kg
				SE-031016-JN-017	13 J	39 U	µg/kg
				SE-031016-JN-018	22 J	66 U	µg/kg
				SE-031016-JN-019	8.3 J	39 U	µg/kg
VOC	Acetone	03/14/2016	9.67 J	SE-031016-JN-024	16 J	41 U	µg/kg
				SE-031016-JN-016	37 J	43 U	µg/kg
				SE-031016-JN-019	31 J	39 U	µg/kg

Table 5

Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Phase II ESA-Sediment Sampling
General Motors Janesville Assembly Plant
Janesville, Wisconsin
March 2016

Parameter	Analyte	Analysis Date (mm/dd/yyyy)	Blank Result	Sample ID	Original Result	Qualified Result	Units
VOC	Methylene chloride	03/14/2016	1.32 J	SE-031016-JN-020	3.2 J	8.7 U	µg/kg
				SE-031016-JN-021	3.0 J	9.2 U	µg/kg
				SE-031016-JN-022	3.8 J	11 U	µg/kg
				SE-031016-JN-024	3.4 J	10 U	µg/kg
				SE-031016-JN-014	2.0 J	9.6 U	µg/kg
				SE-031016-JN-015	2.1 J	9.1 U	µg/kg
				SE-031016-JN-016	2.3 J	11 U	µg/kg
				SE-031016-JN-017	2.0 J	9.8 U	µg/kg
				SE-031016-JN-018	6.3 J	17 U	µg/kg
				SE-031016-JN-019	3.1 J	9.8 U	µg/kg
VOC	2-Butanone	03/16/2016	1.17 J	SE-031016-JN-025	32 J	210 U	µg/kg
				SE-031016-JN-026	9.3 J	42 U	µg/kg
				SE-031016-JN-027	6.7 J	38 U	µg/kg
	Acetone	03/16/2016	10.0 J	SE-031016-JN-025	130 J	210 U	µg/kg
				SE-031016-JN-027	27 J	38 U	µg/kg
VOC	Methylene chloride	03/16/2016	99.2 J	SE-030916-JN-007	450 J	760 U	µg/kg
VOC	Methylene chloride	03/16/2016	1.54 J	SE-031016-JN-011	40 J	59 U	µg/kg
				SE-031016-JN-023	4.8 J	11 U	µg/kg
VOC	Methylene chloride	03/16/2016	3.67 J	SE-031016-JN-025	23 J	52 U	µg/kg
				SE-031016-JN-026	3.5 J	10 U	µg/kg
				SE-031016-JN-027	3.6 J	9.5 U	µg/kg
VOC	Toluene	03/16/2016	13.8 J	SE-030916-JN-007	140 J	760 U	µg/kg
				SE-031016-JN-012	67 J	710 U	µg/kg
				SE-031016-JN-013	83 J	970 U	µg/kg
VOC	Toluene	03/17/2016	34.3 J	SE-030916-JN-010	82 J	690 U	µg/kg
				SE-030916-JN-008	110 J	640 U	µg/kg
				SE-030916-JN-009	120 J	740 U	µg/kg

Table 5

Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Phase II ESA-Sediment Sampling
General Motors Janesville Assembly Plant
Janesville, Wisconsin
March 2016

Parameter	Analyte	Analysis Date (mm/dd/yyyy)	Blank Result	Sample ID	Original Result	Qualified Result	Units
SVOC	bis(2-Ethylhexyl)phthalate	03/17/2016	36.1 J	SE-031016-JN-011	13000 J	18000 U	µg/kg
				SE-031016-JN-021	250 J	290 U	µg/kg
				SE-031016-JN-024	3900	3900 U	µg/kg
				SE-031016-JN-025	1100 J	3200 U	µg/kg
				SE-031016-JN-012	18000	18000 U	µg/kg
				SE-031016-JN-015	43 J	140 U	µg/kg
				SE-031016-JN-018	360 J	570 U	µg/kg
				SE-031016-JN-019	52 J	140 U	µg/kg
SVOC	bis(2-Ethylhexyl)phthalate	03/16/2016	28.5 J	SE-031016-JN-027	1900 J	3700 U	µg/kg
SVOC	Di-n-butylphthalate	03/16/2016	62.4 J	SE-031016-JN-027	2900 J	3700 U	µg/kg

Notes:

U - Not detected at the associated reporting limit
J - Estimated concentration
VOC - Volatile Organic Compound
SVOC - Semi-volatile Organic Compound

Table 6

Qualified Sample Data Due to Outlying of Surrogate Recoveries
Phase II ESA-Sediment Sampling
General Motors Janesville Assembly Plant
Janesville, Wisconsin
March 2016

Parameter	Sample ID	Surrogate	Surrogate % Recovery	Control Limits % Recovery	Analyte	Qualified Result	Units
VOC	SE-030916-JN-001	Toluene-d8	156	67 - 125	Acetone	97 J	µg/kg
					Cyclohexane	28 J	µg/kg
					Isopropyl benzene	67 J	µg/kg
					Methyl cyclohexane	450 J	µg/kg
VOC	SE-030916-JN-002	Toluene-d8	130	67 - 125	Acetone	300 J	µg/kg
					Cyclohexane	90 J	µg/kg
					Isopropyl benzene	220 J	µg/kg
					Methyl cyclohexane	1800 J	µg/kg
VOC	SE-030916-JN-003	Toluene-d8	139	67 - 125	Acetone	300 J	µg/kg
					Cyclohexane	69 J	µg/kg
					Isopropyl benzene	230 J	µg/kg
					Methyl cyclohexane	1500 J	µg/kg
VOC	SE-030916-JN-005	Toluene-d8	150	67 - 125	Acetone	33 J	µg/kg
					Methyl cyclohexane	83 J	µg/kg
VOC	SE-031016-JN-018	Toluene-d8	129	67 - 125	Acetone	69 J	µg/kg
					Methyl cyclohexane	39 J	µg/kg
PCB	SE-031016-JN-024	Decachlorobiphenyl	1520	10 - 155	PCB-1254	66 J	µg/kg
					PCB-1268	380 J	µg/kg
					Total PCB	446 J	µg/kg
PCB	SE-031016-JN-026	Decachlorobiphenyl	170	10 - 155	PCB-1268	28 J	µg/kg
					Total PCB	28 J	µg/kg
PCB	SE-031016-JN-027	Decachlorobiphenyl	289	10 - 155	PCB-1268	59 J	µg/kg
					Total PCB	59 J	µg/kg
PCB	SE-031016-JN-012	Decachlorobiphenyl	583	10 - 155	PCB-1254	270 J	µg/kg
					PCB-1268	560 J	µg/kg
					Total PCB	830 J	µg/kg
PCB	SE-031016-JN-018	Decachlorobiphenyl	382	10 - 155	PCB-1254	180 J	µg/kg
					Total PCB	180 J	µg/kg

Notes:

J - Estimated concentration
VOC - Volatile Organic Compound
PCB - Polychlorinated Biphenyl

Table 7

Qualified Sample Results Due to Outlying MS/MSD Results
Phase II ESA - Sediment Sampling
General Motors Janesville Assembly Plant
Janesville, Wisconsin
March 2016

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Qualified Result		Units
VOC	SE-030916-JN-008	Bromomethane	0	7	NC	10 - 151	30		R	
		Carbon disulfide	0	9	NC	10 - 155	30		R	
		Cyclohexane	-0.2	5	44	10 - 154	30	170	J	µg/kg
		Dichlorodifluoromethane	0	0	NC	10 - 120	30		R	
		Isopropyl benzene	16	25	18	39 - 126	30	530	J	µg/kg
		Methyl cyclohexane	-54	-43	30	11 - 156	30	1400	J	µg/kg
		trans-1,2-Dichloroethene	25	35	34	40-126	30	640	UJ	µg/kg
		Trifluorotrichloroethane	11	20	53	23 - 168	30	640	UJ	µg/kg
VOC	SE-031016-JN-023	1,2-Dichloropropane	57	57	2	61 - 120	30	11	UJ	µg/kg
VOC	SE-031016-JN-027	1,2,4-Trichlorobenzene	7	8	12	10 - 120	30		R	
		Methyl cyclohexane	15	33	42	29 - 131	30	2.7	J	µg/kg
		Trifluorotrichloroethane	28	45	40	50 - 147	30	9.5	UJ	µg/kg
VOC	SE-031016-JN-013	Methyl cyclohexane	-22	-20	3	11 - 156	30	2000	J	µg/kg
SVOC	SE-031016-JN-023	Butyl benzylphthalate	97	171	54	44 - 110	30	38	J	µg/kg
		Hexachlorocyclopentadiene	0	0	NC	10 - 110	79		R	
Metals	SE-030916-JN-001	Chromium	54	74	9	75 - 125	20	261	J	mg/kg
	SE-030916-JN-010							164	J	mg/kg
	SE-030916-JN-002							113	J	mg/kg
	SE-030916-JN-003							102	J	mg/kg
	SE-030916-JN-004							152	J	mg/kg
	SE-030916-JN-005							119	J	mg/kg
	SE-030916-JN-006							66.8	J	mg/kg
	SE-030916-JN-007							181	J	mg/kg
	SE-030916-JN-008							197	J	mg/kg
	SE-030916-JN-009							51.7	J	mg/kg

Table 7

Qualified Sample Results Due to Outlying MS/MSD Results
Phase II ESA - Sediment Sampling
General Motors Janesville Assembly Plant
Janesville, Wisconsin
March 2016

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Qualified Result	Units
Metals	SE-031016-JN-020	Antimony	44	46	5	75 - 125	20	0.57 J	mg/kg
	SE-031016-JN-021							0.44 J	mg/kg
	SE-031016-JN-022							0.13 J	mg/kg
	SE-031016-JN-023							0.12 J	mg/kg
	SE-031016-JN-024							23.0 J	mg/kg
	SE-031016-JN-025							2.5 J	mg/kg
	SE-031016-JN-026							13.8 J	mg/kg
	SE-031016-JN-027							1.7 J	mg/kg
Metals	SE-031016-JN-020	Beryllium	58	96	49	75 - 125	20	0.58 J	mg/kg
	SE-031016-JN-021							0.38 J	mg/kg
	SE-031016-JN-022							0.57 J	mg/kg
	SE-031016-JN-023							0.64 J	mg/kg
	SE-031016-JN-024							0.36 J	mg/kg
	SE-031016-JN-025							0.56 J	mg/kg
	SE-031016-JN-026							0.48 J	mg/kg
	SE-031016-JN-027							0.49 J	mg/kg
Metals	SE-031016-JN-011	Copper	199	74	35	75 - 125	20	11.6 J	mg/kg
	SE-031016-JN-014							12.6 J	mg/kg
	SE-031016-JN-018							10 J	mg/kg
	SE-031016-JN-021							17.0 J	mg/kg
	SE-031016-JN-024							46.9 J	mg/kg
Metals	SE-031016-JN-011	Copper	199	74	35	75 - 125	20	0.18 J	umol/g
	SE-031016-JN-014							0.20 J	umol/g
	SE-031016-JN-018							0.16 J	umol/g
	SE-031016-JN-021							0.27 J	umol/g
	SE-031016-JN-024							0.74 J	umol/g

Table 7

Qualified Sample Results Due to Outlying MS/MSD Results
Phase II ESA - Sediment Sampling
General Motors Janesville Assembly Plant
Janesville, Wisconsin
March 2016

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Qualified Result	Units
Metals	SE-031016-JN-011	Silver	28	18	35	75 - 125	20	R	
	SE-031016-JN-014							R	
	SE-031016-JN-018							R	
	SE-031016-JN-021							R	
	SE-031016-JN-024							R	
Metals	SE-031016-JN-011	Silver	28	18	35	75 - 125	20	R	
	SE-031016-JN-014							R	
	SE-031016-JN-018							R	
	SE-031016-JN-021							R	
	SE-031016-JN-024							R	

Notes:

MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference
J - Estimated concentration
UJ - Not detected; associated reporting limit is estimated
R - Rejected

Table 8

Qualified Sample Data Due to Variability in Field Duplicate Results
Phase II ESA - Sediment Sampling
General Motors Janesville Assembly Plant
Janesville, Wisconsin
March 2016

Parameter	Analyte	RPD	Sample ID	Qualified Result	Field Duplicate Sample ID	Qualified Result	Units
SVOC	Benzo(k)fluoranthene	105	SE-031016-JN-016	170 J	SE-031016-JN-017	53 J	µg/kg
Metals	Mercury	130		2.8 J		13.6 J	mg/kg
Metals	Antimony	170	SE-030916-JN-008	59.8 J	SE-030916-JN-009	5.1 J	mg/kg
	Barium	140		2080 J		426 J	mg/kg
	Chromium	120		197 J		51.7 J	mg/kg

Notes:

RPD - Relative Percent Difference
J - Estimated concentration
SVOC - Semi-volatile Organic Compound

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-61959-1
Client Project/Site: 58505, Janesville WI, SSOW 108014
Revision: 1

For:
GHD Services Inc.
45 Farmington Valley Drive
Plainville, Connecticut 06062

Attn: Ms. Kathy Shaw

Authorized for release by:
4/15/2016 4:13:40 PM
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Reported value was between the limit of detection and the limit of quantitation.
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
^c	CCV Recovery is outside acceptance limits.
X	Surrogate is outside control limits
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
J	Reported value was between the limit of detection and the limit of quantitation.

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Reported value was between the limit of detection and the limit of quantitation.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 240-61959-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-61959-1

REVISION
PAH's added to method 8270. April 15, 2016

Comments
The alkylated PAHs were sent by GHD to another lab.

Metals were analyzed per the SSOW, the comment on the COC is incorrect. The comment should read: Earth metals exclude: aluminum, calcium, iron, magnesium, potassium & sodium.

Receipt
The samples were received on 3/10/2016 11:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.1º C and 2.7º C.

GC/MS VOA
Method(s) 8260B: Surrogate recovery for the following samples were outside control limits: SE-030916-JN-001 (240-61959-1), SE-030916-JN-002 (240-61959-2), SE-030916-JN-003 (240-61959-3) and SE-030916-JN-005 (240-61959-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: The following samples were diluted due to the nature of the sample matrix: SE-030916-JN-001 (240-61959-1), SE-030916-JN-002 (240-61959-2), SE-030916-JN-003 (240-61959-3) and SE-030916-JN-006 (240-61959-6). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: A MS/MSD was prepared for batch 221222, but was analyzed in a different analytical batch.

Method(s) 8260B: The following samples were diluted due to the abundance of non-target analytes: SE-030916-JN-009 (240-61959-9) and SE-030916-JN-010 (240-61959-10). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270C: The laboratory control sample (LCS) for 221127 associated with samples SE-030916-JN-001 (240-61959-1), SE-030916-JN-002 (240-61959-2), SE-030916-JN-003 (240-61959-3), SE-030916-JN-004 (240-61959-4), SE-030916-JN-005 (240-61959-5), SE-030916-JN-006 (240-61959-6), SE-030916-JN-007 (240-61959-7), SE-030916-JN-008 (240-61959-8), SE-030916-JN-009 (240-61959-9), SE-030916-JN-010 (240-61959-10) and (240-61973-C-1-B), recovered outside control limits for the following analyte: 4,6-Dinitro-2-methylphenol . This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8270C: The following samples were diluted due to the nature of the sample matrix: SE-030916-JN-002 (240-61959-2), SE-030916-JN-003 (240-61959-3), SE-030916-JN-004 (240-61959-4), SE-030916-JN-005 (240-61959-5), SE-030916-JN-006 (240-61959-6), SE-030916-JN-007 (240-61959-7), SE-030916-JN-008 (240-61959-8), SE-030916-JN-009 (240-61959-9) and SE-030916-JN-010 (240-61959-10). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: SE-030916-JN-008 (240-61959-8) and SE-030916-JN-010 (240-61959-10). 2427271, 2103100, 2283703.

Method(s) 8082: The following samples were diluted due to the nature of the sample matrix: SE-030916-JN-002 (240-61959-2), SE-030916-JN-003 (240-61959-3), SE-030916-JN-005 (240-61959-5), SE-030916-JN-006 (240-61959-6), SE-030916-JN-007 (240-61959-7) and SE-030916-JN-009 (240-61959-9). Elevated reporting limits (RLs) are provided.

Job ID: 240-61959-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: SE-030916-JN-002 (240-61959-2), SE-030916-JN-003 (240-61959-3), SE-030916-JN-005 (240-61959-5), SE-030916-JN-006 (240-61959-6), SE-030916-JN-007 (240-61959-7) and SE-030916-JN-009 (240-61959-9). Reagents: 2427270,2103101 and 2283705.

Method(s) 8082: The continuing calibration verification (CCV) associated with batch 240-221640 recovered above the upper control limit for Aroclor 1268. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. SE-030916-JN-008 (240-61959-8), SE-030916-JN-010 (240-61959-10) and (MB 240-221107/22-A)

Method(s) 8082: Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: SE-030916-JN-010 (240-61959-10). These results have been reported and qualified.

Method(s) 8082: The following sample was diluted due to color: SE-030916-JN-008 (240-61959-8). Elevated reporting limits (RL) are provided.

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: SE-030916-JN-001 (240-61959-1) and SE-030916-JN-004 (240-61959-4).Reagents: 2427270,2103101 and 2283705.

Method(s) Lloyd Kahn: Tthe reporting limit for Lloyd Kahn TOC analysis is a nominal value and does not reflect adjustments in sample mass processed on an individual basis.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for 170984 were outside the control limits for silver and copper. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. A post digestion spike (PDS) was analyzed as per the 6010C method and it passed for these analytes.

Method(s) 6010B: The following samples were diluted to bring the concentrations of lead and zinc within the linear range of the instrument: SE-030916-JN-001 (240-61959-12) and SE-030916-JN-007 (240-61959-14). Elevated reporting limits (RLs) are provided. Silver was also reported from dilution due to the concentration being less than the negative reporting limit.

Method(s) 6010B: The following sample was diluted to bring the concentration of lead within the linear range of the instrument: SE-030916-JN-004 (240-61959-13). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method(s) 3540C: Due to the matrix, the following sample could not be concentrated to the final method required volume: SE-030916-JN-001 (240-61959-1). The reporting limits (RLs) are elevated proportionately.

Method(s) 3540C: Due to the matrix, the following sample could not be concentrated to the final method required volume: SE-030916-JN-005 (240-61959-5). The reporting limits (RLs) are elevated proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
1630	Methyl Mercury (GC)	EPA	TAL CAN
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
6010B	Metals (ICP)	SW846	TAL PIT
6010B	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL PIT
7470A	Mercury (CVAA)	SW846	TAL CAN
7471A	Mercury (CVAA)	SW846	TAL CAN
SEM	Metals, Simultaneously Extracted Metals (SEM)	EPA	TAL PIT
2540G	SM 2540G	SM22	TAL PIT
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL PIT
Lloyd Kahn	Organic Carbon, Total (TOC)	EPA	TAL PIT
Moisture	Percent Moisture	EPA	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SM22 = SM22

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Sample Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-61959-1	SE-030916-JN-001	Solid	03/09/16 12:45	03/10/16 11:30
240-61959-2	SE-030916-JN-002	Solid	03/09/16 12:55	03/10/16 11:30
240-61959-3	SE-030916-JN-003	Solid	03/09/16 13:10	03/10/16 11:30
240-61959-4	SE-030916-JN-004	Solid	03/09/16 14:25	03/10/16 11:30
240-61959-5	SE-030916-JN-005	Solid	03/09/16 14:35	03/10/16 11:30
240-61959-6	SE-030916-JN-006	Solid	03/09/16 14:45	03/10/16 11:30
240-61959-7	SE-030916-JN-007	Solid	03/09/16 15:45	03/10/16 11:30
240-61959-8	SE-030916-JN-008	Solid	03/09/16 15:50	03/10/16 11:30
240-61959-9	SE-030916-JN-009	Solid	03/09/16 15:55	03/10/16 11:30
240-61959-10	SE-030916-JN-010	Solid	03/09/16 16:00	03/10/16 11:30
240-61959-11	TB-030916-JN-001	Water	03/09/16 00:00	03/10/16 11:30
240-61959-12	SE-030916-JN-001	Sediment	03/09/16 12:45	03/10/16 11:30
240-61959-13	SE-030916-JN-004	Sediment	03/09/16 14:25	03/10/16 11:30
240-61959-14	SE-030916-JN-007	Sediment	03/09/16 15:45	03/10/16 11:30

Detection Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: SE-030916-JN-001 — Lab Sample ID: 240-61959-1

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	97	B	65	18	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	22	J B	65	3.6	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	10	J B	16	2.4	ug/Kg	1	☼	8260B	Total/NA
Cyclohexane	28	J	32	1.6	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	67		16	0.65	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	450		32	1.9	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	610	J	740	55	ug/Kg	50	☼	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	12000		7700	2100	ug/Kg	50	☼	8270C	Total/NA
Butyl benzyl phthalate	70000		7700	1100	ug/Kg	50	☼	8270C	Total/NA
Di-n-butyl phthalate	2300	J	7700	1700	ug/Kg	50	☼	8270C	Total/NA
Methyl Mercury	0.24		0.16	0.048	ug/Kg	1	☼	1630	Total/NA
Aroclor-1268	1200		1100	450	ug/Kg	20	☼	8082	Total/NA
Silver	0.34	B	0.29	0.0020	mg/Kg	2	☼	6020	Total/NA
Arsenic	10.2		1.4	0.037	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.25	J	0.29	0.016	mg/Kg	2	☼	6020	Total/NA
Cadmium	57.9	F1	0.29	0.0053	mg/Kg	2	☼	6020	Total/NA
Cobalt	5.2	B	0.29	0.0025	mg/Kg	2	☼	6020	Total/NA
Chromium	261	B F1	0.58	0.086	mg/Kg	2	☼	6020	Total/NA
Copper	50.8	B	0.58	0.14	mg/Kg	2	☼	6020	Total/NA
Manganese	548		1.4	0.17	mg/Kg	2	☼	6020	Total/NA
Nickel	12.7	B	0.58	0.056	mg/Kg	2	☼	6020	Total/NA
Lead	1870		2.9	0.65	mg/Kg	20	☼	6020	Total/NA
Antimony	30.6		0.58	0.020	mg/Kg	2	☼	6020	Total/NA
Selenium	15.1		1.4	0.058	mg/Kg	2	☼	6020	Total/NA
Thallium	0.11	J	0.58	0.027	mg/Kg	2	☼	6020	Total/NA
Vanadium	10.0		1.4	0.053	mg/Kg	2	☼	6020	Total/NA
Zinc	904	B	5.8	0.72	mg/Kg	2	☼	6020	Total/NA
Barium	1140		1.4	0.32	mg/Kg	2	☼	6020	Total/NA
Mercury	0.46		0.17	0.024	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	53500		1720	858	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-030916-JN-002 — Lab Sample ID: 240-61959-2

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	300	J B	410	120	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	82	J B	410	23	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	61	J B	100	15	ug/Kg	1	☼	8260B	Total/NA
Cyclohexane	90	J	200	9.7	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	220		100	4.1	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	1800		200	12	ug/Kg	1	☼	8260B	Total/NA
1,1'-Biphenyl	590	J	5300	370	ug/Kg	50	☼	8270C	Total/NA
2-Methylnaphthalene	4200		710	53	ug/Kg	50	☼	8270C	Total/NA
Carbazole	3700	J	5300	2900	ug/Kg	50	☼	8270C	Total/NA
Dibenzofuran	2900	J	5300	70	ug/Kg	50	☼	8270C	Total/NA
Di-n-butyl phthalate	3400	J	7500	1600	ug/Kg	50	☼	8270C	Total/NA
Fluorene	5500		710	57	ug/Kg	50	☼	8270C	Total/NA
Acenaphthylene	380	J	710	37	ug/Kg	50	☼	8270C	Total/NA
Benzo[g,h,i]perylene	6400		710	37	ug/Kg	50	☼	8270C	Total/NA
Phenanthrene	37000		710	78	ug/Kg	50	☼	8270C	Total/NA
Benzo[k]fluoranthene	6900		710	73	ug/Kg	50	☼	8270C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-030916-JN-002 (Continued)

Lab Sample ID: 240-61959-2

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	12000		710	68	ug/Kg	50	☼	8270C	Total/NA
Anthracene	7500		710	83	ug/Kg	50	☼	8270C	Total/NA
Pyrene	30000		710	47	ug/Kg	50	☼	8270C	Total/NA
Dibenz(a,h)anthracene	2200		710	70	ug/Kg	50	☼	8270C	Total/NA
Naphthalene	2600		710	88	ug/Kg	50	☼	8270C	Total/NA
Fluoranthene	34000		710	59	ug/Kg	50	☼	8270C	Total/NA
Benzo[a]anthracene	14000		710	67	ug/Kg	50	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	5800		710	37	ug/Kg	50	☼	8270C	Total/NA
Chrysene	14000		710	120	ug/Kg	50	☼	8270C	Total/NA
Acenaphthene	4500		710	81	ug/Kg	50	☼	8270C	Total/NA
Benzo[b]fluoranthene	16000		710	63	ug/Kg	50	☼	8270C	Total/NA
Silver	0.22	J B	0.41	0.0029	mg/Kg	2	☼	6020	Total/NA
Arsenic	9.0		2.1	0.054	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.47		0.41	0.023	mg/Kg	2	☼	6020	Total/NA
Cadmium	4.1		0.41	0.0077	mg/Kg	2	☼	6020	Total/NA
Cobalt	6.0	B	0.41	0.0035	mg/Kg	2	☼	6020	Total/NA
Chromium	113	B	0.83	0.12	mg/Kg	2	☼	6020	Total/NA
Copper	91.8	B	0.83	0.20	mg/Kg	2	☼	6020	Total/NA
Manganese	629		2.1	0.25	mg/Kg	2	☼	6020	Total/NA
Nickel	14.7	B	0.83	0.081	mg/Kg	2	☼	6020	Total/NA
Lead	706		0.41	0.093	mg/Kg	2	☼	6020	Total/NA
Antimony	35.9		0.83	0.029	mg/Kg	2	☼	6020	Total/NA
Selenium	2.2		2.1	0.083	mg/Kg	2	☼	6020	Total/NA
Thallium	0.23	J	0.83	0.039	mg/Kg	2	☼	6020	Total/NA
Vanadium	14.2		2.1	0.077	mg/Kg	2	☼	6020	Total/NA
Zinc	1140	B	8.3	1.0	mg/Kg	2	☼	6020	Total/NA
Barium	945		2.1	0.46	mg/Kg	2	☼	6020	Total/NA
Mercury	7.2		1.2	0.17	mg/Kg	5	☼	7471A	Total/NA
Total Organic Carbon	89500		2150	1080	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-030916-JN-003

Lab Sample ID: 240-61959-3

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	300	J B	320	91	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	89	J B	320	18	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	50	J B	80	12	ug/Kg	1	☼	8260B	Total/NA
Cyclohexane	69	J	160	7.7	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	230		80	3.2	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	1500		160	9.3	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	4400		720	54	ug/Kg	50	☼	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	11000		7600	2100	ug/Kg	50	☼	8270C	Total/NA
Caprolactam	28000	J	36000	4000	ug/Kg	50	☼	8270C	Total/NA
Dibenzofuran	880	J	5400	72	ug/Kg	50	☼	8270C	Total/NA
Di-n-butyl phthalate	4100	J	7600	1600	ug/Kg	50	☼	8270C	Total/NA
Fluorene	1800		720	58	ug/Kg	50	☼	8270C	Total/NA
Acenaphthylene	450	J	720	38	ug/Kg	50	☼	8270C	Total/NA
Benzo[g,h,i]perylene	1600		720	38	ug/Kg	50	☼	8270C	Total/NA
Phenanthrene	11000		720	79	ug/Kg	50	☼	8270C	Total/NA
Benzo[k]fluoranthene	1200		720	74	ug/Kg	50	☼	8270C	Total/NA
Benzo[a]pyrene	3000		720	70	ug/Kg	50	☼	8270C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-030916-JN-003 (Continued)

Lab Sample ID: 240-61959-3

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Anthracene	1800		720	85	ug/Kg	50	☼	8270C	Total/NA
Pyrene	9000		720	48	ug/Kg	50	☼	8270C	Total/NA
Naphthalene	2200		720	89	ug/Kg	50	☼	8270C	Total/NA
Fluoranthene	9500		720	60	ug/Kg	50	☼	8270C	Total/NA
Benzo[a]anthracene	4200		720	68	ug/Kg	50	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	1500		720	38	ug/Kg	50	☼	8270C	Total/NA
Chrysene	5400		720	120	ug/Kg	50	☼	8270C	Total/NA
Acenaphthene	1400		720	83	ug/Kg	50	☼	8270C	Total/NA
Benzo[b]fluoranthene	3900		720	64	ug/Kg	50	☼	8270C	Total/NA
Arsenic	0.028	J	0.50	0.0029	mg/L	1		6010B	TCLP
Barium	0.61	J B	10.0	0.0010	mg/L	1		6010B	TCLP
Cadmium	0.00070	J	0.10	0.00014	mg/L	1		6010B	TCLP
Chromium	0.0049	J B	0.50	0.00055	mg/L	1		6010B	TCLP
Lead	0.11	J	0.50	0.0019	mg/L	1		6010B	TCLP
Silver	0.0019	J	0.50	0.00092	mg/L	1		6010B	TCLP
Silver	0.26	J B	0.43	0.0030	mg/Kg	2	☼	6020	Total/NA
Arsenic	8.4		2.1	0.056	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.48		0.43	0.024	mg/Kg	2	☼	6020	Total/NA
Cadmium	7.6		0.43	0.0079	mg/Kg	2	☼	6020	Total/NA
Cobalt	5.9	B	0.43	0.0036	mg/Kg	2	☼	6020	Total/NA
Chromium	102	B	0.85	0.13	mg/Kg	2	☼	6020	Total/NA
Copper	88.7	B	0.85	0.21	mg/Kg	2	☼	6020	Total/NA
Manganese	525		2.1	0.26	mg/Kg	2	☼	6020	Total/NA
Nickel	15.0	B	0.85	0.083	mg/Kg	2	☼	6020	Total/NA
Lead	637		0.43	0.096	mg/Kg	2	☼	6020	Total/NA
Antimony	15.0		0.85	0.030	mg/Kg	2	☼	6020	Total/NA
Selenium	3.2		2.1	0.085	mg/Kg	2	☼	6020	Total/NA
Thallium	0.21	J	0.85	0.041	mg/Kg	2	☼	6020	Total/NA
Vanadium	14.4		2.1	0.079	mg/Kg	2	☼	6020	Total/NA
Zinc	1250	B	8.5	1.1	mg/Kg	2	☼	6020	Total/NA
Barium	1010		2.1	0.47	mg/Kg	2	☼	6020	Total/NA
Mercury	1.6		0.20	0.028	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	96200		2180	1090	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-030916-JN-004

Lab Sample ID: 240-61959-4

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	4.7	J B	11	1.7	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	730		320	24	ug/Kg	20	☼	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	9200		3300	900	ug/Kg	20	☼	8270C	Total/NA
Butyl benzyl phthalate	1600	J	3300	470	ug/Kg	20	☼	8270C	Total/NA
Di-n-butyl phthalate	2400	J	3300	710	ug/Kg	20	☼	8270C	Total/NA
Methyl Mercury	0.47		0.22	0.065	ug/Kg	1	☼	1630	Total/NA
Aroclor-1254	210	J	390	160	ug/Kg	5	☼	8082	Total/NA
Aroclor-1268	600		390	150	ug/Kg	5	☼	8082	Total/NA
Silver	0.35	J B	0.44	0.0031	mg/Kg	2	☼	6020	Total/NA
Arsenic	9.3		2.2	0.058	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.30	J	0.44	0.024	mg/Kg	2	☼	6020	Total/NA
Cadmium	9.7		0.44	0.0082	mg/Kg	2	☼	6020	Total/NA
Cobalt	4.5	B	0.44	0.0038	mg/Kg	2	☼	6020	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-030916-JN-004 (Continued) — Lab Sample ID: 240-61959-4

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Chromium	152	B	0.89	0.13	mg/Kg	2	☼	6020	Total/NA
Copper	93.9	B	0.89	0.22	mg/Kg	2	☼	6020	Total/NA
Manganese	357		2.2	0.27	mg/Kg	2	☼	6020	Total/NA
Nickel	13.5	B	0.89	0.087	mg/Kg	2	☼	6020	Total/NA
Lead	1880		2.2	0.50	mg/Kg	10	☼	6020	Total/NA
Antimony	33.4		0.89	0.031	mg/Kg	2	☼	6020	Total/NA
Selenium	2.3		2.2	0.089	mg/Kg	2	☼	6020	Total/NA
Thallium	0.14	J	0.89	0.042	mg/Kg	2	☼	6020	Total/NA
Vanadium	9.2		2.2	0.082	mg/Kg	2	☼	6020	Total/NA
Zinc	1480	B	8.9	1.1	mg/Kg	2	☼	6020	Total/NA
Barium	1520		2.2	0.49	mg/Kg	2	☼	6020	Total/NA
Mercury	1.3		0.20	0.028	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	109000		2340	1170	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-030916-JN-005 — Lab Sample ID: 240-61959-5

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	33	J B	35	9.9	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	8.3	J B	35	1.9	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	5.0	J B	8.6	1.3	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	83		17	1.0	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	470		330	25	ug/Kg	20	☼	8270C	Total/NA
Di-n-butyl phthalate	1200	J	3400	740	ug/Kg	20	☼	8270C	Total/NA
Benzo[g,h,i]perylene	350		330	17	ug/Kg	20	☼	8270C	Total/NA
Phenanthrene	1100		330	36	ug/Kg	20	☼	8270C	Total/NA
Benzo[k]fluoranthene	330		330	33	ug/Kg	20	☼	8270C	Total/NA
Benzo[a]pyrene	660		330	31	ug/Kg	20	☼	8270C	Total/NA
Anthracene	410		330	38	ug/Kg	20	☼	8270C	Total/NA
Pyrene	1700		330	22	ug/Kg	20	☼	8270C	Total/NA
Naphthalene	380		330	40	ug/Kg	20	☼	8270C	Total/NA
Fluoranthene	2000		330	27	ug/Kg	20	☼	8270C	Total/NA
Benzo[a]anthracene	840		330	31	ug/Kg	20	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	310	J	330	17	ug/Kg	20	☼	8270C	Total/NA
Chrysene	940		330	54	ug/Kg	20	☼	8270C	Total/NA
Acenaphthene	290	J	330	37	ug/Kg	20	☼	8270C	Total/NA
Benzo[b]fluoranthene	650		330	29	ug/Kg	20	☼	8270C	Total/NA
Silver	0.33	J B	0.35	0.0025	mg/Kg	2	☼	6020	Total/NA
Arsenic	6.3		1.8	0.046	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.40		0.35	0.020	mg/Kg	2	☼	6020	Total/NA
Cadmium	3.4		0.35	0.0066	mg/Kg	2	☼	6020	Total/NA
Cobalt	4.5	B	0.35	0.0030	mg/Kg	2	☼	6020	Total/NA
Chromium	119	B	0.71	0.11	mg/Kg	2	☼	6020	Total/NA
Copper	51.6	B	0.71	0.17	mg/Kg	2	☼	6020	Total/NA
Manganese	342		1.8	0.21	mg/Kg	2	☼	6020	Total/NA
Nickel	11.3	B	0.71	0.069	mg/Kg	2	☼	6020	Total/NA
Lead	583		0.35	0.080	mg/Kg	2	☼	6020	Total/NA
Antimony	15.8		0.71	0.025	mg/Kg	2	☼	6020	Total/NA
Selenium	1.7	J	1.8	0.071	mg/Kg	2	☼	6020	Total/NA
Thallium	0.14	J	0.71	0.034	mg/Kg	2	☼	6020	Total/NA
Vanadium	11.3		1.8	0.066	mg/Kg	2	☼	6020	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-030916-JN-005 (Continued) — Lab Sample ID: 240-61959-5

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Zinc	641	B	7.1	0.89	mg/Kg	2	☼	6020	Total/NA
Barium	530		1.8	0.39	mg/Kg	2	☼	6020	Total/NA
Mercury	2.7		0.21	0.030	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	22700		1900	949	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-030916-JN-006 — Lab Sample ID: 240-61959-6

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	74	J B	110	33	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	23	J B	110	6.4	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	16	J B	29	4.2	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	22	J	57	3.3	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	610		210	16	ug/Kg	20	☼	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	1800	J	2200	600	ug/Kg	20	☼	8270C	Total/NA
Butyl benzyl phthalate	4400		2200	310	ug/Kg	20	☼	8270C	Total/NA
Di-n-butyl phthalate	2400		2200	470	ug/Kg	20	☼	8270C	Total/NA
Fluorene	230		210	17	ug/Kg	20	☼	8270C	Total/NA
Benzo[g,h,i]perylene	560		210	11	ug/Kg	20	☼	8270C	Total/NA
Phenanthrene	1700		210	23	ug/Kg	20	☼	8270C	Total/NA
Benzo[k]fluoranthene	360		210	21	ug/Kg	20	☼	8270C	Total/NA
Benzo[a]pyrene	980		210	20	ug/Kg	20	☼	8270C	Total/NA
Anthracene	420		210	24	ug/Kg	20	☼	8270C	Total/NA
Pyrene	2600		210	14	ug/Kg	20	☼	8270C	Total/NA
Naphthalene	370		210	26	ug/Kg	20	☼	8270C	Total/NA
Fluoranthene	2800		210	17	ug/Kg	20	☼	8270C	Total/NA
Benzo[a]anthracene	1100		210	20	ug/Kg	20	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	530		210	11	ug/Kg	20	☼	8270C	Total/NA
Chrysene	1600		210	34	ug/Kg	20	☼	8270C	Total/NA
Benzo[b]fluoranthene	1500		210	18	ug/Kg	20	☼	8270C	Total/NA
Arsenic	0.025	J B	0.50	0.0029	mg/L	1		6010B	TCLP
Barium	0.87	J B	10.0	0.0010	mg/L	1		6010B	TCLP
Cadmium	0.00015	J	0.10	0.00014	mg/L	1		6010B	TCLP
Chromium	0.0040	J B	0.50	0.00055	mg/L	1		6010B	TCLP
Lead	0.052	J	0.50	0.0019	mg/L	1		6010B	TCLP
Silver	0.24	B	0.24	0.0017	mg/Kg	2	☼	6020	Total/NA
Arsenic	7.8		1.2	0.032	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.28		0.24	0.013	mg/Kg	2	☼	6020	Total/NA
Cadmium	2.6		0.24	0.0045	mg/Kg	2	☼	6020	Total/NA
Cobalt	3.3	B	0.24	0.0021	mg/Kg	2	☼	6020	Total/NA
Chromium	66.8	B	0.49	0.073	mg/Kg	2	☼	6020	Total/NA
Copper	41.4	B	0.49	0.12	mg/Kg	2	☼	6020	Total/NA
Manganese	237		1.2	0.15	mg/Kg	2	☼	6020	Total/NA
Nickel	8.6	B	0.49	0.047	mg/Kg	2	☼	6020	Total/NA
Lead	950		0.24	0.055	mg/Kg	2	☼	6020	Total/NA
Antimony	22.4		0.49	0.017	mg/Kg	2	☼	6020	Total/NA
Selenium	1.4		1.2	0.049	mg/Kg	2	☼	6020	Total/NA
Thallium	0.11	J	0.49	0.023	mg/Kg	2	☼	6020	Total/NA
Vanadium	10.1		1.2	0.045	mg/Kg	2	☼	6020	Total/NA
Zinc	584	B	4.9	0.61	mg/Kg	2	☼	6020	Total/NA
Barium	465		1.2	0.27	mg/Kg	2	☼	6020	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-030916-JN-006 (Continued) — Lab Sample ID: 240-61959-6

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.77		0.16	0.022	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	43200		1550	776	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-030916-JN-007 — Lab Sample ID: 240-61959-7

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	4200		760	39	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	450	J B	760	260	ug/Kg	1	☼	8260B	Total/NA
Toluene	140	J B	760	30	ug/Kg	1	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	2300		760	45	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	940	J	1500	97	ug/Kg	1	☼	8260B	Total/NA
Cyclohexane	280	J	1500	91	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	490	J	760	39	ug/Kg	1	☼	8260B	Total/NA
Methyl acetate	220	J	1500	170	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	2300		1500	120	ug/Kg	1	☼	8260B	Total/NA
1,1'-Biphenyl	480	J	5300	370	ug/Kg	50	☼	8270C	Total/NA
2-Methylnaphthalene	7400		710	53	ug/Kg	50	☼	8270C	Total/NA
Dibenzofuran	1900	J	5300	70	ug/Kg	50	☼	8270C	Total/NA
Di-n-butyl phthalate	6700	J	7500	1600	ug/Kg	50	☼	8270C	Total/NA
Methyl Mercury	1.4		0.20	0.060	ug/Kg	1	☼	1630	Total/NA
Silver	0.22	J B	0.39	0.0028	mg/Kg	2	☼	6020	Total/NA
Arsenic	7.6		2.0	0.051	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.56		0.39	0.022	mg/Kg	2	☼	6020	Total/NA
Cadmium	4.5		0.39	0.0073	mg/Kg	2	☼	6020	Total/NA
Cobalt	5.9	B	0.39	0.0033	mg/Kg	2	☼	6020	Total/NA
Chromium	181	B	0.79	0.12	mg/Kg	2	☼	6020	Total/NA
Copper	135	B	0.79	0.19	mg/Kg	2	☼	6020	Total/NA
Manganese	390		2.0	0.24	mg/Kg	2	☼	6020	Total/NA
Nickel	14.8	B	0.79	0.077	mg/Kg	2	☼	6020	Total/NA
Lead	1340		0.39	0.088	mg/Kg	2	☼	6020	Total/NA
Antimony	50.2		0.79	0.028	mg/Kg	2	☼	6020	Total/NA
Selenium	2.1		2.0	0.079	mg/Kg	2	☼	6020	Total/NA
Thallium	0.22	J	0.79	0.037	mg/Kg	2	☼	6020	Total/NA
Vanadium	18.7		2.0	0.073	mg/Kg	2	☼	6020	Total/NA
Zinc	1910	B	7.9	0.98	mg/Kg	2	☼	6020	Total/NA
Barium	2270		2.0	0.43	mg/Kg	2	☼	6020	Total/NA
Mercury	9.3		2.2	0.31	mg/Kg	10	☼	7471A	Total/NA
Total Organic Carbon	80700		2140	1070	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-030916-JN-008 — Lab Sample ID: 240-61959-8

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	450	J	640	33	ug/Kg	1	☼	8260B	Total/NA
Toluene	110	J B	640	25	ug/Kg	1	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	180	J	640	38	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	120	J	1300	81	ug/Kg	1	☼	8260B	Total/NA
Cyclohexane	170	J F1	1300	76	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	530	J F1	640	33	ug/Kg	1	☼	8260B	Total/NA
Methyl acetate	230	J	1300	140	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	1400	F1	1300	97	ug/Kg	1	☼	8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-030916-JN-008 (Continued)

Lab Sample ID: 240-61959-8

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
1,1'-Biphenyl	430	J	4600	320	ug/Kg	50	☼	8270C	Total/NA
2-Methylnaphthalene	6300		610	46	ug/Kg	50	☼	8270C	Total/NA
Dibenzofuran	850	J	4600	60	ug/Kg	50	☼	8270C	Total/NA
Di-n-butyl phthalate	4000	J	6400	1400	ug/Kg	50	☼	8270C	Total/NA
Fluorene	1500		610	48	ug/Kg	50	☼	8270C	Total/NA
Benzo[g,h,i]perylene	1100		610	32	ug/Kg	50	☼	8270C	Total/NA
Phenanthrene	7300		610	67	ug/Kg	50	☼	8270C	Total/NA
Benzo[k]fluoranthene	1300		610	62	ug/Kg	50	☼	8270C	Total/NA
Benzo[a]pyrene	2300		610	58	ug/Kg	50	☼	8270C	Total/NA
Anthracene	1500		610	71	ug/Kg	50	☼	8270C	Total/NA
Pyrene	6100		610	40	ug/Kg	50	☼	8270C	Total/NA
Naphthalene	3900		610	75	ug/Kg	50	☼	8270C	Total/NA
Fluoranthene	6000		610	50	ug/Kg	50	☼	8270C	Total/NA
Benzo[a]anthracene	2800		610	58	ug/Kg	50	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	1200		610	32	ug/Kg	50	☼	8270C	Total/NA
Chrysene	4200		610	100	ug/Kg	50	☼	8270C	Total/NA
Acenaphthene	1000		610	69	ug/Kg	50	☼	8270C	Total/NA
Benzo[b]fluoranthene	2700		610	54	ug/Kg	50	☼	8270C	Total/NA
Silver	0.23	J B	0.32	0.0023	mg/Kg	2	☼	6020	Total/NA
Arsenic	11.9		1.6	0.042	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.40		0.32	0.018	mg/Kg	2	☼	6020	Total/NA
Cadmium	4.0		0.32	0.0060	mg/Kg	2	☼	6020	Total/NA
Cobalt	4.3	B	0.32	0.0028	mg/Kg	2	☼	6020	Total/NA
Chromium	197	B	0.65	0.097	mg/Kg	2	☼	6020	Total/NA
Copper	152	B	0.65	0.16	mg/Kg	2	☼	6020	Total/NA
Manganese	236		1.6	0.19	mg/Kg	2	☼	6020	Total/NA
Nickel	13.6	B	0.65	0.063	mg/Kg	2	☼	6020	Total/NA
Lead	1630		1.6	0.36	mg/Kg	10	☼	6020	Total/NA
Antimony	59.8		0.65	0.023	mg/Kg	2	☼	6020	Total/NA
Selenium	1.5	J	1.6	0.065	mg/Kg	2	☼	6020	Total/NA
Thallium	0.21	J	0.65	0.031	mg/Kg	2	☼	6020	Total/NA
Vanadium	12.5		1.6	0.060	mg/Kg	2	☼	6020	Total/NA
Zinc	1710	B	6.5	0.81	mg/Kg	2	☼	6020	Total/NA
Barium	2080		1.6	0.36	mg/Kg	2	☼	6020	Total/NA
Mercury	14.8		1.9	0.27	mg/Kg	10	☼	7471A	Total/NA
Total Organic Carbon	162000		1820	908	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-030916-JN-009

Lab Sample ID: 240-61959-9

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	350	J	740	38	ug/Kg	1	☼	8260B	Total/NA
Toluene	120	J B	740	29	ug/Kg	1	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	150	J	740	44	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	140	J	1500	94	ug/Kg	1	☼	8260B	Total/NA
Cyclohexane	160	J	1500	88	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	490	J	740	38	ug/Kg	1	☼	8260B	Total/NA
Methyl acetate	230	J	1500	160	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	1300	J	1500	110	ug/Kg	1	☼	8260B	Total/NA
1,1'-Biphenyl	570	J	5200	360	ug/Kg	50	☼	8270C	Total/NA
2-Methylnaphthalene	14000		690	52	ug/Kg	50	☼	8270C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-030916-JN-009 (Continued)

Lab Sample ID: 240-61959-9

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Dibenzofuran	1100	J	5200	68	ug/Kg	50	☼	8270C	Total/NA
Di-n-butyl phthalate	5900	J	7200	1600	ug/Kg	50	☼	8270C	Total/NA
Fluorene	1900		690	55	ug/Kg	50	☼	8270C	Total/NA
Benzo[g,h,i]perylene	1100		690	36	ug/Kg	50	☼	8270C	Total/NA
Phenanthrene	9300		690	76	ug/Kg	50	☼	8270C	Total/NA
Benzo[k]fluoranthene	910		690	70	ug/Kg	50	☼	8270C	Total/NA
Benzo[a]pyrene	2700		690	66	ug/Kg	50	☼	8270C	Total/NA
Anthracene	1700		690	81	ug/Kg	50	☼	8270C	Total/NA
Pyrene	7900		690	46	ug/Kg	50	☼	8270C	Total/NA
Naphthalene	5200		690	85	ug/Kg	50	☼	8270C	Total/NA
Fluoranthene	6600		690	57	ug/Kg	50	☼	8270C	Total/NA
Benzo[a]anthracene	3600		690	65	ug/Kg	50	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	1000		690	36	ug/Kg	50	☼	8270C	Total/NA
Chrysene	4600		690	110	ug/Kg	50	☼	8270C	Total/NA
Acenaphthene	1100		690	79	ug/Kg	50	☼	8270C	Total/NA
Benzo[b]fluoranthene	3300		690	61	ug/Kg	50	☼	8270C	Total/NA
Silver	0.29	J B	0.33	0.0023	mg/Kg	2	☼	6020	Total/NA
Arsenic	10.7		1.6	0.042	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.47		0.33	0.018	mg/Kg	2	☼	6020	Total/NA
Cadmium	1.7		0.33	0.0060	mg/Kg	2	☼	6020	Total/NA
Cobalt	5.0	B	0.33	0.0028	mg/Kg	2	☼	6020	Total/NA
Chromium	51.7	B	0.65	0.098	mg/Kg	2	☼	6020	Total/NA
Copper	53.3	B	0.65	0.16	mg/Kg	2	☼	6020	Total/NA
Manganese	394		1.6	0.20	mg/Kg	2	☼	6020	Total/NA
Nickel	12.3	B	0.65	0.063	mg/Kg	2	☼	6020	Total/NA
Lead	657		0.33	0.073	mg/Kg	2	☼	6020	Total/NA
Antimony	5.1		0.65	0.023	mg/Kg	2	☼	6020	Total/NA
Selenium	2.0		1.6	0.065	mg/Kg	2	☼	6020	Total/NA
Thallium	0.21	J	0.65	0.031	mg/Kg	2	☼	6020	Total/NA
Vanadium	18.1		1.6	0.060	mg/Kg	2	☼	6020	Total/NA
Zinc	605	B	6.5	0.81	mg/Kg	2	☼	6020	Total/NA
Barium	426		1.6	0.36	mg/Kg	2	☼	6020	Total/NA
Mercury	8.4		2.3	0.32	mg/Kg	10	☼	7471A	Total/NA
Total Organic Carbon	399000		2070	1030	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-030916-JN-010

Lab Sample ID: 240-61959-10

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	380	J	690	36	ug/Kg	1	☼	8260B	Total/NA
Toluene	82	J B	690	28	ug/Kg	1	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	150	J	690	41	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	150	J	1400	88	ug/Kg	1	☼	8260B	Total/NA
Cyclohexane	150	J	1400	83	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	370	J	690	36	ug/Kg	1	☼	8260B	Total/NA
Methyl acetate	290	J	1400	150	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	1300	J	1400	100	ug/Kg	1	☼	8260B	Total/NA
1,1'-Biphenyl	260	J	2000	140	ug/Kg	20	☼	8270C	Total/NA
2-Methylnaphthalene	3300		260	20	ug/Kg	20	☼	8270C	Total/NA
Dibenzofuran	390	J	2000	26	ug/Kg	20	☼	8270C	Total/NA
Di-n-butyl phthalate	3000		2700	590	ug/Kg	20	☼	8270C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-030916-JN-010 (Continued) — Lab Sample ID: 240-61959-10

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Fluorene	670		260	21	ug/Kg	20	☼	8270C	Total/NA
Benzo[g,h,i]perylene	480		260	14	ug/Kg	20	☼	8270C	Total/NA
Phenanthrene	3500		260	28	ug/Kg	20	☼	8270C	Total/NA
Benzo[k]fluoranthene	460		260	27	ug/Kg	20	☼	8270C	Total/NA
Benzo[a]pyrene	990		260	25	ug/Kg	20	☼	8270C	Total/NA
Anthracene	830		260	30	ug/Kg	20	☼	8270C	Total/NA
Pyrene	2700		260	17	ug/Kg	20	☼	8270C	Total/NA
Dibenz(a,h)anthracene	170	J	260	26	ug/Kg	20	☼	8270C	Total/NA
Naphthalene	1500		260	32	ug/Kg	20	☼	8270C	Total/NA
Fluoranthene	2900		260	21	ug/Kg	20	☼	8270C	Total/NA
Benzo[a]anthracene	1400		260	25	ug/Kg	20	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	420		260	14	ug/Kg	20	☼	8270C	Total/NA
Chrysene	2100		260	43	ug/Kg	20	☼	8270C	Total/NA
Acenaphthene	490		260	30	ug/Kg	20	☼	8270C	Total/NA
Benzo[b]fluoranthene	1300		260	23	ug/Kg	20	☼	8270C	Total/NA
Silver	0.20	J B	0.36	0.0025	mg/Kg	2	☼	6020	Total/NA
Arsenic	16.3		1.8	0.047	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.53		0.36	0.020	mg/Kg	2	☼	6020	Total/NA
Cadmium	3.9		0.36	0.0067	mg/Kg	2	☼	6020	Total/NA
Cobalt	5.9	B	0.36	0.0031	mg/Kg	2	☼	6020	Total/NA
Chromium	164	B	0.73	0.11	mg/Kg	2	☼	6020	Total/NA
Copper	106	B	0.73	0.18	mg/Kg	2	☼	6020	Total/NA
Manganese	377		1.8	0.22	mg/Kg	2	☼	6020	Total/NA
Nickel	13.8	B	0.73	0.071	mg/Kg	2	☼	6020	Total/NA
Lead	1280		0.36	0.082	mg/Kg	2	☼	6020	Total/NA
Antimony	17.2		0.73	0.025	mg/Kg	2	☼	6020	Total/NA
Selenium	2.0		1.8	0.073	mg/Kg	2	☼	6020	Total/NA
Thallium	0.23	J	0.73	0.034	mg/Kg	2	☼	6020	Total/NA
Vanadium	17.9		1.8	0.067	mg/Kg	2	☼	6020	Total/NA
Zinc	1750	B	7.3	0.91	mg/Kg	2	☼	6020	Total/NA
Barium	1550		1.8	0.40	mg/Kg	2	☼	6020	Total/NA
Mercury	15.2		1.9	0.27	mg/Kg	10	☼	7471A	Total/NA
Total Organic Carbon	114000		1940	970	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: TB-030916-JN-001 — Lab Sample ID: 240-61959-11

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.39	J B	1.0	0.33	ug/L	1		8260B	Total/NA

Client Sample ID: SE-030916-JN-001 — Lab Sample ID: 240-61959-12

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Cadmium SEM	3.7		0.30	0.015	mg/Kg	1	☼	6010B	SEM/AVS
Copper SEM	24.8		1.5	0.058	mg/Kg	1	☼	6010B	SEM/AVS
Lead SEM	839		1.2	0.25	mg/Kg	2	☼	6010B	SEM/AVS
Nickel SEM	7.4	B	2.4	0.053	mg/Kg	1	☼	6010B	SEM/AVS
Zinc SEM	2080	B	11.9	0.35	mg/Kg	2	☼	6010B	SEM/AVS
SEM/AVS Ratio	1.68		0.00100	0.00100	NONE	1		SEM	SEM/AVS
Acid Volatile Sulfides (AVS)	693		35.7	7.1	mg/Kg	1	☼	9034	SEM/AVS

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: SE-030916-JN-004 — Lab Sample ID: 240-61959-13

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Cadmium SEM	3.2		0.23	0.012	mg/Kg	1	☼	6010B	SEM/AVS
Copper SEM	55.1		1.2	0.045	mg/Kg	1	☼	6010B	SEM/AVS
Lead SEM	1800		2.3	0.49	mg/Kg	5	☼	6010B	SEM/AVS
Nickel SEM	6.1	B	1.9	0.041	mg/Kg	1	☼	6010B	SEM/AVS
Zinc SEM	1010	B	4.7	0.14	mg/Kg	1	☼	6010B	SEM/AVS
Mercury SEM	0.0030	J	0.0093	0.0024	mg/Kg	1	☼	7470A	SEM/AVS
SEM/AVS Ratio	6.81		0.00100	0.00100	NONE	1		SEM	SEM/AVS
Acid Volatile Sulfides (AVS)	118		27.9	5.6	mg/Kg	1	☼	9034	SEM/AVS

Client Sample ID: SE-030916-JN-007 — Lab Sample ID: 240-61959-14

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Cadmium SEM	5.6		0.26	0.013	mg/Kg	1	☼	6010B	SEM/AVS
Copper SEM	138		1.3	0.051	mg/Kg	1	☼	6010B	SEM/AVS
Lead SEM	1940		2.6	0.55	mg/Kg	5	☼	6010B	SEM/AVS
Nickel SEM	10.2	B	2.1	0.047	mg/Kg	1	☼	6010B	SEM/AVS
Zinc SEM	2960	B	26.3	0.77	mg/Kg	5	☼	6010B	SEM/AVS
SEM/AVS Ratio	3.28		0.00100	0.00100	NONE	1		SEM	SEM/AVS
Acid Volatile Sulfides (AVS)	558		31.5	6.3	mg/Kg	1	☼	9034	SEM/AVS

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-030916-JN-001
Date Collected: 03/09/16 12:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-1
Matrix: Solid
Percent Solids: 58.3

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**97**	**B**	65	18	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Benzene	<2.9		16	2.9	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Dichlorobromomethane	<0.94		16	0.94	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Bromoform	<0.78		16	0.78	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Bromomethane	<1.4		16	1.4	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
2-Butanone (MEK)	**22**	**J B**	65	3.6	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Carbon disulfide	<1.9		16	1.9	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Carbon tetrachloride	<2.1		16	2.1	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Chlorobenzene	<1.7		16	1.7	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Chloroethane	<1.4		16	1.4	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Chloroform	<1.2		16	1.2	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Chloromethane	<2.6		16	2.6	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,1-Dichloroethane	<1.1		16	1.1	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,2-Dichloroethane	<1.5		16	1.5	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,1-Dichloroethene	<2.6		16	2.6	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,2-Dichloropropane	<0.45		16	0.45	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,2,4-Trimethylbenzene	<1.9		16	1.9	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
cis-1,3-Dichloropropene	<2.3		16	2.3	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
trans-1,3-Dichloropropene	<0.94		16	0.94	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Ethylbenzene	<1.0		16	1.0	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
2-Hexanone	<2.2		65	2.2	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Methylene Chloride	**10**	**J B**	16	2.4	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
4-Methyl-2-pentanone (MIBK)	<3.9		65	3.9	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Styrene	<1.3		16	1.3	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,1,2,2-Tetrachloroethane	<1.0		16	1.0	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Tetrachloroethene	<2.6		16	2.6	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Toluene	<0.87		16	0.87	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Trichloroethene	<1.2		16	1.2	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,3,5-Trimethylbenzene	<0.94		16	0.94	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Vinyl chloride	<0.97		16	0.97	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Xylenes, Total	<1.7		32	1.7	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,1,1-Trichloroethane	<2.1		16	2.1	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,1,2-Trichloroethane	<1.2		16	1.2	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Cyclohexane	**28**	**J**	32	1.6	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,2-Dibromo-3-Chloropropane	<8.8		32	8.8	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Ethylene Dibromide	<1.7		16	1.7	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Dichlorodifluoromethane	<0.91		16	0.91	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
cis-1,2-Dichloroethene	<0.91		16	0.91	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
trans-1,2-Dichloroethene	<1.0		16	1.0	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Isopropylbenzene	**67**		16	0.65	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Methyl acetate	<6.5		32	6.5	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Methyl tert-butyl ether	<1.4		16	1.4	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<1.4		16	1.4	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,2,4-Trichlorobenzene	<1.2		16	1.2	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,2-Dichlorobenzene	<1.1		16	1.1	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,3-Dichlorobenzene	<2.2		16	2.2	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
1,4-Dichlorobenzene	<0.91		16	0.91	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Trichlorofluoromethane	<0.94		16	0.94	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1
Chlorodibromomethane	<1.2		16	1.2	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1

Client Sample ID: SE-030916-JN-001
Date Collected: 03/09/16 12:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-1
Matrix: Solid
Percent Solids: 58.3

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**450**		32	1.9	ug/Kg	☼	03/11/16 12:48	03/11/16 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*58 - 123*	*03/11/16 12:48*	*03/11/16 18:54*	*1*
4-Bromofluorobenzene (Surr)	*196*	*X*	*52 - 136*	*03/11/16 12:48*	*03/11/16 18:54*	*1*
Toluene-d8 (Surr)	*156*	*X*	*67 - 125*	*03/11/16 12:48*	*03/11/16 18:54*	*1*
Dibromofluoromethane (Surr)	*94*		*37 - 132*	*03/11/16 12:48*	*03/11/16 18:54*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<390		5500	390	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
bis (2-chloroisopropyl) ether	<1000		11000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
2,4,5-Trichlorophenol	<2800		17000	2800	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
2,4,6-Trichlorophenol	<980		17000	980	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
2,4-Dichlorophenol	<2200		17000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
2,4-Dimethylphenol	<2200		17000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
2,4-Dinitrophenol	<2300		36000	2300	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
2,4-Dinitrotoluene	<1900		22000	1900	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
2,6-Dinitrotoluene	<2300		22000	2300	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
2-Chloronaphthalene	<50		5500	50	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
2-Chlorophenol	<900		5500	900	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
2-Methylnaphthalene	**610**	**J**	740	55	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
2-Methylphenol	<1200		22000	1200	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
2-Nitroaniline	<1000		22000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
2-Nitrophenol	<910		5500	910	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
3,3'-Dichlorobenzidine	<2000		11000	2000	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
3-Nitroaniline	<1800		22000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
4,6-Dinitro-2-methylphenol	<1000	*	17000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
4-Bromophenyl phenyl ether	<1400		5500	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
4-Chloro-3-methylphenol	<2300		17000	2300	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
4-Chloroaniline	<1900		17000	1900	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
4-Chlorophenyl phenyl ether	<1400		5500	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
4-Nitroaniline	<2900		22000	2900	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
4-Nitrophenol	<1900		36000	1900	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Acetophenone	<1000		11000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Atrazine	<1000		22000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Benzaldehyde	<1300		11000	1300	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Bis(2-chloroethoxy)methane	<2400		11000	2400	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Bis(2-chloroethyl)ether	<220		11000	220	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Bis(2-ethylhexyl) phthalate	**12000**		7700	2100	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Butyl benzyl phthalate	**70000**		7700	1100	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Caprolactam	<4100		36000	4100	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Carbazole	<3000		5500	3000	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Dibenzofuran	<73		5500	73	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Diethyl phthalate	<1800		7700	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Dimethyl phthalate	<1900		7700	1900	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Di-n-butyl phthalate	**2300**	**J**	7700	1700	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Di-n-octyl phthalate	<870		7700	870	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Hexachlorobenzene	<230		740	230	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Hexachlorobutadiene	<620		5500	620	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50

Client Sample ID: SE-030916-JN-001
Date Collected: 03/09/16 12:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-1
Matrix: Solid
Percent Solids: 58.3

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<890		36000	890	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Hexachloroethane	<990		5500	990	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Isophorone	<1400		5500	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Nitrobenzene	<240		11000	240	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
N-Nitrosodi-n-propylamine	<690		5500	690	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
N-Nitrosodiphenylamine	<2300		5500	2300	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Pentachlorophenol	<1000		17000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
Phenol	<800		5500	800	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50
3 & 4 Methylphenol	<2200		44000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 17:26	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*71*		*24 - 110*	*03/11/16 08:42*	*03/18/16 17:26*	*50*
2-Fluorophenol (Surr)	*74*		*24 - 110*	*03/11/16 08:42*	*03/18/16 17:26*	*50*
2,4,6-Tribromophenol (Surr)	*35*		*10 - 110*	*03/11/16 08:42*	*03/18/16 17:26*	*50*
Nitrobenzene-d5 (Surr)	*106*		*20 - 110*	*03/11/16 08:42*	*03/18/16 17:26*	*50*
Phenol-d5 (Surr)	*43*		*26 - 110*	*03/11/16 08:42*	*03/18/16 17:26*	*50*
Terphenyl-d14 (Surr)	*87*		*36 - 110*	*03/11/16 08:42*	*03/18/16 17:26*	*50*

Method: 1630 - Methyl Mercury (GC)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.24**		0.16	0.048	ug/Kg	☼	03/14/16 11:58	03/18/16 20:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Propyl Mercury Chloride	*41*		*10 - 149*	*03/14/16 11:58*	*03/18/16 20:42*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<410		1100	410	ug/Kg	☼	03/11/16 07:38	03/18/16 11:02	20
Aroclor-1221	<550		1100	550	ug/Kg	☼	03/11/16 07:38	03/18/16 11:02	20
Aroclor-1232	<690		1100	690	ug/Kg	☼	03/11/16 07:38	03/18/16 11:02	20
Aroclor-1242	<380	^c	1100	380	ug/Kg	☼	03/11/16 07:38	03/18/16 11:02	20
Aroclor-1248	<270		1100	270	ug/Kg	☼	03/11/16 07:38	03/18/16 11:02	20
Aroclor-1254	<480		1100	480	ug/Kg	☼	03/11/16 07:38	03/18/16 11:02	20
Aroclor-1260	<310		1100	310	ug/Kg	☼	03/11/16 07:38	03/18/16 11:02	20
Aroclor-1262	<340		1100	340	ug/Kg	☼	03/11/16 07:38	03/18/16 11:02	20
Aroclor-1268	**1200**		1100	450	ug/Kg	☼	03/11/16 07:38	03/18/16 11:02	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*277*	*X*	*13 - 134*	*03/11/16 07:38*	*03/18/16 11:02*	*20*
DCB Decachlorobiphenyl	*2950*	*X ^c*	*10 - 155*	*03/11/16 07:38*	*03/18/16 11:02*	*20*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.34**	**B**	0.29	0.0020	mg/Kg	☼	03/11/16 12:52	03/18/16 20:07	2
Arsenic	**10.2**		1.4	0.037	mg/Kg	☼	03/11/16 12:52	03/18/16 20:07	2
Beryllium	**0.25**	**J**	0.29	0.016	mg/Kg	☼	03/11/16 12:52	03/19/16 16:40	2
Cadmium	**57.9**	**F1**	0.29	0.0053	mg/Kg	☼	03/11/16 12:52	03/18/16 20:07	2
Cobalt	**5.2**	**B**	0.29	0.0025	mg/Kg	☼	03/11/16 12:52	03/19/16 16:40	2
Chromium	**261**	**B F1**	0.58	0.086	mg/Kg	☼	03/11/16 12:52	03/19/16 16:40	2
Copper	**50.8**	**B**	0.58	0.14	mg/Kg	☼	03/11/16 12:52	03/19/16 16:40	2
Manganese	**548**		1.4	0.17	mg/Kg	☼	03/11/16 12:52	03/19/16 16:40	2

Client Sample ID: SE-030916-JN-001
Date Collected: 03/09/16 12:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-1
Matrix: Solid
Percent Solids: 58.3

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	12.7	B	0.58	0.056	mg/Kg	☼	03/11/16 12:52	03/19/16 16:40	2
Lead	1870		2.9	0.65	mg/Kg	☼	03/11/16 12:52	03/19/16 16:44	20
Antimony	30.6		0.58	0.020	mg/Kg	☼	03/11/16 12:52	03/18/16 20:07	2
Selenium	15.1		1.4	0.058	mg/Kg	☼	03/11/16 12:52	03/18/16 20:07	2
Thallium	0.11	J	0.58	0.027	mg/Kg	☼	03/11/16 12:52	03/18/16 20:07	2
Vanadium	10.0		1.4	0.053	mg/Kg	☼	03/11/16 12:52	03/19/16 16:40	2
Zinc	904	B	5.8	0.72	mg/Kg	☼	03/11/16 12:52	03/19/16 16:40	2
Barium	1140		1.4	0.32	mg/Kg	☼	03/11/16 12:52	03/18/16 20:07	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.46		0.17	0.024	mg/Kg	☼	03/11/16 15:00	03/15/16 08:05	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	53500		1720	858	mg/Kg	☼		03/16/16 13:22	1
Percent Solids	58.3		0.1	0.1	%			03/11/16 14:03	1
Percent Moisture	41.7		0.1	0.1	%			03/11/16 14:03	1

Client Sample ID: SE-030916-JN-002
Date Collected: 03/09/16 12:55
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-2
Matrix: Solid
Percent Solids: 46.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**300**	**J B**	410	120	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Benzene	<18		100	18	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Dichlorobromomethane	<5.9		100	5.9	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Bromoform	<4.9		100	4.9	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Bromomethane	<8.5		100	8.5	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
2-Butanone (MEK)	**82**	**J B**	410	23	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Carbon disulfide	<12		100	12	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Carbon tetrachloride	<13		100	13	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Chlorobenzene	<11		100	11	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Chloroethane	<8.9		100	8.9	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Chloroform	<7.3		100	7.3	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Chloromethane	<16		100	16	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,1-Dichloroethane	<6.9		100	6.9	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,2-Dichloroethane	<9.3		100	9.3	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,1-Dichloroethene	<16		100	16	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,2-Dichloropropane	<2.8		100	2.8	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,2,4-Trimethylbenzene	<12		100	12	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
cis-1,3-Dichloropropene	<14		100	14	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
trans-1,3-Dichloropropene	<5.9		100	5.9	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Ethylbenzene	<6.5		100	6.5	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
2-Hexanone	<14		410	14	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Methylene Chloride	**61**	**J B**	100	15	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
4-Methyl-2-pentanone (MIBK)	<25		410	25	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Styrene	<8.1		100	8.1	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,1,2,2-Tetrachloroethane	<6.3		100	6.3	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Tetrachloroethene	<16		100	16	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Toluene	<5.5		100	5.5	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Trichloroethene	<7.7		100	7.7	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,3,5-Trimethylbenzene	<5.9		100	5.9	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Vinyl chloride	<6.1		100	6.1	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Xylenes, Total	<11		200	11	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,1,1-Trichloroethane	<13		100	13	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,1,2-Trichloroethane	<7.5		100	7.5	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Cyclohexane	**90**	**J**	200	9.7	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,2-Dibromo-3-Chloropropane	<55		200	55	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Ethylene Dibromide	<11		100	11	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Dichlorodifluoromethane	<5.7		100	5.7	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
cis-1,2-Dichloroethene	<5.7		100	5.7	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
trans-1,2-Dichloroethene	<6.5		100	6.5	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Isopropylbenzene	**220**		100	4.1	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Methyl acetate	<41		200	41	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Methyl tert-butyl ether	<8.7		100	8.7	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<8.5		100	8.5	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,2,4-Trichlorobenzene	<7.7		100	7.7	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,2-Dichlorobenzene	<6.9		100	6.9	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,3-Dichlorobenzene	<14		100	14	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
1,4-Dichlorobenzene	<5.7		100	5.7	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Trichlorofluoromethane	<5.9		100	5.9	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1
Chlorodibromomethane	<7.5		100	7.5	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1

Client Sample ID: SE-030916-JN-002
Date Collected: 03/09/16 12:55
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-2
Matrix: Solid
Percent Solids: 46.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**1800**		200	12	ug/Kg	☼	03/11/16 12:48	03/11/16 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*58 - 123*	*03/11/16 12:48*	*03/11/16 19:45*	*1*
4-Bromofluorobenzene (Surr)	*144*	*X*	*52 - 136*	*03/11/16 12:48*	*03/11/16 19:45*	*1*
Toluene-d8 (Surr)	*130*	*X*	*67 - 125*	*03/11/16 12:48*	*03/11/16 19:45*	*1*
Dibromofluoromethane (Surr)	*95*		*37 - 132*	*03/11/16 12:48*	*03/11/16 19:45*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	**590**	**J**	5300	370	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
bis (2-chloroisopropyl) ether	<1000		11000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
2,4,5-Trichlorophenol	<2700		16000	2700	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
2,4,6-Trichlorophenol	<950		16000	950	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
2,4-Dichlorophenol	<2100		16000	2100	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
2,4-Dimethylphenol	<2100		16000	2100	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
2,4-Dinitrophenol	<2200		35000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
2,4-Dinitrotoluene	<1800		21000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
2,6-Dinitrotoluene	<2200		21000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
2-Chloronaphthalene	<48		5300	48	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
2-Chlorophenol	<880		5300	880	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
2-Methylnaphthalene	**4200**		710	53	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
2-Methylphenol	<1200		21000	1200	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
2-Nitroaniline	<970		21000	970	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
2-Nitrophenol	<890		5300	890	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
3,3'-Dichlorobenzidine	<1900		11000	1900	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
3-Nitroaniline	<1700		21000	1700	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
4,6-Dinitro-2-methylphenol	<980	*	16000	980	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
4-Bromophenyl phenyl ether	<1400		5300	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
4-Chloro-3-methylphenol	<2200		16000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
4-Chloroaniline	<1800		16000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
4-Chlorophenyl phenyl ether	<1400		5300	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
4-Nitroaniline	<2800		21000	2800	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
4-Nitrophenol	<1800		35000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Acetophenone	<980		11000	980	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Atrazine	<970		21000	970	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Benzaldehyde	<1300		11000	1300	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Bis(2-chloroethoxy)methane	<2300		11000	2300	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Bis(2-chloroethyl)ether	<210		11000	210	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Bis(2-ethylhexyl) phthalate	<2000		7500	2000	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Butyl benzyl phthalate	<1100		7500	1100	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Caprolactam	<4000		35000	4000	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Carbazole	**3700**	**J**	5300	2900	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Dibenzofuran	**2900**	**J**	5300	70	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Diethyl phthalate	<1700		7500	1700	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Dimethyl phthalate	<1800		7500	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Di-n-butyl phthalate	**3400**	**J**	7500	1600	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Di-n-octyl phthalate	<840		7500	840	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Hexachlorobenzene	<220		710	220	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Hexachlorobutadiene	<600		5300	600	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50

Client Sample ID: SE-030916-JN-002
Date Collected: 03/09/16 12:55
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-2
Matrix: Solid
Percent Solids: 46.5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<870		35000	870	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Hexachloroethane	<960		5300	960	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Isophorone	<1400		5300	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Nitrobenzene	<230		11000	230	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
N-Nitrosodi-n-propylamine	<670		5300	670	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
N-Nitrosodiphenylamine	<2200		5300	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Pentachlorophenol	<970		16000	970	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Phenol	<780		5300	780	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
3 & 4 Methylphenol	<2100		43000	2100	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Fluorene	**5500**		710	57	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Acenaphthylene	**380**	**J**	710	37	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Benzo[g,h,i]perylene	**6400**		710	37	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Phenanthrene	**37000**		710	78	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Benzo[k]fluoranthene	**6900**		710	73	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Benzo[a]pyrene	**12000**		710	68	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Anthracene	**7500**		710	83	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Pyrene	**30000**		710	47	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Dibenz(a,h)anthracene	**2200**		710	70	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Naphthalene	**2600**		710	88	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Fluoranthene	**34000**		710	59	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Benzo[a]anthracene	**14000**		710	67	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Indeno[1,2,3-cd]pyrene	**5800**		710	37	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Chrysene	**14000**		710	120	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Acenaphthene	**4500**		710	81	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50
Benzo[b]fluoranthene	**16000**		710	63	ug/Kg	☼	03/11/16 08:42	03/18/16 19:50	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*64*		*24 - 110*	*03/11/16 08:42*	*03/18/16 19:50*	*50*
2-Fluorophenol (Surr)	*36*		*24 - 110*	*03/11/16 08:42*	*03/18/16 19:50*	*50*
2,4,6-Tribromophenol (Surr)	*48*		*10 - 110*	*03/11/16 08:42*	*03/18/16 19:50*	*50*
Nitrobenzene-d5 (Surr)	*109*		*20 - 110*	*03/11/16 08:42*	*03/18/16 19:50*	*50*
Phenol-d5 (Surr)	*37*		*26 - 110*	*03/11/16 08:42*	*03/18/16 19:50*	*50*
Terphenyl-d14 (Surr)	*68*		*36 - 110*	*03/11/16 08:42*	*03/18/16 19:50*	*50*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<130		350	130	ug/Kg	☼	03/11/16 07:38	03/16/16 15:34	5
Aroclor-1221	<170		350	170	ug/Kg	☼	03/11/16 07:38	03/16/16 15:34	5
Aroclor-1232	<210		350	210	ug/Kg	☼	03/11/16 07:38	03/16/16 15:34	5
Aroclor-1242	<120		350	120	ug/Kg	☼	03/11/16 07:38	03/16/16 15:34	5
Aroclor-1248	<85		350	85	ug/Kg	☼	03/11/16 07:38	03/16/16 15:34	5
Aroclor-1254	<150		350	150	ug/Kg	☼	03/11/16 07:38	03/16/16 15:34	5
Aroclor-1260	<96		350	96	ug/Kg	☼	03/11/16 07:38	03/16/16 15:34	5
Aroclor-1262	<110		350	110	ug/Kg	☼	03/11/16 07:38	03/16/16 15:34	5
Aroclor-1268	<140	^c	350	140	ug/Kg	☼	03/11/16 07:38	03/16/16 15:34	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*13 - 134*	*03/11/16 07:38*	*03/16/16 15:34*	*5*
DCB Decachlorobiphenyl	*173*	*p X*	*10 - 155*	*03/11/16 07:38*	*03/16/16 15:34*	*5*

Client Sample ID: SE-030916-JN-002

Date Collected: 03/09/16 12:55
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-2

Matrix: Solid
Percent Solids: 46.5

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.22	J B	0.41	0.0029	mg/Kg	☼	03/11/16 12:52	03/18/16 20:28	2
Arsenic	9.0		2.1	0.054	mg/Kg	☼	03/11/16 12:52	03/18/16 20:28	2
Beryllium	0.47		0.41	0.023	mg/Kg	☼	03/11/16 12:52	03/19/16 17:29	2
Cadmium	4.1		0.41	0.0077	mg/Kg	☼	03/11/16 12:52	03/18/16 20:28	2
Cobalt	6.0	B	0.41	0.0035	mg/Kg	☼	03/11/16 12:52	03/19/16 17:29	2
Chromium	113	B	0.83	0.12	mg/Kg	☼	03/11/16 12:52	03/19/16 17:29	2
Copper	91.8	B	0.83	0.20	mg/Kg	☼	03/11/16 12:52	03/19/16 17:29	2
Manganese	629		2.1	0.25	mg/Kg	☼	03/11/16 12:52	03/19/16 17:29	2
Nickel	14.7	B	0.83	0.081	mg/Kg	☼	03/11/16 12:52	03/19/16 17:29	2
Lead	706		0.41	0.093	mg/Kg	☼	03/11/16 12:52	03/19/16 17:29	2
Antimony	35.9		0.83	0.029	mg/Kg	☼	03/11/16 12:52	03/18/16 20:28	2
Selenium	2.2		2.1	0.083	mg/Kg	☼	03/11/16 12:52	03/18/16 20:28	2
Thallium	0.23	J	0.83	0.039	mg/Kg	☼	03/11/16 12:52	03/18/16 20:28	2
Vanadium	14.2		2.1	0.077	mg/Kg	☼	03/11/16 12:52	03/19/16 17:29	2
Zinc	1140	B	8.3	1.0	mg/Kg	☼	03/11/16 12:52	03/19/16 17:29	2
Barium	945		2.1	0.46	mg/Kg	☼	03/11/16 12:52	03/18/16 20:28	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	7.2		1.2	0.17	mg/Kg	☼	03/11/16 15:00	03/15/16 08:07	5

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	89500		2150	1080	mg/Kg	☼		03/16/16 13:49	1
Percent Solids	46.5		0.1	0.1	%			03/11/16 14:03	1
Percent Moisture	53.5		0.1	0.1	%			03/11/16 14:03	1

Client Sample ID: SE-030916-JN-003
Date Collected: 03/09/16 13:10
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-3
Matrix: Solid
Percent Solids: 45.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**300**	**J B**	320	91	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Benzene	<14		80	14	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Dichlorobromomethane	<4.6		80	4.6	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Bromoform	<3.8		80	3.8	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Bromomethane	<6.7		80	6.7	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
2-Butanone (MEK)	**89**	**J B**	320	18	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Carbon disulfide	<9.5		80	9.5	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Carbon tetrachloride	<10		80	10	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Chlorobenzene	<8.5		80	8.5	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Chloroethane	<7.1		80	7.1	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Chloroform	<5.8		80	5.8	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Chloromethane	<13		80	13	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,1-Dichloroethane	<5.5		80	5.5	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,2-Dichloroethane	<7.4		80	7.4	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,1-Dichloroethene	<13		80	13	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,2-Dichloropropane	<2.2		80	2.2	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,2,4-Trimethylbenzene	<9.3		80	9.3	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
cis-1,3-Dichloropropene	<11		80	11	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
trans-1,3-Dichloropropene	<4.6		80	4.6	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Ethylbenzene	<5.1		80	5.1	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
2-Hexanone	<11		320	11	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Methylene Chloride	**50**	**J B**	80	12	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
4-Methyl-2-pentanone (MIBK)	<20		320	20	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Styrene	<6.4		80	6.4	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,1,2,2-Tetrachloroethane	<5.0		80	5.0	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Tetrachloroethene	<13		80	13	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Toluene	<4.3		80	4.3	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Trichloroethene	<6.1		80	6.1	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,3,5-Trimethylbenzene	<4.6		80	4.6	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Vinyl chloride	<4.8		80	4.8	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Xylenes, Total	<8.7		160	8.7	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,1,1-Trichloroethane	<10		80	10	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,1,2-Trichloroethane	<5.9		80	5.9	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Cyclohexane	**69**	**J**	160	7.7	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,2-Dibromo-3-Chloropropane	<43		160	43	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Ethylene Dibromide	<8.5		80	8.5	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Dichlorodifluoromethane	<4.5		80	4.5	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
cis-1,2-Dichloroethene	<4.5		80	4.5	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
trans-1,2-Dichloroethene	<5.1		80	5.1	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Isopropylbenzene	**230**		80	3.2	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Methyl acetate	<32		160	32	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Methyl tert-butyl ether	<6.9		80	6.9	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<6.7		80	6.7	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,2,4-Trichlorobenzene	<6.1		80	6.1	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,2-Dichlorobenzene	<5.5		80	5.5	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,3-Dichlorobenzene	<11		80	11	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
1,4-Dichlorobenzene	<4.5		80	4.5	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Trichlorofluoromethane	<4.6		80	4.6	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1
Chlorodibromomethane	<5.9		80	5.9	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1

Client Sample ID: SE-030916-JN-003
Date Collected: 03/09/16 13:10
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-3
Matrix: Solid
Percent Solids: 45.9

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**1500**		160	9.3	ug/Kg	☼	03/11/16 12:48	03/11/16 20:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*58 - 123*	*03/11/16 12:48*	*03/11/16 20:10*	*1*
4-Bromofluorobenzene (Surr)	*166*	*X*	*52 - 136*	*03/11/16 12:48*	*03/11/16 20:10*	*1*
Toluene-d8 (Surr)	*139*	*X*	*67 - 125*	*03/11/16 12:48*	*03/11/16 20:10*	*1*
Dibromofluoromethane (Surr)	*98*		*37 - 132*	*03/11/16 12:48*	*03/11/16 20:10*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<380		5400	380	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
bis (2-chloroisopropyl) ether	<1000		11000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
2,4,5-Trichlorophenol	<2700		16000	2700	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
2,4,6-Trichlorophenol	<970		16000	970	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
2,4-Dichlorophenol	<2200		16000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
2,4-Dimethylphenol	<2200		16000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
2,4-Dinitrophenol	<2300		36000	2300	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
2,4-Dinitrotoluene	<1800		22000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
2,6-Dinitrotoluene	<2300		22000	2300	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
2-Chloronaphthalene	<49		5400	49	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
2-Chlorophenol	<890		5400	890	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
2-Methylnaphthalene	**4400**		720	54	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
2-Methylphenol	<1200		22000	1200	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
2-Nitroaniline	<990		22000	990	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
2-Nitrophenol	<900		5400	900	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
3,3'-Dichlorobenzidine	<2000		11000	2000	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
3-Nitroaniline	<1700		22000	1700	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
4,6-Dinitro-2-methylphenol	<1000	*	16000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
4-Bromophenyl phenyl ether	<1400		5400	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
4-Chloro-3-methylphenol	<2300		16000	2300	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
4-Chloroaniline	<1800		16000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
4-Chlorophenyl phenyl ether	<1400		5400	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
4-Nitroaniline	<2800		22000	2800	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
4-Nitrophenol	<1800		36000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Acetophenone	<1000		11000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Atrazine	<990		22000	990	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Benzaldehyde	<1300		11000	1300	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Bis(2-chloroethoxy)methane	<2400		11000	2400	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Bis(2-chloroethyl)ether	<220		11000	220	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Bis(2-ethylhexyl) phthalate	**11000**		7600	2100	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Butyl benzyl phthalate	<1100		7600	1100	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Caprolactam	**28000**	**J**	36000	4000	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Carbazole	<2900		5400	2900	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Dibenzofuran	**880**	**J**	5400	72	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Diethyl phthalate	<1700		7600	1700	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Dimethyl phthalate	<1800		7600	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Di-n-butyl phthalate	**4100**	**J**	7600	1600	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Di-n-octyl phthalate	<860		7600	860	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Hexachlorobenzene	<230		720	230	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Hexachlorobutadiene	<610		5400	610	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50

Client Sample ID: SE-030916-JN-003

Date Collected: 03/09/16 13:10
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-3

Matrix: Solid
Percent Solids: 45.9

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<880		36000	880	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Hexachloroethane	<980		5400	980	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Isophorone	<1400		5400	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Nitrobenzene	<240		11000	240	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
N-Nitrosodi-n-propylamine	<680		5400	680	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
N-Nitrosodiphenylamine	<2300		5400	2300	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Pentachlorophenol	<990		16000	990	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Phenol	<790		5400	790	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
3 & 4 Methylphenol	<2200		43000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Fluorene	**1800**		720	58	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Acenaphthylene	**450**	**J**	720	38	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Benzo[g,h,i]perylene	**1600**		720	38	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Phenanthrene	**11000**		720	79	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Benzo[k]fluoranthene	**1200**		720	74	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Benzo[a]pyrene	**3000**		720	70	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Anthracene	**1800**		720	85	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Pyrene	**9000**		720	48	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Dibenz(a,h)anthracene	<72		720	72	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Naphthalene	**2200**		720	89	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Fluoranthene	**9500**		720	60	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Benzo[a]anthracene	**4200**		720	68	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Indeno[1,2,3-cd]pyrene	**1500**		720	38	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Chrysene	**5400**		720	120	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Acenaphthene	**1400**		720	83	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50
Benzo[b]fluoranthene	**3900**		720	64	ug/Kg	☼	03/11/16 08:42	03/18/16 19:26	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*178*	*X*	*24 - 110*	*03/11/16 08:42*	*03/18/16 19:26*	*50*
2-Fluorophenol (Surr)	*192*	*X*	*24 - 110*	*03/11/16 08:42*	*03/18/16 19:26*	*50*
2,4,6-Tribromophenol (Surr)	*192*	*X*	*10 - 110*	*03/11/16 08:42*	*03/18/16 19:26*	*50*
Nitrobenzene-d5 (Surr)	*0*	*X*	*20 - 110*	*03/11/16 08:42*	*03/18/16 19:26*	*50*
Phenol-d5 (Surr)	*208*	*X*	*26 - 110*	*03/11/16 08:42*	*03/18/16 19:26*	*50*
Terphenyl-d14 (Surr)	*183*	*X*	*36 - 110*	*03/11/16 08:42*	*03/18/16 19:26*	*50*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<130		370	130	ug/Kg	☼	03/11/16 07:38	03/16/16 15:51	5
Aroclor-1221	<180		370	180	ug/Kg	☼	03/11/16 07:38	03/16/16 15:51	5
Aroclor-1232	<220		370	220	ug/Kg	☼	03/11/16 07:38	03/16/16 15:51	5
Aroclor-1242	<120		370	120	ug/Kg	☼	03/11/16 07:38	03/16/16 15:51	5
Aroclor-1248	<89		370	89	ug/Kg	☼	03/11/16 07:38	03/16/16 15:51	5
Aroclor-1254	<160		370	160	ug/Kg	☼	03/11/16 07:38	03/16/16 15:51	5
Aroclor-1260	<100		370	100	ug/Kg	☼	03/11/16 07:38	03/16/16 15:51	5
Aroclor-1262	<110		370	110	ug/Kg	☼	03/11/16 07:38	03/16/16 15:51	5
Aroclor-1268	<140	^c	370	140	ug/Kg	☼	03/11/16 07:38	03/16/16 15:51	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*126*	*p*	*13 - 134*	*03/11/16 07:38*	*03/16/16 15:51*	*5*
DCB Decachlorobiphenyl	*458*	*p X*	*10 - 155*	*03/11/16 07:38*	*03/16/16 15:51*	*5*

Client Sample ID: SE-030916-JN-003

Date Collected: 03/09/16 13:10
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-3

Matrix: Solid
Percent Solids: 45.9

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.028	J	0.50	0.0029	mg/L		03/16/16 11:10	03/17/16 21:26	1
Barium	0.61	J B	10.0	0.0010	mg/L		03/16/16 11:10	03/17/16 21:26	1
Cadmium	0.00070	J	0.10	0.00014	mg/L		03/16/16 11:10	03/17/16 21:26	1
Chromium	0.0049	J B	0.50	0.00055	mg/L		03/16/16 11:10	03/17/16 21:26	1
Lead	0.11	J	0.50	0.0019	mg/L		03/16/16 11:10	03/17/16 21:26	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:10	03/17/16 21:26	1
Silver	0.0019	J	0.50	0.00092	mg/L		03/16/16 11:10	03/17/16 21:26	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.26	J B	0.43	0.0030	mg/Kg	☼	03/11/16 12:52	03/18/16 20:32	2
Arsenic	8.4		2.1	0.056	mg/Kg	☼	03/11/16 12:52	03/18/16 20:32	2
Beryllium	0.48		0.43	0.024	mg/Kg	☼	03/11/16 12:52	03/19/16 17:33	2
Cadmium	7.6		0.43	0.0079	mg/Kg	☼	03/11/16 12:52	03/18/16 20:32	2
Cobalt	5.9	B	0.43	0.0036	mg/Kg	☼	03/11/16 12:52	03/19/16 17:33	2
Chromium	102	B	0.85	0.13	mg/Kg	☼	03/11/16 12:52	03/19/16 17:33	2
Copper	88.7	B	0.85	0.21	mg/Kg	☼	03/11/16 12:52	03/19/16 17:33	2
Manganese	525		2.1	0.26	mg/Kg	☼	03/11/16 12:52	03/19/16 17:33	2
Nickel	15.0	B	0.85	0.083	mg/Kg	☼	03/11/16 12:52	03/19/16 17:33	2
Lead	637		0.43	0.096	mg/Kg	☼	03/11/16 12:52	03/19/16 17:33	2
Antimony	15.0		0.85	0.030	mg/Kg	☼	03/11/16 12:52	03/18/16 20:32	2
Selenium	3.2		2.1	0.085	mg/Kg	☼	03/11/16 12:52	03/18/16 20:32	2
Thallium	0.21	J	0.85	0.041	mg/Kg	☼	03/11/16 12:52	03/18/16 20:32	2
Vanadium	14.4		2.1	0.079	mg/Kg	☼	03/11/16 12:52	03/19/16 17:33	2
Zinc	1250	B	8.5	1.1	mg/Kg	☼	03/11/16 12:52	03/19/16 17:33	2
Barium	1010		2.1	0.47	mg/Kg	☼	03/11/16 12:52	03/18/16 20:32	2

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 12:03	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.6		0.20	0.028	mg/Kg	☼	03/11/16 15:00	03/15/16 08:08	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	96200		2180	1090	mg/Kg	☼		03/16/16 14:31	1
Percent Solids	45.9		0.1	0.1	%			03/11/16 14:03	1
Percent Moisture	54.1		0.1	0.1	%			03/11/16 14:03	1

Client Sample ID: SE-030916-JN-004
Date Collected: 03/09/16 14:25
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-4
Matrix: Solid
Percent Solids: 42.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<13		46	13	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Benzene	<2.0		11	2.0	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Dichlorobromomethane	<0.66		11	0.66	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Bromoform	<0.55		11	0.55	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Bromomethane	<0.96		11	0.96	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
2-Butanone (MEK)	<2.5		46	2.5	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Carbon disulfide	<1.3		11	1.3	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Carbon tetrachloride	<1.5		11	1.5	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Chlorobenzene	<1.2		11	1.2	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Chloroethane	<1.0		11	1.0	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Chloroform	<0.82		11	0.82	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Chloromethane	<1.8		11	1.8	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,1-Dichloroethane	<0.77		11	0.77	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,2-Dichloroethane	<1.0		11	1.0	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,1-Dichloroethene	<1.8		11	1.8	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,2-Dichloropropane	<0.32		11	0.32	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,2,4-Trimethylbenzene	<1.3		11	1.3	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
cis-1,3-Dichloropropene	<1.6		11	1.6	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
trans-1,3-Dichloropropene	<0.66		11	0.66	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Ethylbenzene	<0.73		11	0.73	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
2-Hexanone	<1.5		46	1.5	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Methylene Chloride	**4.7**	**J B**	11	1.7	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
4-Methyl-2-pentanone (MIBK)	<2.8		46	2.8	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Styrene	<0.91		11	0.91	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,1,2,2-Tetrachloroethane	<0.71		11	0.71	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Tetrachloroethene	<1.8		11	1.8	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Toluene	<0.61		11	0.61	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Trichloroethene	<0.86		11	0.86	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,3,5-Trimethylbenzene	<0.66		11	0.66	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Vinyl chloride	<0.68		11	0.68	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Xylenes, Total	<1.2		23	1.2	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,1,1-Trichloroethane	<1.5		11	1.5	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,1,2-Trichloroethane	<0.84		11	0.84	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Cyclohexane	<1.1		23	1.1	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,2-Dibromo-3-Chloropropane	<6.2		23	6.2	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Ethylene Dibromide	<1.2		11	1.2	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Dichlorodifluoromethane	<0.64		11	0.64	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
cis-1,2-Dichloroethene	<0.64		11	0.64	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
trans-1,2-Dichloroethene	<0.73		11	0.73	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Isopropylbenzene	<0.46		11	0.46	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Methyl acetate	<4.6		23	4.6	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Methyl tert-butyl ether	<0.98		11	0.98	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.96		11	0.96	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,2,4-Trichlorobenzene	<0.86		11	0.86	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,2-Dichlorobenzene	<0.77		11	0.77	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,3-Dichlorobenzene	<1.6		11	1.6	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
1,4-Dichlorobenzene	<0.64		11	0.64	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Trichlorofluoromethane	<0.66		11	0.66	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1
Chlorodibromomethane	<0.84		11	0.84	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: SE-030916-JN-004
Date Collected: 03/09/16 14:25
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-4
Matrix: Solid
Percent Solids: 42.8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	<1.3		23	1.3	ug/Kg	☼	03/11/16 12:48	03/11/16 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*58 - 123*	*03/11/16 12:48*	*03/11/16 16:46*	*1*
4-Bromofluorobenzene (Surr)	*112*		*52 - 136*	*03/11/16 12:48*	*03/11/16 16:46*	*1*
Toluene-d8 (Surr)	*108*		*67 - 125*	*03/11/16 12:48*	*03/11/16 16:46*	*1*
Dibromofluoromethane (Surr)	*100*		*37 - 132*	*03/11/16 12:48*	*03/11/16 16:46*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<170		2400	170	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
bis (2-chloroisopropyl) ether	<450		4700	450	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
2,4,5-Trichlorophenol	<1200		7100	1200	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
2,4,6-Trichlorophenol	<420		7100	420	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
2,4-Dichlorophenol	<950		7100	950	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
2,4-Dimethylphenol	<950		7100	950	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
2,4-Dinitrophenol	<1000		16000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
2,4-Dinitrotoluene	<810		9500	810	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
2,6-Dinitrotoluene	<1000		9500	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
2-Chloronaphthalene	<21		2400	21	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
2-Chlorophenol	<390		2400	390	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
2-Methylnaphthalene	**730**		320	24	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
2-Methylphenol	<520		9500	520	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
2-Nitroaniline	<430		9500	430	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
2-Nitrophenol	<390		2400	390	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
3,3'-Dichlorobenzidine	<850		4700	850	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
3-Nitroaniline	<760		9500	760	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
4,6-Dinitro-2-methylphenol	<440	*	7100	440	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
4-Bromophenyl phenyl ether	<620		2400	620	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
4-Chloro-3-methylphenol	<1000		7100	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
4-Chloroaniline	<810		7100	810	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
4-Chlorophenyl phenyl ether	<620		2400	620	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
4-Nitroaniline	<1200		9500	1200	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
4-Nitrophenol	<810		16000	810	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Acetophenone	<440		4700	440	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Atrazine	<430		9500	430	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Benzaldehyde	<570		4700	570	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Bis(2-chloroethoxy)methane	<1000		4700	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Bis(2-chloroethyl)ether	<95		4700	95	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Bis(2-ethylhexyl) phthalate	**9200**		3300	900	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Butyl benzyl phthalate	**1600**	**J**	3300	470	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Caprolactam	<1800		16000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Carbazole	<1300		2400	1300	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Dibenzofuran	<31		2400	31	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Diethyl phthalate	<760		3300	760	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Dimethyl phthalate	<810		3300	810	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Di-n-butyl phthalate	**2400**	**J**	3300	710	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Di-n-octyl phthalate	<380		3300	380	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Hexachlorobenzene	<100		320	100	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Hexachlorobutadiene	<270		2400	270	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20

Client Sample ID: SE-030916-JN-004

Date Collected: 03/09/16 14:25
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-4

Matrix: Solid
Percent Solids: 42.8

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<380		16000	380	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Hexachloroethane	<430		2400	430	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Isophorone	<620		2400	620	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Nitrobenzene	<100		4700	100	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
N-Nitrosodi-n-propylamine	<300		2400	300	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
N-Nitrosodiphenylamine	<1000		2400	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Pentachlorophenol	<430		7100	430	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
Phenol	<350		2400	350	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20
3 & 4 Methylphenol	<950		19000	950	ug/Kg	☼	03/11/16 08:42	03/18/16 18:14	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*66*		*24 - 110*	*03/11/16 08:42*	*03/18/16 18:14*	*20*
2-Fluorophenol (Surr)	*75*		*24 - 110*	*03/11/16 08:42*	*03/18/16 18:14*	*20*
2,4,6-Tribromophenol (Surr)	*44*		*10 - 110*	*03/11/16 08:42*	*03/18/16 18:14*	*20*
Nitrobenzene-d5 (Surr)	*132*	*X*	*20 - 110*	*03/11/16 08:42*	*03/18/16 18:14*	*20*
Phenol-d5 (Surr)	*79*		*26 - 110*	*03/11/16 08:42*	*03/18/16 18:14*	*20*
Terphenyl-d14 (Surr)	*74*		*36 - 110*	*03/11/16 08:42*	*03/18/16 18:14*	*20*

Method: 1630 - Methyl Mercury (GC)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.47**		0.22	0.065	ug/Kg	☼	03/14/16 11:58	03/18/16 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Propyl Mercury Chloride	*42*		*10 - 149*	*03/14/16 11:58*	*03/18/16 21:46*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<140		390	140	ug/Kg	☼	03/11/16 07:38	03/18/16 13:58	5
Aroclor-1221	<190		390	190	ug/Kg	☼	03/11/16 07:38	03/18/16 13:58	5
Aroclor-1232	<230		390	230	ug/Kg	☼	03/11/16 07:38	03/18/16 13:58	5
Aroclor-1242	<130	^c	390	130	ug/Kg	☼	03/11/16 07:38	03/18/16 13:58	5
Aroclor-1248	<94		390	94	ug/Kg	☼	03/11/16 07:38	03/18/16 13:58	5
Aroclor-1254	**210**	**J**	390	160	ug/Kg	☼	03/11/16 07:38	03/18/16 13:58	5
Aroclor-1260	<110		390	110	ug/Kg	☼	03/11/16 07:38	03/18/16 13:58	5
Aroclor-1262	<120		390	120	ug/Kg	☼	03/11/16 07:38	03/18/16 13:58	5
Aroclor-1268	**600**		390	150	ug/Kg	☼	03/11/16 07:38	03/18/16 13:58	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*191*	*X*	*13 - 134*	*03/11/16 07:38*	*03/18/16 13:58*	*5*
DCB Decachlorobiphenyl	*1287*	*^c X*	*10 - 155*	*03/11/16 07:38*	*03/18/16 13:58*	*5*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.35**	**J B**	0.44	0.0031	mg/Kg	☼	03/11/16 12:52	03/18/16 20:36	2
Arsenic	**9.3**		2.2	0.058	mg/Kg	☼	03/11/16 12:52	03/18/16 20:36	2
Beryllium	**0.30**	**J**	0.44	0.024	mg/Kg	☼	03/11/16 12:52	03/19/16 17:37	2
Cadmium	**9.7**		0.44	0.0082	mg/Kg	☼	03/11/16 12:52	03/18/16 20:36	2
Cobalt	**4.5**	**B**	0.44	0.0038	mg/Kg	☼	03/11/16 12:52	03/19/16 17:37	2
Chromium	**152**	**B**	0.89	0.13	mg/Kg	☼	03/11/16 12:52	03/19/16 17:37	2
Copper	**93.9**	**B**	0.89	0.22	mg/Kg	☼	03/11/16 12:52	03/19/16 17:37	2
Manganese	**357**		2.2	0.27	mg/Kg	☼	03/11/16 12:52	03/19/16 17:37	2

Client Sample ID: SE-030916-JN-004
Date Collected: 03/09/16 14:25
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-4
Matrix: Solid
Percent Solids: 42.8

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	13.5	B	0.89	0.087	mg/Kg	☼	03/11/16 12:52	03/19/16 17:37	2
Lead	1880		2.2	0.50	mg/Kg	☼	03/11/16 12:52	03/19/16 17:41	10
Antimony	33.4		0.89	0.031	mg/Kg	☼	03/11/16 12:52	03/18/16 20:36	2
Selenium	2.3		2.2	0.089	mg/Kg	☼	03/11/16 12:52	03/18/16 20:36	2
Thallium	0.14	J	0.89	0.042	mg/Kg	☼	03/11/16 12:52	03/18/16 20:36	2
Vanadium	9.2		2.2	0.082	mg/Kg	☼	03/11/16 12:52	03/19/16 17:37	2
Zinc	1480	B	8.9	1.1	mg/Kg	☼	03/11/16 12:52	03/19/16 17:37	2
Barium	1520		2.2	0.49	mg/Kg	☼	03/11/16 12:52	03/18/16 20:36	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.3		0.20	0.028	mg/Kg	☼	03/11/16 15:00	03/15/16 08:09	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	109000		2340	1170	mg/Kg	☼		03/16/16 14:52	1
Percent Solids	42.8		0.1	0.1	%			03/11/16 14:03	1
Percent Moisture	57.2		0.1	0.1	%			03/11/16 14:03	1

Client Sample ID: SE-030916-JN-005
Date Collected: 03/09/16 14:35
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-5
Matrix: Solid
Percent Solids: 52.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**33**	**J B**	35	9.9	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Benzene	<1.6		8.6	1.6	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Dichlorobromomethane	<0.50		8.6	0.50	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Bromoform	<0.41		8.6	0.41	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Bromomethane	<0.73		8.6	0.73	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
2-Butanone (MEK)	**8.3**	**J B**	35	1.9	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Carbon disulfide	<1.0		8.6	1.0	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Carbon tetrachloride	<1.1		8.6	1.1	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Chlorobenzene	<0.92		8.6	0.92	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Chloroethane	<0.76		8.6	0.76	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Chloroform	<0.62		8.6	0.62	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Chloromethane	<1.4		8.6	1.4	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,1-Dichloroethane	<0.59		8.6	0.59	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,2-Dichloroethane	<0.80		8.6	0.80	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,1-Dichloroethene	<1.4		8.6	1.4	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,2-Dichloropropane	<0.24		8.6	0.24	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,2,4-Trimethylbenzene	<1.0		8.6	1.0	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
cis-1,3-Dichloropropene	<1.2		8.6	1.2	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
trans-1,3-Dichloropropene	<0.50		8.6	0.50	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Ethylbenzene	<0.55		8.6	0.55	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
2-Hexanone	<1.2		35	1.2	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Methylene Chloride	**5.0**	**J B**	8.6	1.3	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
4-Methyl-2-pentanone (MIBK)	<2.1		35	2.1	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Styrene	<0.69		8.6	0.69	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,1,2,2-Tetrachloroethane	<0.54		8.6	0.54	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Tetrachloroethene	<1.4		8.6	1.4	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Toluene	<0.47		8.6	0.47	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Trichloroethene	<0.66		8.6	0.66	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,3,5-Trimethylbenzene	<0.50		8.6	0.50	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Vinyl chloride	<0.52		8.6	0.52	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Xylenes, Total	<0.93		17	0.93	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,1,1-Trichloroethane	<1.1		8.6	1.1	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,1,2-Trichloroethane	<0.64		8.6	0.64	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Cyclohexane	<0.83		17	0.83	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,2-Dibromo-3-Chloropropane	<4.7		17	4.7	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Ethylene Dibromide	<0.92		8.6	0.92	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Dichlorodifluoromethane	<0.48		8.6	0.48	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
cis-1,2-Dichloroethene	<0.48		8.6	0.48	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
trans-1,2-Dichloroethene	<0.55		8.6	0.55	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Isopropylbenzene	<0.35		8.6	0.35	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Methyl acetate	<3.5		17	3.5	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Methyl tert-butyl ether	<0.74		8.6	0.74	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.73		8.6	0.73	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,2,4-Trichlorobenzene	<0.66		8.6	0.66	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,2-Dichlorobenzene	<0.59		8.6	0.59	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,3-Dichlorobenzene	<1.2		8.6	1.2	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
1,4-Dichlorobenzene	<0.48		8.6	0.48	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Trichlorofluoromethane	<0.50		8.6	0.50	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1
Chlorodibromomethane	<0.64		8.6	0.64	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: SE-030916-JN-005
Date Collected: 03/09/16 14:35
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-5
Matrix: Solid
Percent Solids: 52.7

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**83**		17	1.0	ug/Kg	☼	03/11/16 12:48	03/11/16 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*58 - 123*	*03/11/16 12:48*	*03/11/16 17:12*	*1*
4-Bromofluorobenzene (Surr)	*195*	*X*	*52 - 136*	*03/11/16 12:48*	*03/11/16 17:12*	*1*
Toluene-d8 (Surr)	*150*	*X*	*67 - 125*	*03/11/16 12:48*	*03/11/16 17:12*	*1*
Dibromofluoromethane (Surr)	*97*		*37 - 132*	*03/11/16 12:48*	*03/11/16 17:12*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<170		2500	170	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
bis (2-chloroisopropyl) ether	<470		4900	470	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
2,4,5-Trichlorophenol	<1200		7400	1200	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
2,4,6-Trichlorophenol	<440		7400	440	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
2,4-Dichlorophenol	<980		7400	980	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
2,4-Dimethylphenol	<980		7400	980	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
2,4-Dinitrophenol	<1000		16000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
2,4-Dinitrotoluene	<840		9800	840	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
2,6-Dinitrotoluene	<1000		9800	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
2-Chloronaphthalene	<22		2500	22	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
2-Chlorophenol	<400		2500	400	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
2-Methylnaphthalene	**470**		330	25	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
2-Methylphenol	<540		9800	540	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
2-Nitroaniline	<450		9800	450	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
2-Nitrophenol	<410		2500	410	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
3,3'-Dichlorobenzidine	<880		4900	880	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
3-Nitroaniline	<790		9800	790	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
4,6-Dinitro-2-methylphenol	<450	*	7400	450	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
4-Bromophenyl phenyl ether	<640		2500	640	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
4-Chloro-3-methylphenol	<1000		7400	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
4-Chloroaniline	<840		7400	840	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
4-Chlorophenyl phenyl ether	<640		2500	640	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
4-Nitroaniline	<1300		9800	1300	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
4-Nitrophenol	<840		16000	840	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Acetophenone	<450		4900	450	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Atrazine	<450		9800	450	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Benzaldehyde	<590		4900	590	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Bis(2-chloroethoxy)methane	<1100		4900	1100	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Bis(2-chloroethyl)ether	<98		4900	98	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Bis(2-ethylhexyl) phthalate	<930		3400	930	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Butyl benzyl phthalate	<490		3400	490	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Caprolactam	<1800		16000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Carbazole	<1300		2500	1300	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Dibenzofuran	<32		2500	32	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Diethyl phthalate	<790		3400	790	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Dimethyl phthalate	<840		3400	840	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Di-n-butyl phthalate	**1200**	**J**	3400	740	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Di-n-octyl phthalate	<390		3400	390	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Hexachlorobenzene	<100		330	100	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Hexachlorobutadiene	<280		2500	280	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20

Client Sample ID: SE-030916-JN-005
Date Collected: 03/09/16 14:35
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-5
Matrix: Solid
Percent Solids: 52.7

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<400		16000	400	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Hexachloroethane	<440		2500	440	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Isophorone	<640		2500	640	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Nitrobenzene	<110		4900	110	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
N-Nitrosodi-n-propylamine	<310		2500	310	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
N-Nitrosodiphenylamine	<1000		2500	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Pentachlorophenol	<450		7400	450	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Phenol	<360		2500	360	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
3 & 4 Methylphenol	<980		20000	980	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Fluorene	<26		330	26	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Acenaphthylene	<17		330	17	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Benzo[g,h,i]perylene	**350**		330	17	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Phenanthrene	**1100**		330	36	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Benzo[k]fluoranthene	**330**		330	33	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Benzo[a]pyrene	**660**		330	31	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Anthracene	**410**		330	38	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Pyrene	**1700**		330	22	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Dibenz(a,h)anthracene	<32		330	32	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Naphthalene	**380**		330	40	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Fluoranthene	**2000**		330	27	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Benzo[a]anthracene	**840**		330	31	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Indeno[1,2,3-cd]pyrene	**310**	**J**	330	17	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Chrysene	**940**		330	54	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Acenaphthene	**290**	**J**	330	37	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20
Benzo[b]fluoranthene	**650**		330	29	ug/Kg	☼	03/11/16 08:42	03/18/16 17:50	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*87*		*24 - 110*	*03/11/16 08:42*	*03/18/16 17:50*	*20*
2-Fluorophenol (Surr)	*74*		*24 - 110*	*03/11/16 08:42*	*03/18/16 17:50*	*20*
2,4,6-Tribromophenol (Surr)	*60*		*10 - 110*	*03/11/16 08:42*	*03/18/16 17:50*	*20*
Nitrobenzene-d5 (Surr)	*119*	*X*	*20 - 110*	*03/11/16 08:42*	*03/18/16 17:50*	*20*
Phenol-d5 (Surr)	*58*		*26 - 110*	*03/11/16 08:42*	*03/18/16 17:50*	*20*
Terphenyl-d14 (Surr)	*89*		*36 - 110*	*03/11/16 08:42*	*03/18/16 17:50*	*20*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<110		320	110	ug/Kg	☼	03/11/16 07:38	03/16/16 16:26	5
Aroclor-1221	<150		320	150	ug/Kg	☼	03/11/16 07:38	03/16/16 16:26	5
Aroclor-1232	<190		320	190	ug/Kg	☼	03/11/16 07:38	03/16/16 16:26	5
Aroclor-1242	<110		320	110	ug/Kg	☼	03/11/16 07:38	03/16/16 16:26	5
Aroclor-1248	<76		320	76	ug/Kg	☼	03/11/16 07:38	03/16/16 16:26	5
Aroclor-1254	<130		320	130	ug/Kg	☼	03/11/16 07:38	03/16/16 16:26	5
Aroclor-1260	<86		320	86	ug/Kg	☼	03/11/16 07:38	03/16/16 16:26	5
Aroclor-1262	<96		320	96	ug/Kg	☼	03/11/16 07:38	03/16/16 16:26	5
Aroclor-1268	<120	^c	320	120	ug/Kg	☼	03/11/16 07:38	03/16/16 16:26	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*76*		*13 - 134*	*03/11/16 07:38*	*03/16/16 16:26*	*5*
DCB Decachlorobiphenyl	*56*	*p*	*10 - 155*	*03/11/16 07:38*	*03/16/16 16:26*	*5*

Client Sample ID: SE-030916-JN-005

Date Collected: 03/09/16 14:35
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-5

Matrix: Solid
Percent Solids: 52.7

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.33	J B	0.35	0.0025	mg/Kg	☼	03/11/16 12:52	03/18/16 20:48	2
Arsenic	6.3		1.8	0.046	mg/Kg	☼	03/11/16 12:52	03/18/16 20:48	2
Beryllium	0.40		0.35	0.020	mg/Kg	☼	03/11/16 12:52	03/19/16 17:45	2
Cadmium	3.4		0.35	0.0066	mg/Kg	☼	03/11/16 12:52	03/18/16 20:48	2
Cobalt	4.5	B	0.35	0.0030	mg/Kg	☼	03/11/16 12:52	03/19/16 17:45	2
Chromium	119	B	0.71	0.11	mg/Kg	☼	03/11/16 12:52	03/19/16 17:45	2
Copper	51.6	B	0.71	0.17	mg/Kg	☼	03/11/16 12:52	03/19/16 17:45	2
Manganese	342		1.8	0.21	mg/Kg	☼	03/11/16 12:52	03/19/16 17:45	2
Nickel	11.3	B	0.71	0.069	mg/Kg	☼	03/11/16 12:52	03/19/16 17:45	2
Lead	583		0.35	0.080	mg/Kg	☼	03/11/16 12:52	03/19/16 17:45	2
Antimony	15.8		0.71	0.025	mg/Kg	☼	03/11/16 12:52	03/18/16 20:48	2
Selenium	1.7	J	1.8	0.071	mg/Kg	☼	03/11/16 12:52	03/18/16 20:48	2
Thallium	0.14	J	0.71	0.034	mg/Kg	☼	03/11/16 12:52	03/18/16 20:48	2
Vanadium	11.3		1.8	0.066	mg/Kg	☼	03/11/16 12:52	03/19/16 17:45	2
Zinc	641	B	7.1	0.89	mg/Kg	☼	03/11/16 12:52	03/19/16 17:45	2
Barium	530		1.8	0.39	mg/Kg	☼	03/11/16 12:52	03/18/16 20:48	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.7		0.21	0.030	mg/Kg	☼	03/11/16 15:00	03/15/16 08:10	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	22700		1900	949	mg/Kg	☼		03/16/16 15:02	1
Percent Solids	52.7		0.1	0.1	%			03/11/16 14:03	1
Percent Moisture	47.3		0.1	0.1	%			03/11/16 14:03	1

Client Sample ID: SE-030916-JN-006
Date Collected: 03/09/16 14:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-6
Matrix: Solid
Percent Solids: 64.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**74**	**J B**	110	33	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Benzene	<5.1		29	5.1	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Dichlorobromomethane	<1.7		29	1.7	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Bromoform	<1.4		29	1.4	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Bromomethane	<2.4		29	2.4	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
2-Butanone (MEK)	**23**	**J B**	110	6.4	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Carbon disulfide	<3.4		29	3.4	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Carbon tetrachloride	<3.7		29	3.7	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Chlorobenzene	<3.0		29	3.0	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Chloroethane	<2.5		29	2.5	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Chloroform	<2.1		29	2.1	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Chloromethane	<4.5		29	4.5	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,1-Dichloroethane	<1.9		29	1.9	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,2-Dichloroethane	<2.6		29	2.6	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,1-Dichloroethene	<4.6		29	4.6	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,2-Dichloropropane	<0.80		29	0.80	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,2,4-Trimethylbenzene	<3.3		29	3.3	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
cis-1,3-Dichloropropene	<4.1		29	4.1	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
trans-1,3-Dichloropropene	<1.7		29	1.7	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Ethylbenzene	<1.8		29	1.8	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
2-Hexanone	<3.9		110	3.9	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Methylene Chloride	**16**	**J B**	29	4.2	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
4-Methyl-2-pentanone (MIBK)	<7.0		110	7.0	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Styrene	<2.3		29	2.3	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,1,2,2-Tetrachloroethane	<1.8		29	1.8	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Tetrachloroethene	<4.6		29	4.6	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Toluene	<1.5		29	1.5	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Trichloroethene	<2.2		29	2.2	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,3,5-Trimethylbenzene	<1.7		29	1.7	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Vinyl chloride	<1.7		29	1.7	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Xylenes, Total	<3.1		57	3.1	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,1,1-Trichloroethane	<3.7		29	3.7	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,1,2-Trichloroethane	<2.1		29	2.1	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Cyclohexane	<2.7		57	2.7	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,2-Dibromo-3-Chloropropane	<15		57	15	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Ethylene Dibromide	<3.0		29	3.0	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Dichlorodifluoromethane	<1.6		29	1.6	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
cis-1,2-Dichloroethene	<1.6		29	1.6	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
trans-1,2-Dichloroethene	<1.8		29	1.8	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Isopropylbenzene	<1.1		29	1.1	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Methyl acetate	<11		57	11	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Methyl tert-butyl ether	<2.5		29	2.5	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<2.4		29	2.4	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,2,4-Trichlorobenzene	<2.2		29	2.2	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,2-Dichlorobenzene	<1.9		29	1.9	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,3-Dichlorobenzene	<3.9		29	3.9	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
1,4-Dichlorobenzene	<1.6		29	1.6	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Trichlorofluoromethane	<1.7		29	1.7	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1
Chlorodibromomethane	<2.1		29	2.1	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: SE-030916-JN-006
Date Collected: 03/09/16 14:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-6
Matrix: Solid
Percent Solids: 64.4

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**22**	**J**	57	3.3	ug/Kg	☼	03/11/16 12:48	03/11/16 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*58 - 123*	*03/11/16 12:48*	*03/11/16 18:03*	*1*
4-Bromofluorobenzene (Surr)	*103*		*52 - 136*	*03/11/16 12:48*	*03/11/16 18:03*	*1*
Toluene-d8 (Surr)	*114*		*67 - 125*	*03/11/16 12:48*	*03/11/16 18:03*	*1*
Dibromofluoromethane (Surr)	*95*		*37 - 132*	*03/11/16 12:48*	*03/11/16 18:03*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<110		1600	110	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
bis (2-chloroisopropyl) ether	<300		3100	300	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
2,4,5-Trichlorophenol	<780		4700	780	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
2,4,6-Trichlorophenol	<280		4700	280	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
2,4-Dichlorophenol	<630		4700	630	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
2,4-Dimethylphenol	<630		4700	630	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
2,4-Dinitrophenol	<660		10000	660	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
2,4-Dinitrotoluene	<530		6300	530	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
2,6-Dinitrotoluene	<660		6300	660	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
2-Chloronaphthalene	<14		1600	14	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
2-Chlorophenol	<260		1600	260	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
2-Methylnaphthalene	**610**		210	16	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
2-Methylphenol	<340		6300	340	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
2-Nitroaniline	<290		6300	290	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
2-Nitrophenol	<260		1600	260	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
3,3'-Dichlorobenzidine	<560		3100	560	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
3-Nitroaniline	<500		6300	500	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
4,6-Dinitro-2-methylphenol	<290	*	4700	290	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
4-Bromophenyl phenyl ether	<410		1600	410	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
4-Chloro-3-methylphenol	<660		4700	660	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
4-Chloroaniline	<530		4700	530	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
4-Chlorophenyl phenyl ether	<410		1600	410	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
4-Nitroaniline	<810		6300	810	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
4-Nitrophenol	<530		10000	530	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Acetophenone	<290		3100	290	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Atrazine	<290		6300	290	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Benzaldehyde	<380		3100	380	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Bis(2-chloroethoxy)methane	<690		3100	690	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Bis(2-chloroethyl)ether	<63		3100	63	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Bis(2-ethylhexyl) phthalate	**1800**	**J**	2200	600	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Butyl benzyl phthalate	**4400**		2200	310	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Caprolactam	<1200		10000	1200	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Carbazole	<850		1600	850	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Dibenzofuran	<21		1600	21	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Diethyl phthalate	<500		2200	500	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Dimethyl phthalate	<530		2200	530	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Di-n-butyl phthalate	**2400**		2200	470	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Di-n-octyl phthalate	<250		2200	250	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Hexachlorobenzene	<66		210	66	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Hexachlorobutadiene	<180		1600	180	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20

Client Sample ID: SE-030916-JN-006
Date Collected: 03/09/16 14:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-6
Matrix: Solid
Percent Solids: 64.4

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<250		10000	250	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Hexachloroethane	<280		1600	280	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Isophorone	<410		1600	410	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Nitrobenzene	<69		3100	69	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
N-Nitrosodi-n-propylamine	<200		1600	200	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
N-Nitrosodiphenylamine	<660		1600	660	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Pentachlorophenol	<290		4700	290	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Phenol	<230		1600	230	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
3 & 4 Methylphenol	<630		13000	630	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Fluorene	**230**		210	17	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Acenaphthylene	<11		210	11	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Benzo[g,h,i]perylene	**560**		210	11	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Phenanthrene	**1700**		210	23	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Benzo[k]fluoranthene	**360**		210	21	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Benzo[a]pyrene	**980**		210	20	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Anthracene	**420**		210	24	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Pyrene	**2600**		210	14	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Dibenz(a,h)anthracene	<21		210	21	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Naphthalene	**370**		210	26	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Fluoranthene	**2800**		210	17	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Benzo[a]anthracene	**1100**		210	20	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Indeno[1,2,3-cd]pyrene	**530**		210	11	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Chrysene	**1600**		210	34	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Acenaphthene	<24		210	24	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20
Benzo[b]fluoranthene	**1500**		210	18	ug/Kg	☼	03/11/16 08:42	03/18/16 18:38	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*79*		*24 - 110*	*03/11/16 08:42*	*03/18/16 18:38*	*20*
2-Fluorophenol (Surr)	*71*		*24 - 110*	*03/11/16 08:42*	*03/18/16 18:38*	*20*
2,4,6-Tribromophenol (Surr)	*68*		*10 - 110*	*03/11/16 08:42*	*03/18/16 18:38*	*20*
Nitrobenzene-d5 (Surr)	*67*		*20 - 110*	*03/11/16 08:42*	*03/18/16 18:38*	*20*
Phenol-d5 (Surr)	*64*		*26 - 110*	*03/11/16 08:42*	*03/18/16 18:38*	*20*
Terphenyl-d14 (Surr)	*83*		*36 - 110*	*03/11/16 08:42*	*03/18/16 18:38*	*20*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<94		260	94	ug/Kg	☼	03/11/16 07:38	03/16/16 16:44	5
Aroclor-1221	<120		260	120	ug/Kg	☼	03/11/16 07:38	03/16/16 16:44	5
Aroclor-1232	<160		260	160	ug/Kg	☼	03/11/16 07:38	03/16/16 16:44	5
Aroclor-1242	<86		260	86	ug/Kg	☼	03/11/16 07:38	03/16/16 16:44	5
Aroclor-1248	<62		260	62	ug/Kg	☼	03/11/16 07:38	03/16/16 16:44	5
Aroclor-1254	<110		260	110	ug/Kg	☼	03/11/16 07:38	03/16/16 16:44	5
Aroclor-1260	<70		260	70	ug/Kg	☼	03/11/16 07:38	03/16/16 16:44	5
Aroclor-1262	<78		260	78	ug/Kg	☼	03/11/16 07:38	03/16/16 16:44	5
Aroclor-1268	<100	^c	260	100	ug/Kg	☼	03/11/16 07:38	03/16/16 16:44	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*97*		*13 - 134*	*03/11/16 07:38*	*03/16/16 16:44*	*5*
DCB Decachlorobiphenyl	*265*	*p X*	*10 - 155*	*03/11/16 07:38*	*03/16/16 16:44*	*5*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: SE-030916-JN-006

Date Collected: 03/09/16 14:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-6

Matrix: Solid
Percent Solids: 64.4

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.025	J B	0.50	0.0029	mg/L		03/16/16 11:41	03/17/16 20:19	1
Barium	0.87	J B	10.0	0.0010	mg/L		03/16/16 11:41	03/17/16 20:19	1
Cadmium	0.00015	J	0.10	0.00014	mg/L		03/16/16 11:41	03/17/16 20:19	1
Chromium	0.0040	J B	0.50	0.00055	mg/L		03/16/16 11:41	03/17/16 20:19	1
Lead	0.052	J	0.50	0.0019	mg/L		03/16/16 11:41	03/17/16 20:19	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:41	03/17/16 20:19	1
Silver	<0.00092		0.50	0.00092	mg/L		03/16/16 11:41	03/17/16 20:19	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.24	B	0.24	0.0017	mg/Kg	☼	03/11/16 12:52	03/18/16 20:53	2
Arsenic	7.8		1.2	0.032	mg/Kg	☼	03/11/16 12:52	03/18/16 20:53	2
Beryllium	0.28		0.24	0.013	mg/Kg	☼	03/11/16 12:52	03/19/16 17:49	2
Cadmium	2.6		0.24	0.0045	mg/Kg	☼	03/11/16 12:52	03/18/16 20:53	2
Cobalt	3.3	B	0.24	0.0021	mg/Kg	☼	03/11/16 12:52	03/19/16 17:49	2
Chromium	66.8	B	0.49	0.073	mg/Kg	☼	03/11/16 12:52	03/19/16 17:49	2
Copper	41.4	B	0.49	0.12	mg/Kg	☼	03/11/16 12:52	03/19/16 17:49	2
Manganese	237		1.2	0.15	mg/Kg	☼	03/11/16 12:52	03/19/16 17:49	2
Nickel	8.6	B	0.49	0.047	mg/Kg	☼	03/11/16 12:52	03/19/16 17:49	2
Lead	950		0.24	0.055	mg/Kg	☼	03/11/16 12:52	03/19/16 17:49	2
Antimony	22.4		0.49	0.017	mg/Kg	☼	03/11/16 12:52	03/18/16 20:53	2
Selenium	1.4		1.2	0.049	mg/Kg	☼	03/11/16 12:52	03/18/16 20:53	2
Thallium	0.11	J	0.49	0.023	mg/Kg	☼	03/11/16 12:52	03/18/16 20:53	2
Vanadium	10.1		1.2	0.045	mg/Kg	☼	03/11/16 12:52	03/19/16 17:49	2
Zinc	584	B	4.9	0.61	mg/Kg	☼	03/11/16 12:52	03/19/16 17:49	2
Barium	465		1.2	0.27	mg/Kg	☼	03/11/16 12:52	03/18/16 20:53	2

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 12:43	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.77		0.16	0.022	mg/Kg	☼	03/11/16 15:00	03/15/16 08:12	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	43200		1550	776	mg/Kg	☼		03/16/16 15:13	1
Percent Solids	64.4		0.1	0.1	%			03/11/16 14:03	1
Percent Moisture	35.6		0.1	0.1	%			03/11/16 14:03	1

Client Sample ID: SE-030916-JN-007
Date Collected: 03/09/16 15:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-7
Matrix: Solid
Percent Solids: 46.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<680		3000	680	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Benzene	<27		760	27	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Dichlorobromomethane	<120		760	120	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Bromoform	<180		760	180	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Bromomethane	<150		760	150	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
2-Butanone (MEK)	<220		3000	220	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Carbon disulfide	<170		760	170	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Carbon tetrachloride	<54		760	54	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Chlorobenzene	<39		760	39	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Chloroethane	<150		760	150	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Chloroform	<110		760	110	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Chloromethane	<150		760	150	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,1-Dichloroethane	<110		760	110	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,2-Dichloroethane	<30		760	30	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,1-Dichloroethene	<91		760	91	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,2-Dichloropropane	<97		760	97	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,2,4-Trimethylbenzene	**4200**		760	39	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
cis-1,3-Dichloropropene	<67		760	67	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
trans-1,3-Dichloropropene	<79		760	79	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Ethylbenzene	<110		760	110	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
2-Hexanone	<250		3000	250	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Methylene Chloride	**450**	**J B**	760	260	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
4-Methyl-2-pentanone (MIBK)	<170		3000	170	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Styrene	<82		760	82	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,1,2,2-Tetrachloroethane	<76		760	76	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Tetrachloroethene	<82		760	82	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Toluene	**140**	**J B**	760	30	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Trichloroethene	<120		760	120	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,3,5-Trimethylbenzene	**2300**		760	45	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Vinyl chloride	<51		760	51	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Xylenes, Total	**940**	**J**	1500	97	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,1,1-Trichloroethane	<82		760	82	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,1,2-Trichloroethane	<58		760	58	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Cyclohexane	**280**	**J**	1500	91	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,2-Dibromo-3-Chloropropane	<210		1500	210	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Ethylene Dibromide	<97		760	97	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Dichlorodifluoromethane	<180		760	180	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
cis-1,2-Dichloroethene	<120		760	120	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
trans-1,2-Dichloroethene	<79		760	79	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Isopropylbenzene	**490**	**J**	760	39	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Methyl acetate	**220**	**J**	1500	170	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Methyl tert-butyl ether	<91		760	91	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<130		760	130	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,2,4-Trichlorobenzene	<91		760	91	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,2-Dichlorobenzene	<58		760	58	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,3-Dichlorobenzene	<91		760	91	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
1,4-Dichlorobenzene	<120		760	120	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Trichlorofluoromethane	<110		760	110	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1
Chlorodibromomethane	<61		760	61	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1

Client Sample ID: SE-030916-JN-007
Date Collected: 03/09/16 15:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-7
Matrix: Solid
Percent Solids: 46.7

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**2300**		1500	120	ug/Kg	☼	03/11/16 13:46	03/16/16 09:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*78*		*39 - 128*	*03/11/16 13:46*	*03/16/16 09:00*	*1*
4-Bromofluorobenzene (Surr)	*59*		*26 - 141*	*03/11/16 13:46*	*03/16/16 09:00*	*1*
Toluene-d8 (Surr)	*65*		*33 - 134*	*03/11/16 13:46*	*03/16/16 09:00*	*1*
Dibromofluoromethane (Surr)	*72*		*30 - 122*	*03/11/16 13:46*	*03/16/16 09:00*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	**480**	**J**	5300	370	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
bis (2-chloroisopropyl) ether	<1000		11000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
2,4,5-Trichlorophenol	<2700		16000	2700	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
2,4,6-Trichlorophenol	<950		16000	950	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
2,4-Dichlorophenol	<2100		16000	2100	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
2,4-Dimethylphenol	<2100		16000	2100	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
2,4-Dinitrophenol	<2200		35000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
2,4-Dinitrotoluene	<1800		21000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
2,6-Dinitrotoluene	<2200		21000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
2-Chloronaphthalene	<48		5300	48	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
2-Chlorophenol	<870		5300	870	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
2-Methylnaphthalene	**7400**		710	53	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
2-Methylphenol	<1200		21000	1200	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
2-Nitroaniline	<970		21000	970	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
2-Nitrophenol	<880		5300	880	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
3,3'-Dichlorobenzidine	<1900		11000	1900	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
3-Nitroaniline	<1700		21000	1700	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
4,6-Dinitro-2-methylphenol	<980	*	16000	980	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
4-Bromophenyl phenyl ether	<1400		5300	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
4-Chloro-3-methylphenol	<2200		16000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
4-Chloroaniline	<1800		16000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
4-Chlorophenyl phenyl ether	<1400		5300	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
4-Nitroaniline	<2800		21000	2800	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
4-Nitrophenol	<1800		35000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Acetophenone	<980		11000	980	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Atrazine	<970		21000	970	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Benzaldehyde	<1300		11000	1300	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Bis(2-chloroethoxy)methane	<2300		11000	2300	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Bis(2-chloroethyl)ether	<210		11000	210	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Bis(2-ethylhexyl) phthalate	<2000		7500	2000	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Butyl benzyl phthalate	<1100		7500	1100	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Caprolactam	<3900		35000	3900	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Carbazole	<2900		5300	2900	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Dibenzofuran	**1900**	**J**	5300	70	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Diethyl phthalate	<1700		7500	1700	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Dimethyl phthalate	<1800		7500	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Di-n-butyl phthalate	**6700**	**J**	7500	1600	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Di-n-octyl phthalate	<840		7500	840	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Hexachlorobenzene	<220		710	220	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Hexachlorobutadiene	<600		5300	600	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50

Client Sample ID: SE-030916-JN-007

Date Collected: 03/09/16 15:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-7

Matrix: Solid
Percent Solids: 46.7

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<860		35000	860	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Hexachloroethane	<960		5300	960	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Isophorone	<1400		5300	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Nitrobenzene	<230		11000	230	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
N-Nitrosodi-n-propylamine	<670		5300	670	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
N-Nitrosodiphenylamine	<2200		5300	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Pentachlorophenol	<970		16000	970	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
Phenol	<780		5300	780	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50
3 & 4 Methylphenol	<2100		43000	2100	ug/Kg	☼	03/11/16 08:42	03/18/16 20:14	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*61*		*24 - 110*	*03/11/16 08:42*	*03/18/16 20:14*	*50*
2-Fluorophenol (Surr)	*25*		*24 - 110*	*03/11/16 08:42*	*03/18/16 20:14*	*50*
2,4,6-Tribromophenol (Surr)	*36*		*10 - 110*	*03/11/16 08:42*	*03/18/16 20:14*	*50*
Nitrobenzene-d5 (Surr)	*0*	*X*	*20 - 110*	*03/11/16 08:42*	*03/18/16 20:14*	*50*
Phenol-d5 (Surr)	*54*		*26 - 110*	*03/11/16 08:42*	*03/18/16 20:14*	*50*
Terphenyl-d14 (Surr)	*74*		*36 - 110*	*03/11/16 08:42*	*03/18/16 20:14*	*50*

Method: 1630 - Methyl Mercury (GC)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**1.4**		0.20	0.060	ug/Kg	☼	03/14/16 11:58	03/18/16 22:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Propyl Mercury Chloride	*29*		*10 - 149*	*03/14/16 11:58*	*03/18/16 22:07*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<130		350	130	ug/Kg	☼	03/11/16 07:38	03/16/16 17:02	5
Aroclor-1221	<170		350	170	ug/Kg	☼	03/11/16 07:38	03/16/16 17:02	5
Aroclor-1232	<210		350	210	ug/Kg	☼	03/11/16 07:38	03/16/16 17:02	5
Aroclor-1242	<120		350	120	ug/Kg	☼	03/11/16 07:38	03/16/16 17:02	5
Aroclor-1248	<84		350	84	ug/Kg	☼	03/11/16 07:38	03/16/16 17:02	5
Aroclor-1254	<150		350	150	ug/Kg	☼	03/11/16 07:38	03/16/16 17:02	5
Aroclor-1260	<95		350	95	ug/Kg	☼	03/11/16 07:38	03/16/16 17:02	5
Aroclor-1262	<110		350	110	ug/Kg	☼	03/11/16 07:38	03/16/16 17:02	5
Aroclor-1268	<140	^c	350	140	ug/Kg	☼	03/11/16 07:38	03/16/16 17:02	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*71*	*p*	*13 - 134*	*03/11/16 07:38*	*03/16/16 17:02*	*5*
DCB Decachlorobiphenyl	*103*	*p*	*10 - 155*	*03/11/16 07:38*	*03/16/16 17:02*	*5*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.22**	**J B**	0.39	0.0028	mg/Kg	☼	03/11/16 12:52	03/18/16 20:57	2
Arsenic	**7.6**		2.0	0.051	mg/Kg	☼	03/11/16 12:52	03/18/16 20:57	2
Beryllium	**0.56**		0.39	0.022	mg/Kg	☼	03/11/16 12:52	03/19/16 18:06	2
Cadmium	**4.5**		0.39	0.0073	mg/Kg	☼	03/11/16 12:52	03/18/16 20:57	2
Cobalt	**5.9**	**B**	0.39	0.0033	mg/Kg	☼	03/11/16 12:52	03/19/16 18:06	2
Chromium	**181**	**B**	0.79	0.12	mg/Kg	☼	03/11/16 12:52	03/19/16 18:06	2
Copper	**135**	**B**	0.79	0.19	mg/Kg	☼	03/11/16 12:52	03/19/16 18:06	2
Manganese	**390**		2.0	0.24	mg/Kg	☼	03/11/16 12:52	03/19/16 18:06	2

Client Sample ID: SE-030916-JN-007
Date Collected: 03/09/16 15:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-7
Matrix: Solid
Percent Solids: 46.7

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	14.8	B	0.79	0.077	mg/Kg	☼	03/11/16 12:52	03/19/16 18:06	2
Lead	1340		0.39	0.088	mg/Kg	☼	03/11/16 12:52	03/19/16 18:06	2
Antimony	50.2		0.79	0.028	mg/Kg	☼	03/11/16 12:52	03/18/16 20:57	2
Selenium	2.1		2.0	0.079	mg/Kg	☼	03/11/16 12:52	03/18/16 20:57	2
Thallium	0.22	J	0.79	0.037	mg/Kg	☼	03/11/16 12:52	03/18/16 20:57	2
Vanadium	18.7		2.0	0.073	mg/Kg	☼	03/11/16 12:52	03/19/16 18:06	2
Zinc	1910	B	7.9	0.98	mg/Kg	☼	03/11/16 12:52	03/19/16 18:06	2
Barium	2270		2.0	0.43	mg/Kg	☼	03/11/16 12:52	03/18/16 20:57	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	9.3		2.2	0.31	mg/Kg	☼	03/11/16 15:00	03/15/16 08:13	10

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	80700		2140	1070	mg/Kg	☼		03/16/16 15:23	1
Percent Solids	46.7		0.1	0.1	%			03/11/16 14:03	1
Percent Moisture	53.3		0.1	0.1	%			03/11/16 14:03	1

Client Sample ID: SE-030916-JN-008
Date Collected: 03/09/16 15:50
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-8
Matrix: Solid
Percent Solids: 55.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<580		2500	580	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Benzene	<23		640	23	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Dichlorobromomethane	<97		640	97	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Bromoform	<160		640	160	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Bromomethane	<130	F1	640	130	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
2-Butanone (MEK)	<190		2500	190	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Carbon disulfide	<140	F1	640	140	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Carbon tetrachloride	<46		640	46	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Chlorobenzene	<33	F1	640	33	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Chloroethane	<130		640	130	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Chloroform	<92		640	92	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Chloromethane	<120	F1	640	120	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,1-Dichloroethane	<89		640	89	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,2-Dichloroethane	<25		640	25	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,1-Dichloroethene	<76		640	76	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,2-Dichloropropane	<81	F1	640	81	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,2,4-Trimethylbenzene	**450**	**J**	640	33	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
cis-1,3-Dichloropropene	<56		640	56	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
trans-1,3-Dichloropropene	<66		640	66	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Ethylbenzene	<89		640	89	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
2-Hexanone	<210		2500	210	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Methylene Chloride	<220		640	220	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
4-Methyl-2-pentanone (MIBK)	<140		2500	140	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Styrene	<69		640	69	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,1,2,2-Tetrachloroethane	<64		640	64	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Tetrachloroethene	<69		640	69	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Toluene	**110**	**J B**	640	25	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Trichloroethene	<99		640	99	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,3,5-Trimethylbenzene	**180**	**J**	640	38	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Vinyl chloride	<43	F1	640	43	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Xylenes, Total	**120**	**J**	1300	81	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,1,1-Trichloroethane	<69		640	69	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,1,2-Trichloroethane	<48		640	48	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Cyclohexane	**170**	**J F1**	1300	76	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,2-Dibromo-3-Chloropropane	<180		1300	180	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Ethylene Dibromide	<81		640	81	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Dichlorodifluoromethane	<160	F1	640	160	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
cis-1,2-Dichloroethene	<97		640	97	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
trans-1,2-Dichloroethene	<66	F1	640	66	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Isopropylbenzene	**530**	**J F1**	640	33	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Methyl acetate	**230**	**J**	1300	140	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Methyl tert-butyl ether	<76		640	76	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<110	F1	640	110	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,2,4-Trichlorobenzene	<76		640	76	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,2-Dichlorobenzene	<48		640	48	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,3-Dichlorobenzene	<76		640	76	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
1,4-Dichlorobenzene	<100		640	100	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Trichlorofluoromethane	<89		640	89	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1
Chlorodibromomethane	<51		640	51	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1

Client Sample ID: SE-030916-JN-008
Date Collected: 03/09/16 15:50
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-8
Matrix: Solid
Percent Solids: 55.1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**1400**	**F1**	1300	97	ug/Kg	☼	03/11/16 13:46	03/17/16 09:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*74*		*39 - 128*	*03/11/16 13:46*	*03/17/16 09:34*	*1*
4-Bromofluorobenzene (Surr)	*52*		*26 - 141*	*03/11/16 13:46*	*03/17/16 09:34*	*1*
Toluene-d8 (Surr)	*58*		*33 - 134*	*03/11/16 13:46*	*03/17/16 09:34*	*1*
Dibromofluoromethane (Surr)	*66*		*30 - 122*	*03/11/16 13:46*	*03/17/16 09:34*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	**430**	**J**	4600	320	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
bis (2-chloroisopropyl) ether	<870		9100	870	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
2,4,5-Trichlorophenol	<2300		14000	2300	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
2,4,6-Trichlorophenol	<810		14000	810	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
2,4-Dichlorophenol	<1800		14000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
2,4-Dimethylphenol	<1800		14000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
2,4-Dinitrophenol	<1900		30000	1900	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
2,4-Dinitrotoluene	<1600		18000	1600	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
2,6-Dinitrotoluene	<1900		18000	1900	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
2-Chloronaphthalene	<41		4600	41	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
2-Chlorophenol	<750		4600	750	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
2-Methylnaphthalene	**6300**		610	46	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
2-Methylphenol	<1000		18000	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
2-Nitroaniline	<830		18000	830	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
2-Nitrophenol	<760		4600	760	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
3,3'-Dichlorobenzidine	<1600		9100	1600	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
3-Nitroaniline	<1500		18000	1500	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
4,6-Dinitro-2-methylphenol	<840	*	14000	840	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
4-Bromophenyl phenyl ether	<1200		4600	1200	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
4-Chloro-3-methylphenol	<1900		14000	1900	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
4-Chloroaniline	<1600		14000	1600	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
4-Chlorophenyl phenyl ether	<1200		4600	1200	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
4-Nitroaniline	<2400		18000	2400	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
4-Nitrophenol	<1600		30000	1600	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Acetophenone	<840		9100	840	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Atrazine	<830		18000	830	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Benzaldehyde	<1100		9100	1100	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Bis(2-chloroethoxy)methane	<2000		9100	2000	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Bis(2-chloroethyl)ether	<180		9100	180	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Bis(2-ethylhexyl) phthalate	<1700		6400	1700	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Butyl benzyl phthalate	<910		6400	910	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Caprolactam	<3400		30000	3400	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Carbazole	<2500		4600	2500	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Dibenzofuran	**850**	**J**	4600	60	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Diethyl phthalate	<1500		6400	1500	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Dimethyl phthalate	<1600		6400	1600	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Di-n-butyl phthalate	**4000**	**J**	6400	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Di-n-octyl phthalate	<720		6400	720	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Hexachlorobenzene	<190		610	190	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Hexachlorobutadiene	<510		4600	510	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50

Client Sample ID: SE-030916-JN-008
Date Collected: 03/09/16 15:50
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-8
Matrix: Solid
Percent Solids: 55.1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<740		30000	740	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Hexachloroethane	<820		4600	820	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Isophorone	<1200		4600	1200	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Nitrobenzene	<200		9100	200	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
N-Nitrosodi-n-propylamine	<580		4600	580	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
N-Nitrosodiphenylamine	<1900		4600	1900	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Pentachlorophenol	<830		14000	830	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Phenol	<670		4600	670	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
3 & 4 Methylphenol	<1800		37000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Fluorene	**1500**		610	48	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Acenaphthylene	<32		610	32	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Benzo[g,h,i]perylene	**1100**		610	32	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Phenanthrene	**7300**		610	67	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Benzo[k]fluoranthene	**1300**		610	62	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Benzo[a]pyrene	**2300**		610	58	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Anthracene	**1500**		610	71	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Pyrene	**6100**		610	40	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Dibenz(a,h)anthracene	<60		610	60	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Naphthalene	**3900**		610	75	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Fluoranthene	**6000**		610	50	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Benzo[a]anthracene	**2800**		610	58	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Indeno[1,2,3-cd]pyrene	**1200**		610	32	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Chrysene	**4200**		610	100	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Acenaphthene	**1000**		610	69	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50
Benzo[b]fluoranthene	**2700**		610	54	ug/Kg	☼	03/11/16 08:42	03/18/16 20:38	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*90*		*24 - 110*	*03/11/16 08:42*	*03/18/16 20:38*	*50*
2-Fluorophenol (Surr)	*90*		*24 - 110*	*03/11/16 08:42*	*03/18/16 20:38*	*50*
2,4,6-Tribromophenol (Surr)	*88*		*10 - 110*	*03/11/16 08:42*	*03/18/16 20:38*	*50*
Nitrobenzene-d5 (Surr)	*0*	*X*	*20 - 110*	*03/11/16 08:42*	*03/18/16 20:38*	*50*
Phenol-d5 (Surr)	*88*		*26 - 110*	*03/11/16 08:42*	*03/18/16 20:38*	*50*
Terphenyl-d14 (Surr)	*109*		*36 - 110*	*03/11/16 08:42*	*03/18/16 20:38*	*50*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<44		120	44	ug/Kg	☼	03/11/16 07:38	03/15/16 21:36	2
Aroclor-1221	<58		120	58	ug/Kg	☼	03/11/16 07:38	03/15/16 21:36	2
Aroclor-1232	<73		120	73	ug/Kg	☼	03/11/16 07:38	03/15/16 21:36	2
Aroclor-1242	<40		120	40	ug/Kg	☼	03/11/16 07:38	03/15/16 21:36	2
Aroclor-1248	<29		120	29	ug/Kg	☼	03/11/16 07:38	03/15/16 21:36	2
Aroclor-1254	<51		120	51	ug/Kg	☼	03/11/16 07:38	03/15/16 21:36	2
Aroclor-1260	<33		120	33	ug/Kg	☼	03/11/16 07:38	03/15/16 21:36	2
Aroclor-1262	<36		120	36	ug/Kg	☼	03/11/16 07:38	03/15/16 21:36	2
Aroclor-1268	<47	^c	120	47	ug/Kg	☼	03/11/16 07:38	03/15/16 21:36	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*	*p*	*13 - 134*	*03/11/16 07:38*	*03/15/16 21:36*	*2*
DCB Decachlorobiphenyl	*73*	*p*	*10 - 155*	*03/11/16 07:38*	*03/15/16 21:36*	*2*

Client Sample ID: SE-030916-JN-008

Date Collected: 03/09/16 15:50
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-8

Matrix: Solid
Percent Solids: 55.1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.23	J B	0.32	0.0023	mg/Kg	☼	03/11/16 12:52	03/18/16 21:05	2
Arsenic	11.9		1.6	0.042	mg/Kg	☼	03/11/16 12:52	03/18/16 21:05	2
Beryllium	0.40		0.32	0.018	mg/Kg	☼	03/11/16 12:52	03/19/16 18:10	2
Cadmium	4.0		0.32	0.0060	mg/Kg	☼	03/11/16 12:52	03/18/16 21:05	2
Cobalt	4.3	B	0.32	0.0028	mg/Kg	☼	03/11/16 12:52	03/19/16 18:10	2
Chromium	197	B	0.65	0.097	mg/Kg	☼	03/11/16 12:52	03/19/16 18:10	2
Copper	152	B	0.65	0.16	mg/Kg	☼	03/11/16 12:52	03/19/16 18:10	2
Manganese	236		1.6	0.19	mg/Kg	☼	03/11/16 12:52	03/19/16 18:10	2
Nickel	13.6	B	0.65	0.063	mg/Kg	☼	03/11/16 12:52	03/19/16 18:10	2
Lead	1630		1.6	0.36	mg/Kg	☼	03/11/16 12:52	03/19/16 18:14	10
Antimony	59.8		0.65	0.023	mg/Kg	☼	03/11/16 12:52	03/18/16 21:05	2
Selenium	1.5	J	1.6	0.065	mg/Kg	☼	03/11/16 12:52	03/18/16 21:05	2
Thallium	0.21	J	0.65	0.031	mg/Kg	☼	03/11/16 12:52	03/18/16 21:05	2
Vanadium	12.5		1.6	0.060	mg/Kg	☼	03/11/16 12:52	03/19/16 18:10	2
Zinc	1710	B	6.5	0.81	mg/Kg	☼	03/11/16 12:52	03/19/16 18:10	2
Barium	2080		1.6	0.36	mg/Kg	☼	03/11/16 12:52	03/18/16 21:05	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	14.8		1.9	0.27	mg/Kg	☼	03/11/16 15:00	03/15/16 08:14	10

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	162000		1820	908	mg/Kg	☼		03/16/16 15:34	1
Percent Solids	55.1		0.1	0.1	%			03/11/16 14:03	1
Percent Moisture	44.9		0.1	0.1	%			03/11/16 14:03	1

Client Sample ID: SE-030916-JN-009
Date Collected: 03/09/16 15:55
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-9
Matrix: Solid
Percent Solids: 48.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<670		2900	670	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Benzene	<26		740	26	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Dichlorobromomethane	<110		740	110	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Bromoform	<180		740	180	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Bromomethane	<150		740	150	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
2-Butanone (MEK)	<210		2900	210	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Carbon disulfide	<160		740	160	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Carbon tetrachloride	<53		740	53	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Chlorobenzene	<38		740	38	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Chloroethane	<150		740	150	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Chloroform	<110		740	110	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Chloromethane	<140		740	140	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,1-Dichloroethane	<100		740	100	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,2-Dichloroethane	<29		740	29	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,1-Dichloroethene	<88		740	88	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,2-Dichloropropane	<94		740	94	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,2,4-Trimethylbenzene	**350**	**J**	740	38	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
cis-1,3-Dichloropropene	<65		740	65	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
trans-1,3-Dichloropropene	<77		740	77	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Ethylbenzene	<100		740	100	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
2-Hexanone	<250		2900	250	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Methylene Chloride	<250		740	250	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
4-Methyl-2-pentanone (MIBK)	<160		2900	160	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Styrene	<79		740	79	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,1,2,2-Tetrachloroethane	<74		740	74	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Tetrachloroethene	<79		740	79	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Toluene	**120**	**J B**	740	29	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Trichloroethene	<110		740	110	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,3,5-Trimethylbenzene	**150**	**J**	740	44	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Vinyl chloride	<50		740	50	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Xylenes, Total	**140**	**J**	1500	94	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,1,1-Trichloroethane	<79		740	79	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,1,2-Trichloroethane	<56		740	56	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Cyclohexane	**160**	**J**	1500	88	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,2-Dibromo-3-Chloropropane	<210		1500	210	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Ethylene Dibromide	<94		740	94	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Dichlorodifluoromethane	<180		740	180	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
cis-1,2-Dichloroethene	<110		740	110	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
trans-1,2-Dichloroethene	<77		740	77	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Isopropylbenzene	**490**	**J**	740	38	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Methyl acetate	**230**	**J**	1500	160	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Methyl tert-butyl ether	<88		740	88	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<120		740	120	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,2,4-Trichlorobenzene	<88		740	88	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,2-Dichlorobenzene	<56		740	56	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,3-Dichlorobenzene	<88		740	88	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
1,4-Dichlorobenzene	<120		740	120	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Trichlorofluoromethane	<100		740	100	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1
Chlorodibromomethane	<59		740	59	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1

Client Sample ID: SE-030916-JN-009
Date Collected: 03/09/16 15:55
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-9
Matrix: Solid
Percent Solids: 48.4

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**1300**	**J**	1500	110	ug/Kg	☼	03/11/16 13:46	03/17/16 10:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*74*		*39 - 128*	*03/11/16 13:46*	*03/17/16 10:38*	*1*
4-Bromofluorobenzene (Surr)	*50*		*26 - 141*	*03/11/16 13:46*	*03/17/16 10:38*	*1*
Toluene-d8 (Surr)	*54*		*33 - 134*	*03/11/16 13:46*	*03/17/16 10:38*	*1*
Dibromofluoromethane (Surr)	*69*		*30 - 122*	*03/11/16 13:46*	*03/17/16 10:38*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	**570**	**J**	5200	360	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
bis (2-chloroisopropyl) ether	<980		10000	980	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
2,4,5-Trichlorophenol	<2600		16000	2600	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
2,4,6-Trichlorophenol	<920		16000	920	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
2,4-Dichlorophenol	<2100		16000	2100	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
2,4-Dimethylphenol	<2100		16000	2100	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
2,4-Dinitrophenol	<2200		34000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
2,4-Dinitrotoluene	<1800		21000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
2,6-Dinitrotoluene	<2200		21000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
2-Chloronaphthalene	<47		5200	47	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
2-Chlorophenol	<850		5200	850	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
2-Methylnaphthalene	**14000**		690	52	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
2-Methylphenol	<1100		21000	1100	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
2-Nitroaniline	<940		21000	940	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
2-Nitrophenol	<860		5200	860	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
3,3'-Dichlorobenzidine	<1900		10000	1900	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
3-Nitroaniline	<1700		21000	1700	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
4,6-Dinitro-2-methylphenol	<950	*	16000	950	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
4-Bromophenyl phenyl ether	<1300		5200	1300	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
4-Chloro-3-methylphenol	<2200		16000	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
4-Chloroaniline	<1800		16000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
4-Chlorophenyl phenyl ether	<1300		5200	1300	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
4-Nitroaniline	<2700		21000	2700	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
4-Nitrophenol	<1800		34000	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Acetophenone	<950		10000	950	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Atrazine	<940		21000	940	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Benzaldehyde	<1200		10000	1200	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Bis(2-chloroethoxy)methane	<2300		10000	2300	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Bis(2-chloroethyl)ether	<210		10000	210	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Bis(2-ethylhexyl) phthalate	<2000		7200	2000	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Butyl benzyl phthalate	<1000		7200	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Caprolactam	<3800		34000	3800	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Carbazole	<2800		5200	2800	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Dibenzofuran	**1100**	**J**	5200	68	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Diethyl phthalate	<1700		7200	1700	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Dimethyl phthalate	<1800		7200	1800	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Di-n-butyl phthalate	**5900**	**J**	7200	1600	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Di-n-octyl phthalate	<820		7200	820	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Hexachlorobenzene	<220		690	220	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Hexachlorobutadiene	<580		5200	580	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50

Client Sample ID: SE-030916-JN-009
Date Collected: 03/09/16 15:55
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-9
Matrix: Solid
Percent Solids: 48.4

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<840		34000	840	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Hexachloroethane	<930		5200	930	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Isophorone	<1300		5200	1300	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Nitrobenzene	<230		10000	230	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
N-Nitrosodi-n-propylamine	<650		5200	650	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
N-Nitrosodiphenylamine	<2200		5200	2200	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Pentachlorophenol	<940		16000	940	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Phenol	<760		5200	760	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
3 & 4 Methylphenol	<2100		41000	2100	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Fluorene	**1900**		690	55	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Acenaphthylene	<36		690	36	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Benzo[g,h,i]perylene	**1100**		690	36	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Phenanthrene	**9300**		690	76	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Benzo[k]fluoranthene	**910**		690	70	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Benzo[a]pyrene	**2700**		690	66	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Anthracene	**1700**		690	81	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Pyrene	**7900**		690	46	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Dibenz(a,h)anthracene	<68		690	68	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Naphthalene	**5200**		690	85	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Fluoranthene	**6600**		690	57	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Benzo[a]anthracene	**3600**		690	65	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Indeno[1,2,3-cd]pyrene	**1000**		690	36	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Chrysene	**4600**		690	110	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Acenaphthene	**1100**		690	79	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50
Benzo[b]fluoranthene	**3300**		690	61	ug/Kg	☼	03/11/16 08:42	03/18/16 21:02	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*69*		*24 - 110*	*03/11/16 08:42*	*03/18/16 21:02*	*50*
2-Fluorophenol (Surr)	*46*		*24 - 110*	*03/11/16 08:42*	*03/18/16 21:02*	*50*
2,4,6-Tribromophenol (Surr)	*49*		*10 - 110*	*03/11/16 08:42*	*03/18/16 21:02*	*50*
Nitrobenzene-d5 (Surr)	*0*	*X*	*20 - 110*	*03/11/16 08:42*	*03/18/16 21:02*	*50*
Phenol-d5 (Surr)	*147*	*X*	*26 - 110*	*03/11/16 08:42*	*03/18/16 21:02*	*50*
Terphenyl-d14 (Surr)	*82*		*36 - 110*	*03/11/16 08:42*	*03/18/16 21:02*	*50*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<120		340	120	ug/Kg	☼	03/11/16 07:38	03/16/16 17:19	5
Aroclor-1221	<170		340	170	ug/Kg	☼	03/11/16 07:38	03/16/16 17:19	5
Aroclor-1232	<210		340	210	ug/Kg	☼	03/11/16 07:38	03/16/16 17:19	5
Aroclor-1242	<110		340	110	ug/Kg	☼	03/11/16 07:38	03/16/16 17:19	5
Aroclor-1248	<83		340	83	ug/Kg	☼	03/11/16 07:38	03/16/16 17:19	5
Aroclor-1254	<150		340	150	ug/Kg	☼	03/11/16 07:38	03/16/16 17:19	5
Aroclor-1260	<94		340	94	ug/Kg	☼	03/11/16 07:38	03/16/16 17:19	5
Aroclor-1262	<100		340	100	ug/Kg	☼	03/11/16 07:38	03/16/16 17:19	5
Aroclor-1268	<140	^c	340	140	ug/Kg	☼	03/11/16 07:38	03/16/16 17:19	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*91*	*p*	*13 - 134*	*03/11/16 07:38*	*03/16/16 17:19*	*5*
DCB Decachlorobiphenyl	*127*	*p*	*10 - 155*	*03/11/16 07:38*	*03/16/16 17:19*	*5*

Client Sample ID: SE-030916-JN-009
Date Collected: 03/09/16 15:55
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-9
Matrix: Solid
Percent Solids: 48.4

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.29	J B	0.33	0.0023	mg/Kg	☼	03/11/16 12:52	03/18/16 21:13	2
Arsenic	10.7		1.6	0.042	mg/Kg	☼	03/11/16 12:52	03/18/16 21:13	2
Beryllium	0.47		0.33	0.018	mg/Kg	☼	03/11/16 12:52	03/19/16 18:18	2
Cadmium	1.7		0.33	0.0060	mg/Kg	☼	03/11/16 12:52	03/18/16 21:13	2
Cobalt	5.0	B	0.33	0.0028	mg/Kg	☼	03/11/16 12:52	03/19/16 18:18	2
Chromium	51.7	B	0.65	0.098	mg/Kg	☼	03/11/16 12:52	03/19/16 18:18	2
Copper	53.3	B	0.65	0.16	mg/Kg	☼	03/11/16 12:52	03/19/16 18:18	2
Manganese	394		1.6	0.20	mg/Kg	☼	03/11/16 12:52	03/19/16 18:18	2
Nickel	12.3	B	0.65	0.063	mg/Kg	☼	03/11/16 12:52	03/19/16 18:18	2
Lead	657		0.33	0.073	mg/Kg	☼	03/11/16 12:52	03/19/16 18:18	2
Antimony	5.1		0.65	0.023	mg/Kg	☼	03/11/16 12:52	03/18/16 21:13	2
Selenium	2.0		1.6	0.065	mg/Kg	☼	03/11/16 12:52	03/18/16 21:13	2
Thallium	0.21	J	0.65	0.031	mg/Kg	☼	03/11/16 12:52	03/18/16 21:13	2
Vanadium	18.1		1.6	0.060	mg/Kg	☼	03/11/16 12:52	03/19/16 18:18	2
Zinc	605	B	6.5	0.81	mg/Kg	☼	03/11/16 12:52	03/19/16 18:18	2
Barium	426		1.6	0.36	mg/Kg	☼	03/11/16 12:52	03/18/16 21:13	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	8.4		2.3	0.32	mg/Kg	☼	03/11/16 15:00	03/15/16 08:15	10

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	399000		2070	1030	mg/Kg	☼		03/16/16 15:44	1
Percent Solids	48.4		0.1	0.1	%			03/11/16 14:03	1
Percent Moisture	51.6		0.1	0.1	%			03/11/16 14:03	1

Client Sample ID: SE-030916-JN-010
Date Collected: 03/09/16 16:00
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-10
Matrix: Solid
Percent Solids: 51.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<620		2800	620	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Benzene	<25		690	25	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Dichlorobromomethane	<100		690	100	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Bromoform	<170		690	170	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Bromomethane	<140		690	140	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
2-Butanone (MEK)	<200		2800	200	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Carbon disulfide	<150		690	150	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Carbon tetrachloride	<50		690	50	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Chlorobenzene	<36		690	36	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Chloroethane	<140		690	140	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Chloroform	<99		690	99	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Chloromethane	<130		690	130	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,1-Dichloroethane	<96		690	96	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,2-Dichloroethane	<28		690	28	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,1-Dichloroethene	<83		690	83	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,2-Dichloropropane	<88		690	88	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,2,4-Trimethylbenzene	**380**	**J**	690	36	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
cis-1,3-Dichloropropene	<61		690	61	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
trans-1,3-Dichloropropene	<72		690	72	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Ethylbenzene	<96		690	96	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
2-Hexanone	<230		2800	230	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Methylene Chloride	<230		690	230	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
4-Methyl-2-pentanone (MIBK)	<150		2800	150	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Styrene	<74		690	74	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,1,2,2-Tetrachloroethane	<69		690	69	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Tetrachloroethene	<74		690	74	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Toluene	**82**	**J B**	690	28	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Trichloroethene	<110		690	110	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,3,5-Trimethylbenzene	**150**	**J**	690	41	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Vinyl chloride	<47		690	47	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Xylenes, Total	**150**	**J**	1400	88	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,1,1-Trichloroethane	<74		690	74	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,1,2-Trichloroethane	<52		690	52	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Cyclohexane	**150**	**J**	1400	83	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,2-Dibromo-3-Chloropropane	<200		1400	200	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Ethylene Dibromide	<88		690	88	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Dichlorodifluoromethane	<170		690	170	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
cis-1,2-Dichloroethene	<100		690	100	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
trans-1,2-Dichloroethene	<72		690	72	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Isopropylbenzene	**370**	**J**	690	36	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Methyl acetate	**290**	**J**	1400	150	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Methyl tert-butyl ether	<83		690	83	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<120		690	120	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,2,4-Trichlorobenzene	<83		690	83	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,2-Dichlorobenzene	<52		690	52	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,3-Dichlorobenzene	<83		690	83	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
1,4-Dichlorobenzene	<110		690	110	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Trichlorofluoromethane	<96		690	96	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1
Chlorodibromomethane	<55		690	55	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1

Client Sample ID: SE-030916-JN-010
Date Collected: 03/09/16 16:00
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-10
Matrix: Solid
Percent Solids: 51.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**1300**	**J**	1400	100	ug/Kg	☼	03/11/16 13:46	03/17/16 11:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*77*		*39 - 128*	*03/11/16 13:46*	*03/17/16 11:00*	*1*
4-Bromofluorobenzene (Surr)	*60*		*26 - 141*	*03/11/16 13:46*	*03/17/16 11:00*	*1*
Toluene-d8 (Surr)	*65*		*33 - 134*	*03/11/16 13:46*	*03/17/16 11:00*	*1*
Dibromofluoromethane (Surr)	*69*		*30 - 122*	*03/11/16 13:46*	*03/17/16 11:00*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	**260**	**J**	2000	140	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
bis (2-chloroisopropyl) ether	<370		3900	370	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
2,4,5-Trichlorophenol	<980		5900	980	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
2,4,6-Trichlorophenol	<350		5900	350	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
2,4-Dichlorophenol	<780		5900	780	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
2,4-Dimethylphenol	<780		5900	780	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
2,4-Dinitrophenol	<820		13000	820	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
2,4-Dinitrotoluene	<660		7800	660	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
2,6-Dinitrotoluene	<820		7800	820	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
2-Chloronaphthalene	<18		2000	18	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
2-Chlorophenol	<320		2000	320	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
2-Methylnaphthalene	**3300**		260	20	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
2-Methylphenol	<430		7800	430	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
2-Nitroaniline	<360		7800	360	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
2-Nitrophenol	<320		2000	320	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
3,3'-Dichlorobenzidine	<700		3900	700	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
3-Nitroaniline	<620		7800	620	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
4,6-Dinitro-2-methylphenol	<360	*	5900	360	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
4-Bromophenyl phenyl ether	<510		2000	510	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
4-Chloro-3-methylphenol	<820		5900	820	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
4-Chloroaniline	<660		5900	660	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
4-Chlorophenyl phenyl ether	<510		2000	510	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
4-Nitroaniline	<1000		7800	1000	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
4-Nitrophenol	<660		13000	660	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Acetophenone	<360		3900	360	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Atrazine	<360		7800	360	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Benzaldehyde	<470		3900	470	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Bis(2-chloroethoxy)methane	<860		3900	860	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Bis(2-chloroethyl)ether	<78		3900	78	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Bis(2-ethylhexyl) phthalate	<740		2700	740	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Butyl benzyl phthalate	<390		2700	390	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Caprolactam	<1400		13000	1400	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Carbazole	<1100		2000	1100	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Dibenzofuran	**390**	**J**	2000	26	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Diethyl phthalate	<620		2700	620	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Dimethyl phthalate	<660		2700	660	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Di-n-butyl phthalate	**3000**		2700	590	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Di-n-octyl phthalate	<310		2700	310	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Hexachlorobenzene	<82		260	82	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Hexachlorobutadiene	<220		2000	220	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20

Client Sample ID: SE-030916-JN-010
Date Collected: 03/09/16 16:00
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-10
Matrix: Solid
Percent Solids: 51.5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<320		13000	320	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Hexachloroethane	<350		2000	350	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Isophorone	<510		2000	510	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Nitrobenzene	<86		3900	86	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
N-Nitrosodi-n-propylamine	<250		2000	250	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
N-Nitrosodiphenylamine	<820		2000	820	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Pentachlorophenol	<360		5900	360	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Phenol	<280		2000	280	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
3 & 4 Methylphenol	<780		16000	780	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Fluorene	**670**		260	21	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Acenaphthylene	<14		260	14	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Benzo[g,h,i]perylene	**480**		260	14	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Phenanthrene	**3500**		260	28	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Benzo[k]fluoranthene	**460**		260	27	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Benzo[a]pyrene	**990**		260	25	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Anthracene	**830**		260	30	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Pyrene	**2700**		260	17	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Dibenz(a,h)anthracene	**170**	**J**	260	26	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Naphthalene	**1500**		260	32	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Fluoranthene	**2900**		260	21	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Benzo[a]anthracene	**1400**		260	25	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Indeno[1,2,3-cd]pyrene	**420**		260	14	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Chrysene	**2100**		260	43	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Acenaphthene	**490**		260	30	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20
Benzo[b]fluoranthene	**1300**		260	23	ug/Kg	☼	03/11/16 08:42	03/18/16 19:02	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*24 - 110*	*03/11/16 08:42*	*03/18/16 19:02*	*20*
2-Fluorophenol (Surr)	*77*		*24 - 110*	*03/11/16 08:42*	*03/18/16 19:02*	*20*
2,4,6-Tribromophenol (Surr)	*62*		*10 - 110*	*03/11/16 08:42*	*03/18/16 19:02*	*20*
Nitrobenzene-d5 (Surr)	*175*	*X*	*20 - 110*	*03/11/16 08:42*	*03/18/16 19:02*	*20*
Phenol-d5 (Surr)	*83*		*26 - 110*	*03/11/16 08:42*	*03/18/16 19:02*	*20*
Terphenyl-d14 (Surr)	*77*		*36 - 110*	*03/11/16 08:42*	*03/18/16 19:02*	*20*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<46		130	46	ug/Kg	☼	03/11/16 07:38	03/15/16 22:10	2
Aroclor-1221	<62		130	62	ug/Kg	☼	03/11/16 07:38	03/15/16 22:10	2
Aroclor-1232	<77		130	77	ug/Kg	☼	03/11/16 07:38	03/15/16 22:10	2
Aroclor-1242	<42		130	42	ug/Kg	☼	03/11/16 07:38	03/15/16 22:10	2
Aroclor-1248	<31		130	31	ug/Kg	☼	03/11/16 07:38	03/15/16 22:10	2
Aroclor-1254	<54		130	54	ug/Kg	☼	03/11/16 07:38	03/15/16 22:10	2
Aroclor-1260	<35		130	35	ug/Kg	☼	03/11/16 07:38	03/15/16 22:10	2
Aroclor-1262	<39		130	39	ug/Kg	☼	03/11/16 07:38	03/15/16 22:10	2
Aroclor-1268	<50	^c	130	50	ug/Kg	☼	03/11/16 07:38	03/15/16 22:10	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*120*	*p*	*13 - 134*	*03/11/16 07:38*	*03/15/16 22:10*	*2*
DCB Decachlorobiphenyl	*181*	*p X*	*10 - 155*	*03/11/16 07:38*	*03/15/16 22:10*	*2*

Client Sample ID: SE-030916-JN-010

Date Collected: 03/09/16 16:00
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-10

Matrix: Solid
Percent Solids: 51.5

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.20	J B	0.36	0.0025	mg/Kg	☼	03/11/16 12:52	03/18/16 21:22	2
Arsenic	16.3		1.8	0.047	mg/Kg	☼	03/11/16 12:52	03/18/16 21:22	2
Beryllium	0.53		0.36	0.020	mg/Kg	☼	03/11/16 12:52	03/19/16 18:22	2
Cadmium	3.9		0.36	0.0067	mg/Kg	☼	03/11/16 12:52	03/18/16 21:22	2
Cobalt	5.9	B	0.36	0.0031	mg/Kg	☼	03/11/16 12:52	03/19/16 18:22	2
Chromium	164	B	0.73	0.11	mg/Kg	☼	03/11/16 12:52	03/19/16 18:22	2
Copper	106	B	0.73	0.18	mg/Kg	☼	03/11/16 12:52	03/19/16 18:22	2
Manganese	377		1.8	0.22	mg/Kg	☼	03/11/16 12:52	03/19/16 18:22	2
Nickel	13.8	B	0.73	0.071	mg/Kg	☼	03/11/16 12:52	03/19/16 18:22	2
Lead	1280		0.36	0.082	mg/Kg	☼	03/11/16 12:52	03/19/16 18:22	2
Antimony	17.2		0.73	0.025	mg/Kg	☼	03/11/16 12:52	03/18/16 21:22	2
Selenium	2.0		1.8	0.073	mg/Kg	☼	03/11/16 12:52	03/18/16 21:22	2
Thallium	0.23	J	0.73	0.034	mg/Kg	☼	03/11/16 12:52	03/18/16 21:22	2
Vanadium	17.9		1.8	0.067	mg/Kg	☼	03/11/16 12:52	03/19/16 18:22	2
Zinc	1750	B	7.3	0.91	mg/Kg	☼	03/11/16 12:52	03/19/16 18:22	2
Barium	1550		1.8	0.40	mg/Kg	☼	03/11/16 12:52	03/18/16 21:22	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	15.2		1.9	0.27	mg/Kg	☼	03/11/16 15:00	03/15/16 08:20	10

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	114000		1940	970	mg/Kg	☼		03/16/16 15:55	1
Percent Solids	51.5		0.1	0.1	%			03/11/16 14:03	1
Percent Moisture	48.5		0.1	0.1	%			03/11/16 14:03	1

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: TB-030916-JN-001
Date Collected: 03/09/16 00:00
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-11
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.94		10	0.94	ug/L			03/14/16 13:52	1
Benzene	<0.35		1.0	0.35	ug/L			03/14/16 13:52	1
Dichlorobromomethane	<0.29		1.0	0.29	ug/L			03/14/16 13:52	1
Bromoform	<0.56		1.0	0.56	ug/L			03/14/16 13:52	1
Bromomethane	<0.44		1.0	0.44	ug/L			03/14/16 13:52	1
2-Butanone (MEK)	<0.53		10	0.53	ug/L			03/14/16 13:52	1
Carbon disulfide	<0.38		1.0	0.38	ug/L			03/14/16 13:52	1
Carbon tetrachloride	<0.43		1.0	0.43	ug/L			03/14/16 13:52	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			03/14/16 13:52	1
Chloroethane	<0.32		1.0	0.32	ug/L			03/14/16 13:52	1
Chloroform	<0.25		1.0	0.25	ug/L			03/14/16 13:52	1
Chloromethane	<0.44		1.0	0.44	ug/L			03/14/16 13:52	1
1,1-Dichloroethane	<0.30		1.0	0.30	ug/L			03/14/16 13:52	1
1,2-Dichloroethane	<0.23		1.0	0.23	ug/L			03/14/16 13:52	1
1,1-Dichloroethene	<0.45		1.0	0.45	ug/L			03/14/16 13:52	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			03/14/16 13:52	1
1,2,4-Trimethylbenzene	<0.41		1.0	0.41	ug/L			03/14/16 13:52	1
cis-1,3-Dichloropropene	<0.46		1.0	0.46	ug/L			03/14/16 13:52	1
trans-1,3-Dichloropropene	<0.56		1.0	0.56	ug/L			03/14/16 13:52	1
Ethylbenzene	<0.25		1.0	0.25	ug/L			03/14/16 13:52	1
2-Hexanone	<0.48		10	0.48	ug/L			03/14/16 13:52	1
Methylene Chloride	**0.39**	**J B**	1.0	0.33	ug/L			03/14/16 13:52	1
4-Methyl-2-pentanone (MIBK)	<0.99		10	0.99	ug/L			03/14/16 13:52	1
Styrene	<0.45		1.0	0.45	ug/L			03/14/16 13:52	1
1,1,2,2-Tetrachloroethane	<0.22		1.0	0.22	ug/L			03/14/16 13:52	1
Tetrachloroethene	<0.31		1.0	0.31	ug/L			03/14/16 13:52	1
Toluene	<0.23		1.0	0.23	ug/L			03/14/16 13:52	1
Trichloroethene	<0.22		1.0	0.22	ug/L			03/14/16 13:52	1
1,3,5-Trimethylbenzene	<0.48		1.0	0.48	ug/L			03/14/16 13:52	1
Vinyl chloride	<0.29		1.0	0.29	ug/L			03/14/16 13:52	1
Xylenes, Total	<0.52		2.0	0.52	ug/L			03/14/16 13:52	1
1,1,1-Trichloroethane	<0.44		1.0	0.44	ug/L			03/14/16 13:52	1
1,1,2-Trichloroethane	<0.24		1.0	0.24	ug/L			03/14/16 13:52	1
Cyclohexane	<0.45		1.0	0.45	ug/L			03/14/16 13:52	1
1,2-Dibromo-3-Chloropropane	<0.82		2.0	0.82	ug/L			03/14/16 13:52	1
Ethylene Dibromide	<0.32		1.0	0.32	ug/L			03/14/16 13:52	1
Dichlorodifluoromethane	<0.32		1.0	0.32	ug/L			03/14/16 13:52	1
cis-1,2-Dichloroethene	<0.26		1.0	0.26	ug/L			03/14/16 13:52	1
trans-1,2-Dichloroethene	<0.30		1.0	0.30	ug/L			03/14/16 13:52	1
Isopropylbenzene	<0.35		1.0	0.35	ug/L			03/14/16 13:52	1
Methyl acetate	<2.3		10	2.3	ug/L			03/14/16 13:52	1
Methyl tert-butyl ether	<0.20		1.0	0.20	ug/L			03/14/16 13:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.45		1.0	0.45	ug/L			03/14/16 13:52	1
1,2,4-Trichlorobenzene	<0.32		1.0	0.32	ug/L			03/14/16 13:52	1
1,2-Dichlorobenzene	<0.25		1.0	0.25	ug/L			03/14/16 13:52	1
1,3-Dichlorobenzene	<0.19		1.0	0.19	ug/L			03/14/16 13:52	1
1,4-Dichlorobenzene	<0.27		1.0	0.27	ug/L			03/14/16 13:52	1
Trichlorofluoromethane	<0.49		1.0	0.49	ug/L			03/14/16 13:52	1
Chlorodibromomethane	<0.43		1.0	0.43	ug/L			03/14/16 13:52	1

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: TB-030916-JN-001
Date Collected: 03/09/16 00:00
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-11
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	<0.43		1.0	0.43	ug/L			03/14/16 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*78 - 125*		*03/14/16 13:52*	*1*
4-Bromofluorobenzene (Surr)	*92*		*61 - 120*		*03/14/16 13:52*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*03/14/16 13:52*	*1*
Dibromofluoromethane (Surr)	*105*		*79 - 120*		*03/14/16 13:52*	*1*

Client Sample ID: SE-030916-JN-001

Date Collected: 03/09/16 12:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-12

Matrix: Sediment
Percent Solids: 41.9

Method: 6010B - Metals (ICP) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium SEM	**3.7**		0.30	0.015	mg/Kg	☼	03/16/16 14:00	03/18/16 18:34	1
Silver SEM	<0.082		0.60	0.082	mg/Kg	☼	03/16/16 14:00	03/21/16 11:17	2
Copper SEM	**24.8**		1.5	0.058	mg/Kg	☼	03/16/16 14:00	03/18/16 18:34	1
Lead SEM	**839**		1.2	0.25	mg/Kg	☼	03/16/16 14:00	03/21/16 11:17	2
Nickel SEM	**7.4**	**B**	2.4	0.053	mg/Kg	☼	03/16/16 14:00	03/18/16 18:34	1
Zinc SEM	**2080**	**B**	11.9	0.35	mg/Kg	☼	03/16/16 14:00	03/21/16 11:17	2

Method: 7470A - Mercury (CVAA) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury SEM	<0.0031		0.012	0.0031	mg/Kg	☼	03/16/16 14:00	03/18/16 11:58	1

Method: SEM - Metals, Simultaneously Extracted Metals (SEM) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
SEM/AVS Ratio	**1.68**		0.00100	0.00100	NONE			03/22/16 10:41	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**58.1**		0.1	0.1	%			03/16/16 12:42	1
Percent Solids	**41.9**		0.1	0.1	%			03/16/16 12:42	1

General Chemistry - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acid Volatile Sulfides (AVS)	**693**		35.7	7.1	mg/Kg	☼	03/16/16 14:00	03/16/16 17:51	1

Client Sample ID: SE-030916-JN-004

Date Collected: 03/09/16 14:25
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-13

Matrix: Sediment
Percent Solids: 53.6

Method: 6010B - Metals (ICP) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium SEM	**3.2**		0.23	0.012	mg/Kg	☼	03/16/16 14:00	03/18/16 18:29	1
Silver SEM	<0.032		0.23	0.032	mg/Kg	☼	03/16/16 14:00	03/18/16 18:29	1
Copper SEM	**55.1**		1.2	0.045	mg/Kg	☼	03/16/16 14:00	03/18/16 18:29	1
Lead SEM	**1800**		2.3	0.49	mg/Kg	☼	03/16/16 14:00	03/21/16 11:22	5
Nickel SEM	**6.1**	**B**	1.9	0.041	mg/Kg	☼	03/16/16 14:00	03/18/16 18:29	1
Zinc SEM	**1010**	**B**	4.7	0.14	mg/Kg	☼	03/16/16 14:00	03/18/16 18:29	1

Method: 7470A - Mercury (CVAA) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury SEM	**0.0030**	**J**	0.0093	0.0024	mg/Kg	☼	03/16/16 14:00	03/18/16 11:59	1

Method: SEM - Metals, Simultaneously Extracted Metals (SEM) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
SEM/AVS Ratio	**6.81**		0.00100	0.00100	NONE			03/22/16 10:41	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**46.4**		0.1	0.1	%			03/16/16 12:42	1
Percent Solids	**53.6**		0.1	0.1	%			03/16/16 12:42	1

General Chemistry - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acid Volatile Sulfides (AVS)	**118**		27.9	5.6	mg/Kg	☼	03/16/16 14:00	03/16/16 17:53	1

Client Sample ID: SE-030916-JN-007

Date Collected: 03/09/16 15:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-14

Matrix: Sediment
Percent Solids: 47.7

Method: 6010B - Metals (ICP) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium SEM	**5.6**		0.26	0.013	mg/Kg	☼	03/16/16 14:00	03/18/16 18:23	1
Silver SEM	<0.18		1.3	0.18	mg/Kg	☼	03/16/16 14:00	03/21/16 11:28	5
Copper SEM	**138**		1.3	0.051	mg/Kg	☼	03/16/16 14:00	03/18/16 18:23	1
Lead SEM	**1940**		2.6	0.55	mg/Kg	☼	03/16/16 14:00	03/21/16 11:28	5
Nickel SEM	**10.2**	**B**	2.1	0.047	mg/Kg	☼	03/16/16 14:00	03/18/16 18:23	1
Zinc SEM	**2960**	**B**	26.3	0.77	mg/Kg	☼	03/16/16 14:00	03/21/16 11:28	5

Method: 7470A - Mercury (CVAA) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury SEM	<0.0027		0.011	0.0027	mg/Kg	☼	03/16/16 14:00	03/18/16 12:01	1

Method: SEM - Metals, Simultaneously Extracted Metals (SEM) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
SEM/AVS Ratio	**3.28**		0.00100	0.00100	NONE			03/22/16 10:41	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**52.3**		0.1	0.1	%			03/16/16 12:42	1
Percent Solids	**47.7**		0.1	0.1	%			03/16/16 12:42	1

General Chemistry - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acid Volatile Sulfides (AVS)	**558**		31.5	6.3	mg/Kg	☼	03/16/16 14:00	03/16/16 17:56	1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(58-123)	(52-136)	(67-125)	(37-132)
240-61959-1	SE-030916-JN-001	84	196 X	156 X	94
240-61959-2	SE-030916-JN-002	88	144 X	130 X	95
240-61959-3	SE-030916-JN-003	88	166 X	139 X	98
240-61959-4	SE-030916-JN-004	94	112	108	100
240-61959-5	SE-030916-JN-005	89	195 X	150 X	97
240-61959-6	SE-030916-JN-006	88	103	114	95
LCS 240-221125/4	Lab Control Sample	90	101	105	101
MB 240-221125/5	Method Blank	95	104	107	99

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(39-128)	(26-141)	(33-134)	(30-122)
240-61959-7	SE-030916-JN-007	78	59	65	72
240-61959-8	SE-030916-JN-008	74	52	58	66
240-61959-8 MS	SE-030916-JN-008	64	54	50	64
240-61959-8 MSD	SE-030916-JN-008	70	58	52	71
240-61959-9	SE-030916-JN-009	74	50	54	69
240-61959-10	SE-030916-JN-010	77	60	65	69
LCS 240-221222/2-A	Lab Control Sample	88	85	84	88
MB 240-221222/1-A	Method Blank	82	81	81	73

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(78-125)	(61-120)	(80-120)	(79-120)
240-61959-11	TB-030916-JN-001	108	92	98	105
LCS 240-221437/4	Lab Control Sample	103	108	102	103
MB 240-221437/6	Method Blank	108	92	98	105

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	FBP (24-110)	2FP (24-110)	TBP (10-110)	NBZ (20-110)	PHL (26-110)	TPH (36-110)
240-61959-1	SE-030916-JN-001	71	74	35	106	43	87
240-61959-2	SE-030916-JN-002	64	36	48	109	37	68
240-61959-3	SE-030916-JN-003	178 X	192 X	192 X	0 X	208 X	183 X
240-61959-4	SE-030916-JN-004	66	75	44	132 X	79	74
240-61959-5	SE-030916-JN-005	87	74	60	119 X	58	89
240-61959-6	SE-030916-JN-006	79	71	68	67	64	83
240-61959-7	SE-030916-JN-007	61	25	36	0 X	54	74
240-61959-8	SE-030916-JN-008	90	90	88	0 X	88	109
240-61959-9	SE-030916-JN-009	69	46	49	0 X	147 X	82
240-61959-10	SE-030916-JN-010	76	77	62	175 X	83	77
LCS 240-221127/24-A	Lab Control Sample	72	72	50	68	72	85
MB 240-221127/23-A	Method Blank	72	66	34	63	68	87

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 1630 - Methyl Mercury (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	nPMC (10-149)
240-61959-1	SE-030916-JN-001	41
240-61959-1 MS	SE-030916-JN-001	37
240-61959-1 MSD	SE-030916-JN-001	30
240-61959-4	SE-030916-JN-004	42
240-61959-7	SE-030916-JN-007	29
LCS 240-221445/2-A	Lab Control Sample	19
MB 240-221445/1-A	Method Blank	22

Surrogate Legend

nPMC = n-Propyl Mercury Chloride

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (13-134)	DCB1 (10-155)
240-61959-1	SE-030916-JN-001	277 X	2950 X ^c
240-61959-2	SE-030916-JN-002	60	173 p X
240-61959-3	SE-030916-JN-003	126 p	458 p X
240-61959-4	SE-030916-JN-004	191 X	1287 ^c X

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	TCX1 (13-134)	DCB1 (10-155)								
240-61959-5	SE-030916-JN-005	76	56 p								
240-61959-6	SE-030916-JN-006	97	265 p X								
240-61959-7	SE-030916-JN-007	71 p	103 p								
240-61959-8	SE-030916-JN-008	65 p	73 p								
240-61959-9	SE-030916-JN-009	91 p	127 p								
240-61959-10	SE-030916-JN-010	120 p	181 p X								
LCS 240-221107/23-A	Lab Control Sample	95	94								
MB 240-221107/22-A	Method Blank	65	76								

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-221125/5
Matrix: Solid
Analysis Batch: 221125

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	12.3	J	20	5.7	ug/Kg			03/11/16 12:30	1
Benzene	<0.90		5.0	0.90	ug/Kg			03/11/16 12:30	1
Dichlorobromomethane	<0.29		5.0	0.29	ug/Kg			03/11/16 12:30	1
Bromoform	<0.24		5.0	0.24	ug/Kg			03/11/16 12:30	1
Bromomethane	<0.42		5.0	0.42	ug/Kg			03/11/16 12:30	1
2-Butanone (MEK)	1.63	J	20	1.1	ug/Kg			03/11/16 12:30	1
Carbon disulfide	<0.59		5.0	0.59	ug/Kg			03/11/16 12:30	1
Carbon tetrachloride	<0.65		5.0	0.65	ug/Kg			03/11/16 12:30	1
Chlorobenzene	<0.53		5.0	0.53	ug/Kg			03/11/16 12:30	1
Chloroethane	<0.44		5.0	0.44	ug/Kg			03/11/16 12:30	1
Chloroform	<0.36		5.0	0.36	ug/Kg			03/11/16 12:30	1
Chloromethane	<0.79		5.0	0.79	ug/Kg			03/11/16 12:30	1
1,1-Dichloroethane	<0.34		5.0	0.34	ug/Kg			03/11/16 12:30	1
1,2-Dichloroethane	<0.46		5.0	0.46	ug/Kg			03/11/16 12:30	1
1,1-Dichloroethene	<0.80		5.0	0.80	ug/Kg			03/11/16 12:30	1
1,2-Dichloropropane	<0.14		5.0	0.14	ug/Kg			03/11/16 12:30	1
1,2,4-Trimethylbenzene	<0.58		5.0	0.58	ug/Kg			03/11/16 12:30	1
cis-1,3-Dichloropropene	<0.71		5.0	0.71	ug/Kg			03/11/16 12:30	1
trans-1,3-Dichloropropene	<0.29		5.0	0.29	ug/Kg			03/11/16 12:30	1
Ethylbenzene	<0.32		5.0	0.32	ug/Kg			03/11/16 12:30	1
2-Hexanone	<0.68		20	0.68	ug/Kg			03/11/16 12:30	1
Methylene Chloride	4.01	J	5.0	0.74	ug/Kg			03/11/16 12:30	1
4-Methyl-2-pentanone (MIBK)	<1.2		20	1.2	ug/Kg			03/11/16 12:30	1
Styrene	<0.40		5.0	0.40	ug/Kg			03/11/16 12:30	1
1,1,2,2-Tetrachloroethane	<0.31		5.0	0.31	ug/Kg			03/11/16 12:30	1
Tetrachloroethene	<0.80		5.0	0.80	ug/Kg			03/11/16 12:30	1
Toluene	<0.27		5.0	0.27	ug/Kg			03/11/16 12:30	1
Trichloroethene	<0.38		5.0	0.38	ug/Kg			03/11/16 12:30	1
1,3,5-Trimethylbenzene	<0.29		5.0	0.29	ug/Kg			03/11/16 12:30	1
Vinyl chloride	<0.30		5.0	0.30	ug/Kg			03/11/16 12:30	1
Xylenes, Total	<0.54		10	0.54	ug/Kg			03/11/16 12:30	1
1,1,1-Trichloroethane	<0.65		5.0	0.65	ug/Kg			03/11/16 12:30	1
1,1,2-Trichloroethane	<0.37		5.0	0.37	ug/Kg			03/11/16 12:30	1
Cyclohexane	<0.48		10	0.48	ug/Kg			03/11/16 12:30	1
1,2-Dibromo-3-Chloropropane	<2.7		10	2.7	ug/Kg			03/11/16 12:30	1
Ethylene Dibromide	<0.53		5.0	0.53	ug/Kg			03/11/16 12:30	1
Dichlorodifluoromethane	<0.28		5.0	0.28	ug/Kg			03/11/16 12:30	1
cis-1,2-Dichloroethene	<0.28		5.0	0.28	ug/Kg			03/11/16 12:30	1
trans-1,2-Dichloroethene	<0.32		5.0	0.32	ug/Kg			03/11/16 12:30	1
Isopropylbenzene	<0.20		5.0	0.20	ug/Kg			03/11/16 12:30	1
Methyl acetate	<2.0		10	2.0	ug/Kg			03/11/16 12:30	1
Methyl tert-butyl ether	<0.43		5.0	0.43	ug/Kg			03/11/16 12:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.42		5.0	0.42	ug/Kg			03/11/16 12:30	1
1,2,4-Trichlorobenzene	<0.38		5.0	0.38	ug/Kg			03/11/16 12:30	1
1,2-Dichlorobenzene	<0.34		5.0	0.34	ug/Kg			03/11/16 12:30	1
1,3-Dichlorobenzene	<0.69		5.0	0.69	ug/Kg			03/11/16 12:30	1
1,4-Dichlorobenzene	<0.28		5.0	0.28	ug/Kg			03/11/16 12:30	1
Trichlorofluoromethane	<0.29		5.0	0.29	ug/Kg			03/11/16 12:30	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221125/5
Matrix: Solid
Analysis Batch: 221125

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Chlorodibromomethane	<0.37		5.0	0.37	ug/Kg			03/11/16 12:30	1
Methylcyclohexane	<0.58		10	0.58	ug/Kg			03/11/16 12:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*58 - 123*		*03/11/16 12:30*	*1*
4-Bromofluorobenzene (Surr)	*104*		*52 - 136*		*03/11/16 12:30*	*1*
Toluene-d8 (Surr)	*107*		*67 - 125*		*03/11/16 12:30*	*1*
Dibromofluoromethane (Surr)	*99*		*37 - 132*		*03/11/16 12:30*	*1*

Lab Sample ID: LCS 240-221125/4
Matrix: Solid
Analysis Batch: 221125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	93.8		ug/Kg		94	41 - 137
Benzene	50.0	48.9		ug/Kg		98	79 - 120
Dichlorobromomethane	50.0	52.8		ug/Kg		106	80 - 122
Bromoform	50.0	48.2		ug/Kg		96	62 - 133
Bromomethane	20.0	13.9		ug/Kg		70	42 - 136
2-Butanone (MEK)	100	102		ug/Kg		102	52 - 131
Carbon disulfide	50.0	52.7		ug/Kg		105	62 - 146
Carbon tetrachloride	50.0	50.6		ug/Kg		101	71 - 129
Chlorobenzene	50.0	49.0		ug/Kg		98	78 - 120
Chloroethane	20.0	15.3		ug/Kg		77	58 - 120
Chloroform	50.0	50.0		ug/Kg		100	77 - 120
Chloromethane	20.0	14.7		ug/Kg		74	50 - 120
1,1-Dichloroethane	50.0	46.2		ug/Kg		92	76 - 120
1,2-Dichloroethane	50.0	49.2		ug/Kg		98	72 - 120
1,1-Dichloroethene	50.0	49.5		ug/Kg		99	75 - 135
1,2-Dichloropropane	50.0	49.5		ug/Kg		99	80 - 120
1,2,4-Trimethylbenzene	50.0	52.7		ug/Kg		105	80 - 129
cis-1,3-Dichloropropene	50.0	54.4		ug/Kg		109	74 - 128
trans-1,3-Dichloropropene	50.0	48.4		ug/Kg		97	73 - 131
Ethylbenzene	50.0	50.2		ug/Kg		100	79 - 120
2-Hexanone	100	103		ug/Kg		103	64 - 136
Methylene Chloride	50.0	49.3		ug/Kg		99	75 - 120
4-Methyl-2-pentanone (MIBK)	100	99.2		ug/Kg		99	67 - 135
Styrene	50.0	51.2		ug/Kg		102	80 - 120
1,1,2,2-Tetrachloroethane	50.0	52.1		ug/Kg		104	77 - 123
Tetrachloroethene	50.0	49.0		ug/Kg		98	79 - 120
Toluene	50.0	49.4		ug/Kg		99	75 - 120
Trichloroethene	50.0	52.3		ug/Kg		105	79 - 120
1,3,5-Trimethylbenzene	50.0	52.9		ug/Kg		106	78 - 128
Vinyl chloride	20.0	16.5		ug/Kg		82	57 - 120
Xylenes, Total	100	101		ug/Kg		101	80 - 120
1,1,1-Trichloroethane	50.0	49.5		ug/Kg		99	77 - 126
1,1,2-Trichloroethane	50.0	50.2		ug/Kg		100	80 - 120
Cyclohexane	50.0	44.1		ug/Kg		88	66 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221125/4
Matrix: Solid
Analysis Batch: 221125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	50.0	59.5		ug/Kg		119	61 - 132
Ethylene Dibromide	50.0	52.8		ug/Kg		106	80 - 120
Dichlorodifluoromethane	20.0	12.3		ug/Kg		61	26 - 120
cis-1,2-Dichloroethene	50.0	49.5		ug/Kg		99	76 - 120
trans-1,2-Dichloroethene	50.0	49.9		ug/Kg		100	78 - 120
Isopropylbenzene	50.0	52.3		ug/Kg		105	76 - 122
Methyl acetate	250	247		ug/Kg		99	57 - 130
Methyl tert-butyl ether	50.0	49.6		ug/Kg		99	49 - 165
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	43.6		ug/Kg		87	80 - 138
1,2,4-Trichlorobenzene	50.0	49.3		ug/Kg		99	64 - 124
1,2-Dichlorobenzene	50.0	50.0		ug/Kg		100	76 - 120
1,3-Dichlorobenzene	50.0	48.7		ug/Kg		97	78 - 120
1,4-Dichlorobenzene	50.0	49.7		ug/Kg		99	75 - 120
Trichlorofluoromethane	20.0	16.8		ug/Kg		84	57 - 146
Methylcyclohexane	50.0	46.6		ug/Kg		93	70 - 126
m-Xylene & p-Xylene	50.0	50.5		ug/Kg		101	80 - 120
o-Xylene	50.0	50.3		ug/Kg		101	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*90*		*58 - 123*
4-Bromofluorobenzene (Surr)	*101*		*52 - 136*
Toluene-d8 (Surr)	*105*		*67 - 125*
Dibromofluoromethane (Surr)	*101*		*37 - 132*

Lab Sample ID: MB 240-221222/1-A
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221222

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<230		1000	230	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Benzene	<9.0		250	9.0	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Dichlorobromomethane	<38		250	38	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Bromoform	<61		250	61	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Bromomethane	<51		250	51	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
2-Butanone (MEK)	<73		1000	73	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Carbon disulfide	<56		250	56	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Carbon tetrachloride	<18		250	18	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Chlorobenzene	<13		250	13	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Chloroethane	<51		250	51	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Chloroform	<36		250	36	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Chloromethane	<48		250	48	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,1-Dichloroethane	<35		250	35	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,2-Dichloroethane	<10		250	10	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,1-Dichloroethene	<30		250	30	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,2-Dichloropropane	<32		250	32	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,2,4-Trimethylbenzene	<13		250	13	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
cis-1,3-Dichloropropene	<22		250	22	ug/Kg		03/11/16 13:46	03/16/16 08:17	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221222/1-A
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221222

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<26		250	26	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Ethylbenzene	<35		250	35	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
2-Hexanone	<84		1000	84	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Methylene Chloride	99.2	J	250	85	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
4-Methyl-2-pentanone (MIBK)	<56		1000	56	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Styrene	<27		250	27	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,1,2,2-Tetrachloroethane	<25		250	25	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Tetrachloroethene	<27		250	27	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Toluene	34.3	J	250	10	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Trichloroethene	<39		250	39	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,3,5-Trimethylbenzene	<15		250	15	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Vinyl chloride	<17		250	17	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Xylenes, Total	<32		500	32	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,1,1-Trichloroethane	<27		250	27	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,1,2-Trichloroethane	<19		250	19	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Cyclohexane	<30		500	30	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,2-Dibromo-3-Chloropropane	<71		500	71	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Ethylene Dibromide	<32		250	32	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Dichlorodifluoromethane	<61		250	61	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
cis-1,2-Dichloroethene	<38		250	38	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
trans-1,2-Dichloroethene	<26		250	26	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Isopropylbenzene	<13		250	13	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Methyl acetate	<55		500	55	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Methyl tert-butyl ether	<30		250	30	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<42		250	42	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,2,4-Trichlorobenzene	<30		250	30	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,2-Dichlorobenzene	<19		250	19	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,3-Dichlorobenzene	<30		250	30	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
1,4-Dichlorobenzene	<41		250	41	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Trichlorofluoromethane	<35		250	35	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Chlorodibromomethane	<20		250	20	ug/Kg		03/11/16 13:46	03/16/16 08:17	1
Methylcyclohexane	<38		500	38	ug/Kg		03/11/16 13:46	03/16/16 08:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*39 - 128*	*03/11/16 13:46*	*03/16/16 08:17*	*1*
4-Bromofluorobenzene (Surr)	*81*		*26 - 141*	*03/11/16 13:46*	*03/16/16 08:17*	*1*
Toluene-d8 (Surr)	*81*		*33 - 134*	*03/11/16 13:46*	*03/16/16 08:17*	*1*
Dibromofluoromethane (Surr)	*73*		*30 - 122*	*03/11/16 13:46*	*03/16/16 08:17*	*1*

Lab Sample ID: LCS 240-221222/2-A
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	2000	1280		ug/Kg		64	16 - 156
Benzene	1000	783		ug/Kg		78	70 - 120
Dichlorobromomethane	1000	756		ug/Kg		76	28 - 123
Bromoform	1000	673		ug/Kg		67	10 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221222/2-A
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	1000	552		ug/Kg		55	10 - 120
2-Butanone (MEK)	2000	1510		ug/Kg		76	10 - 199
Carbon disulfide	1000	368		ug/Kg		37	10 - 132
Carbon tetrachloride	1000	673		ug/Kg		67	29 - 120
Chlorobenzene	1000	780		ug/Kg		78	71 - 120
Chloroethane	1000	413		ug/Kg		41	10 - 120
Chloroform	1000	813		ug/Kg		81	63 - 120
Chloromethane	1000	546		ug/Kg		55	25 - 120
1,1-Dichloroethane	1000	758		ug/Kg		76	63 - 120
1,2-Dichloroethane	1000	813		ug/Kg		81	68 - 120
1,1-Dichloroethene	1000	623		ug/Kg		62	44 - 143
1,2-Dichloropropane	1000	867		ug/Kg		87	73 - 120
1,2,4-Trimethylbenzene	1000	838		ug/Kg		84	62 - 133
cis-1,3-Dichloropropene	1000	686		ug/Kg		69	25 - 120
trans-1,3-Dichloropropene	1000	642		ug/Kg		64	22 - 122
Ethylbenzene	1000	793		ug/Kg		79	66 - 120
2-Hexanone	2000	1380		ug/Kg		69	43 - 130
Methylene Chloride	1000	957		ug/Kg		96	27 - 172
4-Methyl-2-pentanone (MIBK)	2000	1710		ug/Kg		85	49 - 121
Styrene	1000	872		ug/Kg		87	60 - 120
1,1,2,2-Tetrachloroethane	1000	809		ug/Kg		81	54 - 121
Tetrachloroethene	1000	738		ug/Kg		74	58 - 131
Toluene	1000	903		ug/Kg		90	66 - 123
Trichloroethene	1000	800		ug/Kg		80	59 - 124
1,3,5-Trimethylbenzene	1000	848		ug/Kg		85	60 - 130
Vinyl chloride	1000	556		ug/Kg		56	33 - 120
Xylenes, Total	2000	1720		ug/Kg		86	68 - 120
1,1,1-Trichloroethane	1000	695		ug/Kg		69	38 - 122
1,1,2-Trichloroethane	1000	872		ug/Kg		87	74 - 120
Cyclohexane	1000	706		ug/Kg		71	40 - 120
1,2-Dibromo-3-Chloropropane	1000	497	J	ug/Kg		50	10 - 129
Ethylene Dibromide	1000	859		ug/Kg		86	47 - 123
Dichlorodifluoromethane	1000	382		ug/Kg		38	10 - 120
cis-1,2-Dichloroethene	1000	808		ug/Kg		81	60 - 125
trans-1,2-Dichloroethene	1000	739		ug/Kg		74	58 - 121
Isopropylbenzene	1000	836		ug/Kg		84	61 - 123
Methyl acetate	5000	4630		ug/Kg		93	44 - 173
Methyl tert-butyl ether	1000	778		ug/Kg		78	34 - 157
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	696		ug/Kg		70	48 - 151
1,2,4-Trichlorobenzene	1000	626		ug/Kg		63	41 - 135
1,2-Dichlorobenzene	1000	752		ug/Kg		75	68 - 120
1,3-Dichlorobenzene	1000	767		ug/Kg		77	66 - 121
1,4-Dichlorobenzene	1000	753		ug/Kg		75	65 - 120
Trichlorofluoromethane	1000	570		ug/Kg		57	17 - 145
Methylcyclohexane	1000	719		ug/Kg		72	41 - 133
m-Xylene & p-Xylene	1000	889		ug/Kg		89	67 - 120
o-Xylene	1000	832		ug/Kg		83	68 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221222/2-A
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221222

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*39 - 128*
4-Bromofluorobenzene (Surr)	*85*		*26 - 141*
Toluene-d8 (Surr)	*84*		*33 - 134*
Dibromofluoromethane (Surr)	*88*		*30 - 122*

Lab Sample ID: 240-61959-8 MS
Matrix: Solid
Analysis Batch: 221892

Client Sample ID: SE-030916-JN-008
Prep Type: Total/NA
Prep Batch: 221222

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	<580		3530	1810	J	ug/Kg	☼	51	10 - 142
Benzene	<23		1770	715		ug/Kg	☼	40	10 - 199
Dichlorobromomethane	<97		1770	744		ug/Kg	☼	42	18 - 133
Bromoform	<160		1770	573	J	ug/Kg	☼	32	10 - 147
Bromomethane	<130	F1	1770	<130	F1	ug/Kg	☼	0	10 - 151
2-Butanone (MEK)	<190		3530	2290	J	ug/Kg	☼	65	10 - 172
Carbon disulfide	<140	F1	1770	<140	F1	ug/Kg	☼	0	10 - 155
Carbon tetrachloride	<46		1770	209	J	ug/Kg	☼	12	12 - 135
Chlorobenzene	<33	F1	1770	745	F1	ug/Kg	☼	42	47 - 120
Chloroethane	<130		1770	324	J	ug/Kg	☼	18	10 - 168
Chloroform	<92		1770	894		ug/Kg	☼	51	51 - 120
Chloromethane	<120	F1	1770	233	J F1	ug/Kg	☼	13	16 - 120
1,1-Dichloroethane	<89		1770	731		ug/Kg	☼	41	18 - 160
1,2-Dichloroethane	<25		1770	973		ug/Kg	☼	55	25 - 150
1,1-Dichloroethene	<76		1770	315	J	ug/Kg	☼	18	10 - 179
1,2-Dichloropropane	<81	F1	1770	921	F1	ug/Kg	☼	52	58 - 120
1,2,4-Trimethylbenzene	450	J	1770	809		ug/Kg	☼	20	10 - 199
cis-1,3-Dichloropropene	<56		1770	398	J	ug/Kg	☼	23	19 - 121
trans-1,3-Dichloropropene	<66		1770	653		ug/Kg	☼	37	10 - 136
Ethylbenzene	<89		1770	601	J	ug/Kg	☼	34	27 - 143
2-Hexanone	<210		3530	1970	J	ug/Kg	☼	56	21 - 141
Methylene Chloride	<220		1770	981		ug/Kg	☼	56	10 - 148
4-Methyl-2-pentanone (MIBK)	<140		3530	2510	J	ug/Kg	☼	71	19 - 151
Styrene	<69		1770	698		ug/Kg	☼	40	31 - 137
1,1,2,2-Tetrachloroethane	<64		1770	972		ug/Kg	☼	55	16 - 158
Tetrachloroethene	<69		1770	372	J	ug/Kg	☼	21	19 - 153
Toluene	110	J B	1770	881		ug/Kg	☼	43	10 - 168
Trichloroethene	<99		1770	546	J	ug/Kg	☼	31	10 - 193
1,3,5-Trimethylbenzene	180	J	1770	580	J	ug/Kg	☼	22	10 - 173
Vinyl chloride	<43	F1	1770	179	J F1	ug/Kg	☼	10	15 - 123
Xylenes, Total	120	J	3530	1360		ug/Kg	☼	35	16 - 150
1,1,1-Trichloroethane	<69		1770	488	J	ug/Kg	☼	28	10 - 159
1,1,2-Trichloroethane	<48		1770	1400		ug/Kg	☼	79	34 - 152
Cyclohexane	170	J F1	1770	168	J F1	ug/Kg	☼	-0.2	10 - 154
1,2-Dibromo-3-Chloropropane	<180		1770	540	J	ug/Kg	☼	31	10 - 153
Ethylene Dibromide	<81		1770	814		ug/Kg	☼	46	32 - 127
Dichlorodifluoromethane	<160	F1	1770	<160	F1	ug/Kg	☼	0	10 - 120
cis-1,2-Dichloroethene	<97		1770	822		ug/Kg	☼	46	34 - 137

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-61959-8 MS
Matrix: Solid
Analysis Batch: 221892

Client Sample ID: SE-030916-JN-008
Prep Type: Total/NA
Prep Batch: 221222

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	<66	F1	1770	438	J F1	ug/Kg	☼	25	40 - 126
Isopropylbenzene	530	J F1	1770	820	F1	ug/Kg	☼	16	39 - 126
Methyl acetate	230	J	8830	8000		ug/Kg	☼	88	10 - 175
Methyl tert-butyl ether	<76		1770	1190		ug/Kg	☼	68	26 - 159
1,1,2-Trichloro-1,2,2-trifluoroethane	<110	F1	1770	203	J F1	ug/Kg	☼	11	23 - 168
1,2,4-Trichlorobenzene	<76		1770	364	J	ug/Kg	☼	21	10 - 136
1,2-Dichlorobenzene	<48		1770	730		ug/Kg	☼	41	27 - 126
1,3-Dichlorobenzene	<76		1770	574	J	ug/Kg	☼	33	29 - 124
1,4-Dichlorobenzene	<100		1770	598	J	ug/Kg	☼	34	30 - 123
Trichlorofluoromethane	<89		1770	195	J	ug/Kg	☼	11	10 - 157
Methylcyclohexane	1400	F1	1770	500	J F1	ug/Kg	☼	-54	11 - 156
m-Xylene & p-Xylene	120	J	1770	691		ug/Kg	☼	32	14 - 151
o-Xylene	<43		1770	666		ug/Kg	☼	38	18 - 151

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*64*		*39 - 128*
4-Bromofluorobenzene (Surr)	*54*		*26 - 141*
Toluene-d8 (Surr)	*50*		*33 - 134*
Dibromofluoromethane (Surr)	*64*		*30 - 122*

Lab Sample ID: 240-61959-8 MSD
Matrix: Solid
Analysis Batch: 221892

Client Sample ID: SE-030916-JN-008
Prep Type: Total/NA
Prep Batch: 221222

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	<580		3550	2250	J	ug/Kg	☼	64	10 - 142	22	30
Benzene	<23		1770	895		ug/Kg	☼	50	10 - 199	22	30
Dichlorobromomethane	<97		1770	933		ug/Kg	☼	53	18 - 133	23	30
Bromoform	<160		1770	758		ug/Kg	☼	43	10 - 147	28	30
Bromomethane	<130	F1	1770	133	J F1	ug/Kg	☼	7	10 - 151	NC	30
2-Butanone (MEK)	<190		3550	2700		ug/Kg	☼	76	10 - 172	16	30
Carbon disulfide	<140	F1	1770	169	J F1	ug/Kg	☼	9	10 - 155	NC	30
Carbon tetrachloride	<46		1770	293	J F2	ug/Kg	☼	16	12 - 135	34	30
Chlorobenzene	<33	F1	1770	888		ug/Kg	☼	50	47 - 120	17	30
Chloroethane	<130		1770	386	J	ug/Kg	☼	22	10 - 168	18	30
Chloroform	<92		1770	1140		ug/Kg	☼	64	51 - 120	24	30
Chloromethane	<120	F1	1770	432	J F2	ug/Kg	☼	24	16 - 120	60	30
1,1-Dichloroethane	<89		1770	952		ug/Kg	☼	54	18 - 160	26	30
1,2-Dichloroethane	<25		1770	1150		ug/Kg	☼	65	25 - 150	17	30
1,1-Dichloroethene	<76		1770	505	J F2	ug/Kg	☼	28	10 - 179	46	30
1,2-Dichloropropane	<81	F1	1770	1130		ug/Kg	☼	64	58 - 120	20	30
1,2,4-Trimethylbenzene	450	J	1770	964		ug/Kg	☼	29	10 - 199	17	30
cis-1,3-Dichloropropene	<56		1770	524	J	ug/Kg	☼	30	19 - 121	27	30
trans-1,3-Dichloropropene	<66		1770	727		ug/Kg	☼	41	10 - 136	11	30
Ethylbenzene	<89		1770	736		ug/Kg	☼	41	27 - 143	20	30
2-Hexanone	<210		3550	2370	J	ug/Kg	☼	67	21 - 141	19	30
Methylene Chloride	<220		1770	1260		ug/Kg	☼	71	10 - 148	24	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-61959-8 MSD
Matrix: Solid
Analysis Batch: 221892

Client Sample ID: SE-030916-JN-008
Prep Type: Total/NA
Prep Batch: 221222

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Methyl-2-pentanone (MIBK)	<140		3550	3010		ug/Kg	☼	85	19 - 151	18	30
Styrene	<69		1770	834		ug/Kg	☼	47	31 - 137	18	30
1,1,2,2-Tetrachloroethane	<64		1770	1540	F2	ug/Kg	☼	87	16 - 158	45	30
Tetrachloroethene	<69		1770	462	J	ug/Kg	☼	26	19 - 153	22	30
Toluene	110	J B	1770	988		ug/Kg	☼	49	10 - 168	11	30
Trichloroethene	<99		1770	722		ug/Kg	☼	41	10 - 193	28	30
1,3,5-Trimethylbenzene	180	J	1770	741		ug/Kg	☼	31	10 - 173	24	30
Vinyl chloride	<43	F1	1770	367	J F2	ug/Kg	☼	21	15 - 123	69	30
Xylenes, Total	120	J	3550	1680		ug/Kg	☼	44	16 - 150	21	30
1,1,1-Trichloroethane	<69		1770	649	J	ug/Kg	☼	37	10 - 159	28	30
1,1,2-Trichloroethane	<48		1770	1680		ug/Kg	☼	95	34 - 152	18	30
Cyclohexane	170	J F1	1770	264	J F1 F2	ug/Kg	☼	5	10 - 154	44	30
1,2-Dibromo-3-Chloropropane	<180		1770	603	J	ug/Kg	☼	34	10 - 153	11	30
Ethylene Dibromide	<81		1770	1000		ug/Kg	☼	56	32 - 127	21	30
Dichlorodifluoromethane	<160	F1	1770	<160	F1	ug/Kg	☼	0	10 - 120	NC	30
cis-1,2-Dichloroethene	<97		1770	1010		ug/Kg	☼	57	34 - 137	21	30
trans-1,2-Dichloroethene	<66	F1	1770	618	J F1 F2	ug/Kg	☼	35	40 - 126	34	30
Isopropylbenzene	530	J F1	1770	980	F1	ug/Kg	☼	25	39 - 126	18	30
Methyl acetate	230	J	8870	9340		ug/Kg	☼	103	10 - 175	15	30
Methyl tert-butyl ether	<76		1770	1470		ug/Kg	☼	83	26 - 159	21	30
1,1,2-Trichloro-1,2,2-trifluoroethane	<110	F1	1770	350	J F1 F2	ug/Kg	☼	20	23 - 168	53	30
1,2,4-Trichlorobenzene	<76		1770	465	J	ug/Kg	☼	26	10 - 136	24	30
1,2-Dichlorobenzene	<48		1770	854		ug/Kg	☼	48	27 - 126	16	30
1,3-Dichlorobenzene	<76		1770	704		ug/Kg	☼	40	29 - 124	20	30
1,4-Dichlorobenzene	<100		1770	728		ug/Kg	☼	41	30 - 123	20	30
Trichlorofluoromethane	<89		1770	295	J F2	ug/Kg	☼	17	10 - 157	41	30
Methylcyclohexane	1400	F1	1770	678	J F1	ug/Kg	☼	-43	11 - 156	30	30
m-Xylene & p-Xylene	120	J	1770	842		ug/Kg	☼	40	14 - 151	20	30
o-Xylene	<43		1770	833		ug/Kg	☼	47	18 - 151	22	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*70*		*39 - 128*
4-Bromofluorobenzene (Surr)	*58*		*26 - 141*
Toluene-d8 (Surr)	*52*		*33 - 134*
Dibromofluoromethane (Surr)	*71*		*30 - 122*

Lab Sample ID: MB 240-221437/6
Matrix: Water
Analysis Batch: 221437

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.94		10	0.94	ug/L			03/14/16 13:04	1
Benzene	<0.35		1.0	0.35	ug/L			03/14/16 13:04	1
Dichlorobromomethane	<0.29		1.0	0.29	ug/L			03/14/16 13:04	1
Bromoform	<0.56		1.0	0.56	ug/L			03/14/16 13:04	1
Bromomethane	<0.44		1.0	0.44	ug/L			03/14/16 13:04	1
2-Butanone (MEK)	<0.53		10	0.53	ug/L			03/14/16 13:04	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221437/6
Matrix: Water
Analysis Batch: 221437

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	<0.38		1.0	0.38	ug/L			03/14/16 13:04	1
Carbon tetrachloride	<0.43		1.0	0.43	ug/L			03/14/16 13:04	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			03/14/16 13:04	1
Chloroethane	<0.32		1.0	0.32	ug/L			03/14/16 13:04	1
Chloroform	<0.25		1.0	0.25	ug/L			03/14/16 13:04	1
Chloromethane	<0.44		1.0	0.44	ug/L			03/14/16 13:04	1
1,1-Dichloroethane	<0.30		1.0	0.30	ug/L			03/14/16 13:04	1
1,2-Dichloroethane	<0.23		1.0	0.23	ug/L			03/14/16 13:04	1
1,1-Dichloroethene	<0.45		1.0	0.45	ug/L			03/14/16 13:04	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			03/14/16 13:04	1
1,2,4-Trimethylbenzene	<0.41		1.0	0.41	ug/L			03/14/16 13:04	1
cis-1,3-Dichloropropene	<0.46		1.0	0.46	ug/L			03/14/16 13:04	1
trans-1,3-Dichloropropene	<0.56		1.0	0.56	ug/L			03/14/16 13:04	1
Ethylbenzene	<0.25		1.0	0.25	ug/L			03/14/16 13:04	1
2-Hexanone	<0.48		10	0.48	ug/L			03/14/16 13:04	1
Methylene Chloride	0.393	J	1.0	0.33	ug/L			03/14/16 13:04	1
4-Methyl-2-pentanone (MIBK)	<0.99		10	0.99	ug/L			03/14/16 13:04	1
Styrene	<0.45		1.0	0.45	ug/L			03/14/16 13:04	1
1,1,2,2-Tetrachloroethane	<0.22		1.0	0.22	ug/L			03/14/16 13:04	1
Tetrachloroethene	<0.31		1.0	0.31	ug/L			03/14/16 13:04	1
Toluene	<0.23		1.0	0.23	ug/L			03/14/16 13:04	1
Trichloroethene	<0.22		1.0	0.22	ug/L			03/14/16 13:04	1
1,3,5-Trimethylbenzene	<0.48		1.0	0.48	ug/L			03/14/16 13:04	1
Vinyl chloride	<0.29		1.0	0.29	ug/L			03/14/16 13:04	1
Xylenes, Total	<0.52		2.0	0.52	ug/L			03/14/16 13:04	1
1,1,1-Trichloroethane	<0.44		1.0	0.44	ug/L			03/14/16 13:04	1
1,1,2-Trichloroethane	<0.24		1.0	0.24	ug/L			03/14/16 13:04	1
Cyclohexane	<0.45		1.0	0.45	ug/L			03/14/16 13:04	1
1,2-Dibromo-3-Chloropropane	<0.82		2.0	0.82	ug/L			03/14/16 13:04	1
Ethylene Dibromide	<0.32		1.0	0.32	ug/L			03/14/16 13:04	1
Dichlorodifluoromethane	<0.32		1.0	0.32	ug/L			03/14/16 13:04	1
cis-1,2-Dichloroethene	<0.26		1.0	0.26	ug/L			03/14/16 13:04	1
trans-1,2-Dichloroethene	<0.30		1.0	0.30	ug/L			03/14/16 13:04	1
Isopropylbenzene	<0.35		1.0	0.35	ug/L			03/14/16 13:04	1
Methyl acetate	<2.3		10	2.3	ug/L			03/14/16 13:04	1
Methyl tert-butyl ether	<0.20		1.0	0.20	ug/L			03/14/16 13:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.45		1.0	0.45	ug/L			03/14/16 13:04	1
1,2,4-Trichlorobenzene	<0.32		1.0	0.32	ug/L			03/14/16 13:04	1
1,2-Dichlorobenzene	<0.25		1.0	0.25	ug/L			03/14/16 13:04	1
1,3-Dichlorobenzene	<0.19		1.0	0.19	ug/L			03/14/16 13:04	1
1,4-Dichlorobenzene	<0.27		1.0	0.27	ug/L			03/14/16 13:04	1
Trichlorofluoromethane	<0.49		1.0	0.49	ug/L			03/14/16 13:04	1
Chlorodibromomethane	<0.43		1.0	0.43	ug/L			03/14/16 13:04	1
Methylcyclohexane	<0.43		1.0	0.43	ug/L			03/14/16 13:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*78 - 125*		*03/14/16 13:04*	*1*
4-Bromofluorobenzene (Surr)	*92*		*61 - 120*		*03/14/16 13:04*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221437/6
Matrix: Water
Analysis Batch: 221437

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		03/14/16 13:04	1
Dibromofluoromethane (Surr)	105		79 - 120		03/14/16 13:04	1

Lab Sample ID: LCS 240-221437/4
Matrix: Water
Analysis Batch: 221437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	17.5		ug/L		87	34 - 148
Benzene	10.0	9.80		ug/L		98	80 - 120
Dichlorobromomethane	10.0	10.1		ug/L		101	80 - 120
Bromoform	10.0	9.48		ug/L		95	56 - 122
Bromomethane	10.0	7.40		ug/L		74	38 - 132
2-Butanone (MEK)	20.0	19.1		ug/L		96	56 - 138
Carbon disulfide	10.0	9.14		ug/L		91	65 - 144
Carbon tetrachloride	10.0	11.4		ug/L		114	77 - 131
Chlorobenzene	10.0	9.46		ug/L		95	80 - 120
Chloroethane	10.0	7.79		ug/L		78	36 - 126
Chloroform	10.0	9.85		ug/L		99	80 - 120
Chloromethane	10.0	7.98		ug/L		80	48 - 133
1,1-Dichloroethane	10.0	9.71		ug/L		97	79 - 125
1,2-Dichloroethane	10.0	9.97		ug/L		100	80 - 120
1,1-Dichloroethene	10.0	10.0		ug/L		100	76 - 124
1,2-Dichloropropane	10.0	9.85		ug/L		98	78 - 124
1,2,4-Trimethylbenzene	10.0	9.80		ug/L		98	76 - 120
cis-1,3-Dichloropropene	10.0	10.7		ug/L		107	74 - 126
trans-1,3-Dichloropropene	10.0	9.43		ug/L		94	75 - 131
Ethylbenzene	10.0	9.87		ug/L		99	80 - 120
2-Hexanone	20.0	19.8		ug/L		99	55 - 141
Methylene Chloride	10.0	10.8		ug/L		108	77 - 129
4-Methyl-2-pentanone (MIBK)	20.0	21.2		ug/L		106	64 - 135
Styrene	10.0	10.1		ug/L		101	76 - 122
1,1,2,2-Tetrachloroethane	10.0	8.65		ug/L		86	71 - 123
Tetrachloroethene	10.0	9.77		ug/L		98	78 - 121
Toluene	10.0	9.63		ug/L		96	80 - 120
Trichloroethene	10.0	9.88		ug/L		99	80 - 121
1,3,5-Trimethylbenzene	10.0	9.67		ug/L		97	77 - 120
Vinyl chloride	10.0	7.84		ug/L		78	52 - 121
Xylenes, Total	20.0	20.3		ug/L		102	80 - 120
1,1,1-Trichloroethane	10.0	10.4		ug/L		104	77 - 123
1,1,2-Trichloroethane	10.0	9.75		ug/L		98	80 - 120
Cyclohexane	10.0	10.0		ug/L		100	60 - 140
1,2-Dibromo-3-Chloropropane	10.0	10.3		ug/L		103	50 - 132
Ethylene Dibromide	10.0	10.0		ug/L		100	80 - 120
Dichlorodifluoromethane	10.0	5.68		ug/L		57	23 - 136
cis-1,2-Dichloroethene	10.0	10.1		ug/L		101	79 - 120
trans-1,2-Dichloroethene	10.0	10.3		ug/L		103	80 - 124
Isopropylbenzene	10.0	10.7		ug/L		107	77 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221437/4
Matrix: Water
Analysis Batch: 221437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl acetate	50.0	50.6		ug/L		101	67 - 131
Methyl tert-butyl ether	10.0	10.3		ug/L		103	69 - 121
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.3		ug/L		103	67 - 138
1,2,4-Trichlorobenzene	10.0	9.56		ug/L		96	61 - 120
1,2-Dichlorobenzene	10.0	9.74		ug/L		97	79 - 120
1,3-Dichlorobenzene	10.0	9.29		ug/L		93	79 - 120
1,4-Dichlorobenzene	10.0	9.39		ug/L		94	79 - 120
Trichlorofluoromethane	10.0	8.84		ug/L		88	61 - 133
Methylcyclohexane	10.0	10.4		ug/L		104	61 - 134
m-Xylene & p-Xylene	10.0	9.82		ug/L		98	80 - 120
o-Xylene	10.0	10.5		ug/L		105	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*78 - 125*
4-Bromofluorobenzene (Surr)	*108*		*61 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*79 - 120*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-221127/23-A
Matrix: Solid
Analysis Batch: 222162

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221127

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<3.5		50	3.5	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
bis (2-chloroisopropyl) ether	<9.5		100	9.5	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
2,4,5-Trichlorophenol	<25		150	25	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
2,4,6-Trichlorophenol	<8.9		150	8.9	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
2,4-Dichlorophenol	<20		150	20	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
2,4-Dimethylphenol	<20		150	20	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
2,4-Dinitrophenol	<21		330	21	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
2,4-Dinitrotoluene	<17		200	17	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
2,6-Dinitrotoluene	<21		200	21	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
2-Chloronaphthalene	<0.45		50	0.45	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
2-Chlorophenol	<8.2		50	8.2	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
2-Methylnaphthalene	<0.50		6.7	0.50	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
2-Methylphenol	<11		200	11	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
2-Nitroaniline	<9.1		200	9.1	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
2-Nitrophenol	<8.3		50	8.3	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
3,3'-Dichlorobenzidine	<18		100	18	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
3-Nitroaniline	<16		200	16	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
4,6-Dinitro-2-methylphenol	<9.2		150	9.2	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
4-Bromophenyl phenyl ether	<13		50	13	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
4-Chloro-3-methylphenol	<21		150	21	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
4-Chloroaniline	<17		150	17	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
4-Chlorophenyl phenyl ether	<13		50	13	ug/Kg		03/11/16 08:42	03/18/16 10:12	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221127/23-A
Matrix: Solid
Analysis Batch: 222162

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221127

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitroaniline	<26		200	26	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
4-Nitrophenol	<17		330	17	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Acetophenone	<9.2		100	9.2	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Atrazine	<9.1		200	9.1	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Benzaldehyde	<12		100	12	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Bis(2-chloroethoxy)methane	<22		100	22	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Bis(2-chloroethyl)ether	<2.0		100	2.0	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Bis(2-ethylhexyl) phthalate	<19		70	19	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Butyl benzyl phthalate	<10		70	10	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Caprolactam	<37		330	37	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Carbazole	<27		50	27	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Dibenzofuran	<0.66		50	0.66	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Diethyl phthalate	<16		70	16	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Dimethyl phthalate	<17		70	17	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Di-n-butyl phthalate	<15		70	15	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Di-n-octyl phthalate	<7.9		70	7.9	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Hexachlorobenzene	<2.1		6.7	2.1	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Hexachlorobutadiene	<5.6		50	5.6	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Hexachlorocyclopentadiene	<8.1		330	8.1	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Hexachloroethane	<9.0		50	9.0	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Isophorone	<13		50	13	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Nitrobenzene	<2.2		100	2.2	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
N-Nitrosodi-n-propylamine	<6.3		50	6.3	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
N-Nitrosodiphenylamine	<21		50	21	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Pentachlorophenol	<9.1		150	9.1	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Phenol	<7.3		50	7.3	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
3 & 4 Methylphenol	<20		400	20	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Fluorene	<0.53		6.7	0.53	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Acenaphthylene	<0.35		6.7	0.35	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Benzo[g,h,i]perylene	<0.35		6.7	0.35	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Phenanthrene	<0.73		6.7	0.73	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Benzo[k]fluoranthene	<0.68		6.7	0.68	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Benzo[a]pyrene	<0.64		6.7	0.64	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Anthracene	<0.78		6.7	0.78	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Pyrene	<0.44		6.7	0.44	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Dibenz(a,h)anthracene	<0.66		6.7	0.66	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Naphthalene	<0.82		6.7	0.82	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Fluoranthene	<0.55		6.7	0.55	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Benzo[a]anthracene	<0.63		6.7	0.63	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Indeno[1,2,3-cd]pyrene	<0.35		6.7	0.35	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Chrysene	<1.1		6.7	1.1	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Acenaphthene	<0.76		6.7	0.76	ug/Kg		03/11/16 08:42	03/18/16 10:12	1
Benzo[b]fluoranthene	<0.59		6.7	0.59	ug/Kg		03/11/16 08:42	03/18/16 10:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*72*		*24 - 110*	*03/11/16 08:42*	*03/18/16 10:12*	*1*
2-Fluorophenol (Surr)	*66*		*24 - 110*	*03/11/16 08:42*	*03/18/16 10:12*	*1*
2,4,6-Tribromophenol (Surr)	*34*		*10 - 110*	*03/11/16 08:42*	*03/18/16 10:12*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221127/23-A
Matrix: Solid
Analysis Batch: 222162

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221127

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	63		20 - 110	03/11/16 08:42	03/18/16 10:12	1
Phenol-d5 (Surr)	68		26 - 110	03/11/16 08:42	03/18/16 10:12	1
Terphenyl-d14 (Surr)	87		36 - 110	03/11/16 08:42	03/18/16 10:12	1

Lab Sample ID: LCS 240-221127/24-A
Matrix: Solid
Analysis Batch: 222162

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221127

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	667	499		ug/Kg		75	35 - 110
bis (2-chloroisopropyl) ether	667	421		ug/Kg		63	29 - 110
2,4,5-Trichlorophenol	667	528		ug/Kg		79	25 - 110
2,4,6-Trichlorophenol	667	424		ug/Kg		64	12 - 110
2,4-Dichlorophenol	667	527		ug/Kg		79	39 - 110
2,4-Dimethylphenol	667	490		ug/Kg		74	29 - 110
2,4-Dinitrophenol	1330	1410		ug/Kg		106	10 - 110
2,4-Dinitrotoluene	667	628		ug/Kg		94	48 - 110
2,6-Dinitrotoluene	667	593		ug/Kg		89	45 - 110
2-Chloronaphthalene	667	493		ug/Kg		74	32 - 110
2-Chlorophenol	667	500		ug/Kg		75	37 - 110
2-Methylnaphthalene	667	512		ug/Kg		77	36 - 110
2-Methylphenol	667	504		ug/Kg		76	41 - 110
2-Nitroaniline	667	559		ug/Kg		84	45 - 110
2-Nitrophenol	667	560		ug/Kg		84	34 - 110
3,3'-Dichlorobenzidine	1330	957		ug/Kg		72	28 - 110
3-Nitroaniline	667	544		ug/Kg		82	44 - 110
4,6-Dinitro-2-methylphenol	1330	1500	*	ug/Kg		112	10 - 110
4-Bromophenyl phenyl ether	667	572		ug/Kg		86	39 - 110
4-Chloro-3-methylphenol	667	543		ug/Kg		81	48 - 110
4-Chloroaniline	667	470		ug/Kg		71	30 - 110
4-Chlorophenyl phenyl ether	667	516		ug/Kg		77	40 - 110
4-Nitroaniline	667	595		ug/Kg		89	48 - 110
4-Nitrophenol	1330	1140		ug/Kg		85	28 - 110
Acetophenone	667	491		ug/Kg		74	40 - 110
Atrazine	1330	1030		ug/Kg		77	54 - 120
Benzaldehyde	1330	890		ug/Kg		67	32 - 110
Bis(2-chloroethoxy)methane	667	496		ug/Kg		74	32 - 110
Bis(2-chloroethyl)ether	667	481		ug/Kg		72	34 - 110
Bis(2-ethylhexyl) phthalate	667	557		ug/Kg		84	50 - 110
Butyl benzyl phthalate	667	552		ug/Kg		83	51 - 110
Caprolactam	1330	957		ug/Kg		72	44 - 114
Carbazole	667	566		ug/Kg		85	50 - 110
Dibenzofuran	667	520		ug/Kg		78	43 - 110
Diethyl phthalate	667	536		ug/Kg		80	52 - 110
Dimethyl phthalate	667	538		ug/Kg		81	50 - 110
Di-n-butyl phthalate	667	522		ug/Kg		78	51 - 110
Di-n-octyl phthalate	667	572		ug/Kg		86	48 - 110
Hexachlorobenzene	667	559		ug/Kg		84	43 - 110

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221127/24-A
Matrix: Solid
Analysis Batch: 222162

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221127

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobutadiene	667	501		ug/Kg		75	29 - 110
Hexachlorocyclopentadiene	667	522		ug/Kg		78	12 - 110
Hexachloroethane	667	475		ug/Kg		71	30 - 110
Isophorone	667	488		ug/Kg		73	36 - 110
Nitrobenzene	667	479		ug/Kg		72	32 - 110
N-Nitrosodi-n-propylamine	667	489		ug/Kg		73	38 - 110
N-Nitrosodiphenylamine	1330	1090		ug/Kg		82	46 - 110
Pentachlorophenol	1330	900		ug/Kg		67	10 - 110
Phenol	667	493		ug/Kg		74	38 - 110
3 & 4 Methylphenol	667	493		ug/Kg		74	40 - 110
Fluorene	667	530		ug/Kg		79	46 - 110
Acenaphthylene	667	523		ug/Kg		78	40 - 110
Benzo[g,h,i]perylene	667	603		ug/Kg		90	51 - 110
Phenanthrene	667	539		ug/Kg		81	49 - 110
Benzo[k]fluoranthene	667	575		ug/Kg		86	38 - 105
Benzo[a]pyrene	667	599		ug/Kg		90	44 - 110
Anthracene	667	533		ug/Kg		80	48 - 110
Pyrene	667	580		ug/Kg		87	49 - 110
Dibenz(a,h)anthracene	667	610		ug/Kg		92	51 - 110
Naphthalene	667	487		ug/Kg		73	36 - 110
Fluoranthene	667	549		ug/Kg		82	51 - 110
Benzo[a]anthracene	667	549		ug/Kg		82	50 - 110
Indeno[1,2,3-cd]pyrene	667	600		ug/Kg		90	50 - 110
Chrysene	667	569		ug/Kg		85	50 - 110
Acenaphthene	667	512		ug/Kg		77	38 - 110
Benzo[b]fluoranthene	667	615		ug/Kg		92	43 - 110

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*72*		*24 - 110*
2-Fluorophenol (Surr)	*72*		*24 - 110*
2,4,6-Tribromophenol (Surr)	*50*		*10 - 110*
Nitrobenzene-d5 (Surr)	*68*		*20 - 110*
Phenol-d5 (Surr)	*72*		*26 - 110*
Terphenyl-d14 (Surr)	*85*		*36 - 110*

Method: 1630 - Methyl Mercury (GC)

Lab Sample ID: MB 240-221445/1-A
Matrix: Solid
Analysis Batch: 222277

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221445

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.030		0.10	0.030	ug/Kg		03/14/16 11:58	03/18/16 19:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Propyl Mercury Chloride	*22*		*10 - 149*	*03/14/16 11:58*	*03/18/16 19:59*	*1*

Method: 1630 - Methyl Mercury (GC) (Continued)

Lab Sample ID: LCS 240-221445/2-A
Matrix: Solid
Analysis Batch: 222277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221445

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Methyl Mercury			1.00	0.694		ug/Kg		69	41 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Propyl Mercury Chloride	*19*		*10 - 149*

Lab Sample ID: 240-61959-1 MS
Matrix: Solid
Analysis Batch: 222277

Client Sample ID: SE-030916-JN-001
Prep Type: Total/NA
Prep Batch: 221445

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Methyl Mercury	0.24		1.58	1.53		ug/Kg	☼	81	10 - 181		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Propyl Mercury Chloride	*37*		*10 - 149*

Lab Sample ID: 240-61959-1 MSD
Matrix: Solid
Analysis Batch: 222277

Client Sample ID: SE-030916-JN-001
Prep Type: Total/NA
Prep Batch: 221445

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl Mercury	0.24		1.57	1.54		ug/Kg	☼	83	10 - 181	1	49

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Propyl Mercury Chloride	*30*		*10 - 149*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-221107/22-A
Matrix: Solid
Analysis Batch: 221640

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221107

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<12		33	12	ug/Kg		03/11/16 07:38	03/15/16 23:52	1
Aroclor-1221	<16		33	16	ug/Kg		03/11/16 07:38	03/15/16 23:52	1
Aroclor-1232	<20		33	20	ug/Kg		03/11/16 07:38	03/15/16 23:52	1
Aroclor-1242	<11		33	11	ug/Kg		03/11/16 07:38	03/15/16 23:52	1
Aroclor-1248	<8.0		33	8.0	ug/Kg		03/11/16 07:38	03/15/16 23:52	1
Aroclor-1254	<14		33	14	ug/Kg		03/11/16 07:38	03/15/16 23:52	1
Aroclor-1260	<9.0		33	9.0	ug/Kg		03/11/16 07:38	03/15/16 23:52	1
Aroclor-1262	<10		33	10	ug/Kg		03/11/16 07:38	03/15/16 23:52	1
Aroclor-1268	<13		33	13	ug/Kg		03/11/16 07:38	03/15/16 23:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*		*13 - 134*	*03/11/16 07:38*	*03/15/16 23:52*	*1*
DCB Decachlorobiphenyl	*76*		*10 - 155*	*03/11/16 07:38*	*03/15/16 23:52*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 240-221107/23-A
Matrix: Solid
Analysis Batch: 221640

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221107

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	333	326		ug/Kg		98	51 - 120
Aroclor-1260	333	333		ug/Kg		100	48 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*95*		*13 - 134*
DCB Decachlorobiphenyl	*94*		*10 - 155*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-221797/2-A
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221797

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0029		0.50	0.0029	mg/L		03/16/16 11:10	03/17/16 20:36	1
Barium	<0.0010		10.0	0.0010	mg/L		03/16/16 11:10	03/17/16 20:36	1
Cadmium	<0.00014		0.10	0.00014	mg/L		03/16/16 11:10	03/17/16 20:36	1
Chromium	<0.00055		0.50	0.00055	mg/L		03/16/16 11:10	03/17/16 20:36	1
Lead	<0.0019		0.50	0.0019	mg/L		03/16/16 11:10	03/17/16 20:36	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:10	03/17/16 20:36	1
Silver	<0.00092		0.50	0.00092	mg/L		03/16/16 11:10	03/17/16 20:36	1

Lab Sample ID: LCS 240-221797/3-A
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221797

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.00	2.07		mg/L		104	50 - 150
Barium	2.00	1.94	J	mg/L		97	50 - 150
Cadmium	0.0500	0.0504	J	mg/L		101	50 - 150
Chromium	0.200	0.200	J	mg/L		100	50 - 150
Lead	0.500	0.483	J	mg/L		97	50 - 150
Selenium	2.00	2.17		mg/L		108	50 - 150
Silver	0.0500	0.0384	J	mg/L		77	50 - 150

Lab Sample ID: MB 240-221808/2-A
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221808

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0029		0.50	0.0029	mg/L		03/16/16 11:41	03/17/16 19:33	1
Barium	0.00160	J	10.0	0.0010	mg/L		03/16/16 11:41	03/17/16 19:33	1
Cadmium	<0.00014		0.10	0.00014	mg/L		03/16/16 11:41	03/17/16 19:33	1
Chromium	0.000591	J	0.50	0.00055	mg/L		03/16/16 11:41	03/17/16 19:33	1
Lead	<0.0019		0.50	0.0019	mg/L		03/16/16 11:41	03/17/16 19:33	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:41	03/17/16 19:33	1
Silver	<0.00092		0.50	0.00092	mg/L		03/16/16 11:41	03/17/16 19:33	1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-221808/3-A
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221808

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.00	2.09		mg/L		105	50 - 150
Barium	2.00	1.88	J	mg/L		94	50 - 150
Cadmium	0.0500	0.0502	J	mg/L		100	50 - 150
Chromium	0.200	0.203	J	mg/L		101	50 - 150
Lead	0.500	0.447	J	mg/L		89	50 - 150
Selenium	2.00	2.16		mg/L		108	50 - 150
Silver	0.0500	0.0535	J	mg/L		107	50 - 150

Lab Sample ID: LB 240-221748/1-B
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 221797

Analyte	LB Result	LB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0029		0.50	0.0029	mg/L		03/16/16 11:10	03/17/16 20:24	1
Barium	0.00199	J	10.0	0.0010	mg/L		03/16/16 11:10	03/17/16 20:24	1
Cadmium	<0.00014		0.10	0.00014	mg/L		03/16/16 11:10	03/17/16 20:24	1
Chromium	0.00121	J	0.50	0.00055	mg/L		03/16/16 11:10	03/17/16 20:24	1
Lead	<0.0019		0.50	0.0019	mg/L		03/16/16 11:10	03/17/16 20:24	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:10	03/17/16 20:24	1
Silver	<0.00092		0.50	0.00092	mg/L		03/16/16 11:10	03/17/16 20:24	1

Lab Sample ID: LB 240-221744/1-B
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 221808

Analyte	LB Result	LB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00410	J	0.50	0.0029	mg/L		03/16/16 11:41	03/17/16 19:29	1
Barium	0.00363	J	10.0	0.0010	mg/L		03/16/16 11:41	03/17/16 19:29	1
Cadmium	<0.00014		0.10	0.00014	mg/L		03/16/16 11:41	03/17/16 19:29	1
Chromium	0.00193	J	0.50	0.00055	mg/L		03/16/16 11:41	03/17/16 19:29	1
Lead	<0.0019		0.50	0.0019	mg/L		03/16/16 11:41	03/17/16 19:29	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:41	03/17/16 19:29	1
Silver	<0.00092		0.50	0.00092	mg/L		03/16/16 11:41	03/17/16 19:29	1

Lab Sample ID: MB 180-170984/1-A
Matrix: Sediment
Analysis Batch: 171287

Client Sample ID: Method Blank
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium SEM	<0.0064		0.13	0.0064	mg/Kg		03/16/16 14:00	03/18/16 17:15	1
Silver SEM	<0.017		0.13	0.017	mg/Kg		03/16/16 14:00	03/18/16 17:15	1
Copper SEM	<0.024		0.63	0.024	mg/Kg		03/16/16 14:00	03/18/16 17:15	1
Lead SEM	<0.053		0.25	0.053	mg/Kg		03/16/16 14:00	03/18/16 17:15	1
Nickel SEM	0.0935	J	1.0	0.022	mg/Kg		03/16/16 14:00	03/18/16 17:15	1
Zinc SEM	0.123	J	2.5	0.073	mg/Kg		03/16/16 14:00	03/18/16 17:15	1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 180-170984/2-A
Matrix: Sediment
Analysis Batch: 171287

Client Sample ID: Lab Control Sample
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium SEM	1.25	1.21		mg/Kg		96	80 - 120
Silver SEM	1.25	1.19		mg/Kg		95	80 - 120
Copper SEM	6.25	6.05		mg/Kg		97	80 - 120
Lead SEM	12.5	11.69		mg/Kg		93	80 - 120
Nickel SEM	12.5	11.69		mg/Kg		94	80 - 120
Zinc SEM	12.5	12.31		mg/Kg		99	80 - 120

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-221214/1-A ^2
Matrix: Solid
Analysis Batch: 222294

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221214

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.00160	J	0.20	0.0014	mg/Kg		03/11/16 12:52	03/18/16 19:59	2
Arsenic	<0.026		1.0	0.026	mg/Kg		03/11/16 12:52	03/18/16 19:59	2
Cadmium	<0.0037		0.20	0.0037	mg/Kg		03/11/16 12:52	03/18/16 19:59	2
Antimony	<0.014		0.40	0.014	mg/Kg		03/11/16 12:52	03/18/16 19:59	2
Selenium	<0.040		1.0	0.040	mg/Kg		03/11/16 12:52	03/18/16 19:59	2
Thallium	<0.019		0.40	0.019	mg/Kg		03/11/16 12:52	03/18/16 19:59	2
Barium	<0.22		1.0	0.22	mg/Kg		03/11/16 12:52	03/18/16 19:59	2

Lab Sample ID: MB 240-221214/1-A ^2
Matrix: Solid
Analysis Batch: 222405

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221214

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.011		0.20	0.011	mg/Kg		03/11/16 12:52	03/19/16 16:31	2
Cobalt	0.00660	J	0.20	0.0017	mg/Kg		03/11/16 12:52	03/19/16 16:31	2
Chromium	0.163	J	0.40	0.060	mg/Kg		03/11/16 12:52	03/19/16 16:31	2
Copper	0.208	J	0.40	0.097	mg/Kg		03/11/16 12:52	03/19/16 16:31	2
Manganese	<0.12		1.0	0.12	mg/Kg		03/11/16 12:52	03/19/16 16:31	2
Nickel	0.0638	J	0.40	0.039	mg/Kg		03/11/16 12:52	03/19/16 16:31	2
Lead	<0.045		0.20	0.045	mg/Kg		03/11/16 12:52	03/19/16 16:31	2
Vanadium	<0.037		1.0	0.037	mg/Kg		03/11/16 12:52	03/19/16 16:31	2
Zinc	0.739	J	4.0	0.50	mg/Kg		03/11/16 12:52	03/19/16 16:31	2

Lab Sample ID: LCS 240-221214/3-A ^2
Matrix: Solid
Analysis Batch: 222294

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221214

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	10.0	9.09		mg/Kg		91	60 - 114
Arsenic	100	90.11		mg/Kg		90	73 - 110
Cadmium	100	91.26		mg/Kg		91	74 - 110
Antimony	10.0	9.03		mg/Kg		90	68 - 113
Selenium	100	87.89		mg/Kg		88	65 - 110
Thallium	25.0	23.20		mg/Kg		93	71 - 110

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-221214/3-A ^2
Matrix: Solid
Analysis Batch: 222294

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221214

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	100	88.50		mg/Kg		88	70 - 110

Lab Sample ID: LCS 240-221214/3-A ^2
Matrix: Solid
Analysis Batch: 222405

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221214

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	100	102.8		mg/Kg		103	79 - 110
Cobalt	100	102.7		mg/Kg		103	74 - 110
Chromium	100	99.38		mg/Kg		99	70 - 110
Copper	100	94.00		mg/Kg		94	73 - 110
Manganese	100	94.39		mg/Kg		94	80 - 120
Nickel	100	93.60		mg/Kg		94	75 - 110
Lead	100	98.28		mg/Kg		98	75 - 110
Vanadium	100	93.98		mg/Kg		94	72 - 110
Zinc	100	93.80		mg/Kg		94	72 - 113

Lab Sample ID: 240-61959-1 MS
Matrix: Solid
Analysis Batch: 222294

Client Sample ID: SE-030916-JN-001
Prep Type: Total/NA
Prep Batch: 221214

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	0.34	B	16.2	13.70		mg/Kg	☼	83	75 - 125
Arsenic	10.2		162	153.5		mg/Kg	☼	89	75 - 125
Cadmium	57.9	F1	162	263.3	F1	mg/Kg	☼	127	75 - 125
Antimony	30.6		16.2	50.23		mg/Kg	☼	121	75 - 125
Selenium	15.1		162	164.8		mg/Kg	☼	92	75 - 125
Thallium	0.11	J	40.5	33.36		mg/Kg	☼	82	75 - 125
Barium	1140		162	1510	4	mg/Kg	☼	231	75 - 125

Lab Sample ID: 240-61959-1 MS
Matrix: Solid
Analysis Batch: 222405

Client Sample ID: SE-030916-JN-001
Prep Type: Total/NA
Prep Batch: 221214

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	0.25	J	162	168.6		mg/Kg	☼	104	75 - 125
Cobalt	5.2	B	162	156.9		mg/Kg	☼	94	75 - 125
Chromium	261	B F1	162	347.9	F1	mg/Kg	☼	54	75 - 125
Copper	50.8	B	162	244.7		mg/Kg	☼	120	75 - 125
Manganese	548		162	678.2		mg/Kg	☼	80	75 - 125
Nickel	12.7	B	162	151.4		mg/Kg	☼	86	75 - 125
Vanadium	10.0		162	170.3		mg/Kg	☼	99	75 - 125
Zinc	904	B	162	1350	4	mg/Kg	☼	276	75 - 125

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-61959-1 MS — **Client Sample ID: SE-030916-JN-001**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 222405 — **Prep Batch: 221214**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1870		162	1921	4	mg/Kg	☼	31	75 - 125

Lab Sample ID: 240-61959-1 MSD — **Client Sample ID: SE-030916-JN-001**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 222294 — **Prep Batch: 221214**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	0.34	B	16.2	14.58		mg/Kg	☼	88	75 - 125	6	20
Arsenic	10.2		162	162.8		mg/Kg	☼	94	75 - 125	6	20
Cadmium	57.9	F1	162	228.8		mg/Kg	☼	106	75 - 125	14	20
Antimony	30.6		16.2	49.08		mg/Kg	☼	114	75 - 125	2	20
Selenium	15.1		162	164.7		mg/Kg	☼	92	75 - 125	0	20
Thallium	0.11	J	40.5	35.96		mg/Kg	☼	89	75 - 125	7	20
Barium	1140		162	1369	4	mg/Kg	☼	143	75 - 125	10	20

Lab Sample ID: 240-61959-1 MSD — **Client Sample ID: SE-030916-JN-001**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 222405 — **Prep Batch: 221214**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Beryllium	0.25	J	162	166.3		mg/Kg	☼	103	75 - 125	1	20
Cobalt	5.2	B	162	160.8		mg/Kg	☼	96	75 - 125	2	20
Chromium	261	B F1	162	380.3	F1	mg/Kg	☼	74	75 - 125	9	20
Copper	50.8	B	162	212.6		mg/Kg	☼	100	75 - 125	14	20
Manganese	548		162	699.1		mg/Kg	☼	93	75 - 125	3	20
Nickel	12.7	B	162	156.4		mg/Kg	☼	89	75 - 125	3	20
Vanadium	10.0		162	174.3		mg/Kg	☼	102	75 - 125	2	20
Zinc	904	B	162	1339	4	mg/Kg	☼	269	75 - 125	1	20

Lab Sample ID: 240-61959-1 MSD — **Client Sample ID: SE-030916-JN-001**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 222405 — **Prep Batch: 221214**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	1870		162	1793	4	mg/Kg	☼	-48	75 - 125	7	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-221801/2-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 222045 — **Prep Batch: 221801**

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 11:42	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-221801/3-A
Matrix: Solid
Analysis Batch: 222045

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00491		mg/L		98	80 - 120

Lab Sample ID: MB 240-221812/2-A
Matrix: Solid
Analysis Batch: 222045

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221812

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 12:28	1

Lab Sample ID: LCS 240-221812/3-A
Matrix: Solid
Analysis Batch: 222045

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221812

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00499		mg/L		100	80 - 120

Lab Sample ID: LB 240-221748/1-C
Matrix: Solid
Analysis Batch: 222045

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 221801

Analyte	LB Result	LB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 11:40	1

Lab Sample ID: LB 240-221744/1-C
Matrix: Solid
Analysis Batch: 222045

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 221812

Analyte	LB Result	LB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 12:26	1

Lab Sample ID: MB 180-170984/1-B
Matrix: Sediment
Analysis Batch: 171226

Client Sample ID: Method Blank
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury SEM	<0.0013		0.0050	0.0013	mg/Kg		03/16/16 14:00	03/18/16 11:49	1

Lab Sample ID: LCS 180-170984/2-B
Matrix: Sediment
Analysis Batch: 171226

Client Sample ID: Lab Control Sample
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury SEM	0.0625	0.0632		mg/Kg		101	80 - 120

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 240-221218/1-A
Matrix: Solid
Analysis Batch: 221647

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221218

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.014		0.10	0.014	mg/Kg		03/11/16 15:00	03/15/16 07:51	1

Lab Sample ID: LCS 240-221218/2-A
Matrix: Solid
Analysis Batch: 221647

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221218

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.833	0.783		mg/Kg		94	80 - 120

Method: 2540G - SM 2540G

Lab Sample ID: 240-61959-12 DU
Matrix: Sediment
Analysis Batch: 171000

Client Sample ID: SE-030916-JN-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	58.1		57.5		%		1	20
Percent Solids	41.9		42.5		%		1	20

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 180-171004/1-A
Matrix: Sediment
Analysis Batch: 171036

Client Sample ID: Method Blank
Prep Type: SEM/AVS
Prep Batch: 171004

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acid Volatile Sulfides (AVS)	<3.0		15.0	3.0	mg/Kg		03/16/16 14:00	03/16/16 17:45	1

Lab Sample ID: LCS 180-171004/2-A
Matrix: Sediment
Analysis Batch: 171036

Client Sample ID: Lab Control Sample
Prep Type: SEM/AVS
Prep Batch: 171004

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acid Volatile Sulfides (AVS)	96.1	88.58		mg/Kg		92	85 - 115

Method: Lloyd Kahn - Organic Carbon, Total (TOC)

Lab Sample ID: MB 180-171064/3
Matrix: Solid
Analysis Batch: 171064

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<500		1000	500	mg/Kg			03/16/16 12:06	1

Method: Lloyd Kahn - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 180-171064/4
Matrix: Solid
Analysis Batch: 171064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	35000	32460		mg/Kg		93	75 - 125

Lab Sample ID: 240-61959-2 MS
Matrix: Solid
Analysis Batch: 171064

Client Sample ID: SE-030916-JN-002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	89500		96900	191200		mg/Kg	☼	105	75 - 125

Lab Sample ID: 240-61959-2 MSD
Matrix: Solid
Analysis Batch: 171064

Client Sample ID: SE-030916-JN-002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	89500		110000	213900		mg/Kg	☼	113	75 - 125	11	20

Lab Sample ID: 240-61959-2 DU
Matrix: Solid
Analysis Batch: 171064

Client Sample ID: SE-030916-JN-002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	89500		96240		mg/Kg	☼	7	20

Method: Moisture - Percent Moisture

Lab Sample ID: 240-61959-5 DU
Matrix: Solid
Analysis Batch: 221231

Client Sample ID: SE-030916-JN-005
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	52.7		59.1		%		12	20
Percent Moisture	47.3		40.9		%		15	20

GC/MS VOA

Analysis Batch: 221125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	8260B	221212
240-61959-2	SE-030916-JN-002	Total/NA	Solid	8260B	221212
240-61959-3	SE-030916-JN-003	Total/NA	Solid	8260B	221212
240-61959-4	SE-030916-JN-004	Total/NA	Solid	8260B	221212
240-61959-5	SE-030916-JN-005	Total/NA	Solid	8260B	221212
240-61959-6	SE-030916-JN-006	Total/NA	Solid	8260B	221212
LCS 240-221125/4	Lab Control Sample	Total/NA	Solid	8260B	
MB 240-221125/5	Method Blank	Total/NA	Solid	8260B	

Prep Batch: 221212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	5030A	
240-61959-2	SE-030916-JN-002	Total/NA	Solid	5030A	
240-61959-3	SE-030916-JN-003	Total/NA	Solid	5030A	
240-61959-4	SE-030916-JN-004	Total/NA	Solid	5030A	
240-61959-5	SE-030916-JN-005	Total/NA	Solid	5030A	
240-61959-6	SE-030916-JN-006	Total/NA	Solid	5030A	

Prep Batch: 221222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-7	SE-030916-JN-007	Total/NA	Solid	5030B	
240-61959-8	SE-030916-JN-008	Total/NA	Solid	5030B	
240-61959-8 MS	SE-030916-JN-008	Total/NA	Solid	5030B	
240-61959-8 MSD	SE-030916-JN-008	Total/NA	Solid	5030B	
240-61959-9	SE-030916-JN-009	Total/NA	Solid	5030B	
240-61959-10	SE-030916-JN-010	Total/NA	Solid	5030B	
LCS 240-221222/2-A	Lab Control Sample	Total/NA	Solid	5030B	
MB 240-221222/1-A	Method Blank	Total/NA	Solid	5030B	

Analysis Batch: 221437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-11	TB-030916-JN-001	Total/NA	Water	8260B	
LCS 240-221437/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-221437/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 221688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-7	SE-030916-JN-007	Total/NA	Solid	8260B	221222
LCS 240-221222/2-A	Lab Control Sample	Total/NA	Solid	8260B	221222
MB 240-221222/1-A	Method Blank	Total/NA	Solid	8260B	221222

Analysis Batch: 221892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-8	SE-030916-JN-008	Total/NA	Solid	8260B	221222
240-61959-8 MS	SE-030916-JN-008	Total/NA	Solid	8260B	221222
240-61959-8 MSD	SE-030916-JN-008	Total/NA	Solid	8260B	221222
240-61959-9	SE-030916-JN-009	Total/NA	Solid	8260B	221222
240-61959-10	SE-030916-JN-010	Total/NA	Solid	8260B	221222

GC/MS Semi VOA

Prep Batch: 221127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	3540C	
240-61959-2	SE-030916-JN-002	Total/NA	Solid	3540C	
240-61959-3	SE-030916-JN-003	Total/NA	Solid	3540C	
240-61959-4	SE-030916-JN-004	Total/NA	Solid	3540C	
240-61959-5	SE-030916-JN-005	Total/NA	Solid	3540C	
240-61959-6	SE-030916-JN-006	Total/NA	Solid	3540C	
240-61959-7	SE-030916-JN-007	Total/NA	Solid	3540C	
240-61959-8	SE-030916-JN-008	Total/NA	Solid	3540C	
240-61959-9	SE-030916-JN-009	Total/NA	Solid	3540C	
240-61959-10	SE-030916-JN-010	Total/NA	Solid	3540C	
LCS 240-221127/24-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-221127/23-A	Method Blank	Total/NA	Solid	3540C	

Analysis Batch: 222162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	8270C	221127
240-61959-2	SE-030916-JN-002	Total/NA	Solid	8270C	221127
240-61959-3	SE-030916-JN-003	Total/NA	Solid	8270C	221127
240-61959-4	SE-030916-JN-004	Total/NA	Solid	8270C	221127
240-61959-5	SE-030916-JN-005	Total/NA	Solid	8270C	221127
240-61959-6	SE-030916-JN-006	Total/NA	Solid	8270C	221127
240-61959-7	SE-030916-JN-007	Total/NA	Solid	8270C	221127
240-61959-8	SE-030916-JN-008	Total/NA	Solid	8270C	221127
240-61959-9	SE-030916-JN-009	Total/NA	Solid	8270C	221127
240-61959-10	SE-030916-JN-010	Total/NA	Solid	8270C	221127
LCS 240-221127/24-A	Lab Control Sample	Total/NA	Solid	8270C	221127
MB 240-221127/23-A	Method Blank	Total/NA	Solid	8270C	221127

GC Semi VOA

Prep Batch: 221107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	3540C	
240-61959-2	SE-030916-JN-002	Total/NA	Solid	3540C	
240-61959-3	SE-030916-JN-003	Total/NA	Solid	3540C	
240-61959-4	SE-030916-JN-004	Total/NA	Solid	3540C	
240-61959-5	SE-030916-JN-005	Total/NA	Solid	3540C	
240-61959-6	SE-030916-JN-006	Total/NA	Solid	3540C	
240-61959-7	SE-030916-JN-007	Total/NA	Solid	3540C	
240-61959-8	SE-030916-JN-008	Total/NA	Solid	3540C	
240-61959-9	SE-030916-JN-009	Total/NA	Solid	3540C	
240-61959-10	SE-030916-JN-010	Total/NA	Solid	3540C	
LCS 240-221107/23-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-221107/22-A	Method Blank	Total/NA	Solid	3540C	

Prep Batch: 221445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	1630	
240-61959-1 MS	SE-030916-JN-001	Total/NA	Solid	1630	
240-61959-1 MSD	SE-030916-JN-001	Total/NA	Solid	1630	

GC Semi VOA (Continued)

Prep Batch: 221445 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-4	SE-030916-JN-004	Total/NA	Solid	1630	
240-61959-7	SE-030916-JN-007	Total/NA	Solid	1630	
LCS 240-221445/2-A	Lab Control Sample	Total/NA	Solid	1630	
MB 240-221445/1-A	Method Blank	Total/NA	Solid	1630	

Analysis Batch: 221640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-8	SE-030916-JN-008	Total/NA	Solid	8082	221107
240-61959-10	SE-030916-JN-010	Total/NA	Solid	8082	221107
LCS 240-221107/23-A	Lab Control Sample	Total/NA	Solid	8082	221107
MB 240-221107/22-A	Method Blank	Total/NA	Solid	8082	221107

Analysis Batch: 221734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-2	SE-030916-JN-002	Total/NA	Solid	8082	221107
240-61959-3	SE-030916-JN-003	Total/NA	Solid	8082	221107
240-61959-5	SE-030916-JN-005	Total/NA	Solid	8082	221107
240-61959-6	SE-030916-JN-006	Total/NA	Solid	8082	221107
240-61959-7	SE-030916-JN-007	Total/NA	Solid	8082	221107
240-61959-9	SE-030916-JN-009	Total/NA	Solid	8082	221107

Analysis Batch: 222103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	8082	221107
240-61959-4	SE-030916-JN-004	Total/NA	Solid	8082	221107

Analysis Batch: 222277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	1630	221445
240-61959-1 MS	SE-030916-JN-001	Total/NA	Solid	1630	221445
240-61959-1 MSD	SE-030916-JN-001	Total/NA	Solid	1630	221445
240-61959-4	SE-030916-JN-004	Total/NA	Solid	1630	221445
240-61959-7	SE-030916-JN-007	Total/NA	Solid	1630	221445
LCS 240-221445/2-A	Lab Control Sample	Total/NA	Solid	1630	221445
MB 240-221445/1-A	Method Blank	Total/NA	Solid	1630	221445

Metals

Prep Batch: 170984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-12	SE-030916-JN-001	SEM/AVS	Sediment	AVSSEM	
240-61959-13	SE-030916-JN-004	SEM/AVS	Sediment	AVSSEM	
240-61959-14	SE-030916-JN-007	SEM/AVS	Sediment	AVSSEM	
LCS 180-170984/2-A	Lab Control Sample	SEM/AVS	Sediment	AVSSEM	
LCS 180-170984/2-B	Lab Control Sample	SEM/AVS	Sediment	AVSSEM	
MB 180-170984/1-A	Method Blank	SEM/AVS	Sediment	AVSSEM	
MB 180-170984/1-B	Method Blank	SEM/AVS	Sediment	AVSSEM	

Metals (Continued)

Prep Batch: 171122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-12	SE-030916-JN-001	SEM/AVS	Sediment	7470A	170984
240-61959-13	SE-030916-JN-004	SEM/AVS	Sediment	7470A	170984
240-61959-14	SE-030916-JN-007	SEM/AVS	Sediment	7470A	170984
LCS 180-170984/2-B	Lab Control Sample	SEM/AVS	Sediment	7470A	170984
MB 180-170984/1-B	Method Blank	SEM/AVS	Sediment	7470A	170984

Analysis Batch: 171226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-12	SE-030916-JN-001	SEM/AVS	Sediment	7470A	171122
240-61959-13	SE-030916-JN-004	SEM/AVS	Sediment	7470A	171122
240-61959-14	SE-030916-JN-007	SEM/AVS	Sediment	7470A	171122
LCS 180-170984/2-B	Lab Control Sample	SEM/AVS	Sediment	7470A	171122
MB 180-170984/1-B	Method Blank	SEM/AVS	Sediment	7470A	171122

Analysis Batch: 171287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-12	SE-030916-JN-001	SEM/AVS	Sediment	6010B	170984
240-61959-13	SE-030916-JN-004	SEM/AVS	Sediment	6010B	170984
240-61959-14	SE-030916-JN-007	SEM/AVS	Sediment	6010B	170984
LCS 180-170984/2-A	Lab Control Sample	SEM/AVS	Sediment	6010B	170984
MB 180-170984/1-A	Method Blank	SEM/AVS	Sediment	6010B	170984

Analysis Batch: 171363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-12	SE-030916-JN-001	SEM/AVS	Sediment	6010B	170984
240-61959-13	SE-030916-JN-004	SEM/AVS	Sediment	6010B	170984
240-61959-14	SE-030916-JN-007	SEM/AVS	Sediment	6010B	170984

Analysis Batch: 171444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-12	SE-030916-JN-001	SEM/AVS	Sediment	SEM	
240-61959-13	SE-030916-JN-004	SEM/AVS	Sediment	SEM	
240-61959-14	SE-030916-JN-007	SEM/AVS	Sediment	SEM	

Prep Batch: 221214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	3050B	
240-61959-1 MS	SE-030916-JN-001	Total/NA	Solid	3050B	
240-61959-1 MSD	SE-030916-JN-001	Total/NA	Solid	3050B	
240-61959-2	SE-030916-JN-002	Total/NA	Solid	3050B	
240-61959-3	SE-030916-JN-003	Total/NA	Solid	3050B	
240-61959-4	SE-030916-JN-004	Total/NA	Solid	3050B	
240-61959-5	SE-030916-JN-005	Total/NA	Solid	3050B	
240-61959-6	SE-030916-JN-006	Total/NA	Solid	3050B	
240-61959-7	SE-030916-JN-007	Total/NA	Solid	3050B	
240-61959-8	SE-030916-JN-008	Total/NA	Solid	3050B	
240-61959-9	SE-030916-JN-009	Total/NA	Solid	3050B	
240-61959-10	SE-030916-JN-010	Total/NA	Solid	3050B	
LCS 240-221214/3-A ^2	Lab Control Sample	Total/NA	Solid	3050B	
MB 240-221214/1-A ^2	Method Blank	Total/NA	Solid	3050B	

Metals (Continued)

Prep Batch: 221218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	7471A	
240-61959-2	SE-030916-JN-002	Total/NA	Solid	7471A	
240-61959-3	SE-030916-JN-003	Total/NA	Solid	7471A	
240-61959-4	SE-030916-JN-004	Total/NA	Solid	7471A	
240-61959-5	SE-030916-JN-005	Total/NA	Solid	7471A	
240-61959-6	SE-030916-JN-006	Total/NA	Solid	7471A	
240-61959-7	SE-030916-JN-007	Total/NA	Solid	7471A	
240-61959-8	SE-030916-JN-008	Total/NA	Solid	7471A	
240-61959-9	SE-030916-JN-009	Total/NA	Solid	7471A	
240-61959-10	SE-030916-JN-010	Total/NA	Solid	7471A	
LCS 240-221218/2-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 240-221218/1-A	Method Blank	Total/NA	Solid	7471A	

Analysis Batch: 221647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	7471A	221218
240-61959-2	SE-030916-JN-002	Total/NA	Solid	7471A	221218
240-61959-3	SE-030916-JN-003	Total/NA	Solid	7471A	221218
240-61959-4	SE-030916-JN-004	Total/NA	Solid	7471A	221218
240-61959-5	SE-030916-JN-005	Total/NA	Solid	7471A	221218
240-61959-6	SE-030916-JN-006	Total/NA	Solid	7471A	221218
240-61959-7	SE-030916-JN-007	Total/NA	Solid	7471A	221218
240-61959-8	SE-030916-JN-008	Total/NA	Solid	7471A	221218
240-61959-9	SE-030916-JN-009	Total/NA	Solid	7471A	221218
240-61959-10	SE-030916-JN-010	Total/NA	Solid	7471A	221218
LCS 240-221218/2-A	Lab Control Sample	Total/NA	Solid	7471A	221218
MB 240-221218/1-A	Method Blank	Total/NA	Solid	7471A	221218

Leach Batch: 221744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-6	SE-030916-JN-006	TCLP	Solid	1311	
LB 240-221744/1-B	Method Blank	TCLP	Solid	1311	
LB 240-221744/1-C	Method Blank	TCLP	Solid	1311	

Leach Batch: 221748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-3	SE-030916-JN-003	TCLP	Solid	1311	
LB 240-221748/1-B	Method Blank	TCLP	Solid	1311	
LB 240-221748/1-C	Method Blank	TCLP	Solid	1311	

Prep Batch: 221797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-3	SE-030916-JN-003	TCLP	Solid	3010A	221748
LB 240-221748/1-B	Method Blank	TCLP	Solid	3010A	221748
LCS 240-221797/3-A	Lab Control Sample	Total/NA	Solid	3010A	
MB 240-221797/2-A	Method Blank	Total/NA	Solid	3010A	

Prep Batch: 221801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-3	SE-030916-JN-003	TCLP	Solid	7470A	221748
LB 240-221748/1-C	Method Blank	TCLP	Solid	7470A	221748

Metals (Continued)

Prep Batch: 221801 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-221801/3-A	Lab Control Sample	Total/NA	Solid	7470A	
MB 240-221801/2-A	Method Blank	Total/NA	Solid	7470A	

Prep Batch: 221808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-6	SE-030916-JN-006	TCLP	Solid	3010A	221744
LB 240-221744/1-B	Method Blank	TCLP	Solid	3010A	221744
LCS 240-221808/3-A	Lab Control Sample	Total/NA	Solid	3010A	
MB 240-221808/2-A	Method Blank	Total/NA	Solid	3010A	

Prep Batch: 221812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-6	SE-030916-JN-006	TCLP	Solid	7470A	221744
LB 240-221744/1-C	Method Blank	TCLP	Solid	7470A	221744
LCS 240-221812/3-A	Lab Control Sample	Total/NA	Solid	7470A	
MB 240-221812/2-A	Method Blank	Total/NA	Solid	7470A	

Analysis Batch: 222033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-3	SE-030916-JN-003	TCLP	Solid	6010B	221797
240-61959-6	SE-030916-JN-006	TCLP	Solid	6010B	221808
LB 240-221744/1-B	Method Blank	TCLP	Solid	6010B	221808
LB 240-221748/1-B	Method Blank	TCLP	Solid	6010B	221797
LCS 240-221797/3-A	Lab Control Sample	Total/NA	Solid	6010B	221797
LCS 240-221808/3-A	Lab Control Sample	Total/NA	Solid	6010B	221808
MB 240-221797/2-A	Method Blank	Total/NA	Solid	6010B	221797
MB 240-221808/2-A	Method Blank	Total/NA	Solid	6010B	221808

Analysis Batch: 222045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-3	SE-030916-JN-003	TCLP	Solid	7470A	221801
240-61959-6	SE-030916-JN-006	TCLP	Solid	7470A	221812
LB 240-221744/1-C	Method Blank	TCLP	Solid	7470A	221812
LB 240-221748/1-C	Method Blank	TCLP	Solid	7470A	221801
LCS 240-221801/3-A	Lab Control Sample	Total/NA	Solid	7470A	221801
LCS 240-221812/3-A	Lab Control Sample	Total/NA	Solid	7470A	221812
MB 240-221801/2-A	Method Blank	Total/NA	Solid	7470A	221801
MB 240-221812/2-A	Method Blank	Total/NA	Solid	7470A	221812

Analysis Batch: 222294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	6020	221214
240-61959-1 MS	SE-030916-JN-001	Total/NA	Solid	6020	221214
240-61959-1 MSD	SE-030916-JN-001	Total/NA	Solid	6020	221214
240-61959-2	SE-030916-JN-002	Total/NA	Solid	6020	221214
240-61959-3	SE-030916-JN-003	Total/NA	Solid	6020	221214
240-61959-4	SE-030916-JN-004	Total/NA	Solid	6020	221214
240-61959-5	SE-030916-JN-005	Total/NA	Solid	6020	221214
240-61959-6	SE-030916-JN-006	Total/NA	Solid	6020	221214
240-61959-7	SE-030916-JN-007	Total/NA	Solid	6020	221214
240-61959-8	SE-030916-JN-008	Total/NA	Solid	6020	221214

Metals (Continued)

Analysis Batch: 222294 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-9	SE-030916-JN-009	Total/NA	Solid	6020	221214
240-61959-10	SE-030916-JN-010	Total/NA	Solid	6020	221214
LCS 240-221214/3-A ^2	Lab Control Sample	Total/NA	Solid	6020	221214
MB 240-221214/1-A ^2	Method Blank	Total/NA	Solid	6020	221214

Analysis Batch: 222405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	6020	221214
240-61959-1	SE-030916-JN-001	Total/NA	Solid	6020	221214
240-61959-1 MS	SE-030916-JN-001	Total/NA	Solid	6020	221214
240-61959-1 MS	SE-030916-JN-001	Total/NA	Solid	6020	221214
240-61959-1 MSD	SE-030916-JN-001	Total/NA	Solid	6020	221214
240-61959-1 MSD	SE-030916-JN-001	Total/NA	Solid	6020	221214
240-61959-2	SE-030916-JN-002	Total/NA	Solid	6020	221214
240-61959-3	SE-030916-JN-003	Total/NA	Solid	6020	221214
240-61959-4	SE-030916-JN-004	Total/NA	Solid	6020	221214
240-61959-4	SE-030916-JN-004	Total/NA	Solid	6020	221214
240-61959-5	SE-030916-JN-005	Total/NA	Solid	6020	221214
240-61959-6	SE-030916-JN-006	Total/NA	Solid	6020	221214
240-61959-7	SE-030916-JN-007	Total/NA	Solid	6020	221214
240-61959-8	SE-030916-JN-008	Total/NA	Solid	6020	221214
240-61959-8	SE-030916-JN-008	Total/NA	Solid	6020	221214
240-61959-9	SE-030916-JN-009	Total/NA	Solid	6020	221214
240-61959-10	SE-030916-JN-010	Total/NA	Solid	6020	221214
LCS 240-221214/3-A ^2	Lab Control Sample	Total/NA	Solid	6020	221214
MB 240-221214/1-A ^2	Method Blank	Total/NA	Solid	6020	221214

General Chemistry

Analysis Batch: 171000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-12	SE-030916-JN-001	Total/NA	Sediment	2540G	
240-61959-12 DU	SE-030916-JN-001	Total/NA	Sediment	2540G	
240-61959-13	SE-030916-JN-004	Total/NA	Sediment	2540G	
240-61959-14	SE-030916-JN-007	Total/NA	Sediment	2540G	

Prep Batch: 171004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-12	SE-030916-JN-001	SEM/AVS	Sediment	AVSSEM	
240-61959-13	SE-030916-JN-004	SEM/AVS	Sediment	AVSSEM	
240-61959-14	SE-030916-JN-007	SEM/AVS	Sediment	AVSSEM	
LCS 180-171004/2-A	Lab Control Sample	SEM/AVS	Sediment	AVSSEM	
MB 180-171004/1-A	Method Blank	SEM/AVS	Sediment	AVSSEM	

Analysis Batch: 171036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-12	SE-030916-JN-001	SEM/AVS	Sediment	9034	171004
240-61959-13	SE-030916-JN-004	SEM/AVS	Sediment	9034	171004
240-61959-14	SE-030916-JN-007	SEM/AVS	Sediment	9034	171004
LCS 180-171004/2-A	Lab Control Sample	SEM/AVS	Sediment	9034	171004

General Chemistry (Continued)

Analysis Batch: 171036 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-171004/1-A	Method Blank	SEM/AVS	Sediment	9034	171004

Analysis Batch: 171064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	Lloyd Kahn	
240-61959-2	SE-030916-JN-002	Total/NA	Solid	Lloyd Kahn	
240-61959-2 DU	SE-030916-JN-002	Total/NA	Solid	Lloyd Kahn	
240-61959-2 MS	SE-030916-JN-002	Total/NA	Solid	Lloyd Kahn	
240-61959-2 MSD	SE-030916-JN-002	Total/NA	Solid	Lloyd Kahn	
240-61959-3	SE-030916-JN-003	Total/NA	Solid	Lloyd Kahn	
240-61959-4	SE-030916-JN-004	Total/NA	Solid	Lloyd Kahn	
240-61959-5	SE-030916-JN-005	Total/NA	Solid	Lloyd Kahn	
240-61959-6	SE-030916-JN-006	Total/NA	Solid	Lloyd Kahn	
240-61959-7	SE-030916-JN-007	Total/NA	Solid	Lloyd Kahn	
240-61959-8	SE-030916-JN-008	Total/NA	Solid	Lloyd Kahn	
240-61959-9	SE-030916-JN-009	Total/NA	Solid	Lloyd Kahn	
240-61959-10	SE-030916-JN-010	Total/NA	Solid	Lloyd Kahn	
LCS 180-171064/4	Lab Control Sample	Total/NA	Solid	Lloyd Kahn	
MB 180-171064/3	Method Blank	Total/NA	Solid	Lloyd Kahn	

Analysis Batch: 221231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-1	SE-030916-JN-001	Total/NA	Solid	Moisture	
240-61959-2	SE-030916-JN-002	Total/NA	Solid	Moisture	
240-61959-3	SE-030916-JN-003	Total/NA	Solid	Moisture	
240-61959-4	SE-030916-JN-004	Total/NA	Solid	Moisture	
240-61959-5	SE-030916-JN-005	Total/NA	Solid	Moisture	
240-61959-5 DU	SE-030916-JN-005	Total/NA	Solid	Moisture	
240-61959-6	SE-030916-JN-006	Total/NA	Solid	Moisture	
240-61959-7	SE-030916-JN-007	Total/NA	Solid	Moisture	
240-61959-8	SE-030916-JN-008	Total/NA	Solid	Moisture	
240-61959-9	SE-030916-JN-009	Total/NA	Solid	Moisture	
240-61959-10	SE-030916-JN-010	Total/NA	Solid	Moisture	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: SE-030916-JN-001
Date Collected: 03/09/16 12:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221231	03/11/16 14:03	BLW	TAL CAN

Client Sample ID: SE-030916-JN-001
Date Collected: 03/09/16 12:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-1
Matrix: Solid
Percent Solids: 58.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221212	03/11/16 12:48	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221125	03/11/16 18:54	SAM	TAL CAN
Total/NA	Prep	3540C			221127	03/11/16 08:42	YDN	TAL CAN
Total/NA	Analysis	8270C		50	222162	03/18/16 17:26	JMG	TAL CAN
Total/NA	Prep	1630			221445	03/14/16 11:58	SEM	TAL CAN
Total/NA	Analysis	1630		1	222277	03/18/16 20:42	RES	TAL CAN
Total/NA	Prep	3540C			221107	03/11/16 07:38	SDE	TAL CAN
Total/NA	Analysis	8082		20	222103	03/18/16 11:02	HMB	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222294	03/18/16 20:07	AS1	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 16:40	AS1	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		20	222405	03/19/16 16:44	AS1	TAL CAN
Total/NA	Prep	7471A			221218	03/11/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	221647	03/15/16 08:05	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171064	03/16/16 13:22	JDD	TAL PIT

Client Sample ID: SE-030916-JN-002
Date Collected: 03/09/16 12:55
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221231	03/11/16 14:03	BLW	TAL CAN

Client Sample ID: SE-030916-JN-002
Date Collected: 03/09/16 12:55
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-2
Matrix: Solid
Percent Solids: 46.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221212	03/11/16 12:48	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221125	03/11/16 19:45	SAM	TAL CAN
Total/NA	Prep	3540C			221127	03/11/16 08:42	YDN	TAL CAN
Total/NA	Analysis	8270C		50	222162	03/18/16 19:50	JMG	TAL CAN
Total/NA	Prep	3540C			221107	03/11/16 07:38	SDE	TAL CAN
Total/NA	Analysis	8082		5	221734	03/16/16 15:34	HMB	TAL CAN

Lab Chronicle

Client: GHD Services Inc. TestAmerica Job ID: 240-61959-1
Project/Site: 58505, Janesville WI, SSOW 108014

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222294	03/18/16 20:28	AS1	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 17:29	AS1	TAL CAN
Total/NA	Prep	7471A			221218	03/11/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		5	221647	03/15/16 08:07	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171064	03/16/16 13:49	JDD	TAL PIT

Client Sample ID: SE-030916-JN-003
Lab Sample ID: 240-61959-3
Date Collected: 03/09/16 13:10
Matrix: Solid
Date Received: 03/10/16 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			221748	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	3010A			221797	03/16/16 11:10	WKD	TAL CAN
TCLP	Analysis	6010B		1	222033	03/17/16 21:26	RKT	TAL CAN
TCLP	Leach	1311			221748	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	7470A			221801	03/16/16 14:00	WKD	TAL CAN
TCLP	Analysis	7470A		1	222045	03/17/16 12:03	DSH	TAL CAN
Total/NA	Analysis	Moisture		1	221231	03/11/16 14:03	BLW	TAL CAN

Client Sample ID: SE-030916-JN-003
Lab Sample ID: 240-61959-3
Date Collected: 03/09/16 13:10
Matrix: Solid
Date Received: 03/10/16 11:30
Percent Solids: 45.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221212	03/11/16 12:48	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221125	03/11/16 20:10	SAM	TAL CAN
Total/NA	Prep	3540C			221127	03/11/16 08:42	YDN	TAL CAN
Total/NA	Analysis	8270C		50	222162	03/18/16 19:26	JMG	TAL CAN
Total/NA	Prep	3540C			221107	03/11/16 07:38	SDE	TAL CAN
Total/NA	Analysis	8082		5	221734	03/16/16 15:51	HMB	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222294	03/18/16 20:32	AS1	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 17:33	AS1	TAL CAN
Total/NA	Prep	7471A			221218	03/11/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	221647	03/15/16 08:08	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171064	03/16/16 14:31	JDD	TAL PIT

Client Sample ID: SE-030916-JN-004
Lab Sample ID: 240-61959-4
Date Collected: 03/09/16 14:25
Matrix: Solid
Date Received: 03/10/16 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221231	03/11/16 14:03	BLW	TAL CAN

Client Sample ID: SE-030916-JN-004

Lab Sample ID: 240-61959-4
Date Collected: 03/09/16 14:25
Matrix: Solid
Date Received: 03/10/16 11:30
Percent Solids: 42.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221212	03/11/16 12:48	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221125	03/11/16 16:46	SAM	TAL CAN
Total/NA	Prep	3540C			221127	03/11/16 08:42	YDN	TAL CAN
Total/NA	Analysis	8270C		20	222162	03/18/16 18:14	JMG	TAL CAN
Total/NA	Prep	1630			221445	03/14/16 11:58	SEM	TAL CAN
Total/NA	Analysis	1630		1	222277	03/18/16 21:46	RES	TAL CAN
Total/NA	Prep	3540C			221107	03/11/16 07:38	SDE	TAL CAN
Total/NA	Analysis	8082		5	222103	03/18/16 13:58	HMB	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222294	03/18/16 20:36	AS1	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 17:37	AS1	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		10	222405	03/19/16 17:41	AS1	TAL CAN
Total/NA	Prep	7471A			221218	03/11/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	221647	03/15/16 08:09	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171064	03/16/16 14:52	JDD	TAL PIT

Client Sample ID: SE-030916-JN-005

Lab Sample ID: 240-61959-5
Date Collected: 03/09/16 14:35
Matrix: Solid
Date Received: 03/10/16 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221231	03/11/16 14:03	BLW	TAL CAN

Client Sample ID: SE-030916-JN-005

Lab Sample ID: 240-61959-5
Date Collected: 03/09/16 14:35
Matrix: Solid
Date Received: 03/10/16 11:30
Percent Solids: 52.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221212	03/11/16 12:48	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221125	03/11/16 17:12	SAM	TAL CAN
Total/NA	Prep	3540C			221127	03/11/16 08:42	YDN	TAL CAN
Total/NA	Analysis	8270C		20	222162	03/18/16 17:50	JMG	TAL CAN
Total/NA	Prep	3540C			221107	03/11/16 07:38	SDE	TAL CAN
Total/NA	Analysis	8082		5	221734	03/16/16 16:26	HMB	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222294	03/18/16 20:48	AS1	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 17:45	AS1	TAL CAN
Total/NA	Prep	7471A			221218	03/11/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	221647	03/15/16 08:10	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171064	03/16/16 15:02	JDD	TAL PIT

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: SE-030916-JN-006
Date Collected: 03/09/16 14:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			221744	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	3010A			221808	03/16/16 11:41	WKD	TAL CAN
TCLP	Analysis	6010B		1	222033	03/17/16 20:19	RKT	TAL CAN
TCLP	Leach	1311			221744	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	7470A			221812	03/16/16 14:00	WKD	TAL CAN
TCLP	Analysis	7470A		1	222045	03/17/16 12:43	DSH	TAL CAN
Total/NA	Analysis	Moisture		1	221231	03/11/16 14:03	BLW	TAL CAN

Client Sample ID: SE-030916-JN-006
Date Collected: 03/09/16 14:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-6
Matrix: Solid
Percent Solids: 64.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221212	03/11/16 12:48	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221125	03/11/16 18:03	SAM	TAL CAN
Total/NA	Prep	3540C			221127	03/11/16 08:42	YDN	TAL CAN
Total/NA	Analysis	8270C		20	222162	03/18/16 18:38	JMG	TAL CAN
Total/NA	Prep	3540C			221107	03/11/16 07:38	SDE	TAL CAN
Total/NA	Analysis	8082		5	221734	03/16/16 16:44	HMB	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222294	03/18/16 20:53	AS1	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 17:49	AS1	TAL CAN
Total/NA	Prep	7471A			221218	03/11/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	221647	03/15/16 08:12	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171064	03/16/16 15:13	JDD	TAL PIT

Client Sample ID: SE-030916-JN-007
Date Collected: 03/09/16 15:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221231	03/11/16 14:03	BLW	TAL CAN

Client Sample ID: SE-030916-JN-007
Date Collected: 03/09/16 15:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-7
Matrix: Solid
Percent Solids: 46.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			221222	03/11/16 13:46	LAM	TAL CAN
Total/NA	Analysis	8260B		1	221688	03/16/16 09:00	TJL2	TAL CAN
Total/NA	Prep	3540C			221127	03/11/16 08:42	YDN	TAL CAN
Total/NA	Analysis	8270C		50	222162	03/18/16 20:14	JMG	TAL CAN

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: SE-030916-JN-007

Lab Sample ID: 240-61959-7
Date Collected: 03/09/16 15:45
Matrix: Solid
Date Received: 03/10/16 11:30
Percent Solids: 46.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1630			221445	03/14/16 11:58	SEM	TAL CAN
Total/NA	Analysis	1630		1	222277	03/18/16 22:07	RES	TAL CAN
Total/NA	Prep	3540C			221107	03/11/16 07:38	SDE	TAL CAN
Total/NA	Analysis	8082		5	221734	03/16/16 17:02	HMB	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222294	03/18/16 20:57	AS1	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 18:06	AS1	TAL CAN
Total/NA	Prep	7471A			221218	03/11/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		10	221647	03/15/16 08:13	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171064	03/16/16 15:23	JDD	TAL PIT

Client Sample ID: SE-030916-JN-008

Lab Sample ID: 240-61959-8
Date Collected: 03/09/16 15:50
Matrix: Solid
Date Received: 03/10/16 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221231	03/11/16 14:03	BLW	TAL CAN

Client Sample ID: SE-030916-JN-008

Lab Sample ID: 240-61959-8
Date Collected: 03/09/16 15:50
Matrix: Solid
Date Received: 03/10/16 11:30
Percent Solids: 55.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			221222	03/11/16 13:46	LAM	TAL CAN
Total/NA	Analysis	8260B		1	221892	03/17/16 09:34	TJL2	TAL CAN
Total/NA	Prep	3540C			221127	03/11/16 08:42	YDN	TAL CAN
Total/NA	Analysis	8270C		50	222162	03/18/16 20:38	JMG	TAL CAN
Total/NA	Prep	3540C			221107	03/11/16 07:38	SDE	TAL CAN
Total/NA	Analysis	8082		2	221640	03/15/16 21:36	KMG	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222294	03/18/16 21:05	AS1	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 18:10	AS1	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		10	222405	03/19/16 18:14	AS1	TAL CAN
Total/NA	Prep	7471A			221218	03/11/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		10	221647	03/15/16 08:14	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171064	03/16/16 15:34	JDD	TAL PIT

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: SE-030916-JN-009
Date Collected: 03/09/16 15:55
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221231	03/11/16 14:03	BLW	TAL CAN

Client Sample ID: SE-030916-JN-009
Date Collected: 03/09/16 15:55
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-9
Matrix: Solid
Percent Solids: 48.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			221222	03/11/16 13:46	LAM	TAL CAN
Total/NA	Analysis	8260B		1	221892	03/17/16 10:38	TJL2	TAL CAN
Total/NA	Prep	3540C			221127	03/11/16 08:42	YDN	TAL CAN
Total/NA	Analysis	8270C		50	222162	03/18/16 21:02	JMG	TAL CAN
Total/NA	Prep	3540C			221107	03/11/16 07:38	SDE	TAL CAN
Total/NA	Analysis	8082		5	221734	03/16/16 17:19	HMB	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222294	03/18/16 21:13	AS1	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 18:18	AS1	TAL CAN
Total/NA	Prep	7471A			221218	03/11/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		10	221647	03/15/16 08:15	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171064	03/16/16 15:44	JDD	TAL PIT

Client Sample ID: SE-030916-JN-010
Date Collected: 03/09/16 16:00
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221231	03/11/16 14:03	BLW	TAL CAN

Client Sample ID: SE-030916-JN-010
Date Collected: 03/09/16 16:00
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-10
Matrix: Solid
Percent Solids: 51.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			221222	03/11/16 13:46	LAM	TAL CAN
Total/NA	Analysis	8260B		1	221892	03/17/16 11:00	TJL2	TAL CAN
Total/NA	Prep	3540C			221127	03/11/16 08:42	YDN	TAL CAN
Total/NA	Analysis	8270C		20	222162	03/18/16 19:02	JMG	TAL CAN
Total/NA	Prep	3540C			221107	03/11/16 07:38	SDE	TAL CAN
Total/NA	Analysis	8082		2	221640	03/15/16 22:10	KMG	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222294	03/18/16 21:22	AS1	TAL CAN
Total/NA	Prep	3050B			221214	03/11/16 12:52	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 18:22	AS1	TAL CAN

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: SE-030916-JN-010
Date Collected: 03/09/16 16:00
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-10
Matrix: Solid
Percent Solids: 51.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471A			221218	03/11/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		10	221647	03/15/16 08:20	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171064	03/16/16 15:55	JDD	TAL PIT

Client Sample ID: TB-030916-JN-001
Date Collected: 03/09/16 00:00
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	221437	03/14/16 13:52	LRW	TAL CAN

Client Sample ID: SE-030916-JN-001
Date Collected: 03/09/16 12:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-12
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Analysis	SEM		1	171444	03/22/16 10:41	MM1	TAL PIT
Total/NA	Analysis	2540G		1	171000	03/16/16 12:42	CLL	TAL PIT

Client Sample ID: SE-030916-JN-001
Date Collected: 03/09/16 12:45
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-12
Matrix: Sediment
Percent Solids: 41.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		1	171287	03/18/16 18:34	RJR	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		2	171363	03/21/16 11:17	RJG	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Prep	7470A			171122	03/17/16 13:39	EVR	TAL PIT
SEM/AVS	Analysis	7470A		1	171226	03/18/16 11:58	EVR	TAL PIT
SEM/AVS	Prep	AVSSEM			171004	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	9034		1	171036	03/16/16 17:51	JLR	TAL PIT

Client Sample ID: SE-030916-JN-004
Date Collected: 03/09/16 14:25
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-13
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Analysis	SEM		1	171444	03/22/16 10:41	MM1	TAL PIT
Total/NA	Analysis	2540G		1	171000	03/16/16 12:42	CLL	TAL PIT

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Client Sample ID: SE-030916-JN-004

Lab Sample ID: 240-61959-13
Date Collected: 03/09/16 14:25
Matrix: Sediment
Date Received: 03/10/16 11:30
Percent Solids: 53.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		1	171287	03/18/16 18:29	RJR	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		5	171363	03/21/16 11:22	RJG	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Prep	7470A			171122	03/17/16 13:39	EVR	TAL PIT
SEM/AVS	Analysis	7470A		1	171226	03/18/16 11:59	EVR	TAL PIT
SEM/AVS	Prep	AVSSEM			171004	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	9034		1	171036	03/16/16 17:53	JLR	TAL PIT

Client Sample ID: SE-030916-JN-007

Lab Sample ID: 240-61959-14
Date Collected: 03/09/16 15:45
Matrix: Sediment
Date Received: 03/10/16 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Analysis	SEM		1	171444	03/22/16 10:41	MM1	TAL PIT
Total/NA	Analysis	2540G		1	171000	03/16/16 12:42	CLL	TAL PIT

Client Sample ID: SE-030916-JN-007

Lab Sample ID: 240-61959-14
Date Collected: 03/09/16 15:45
Matrix: Sediment
Date Received: 03/10/16 11:30
Percent Solids: 47.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		1	171287	03/18/16 18:23	RJR	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		5	171363	03/21/16 11:28	RJG	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Prep	7470A			171122	03/17/16 13:39	EVR	TAL PIT
SEM/AVS	Analysis	7470A		1	171226	03/18/16 12:01	EVR	TAL PIT
SEM/AVS	Prep	AVSSEM			171004	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	9034		1	171036	03/16/16 17:56	JLR	TAL PIT

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Certification Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-1

Laboratory: TestAmerica Canton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999518190	08-31-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
1630	1630	Solid	Methyl Mercury
7470A	7470A	Solid	Mercury
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	Cyclohexane
8260B		Water	Methyl acetate
8260B		Water	Methylcyclohexane
8260B	5030A	Solid	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B	5030A	Solid	Cyclohexane
8260B	5030A	Solid	Methyl acetate
8260B	5030A	Solid	Methylcyclohexane
8260B	5030B	Solid	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B	5030B	Solid	Cyclohexane
8260B	5030B	Solid	Methyl acetate
8260B	5030B	Solid	Methylcyclohexane
8270C	3540C	Solid	4-Nitroaniline
8270C	3540C	Solid	Atrazine
8270C	3540C	Solid	Benzaldehyde
8270C	3540C	Solid	Caprolactam
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: TestAmerica Pittsburgh

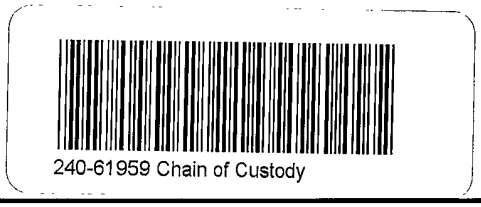
All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-16
California	State Program	9	2891	03-31-18
Connecticut	State Program	1	PH-0688	09-30-16
Florida	NELAP	4	E871008	06-30-16
Illinois	NELAP	5	200005	06-30-16
Kansas	NELAP	7	E-10350	05-31-16
Louisiana	NELAP	6	04041	06-30-16
New Hampshire	NELAP	1	2030	04-04-17
New Jersey	NELAP	2	PA005	06-30-16
New York	NELAP	2	11182	03-31-17
North Carolina (WW/SW)	State Program	4	434	12-31-16
Pennsylvania	NELAP	3	02-00416	04-30-16
South Carolina	State Program	4	89014	04-30-16 *
Texas	NELAP	6	T104704528-15-2	03-31-17
US Fish & Wildlife	Federal		LE94312A-1	10-31-16
USDA	Federal		P-Soil-01	05-23-16 *
Utah	NELAP	8	PA001462015-4	05-31-16
Virginia	NELAP	3	460189	09-14-16
West Virginia DEP	State Program	3	142	01-31-17
Wisconsin	State Program	5	998027800	08-31-16

* Certification renewal pending - certification considered valid.

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

GM Powertrain
ENCORE

2.6/42.1
3.2/C2.7

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 1 OF 1

☐ eCOC in Use

ID: # C#03092016_001

SSOW Ref. Code: 058507-108014

Required Client Information:

GHD	Report To:
6400 Shafer Court	Copy To:
Suite 400	Invoice To:
Rosemont, IL 60018	P.O.:
Phone: (773) 380-9723	Project Name: GM - Janesville
Fax: (773) 380-6421	Project Number: 058505 - 01 - 20404
E-mail: jeffrey.nichols@GHD.com	

Laboratory: Test America	
Laboratory Location: 4101 Shuffel Drive NW, North Canton, OH	
Laboratory Contact: Denise Heckler	
Requested Due Date:	TAT: STD DAY
QA/QC Requirements:	

Valid Matrix Codes:
WG Groundwater
WB Borehole Water
WS Surface Water
SO Soil
SE Sediment
See Back for Additional Codes

3/9/16

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: HCl	TCL VOC (1)	TCL SVOC	TAL Metals (2)	PCBs	Alkylated PAHs	AVS	SEM Metals (3)	Methyl Hg	TOC	TCLP Metals	MS/MSD	Remarks/Lab ID
1	SG-030916-JN-001	SG	3/9/16	1245	7/5		X	X	X	X	X	X	X	X	X			
2	-002	SG	3/9/16	1255	4		X	X	X	X					X			
3	-003	SG	3/9/16	1310	4		X	X	X	X					X	X		
4	-004	SG	3/9/16	1425	7/5		X	X	X	X	X	X	X	X	X			
5	-005	SG	3/9/16	1435	4		X	X	X	X					X			
6	-006	SG	3/9/16	1445	4		X	X	X	X					X	X		
7	-007	SG	3/9/16	1545	5		X	X	X	X	X	X	X	X	X			
8	-008	SG	3/9/16	1550	4		X	X	X	X					X			
9	-009	SG	3/9/16	1555	4		X	X	X	X					X			
10	-010	SG	3/9/16	1600	4		X	X	X	X					X	X		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18	TB-030916-JN-001	SG	3/9/16	0800	2	X	X											

Analysis and Method

(1) Includes reporting 1,2,4-TMB and 1,3,5-TMB.
(2) Earth metals include: aluminum, calcium, iron, magnesium, potassium, & sodium.
(3) Metals include: cadmium, copper, lead, nickel, mercury, silver, & zinc.

TOTAL NUMBER OF CONTAINERS 45 95 3/9/16

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
FedEx	2	Jeffrey M. Nichols / GHD	3/9/16	1700		3-10-16	1170
AIRBILL NO: 8742 2219 3736/3747							

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name: Jeffrey M. Nichols

Sampler Signature: Date: 3/9/16

REV. 0 (9/04)

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4/15/2016

TestAmerica Canton Sample Receipt Form/Narrative Login # : 61959
Canton Facility

Client GHD Site Name

Cooler Received on 3-10-16 Opened on 3-10-16

Cooler unpacked by:

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☑ See Multiple Cooler Form
   IR GUN# 48 (CF -1.9 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   IR GUN# 36 (CF -1.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   IR GUN# I8 (CF -0.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC559158
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Yes No
16. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM Date by via Verbal Voice Mail Other

Concerning

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

18. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

Ref: SOP NC-SC-0005, Sample Receiving
L:\QAQC\QA Department\QA TARDIS\Document Control\Work Instructions\WI-NC-099X-011816 Cooler Receipt Form.doc djl

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # :** 61959
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	6	2.6	2.1	ice
1	1	3.2	2.7	1

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-61959-1

Login Number: 61959
List Number: 2
Creator: Watson, Debbie

List Source: TestAmerica Pittsburgh
List Creation: 03/11/16 02:10 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-62022-1
Client Project/Site: 58505, Janesville WI, SSOW 108014
Revision: 1

For:
GHD Services Inc.
45 Farmington Valley Drive
Plainville, Connecticut 06062

Attn: Ms. Kathy Shaw

Authorized for release by:
4/15/2016 4:40:32 PM
Nathan Pietras, Project Manager II
(330)966-8296
nathan.pietras@testamericainc.com

Designee for

Denise Heckler, Project Manager II
(330)966-9477
denise.heckler@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
X	Surrogate is outside control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Reported value was between the limit of detection and the limit of quantitation.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

GC Semi VOA

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.
X	Surrogate is outside control limits
^c	CCV Recovery is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
F2	MS/MSD RPD exceeds control limits

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Reported value was between the limit of detection and the limit of quantitation.
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F2	MS/MSD RPD exceeds control limits

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 240-62022-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-62022-1

REVISION
PAH's added to method 8270. April 15, 2016

Comments
The alkalyted PAH were sent to another lab by GHD.

Receipt
The samples were received on 3/11/2016 10:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.9º C, 2.1º C and 2.9º C.

GC/MS VOA
Method(s) 8260B: Surrogate recovery for the following sample was outside control limits: SE-031016-JN-018 (240-62022-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: The following sample was diluted due to the abundance of non-target analytes: SE-031016-JN-025 (240-62022-15). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: Method 8260 stipulates a 12 hour sequence for the analysis of samples. Due to an instrument error, the MSD for sample (240-62029-B-1 MSD) exceeded the 12 hour time limit. The MSD was reported for batch QC.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270C: The following sample was diluted due to the nature of the sample matrix: SE-031016-JN-027 (240-62022-17). Elevated reporting limits (RLs) are provided.

Method(s) 8270C: The following samples were diluted due to the nature of the sample matrix: SE-031016-JN-012 (240-62022-2) and SE-031016-JN-021 (240-62022-11). Elevated reporting limits (RLs) are provided.

Method(s) 8270C: The following samples were diluted due to the nature of the sample matrix: SE-031016-JN-013 (240-62022-3), SE-031016-JN-013 (240-62022-3[MS]), SE-031016-JN-013 (240-62022-3[MSD]), SE-031016-JN-014 (240-62022-4), SE-031016-JN-016 (240-62022-6), SE-031016-JN-018 (240-62022-8), SE-031016-JN-020 (240-62022-10), SE-031016-JN-024 (240-62022-14), SE-031016-JN-025 (240-62022-15) and SE-031016-JN-026 (240-62022-16). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8082: The method blank for preparation batch 240-221356 contained Aroclor 1260 above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

Method(s) 8082: The continuing calibration verification (CCV) associated with batch 240-221858 recovered above the upper control limit for Aroclor 1016 and Aroclor 1260. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method(s) 8082: The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: SE-031016-JN-014 (240-62022-4), SE-031016-JN-016 (240-62022-6), SE-031016-JN-017 (240-62022-7), SE-031016-JN-018 (240-62022-8), SE-031016-JN-019 (240-62022-9), SE-031016-JN-020 (240-62022-10), SE-031016-JN-021 (240-62022-11), SE-031016-JN-022 (240-62022-12), SE-031016-JN-023 (240-62022-13), SE-031016-JN-023 (240-62022-13[MS]), SE-031016-JN-023 (240-62022-13[MSD]), SE-031016-JN-024 (240-62022-14), SE-031016-JN-025 (240-62022-15), SE-031016-JN-026 (240-62022-16) and SE-031016-JN-027 (240-62022-17). 2427271, 2103100, 2283703.

Job ID: 240-62022-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: SE-031016-JN-011 (240-62022-1), SE-031016-JN-012 (240-62022-2), SE-031016-JN-013 (240-62022-3), SE-031016-JN-013 (240-62022-3[MS]), SE-031016-JN-013 (240-62022-3[MSD]) and SE-031016-JN-015 (240-62022-5). 2427271, 2103100, 2283703.

Method(s) 8082: Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: SE-031016-JN-012 (240-62022-2), SE-031016-JN-018 (240-62022-8), SE-031016-JN-024 (240-62022-14), SE-031016-JN-026 (240-62022-16) and SE-031016-JN-027 (240-62022-17). These results have been reported and qualified.

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: SE-031016-JN-011 (240-62022-1), SE-031016-JN-012 (240-62022-2), SE-031016-JN-013 (240-62022-3), SE-031016-JN-013 (240-62022-3[MS]), SE-031016-JN-013 (240-62022-3[MSD]), SE-031016-JN-014 (240-62022-4), SE-031016-JN-015 (240-62022-5), SE-031016-JN-017 (240-62022-7), SE-031016-JN-018 (240-62022-8), SE-031016-JN-019 (240-62022-9), SE-031016-JN-021 (240-62022-11), SE-031016-JN-023 (240-62022-13), SE-031016-JN-023 (240-62022-13[MS]), SE-031016-JN-023 (240-62022-13[MSD]), SE-031016-JN-024 (240-62022-14), SE-031016-JN-026 (240-62022-16) and SE-031016-JN-027 (240-62022-17). 2438204, 2103100, 2283703.

Method(s) 8082: The following sample was diluted due to the nature of the sample matrix: SE-031016-JN-023 (240-62022-13). Elevated reporting limits (RLs) are provided.

Method(s) Lloyd Kahn: The matrix spike duplicate (MSD) recovery for 171546 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) Lloyd Kahn: The reporting limit for Lloyd Kahn TOC analysis is a nominal value and does not reflect adjustments in sample mass processed on an individual basis.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 6010B: The serial dilution performed for the following sample associated with batch 170984 was outside the control limits for zinc: SE-031016-JN-024 (240-62022-23).

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for 170984 were outside the control limits for silver and copper. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. A post digestion spike (PDS) was analyzed as per the 6010C method and it passed for these analytes.

Method(s) 6010B: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample: SE-031016-JN-018 (240-62022-21). All analytes referencing the indium internal standard required dilution due to the indium counts being low and outside the 70%-130% control limits.

Method(s) 6010B: The following samples were diluted to bring the concentration of lead within the linear range of the instrument: SE-031016-JN-011 (240-62022-19), SE-031016-JN-024 (240-62022-23), (240-62022-A-23-G MS), (240-62022-A-23-H MSD) and (240-62022-A-23-A SD). Elevated reporting limits (RLs) are provided.

Method(s) 6010B: The following sample was diluted to bring the concentration of zinc within the linear range of the instrument: SE-031016-JN-011 (240-62022-19). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method(s) 3540C: Due to the matrix, the following samples could not be concentrated to the final method required volume:

Job ID: 240-62022-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

SE-031016-JN-012 (240-62022-2), SE-031016-JN-013 (240-62022-3), SE-031016-JN-023 (240-62022-13[MS]) and SE-031016-JN-023 (240-62022-13[MSD]). The reporting limits (RLs) are elevated proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
1630	Methyl Mercury (GC)	EPA	TAL CAN
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
6010B	Metals (ICP)	SW846	TAL PIT
6010B	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL PIT
7470A	Mercury (CVAA)	SW846	TAL CAN
7471A	Mercury (CVAA)	SW846	TAL CAN
SEM	Metals, Simultaneously Extracted Metals (SEM)	EPA	TAL PIT
2540G	SM 2540G	SM22	TAL PIT
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL PIT
Lloyd Kahn	Organic Carbon, Total (TOC)	EPA	TAL PIT
Moisture	Percent Moisture	EPA	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SM22 = SM22

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Sample Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-62022-1	SE-031016-JN-011	Solid	03/10/16 09:35	03/11/16 10:40
240-62022-2	SE-031016-JN-012	Solid	03/10/16 09:40	03/11/16 10:40
240-62022-3	SE-031016-JN-013	Solid	03/10/16 09:45	03/11/16 10:40
240-62022-4	SE-031016-JN-014	Solid	03/10/16 10:35	03/11/16 10:40
240-62022-5	SE-031016-JN-015	Solid	03/10/16 10:40	03/11/16 10:40
240-62022-6	SE-031016-JN-016	Solid	03/10/16 10:45	03/11/16 10:40
240-62022-7	SE-031016-JN-017	Solid	03/10/16 10:50	03/11/16 10:40
240-62022-8	SE-031016-JN-018	Solid	03/10/16 11:40	03/11/16 10:40
240-62022-9	SE-031016-JN-019	Solid	03/10/16 11:45	03/11/16 10:40
240-62022-10	SE-031016-JN-020	Solid	03/10/16 11:50	03/11/16 10:40
240-62022-11	SE-031016-JN-021	Solid	03/10/16 12:50	03/11/16 10:40
240-62022-12	SE-031016-JN-022	Solid	03/10/16 12:55	03/11/16 10:40
240-62022-13	SE-031016-JN-023	Solid	03/10/16 13:00	03/11/16 10:40
240-62022-14	SE-031016-JN-024	Solid	03/10/16 14:05	03/11/16 10:40
240-62022-15	SE-031016-JN-025	Solid	03/10/16 14:10	03/11/16 10:40
240-62022-16	SE-031016-JN-026	Solid	03/10/16 14:15	03/11/16 10:40
240-62022-17	SE-031016-JN-027	Solid	03/10/16 14:20	03/11/16 10:40
240-62022-18	TB-031016-JN-001	Water	03/10/16 08:00	03/11/16 10:40
240-62022-19	SE-031016-JN-011	Sediment	03/10/16 09:35	03/11/16 10:40
240-62022-20	SE-031016-JN-014	Sediment	03/10/16 10:35	03/11/16 10:40
240-62022-21	SE-031016-JN-018	Sediment	03/10/16 11:40	03/11/16 10:40
240-62022-22	SE-031016-JN-021	Sediment	03/10/16 12:50	03/11/16 10:40
240-62022-23	SE-031016-JN-024	Sediment	03/10/16 14:05	03/11/16 10:40

Detection Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: SE-031016-JN-011 — Lab Sample ID: 240-62022-1

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	130	J	240	67	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	23	J	240	13	ug/Kg	1	☼	8260B	Total/NA
1,2,4-Trimethylbenzene	600		59	6.9	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	40	J B	59	8.7	ug/Kg	1	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	250		59	3.4	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	53	J	120	6.4	ug/Kg	1	☼	8260B	Total/NA
Cyclohexane	84	J	120	5.7	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	140		59	2.4	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	390		120	6.9	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	1300	J	1700	130	ug/Kg	200	☼	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	13000	J B	18000	4800	ug/Kg	200	☼	8270C	Total/NA
Butyl benzyl phthalate	290000		18000	2500	ug/Kg	200	☼	8270C	Total/NA
Di-n-butyl phthalate	13000	J	18000	3800	ug/Kg	200	☼	8270C	Total/NA
Methyl Mercury	0.22		0.12	0.035	ug/Kg	1	☼	1630	Total/NA
Aroclor-1254	140	J	210	88	ug/Kg	5	☼	8082	Total/NA
Aroclor-1268	330		210	81	ug/Kg	5	☼	8082	Total/NA
Silver	0.21	J	0.22	0.0015	mg/Kg	2	☼	6020	Total/NA
Arsenic	7.1		1.1	0.028	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.17	J	0.22	0.012	mg/Kg	2	☼	6020	Total/NA
Cadmium	8.0		0.22	0.0040	mg/Kg	2	☼	6020	Total/NA
Cobalt	3.8	B	0.22	0.0018	mg/Kg	2	☼	6020	Total/NA
Chromium	176	B	0.43	0.065	mg/Kg	2	☼	6020	Total/NA
Copper	40.3	B	0.43	0.10	mg/Kg	2	☼	6020	Total/NA
Manganese	371		1.1	0.13	mg/Kg	2	☼	6020	Total/NA
Nickel	29.2	B	0.43	0.042	mg/Kg	2	☼	6020	Total/NA
Lead	1470	B	2.2	0.49	mg/Kg	20	☼	6020	Total/NA
Antimony	32.0		0.43	0.015	mg/Kg	2	☼	6020	Total/NA
Selenium	2.0		1.1	0.043	mg/Kg	2	☼	6020	Total/NA
Thallium	0.10	J	0.43	0.021	mg/Kg	2	☼	6020	Total/NA
Zinc	1970		4.3	0.54	mg/Kg	2	☼	6020	Total/NA
Barium	1120	B	1.1	0.24	mg/Kg	2	☼	6020	Total/NA
Mercury	0.27	B	0.15	0.021	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	78800		1250	626	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-012 — Lab Sample ID: 240-62022-2

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	7700		710	37	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	300	J	710	240	ug/Kg	1	☼	8260B	Total/NA
Toluene	67	J B	710	28	ug/Kg	1	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	3200		710	43	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	1500		1400	91	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	630	J	710	37	ug/Kg	1	☼	8260B	Total/NA
1,2,4-Trichlorobenzene	130	J	710	85	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	800	J	1400	110	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	3500		1000	77	ug/Kg	50	☼	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	18000	B	11000	2900	ug/Kg	50	☼	8270C	Total/NA
Butyl benzyl phthalate	3100	J	11000	1500	ug/Kg	50	☼	8270C	Total/NA
Carbazole	8800		7700	4100	ug/Kg	50	☼	8270C	Total/NA
Dibenzofuran	3800	J	7700	100	ug/Kg	50	☼	8270C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-031016-JN-012 (Continued)

Lab Sample ID: 240-62022-2

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Di-n-butyl phthalate	13000		11000	2300	ug/Kg	50	☼	8270C	Total/NA
Fluorene	7800		1000	81	ug/Kg	50	☼	8270C	Total/NA
Benzo[g,h,i]perylene	9000		1000	54	ug/Kg	50	☼	8270C	Total/NA
Phenanthrene	59000		1000	110	ug/Kg	50	☼	8270C	Total/NA
Benzo[k]fluoranthene	9100		1000	100	ug/Kg	50	☼	8270C	Total/NA
Benzo[a]pyrene	15000		1000	98	ug/Kg	50	☼	8270C	Total/NA
Anthracene	12000		1000	120	ug/Kg	50	☼	8270C	Total/NA
Pyrene	44000		1000	68	ug/Kg	50	☼	8270C	Total/NA
Dibenz(a,h)anthracene	2600		1000	100	ug/Kg	50	☼	8270C	Total/NA
Naphthalene	5200		1000	130	ug/Kg	50	☼	8270C	Total/NA
Fluoranthene	60000		1000	84	ug/Kg	50	☼	8270C	Total/NA
Benzo[a]anthracene	20000		1000	97	ug/Kg	50	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	8200		1000	54	ug/Kg	50	☼	8270C	Total/NA
Chrysene	23000		1000	170	ug/Kg	50	☼	8270C	Total/NA
Acenaphthene	7100		1000	120	ug/Kg	50	☼	8270C	Total/NA
Benzo[b]fluoranthene	23000		1000	91	ug/Kg	50	☼	8270C	Total/NA
Aroclor-1254	270		69	29	ug/Kg	1	☼	8082	Total/NA
Aroclor-1268	560		69	27	ug/Kg	1	☼	8082	Total/NA
Silver	0.40		0.38	0.0027	mg/Kg	2	☼	6020	Total/NA
Arsenic	14.7		1.9	0.050	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.39		0.38	0.021	mg/Kg	2	☼	6020	Total/NA
Cadmium	19.4		0.38	0.0071	mg/Kg	2	☼	6020	Total/NA
Cobalt	10.6	B	0.38	0.0033	mg/Kg	2	☼	6020	Total/NA
Chromium	272	B	0.77	0.11	mg/Kg	2	☼	6020	Total/NA
Copper	113	B	0.77	0.19	mg/Kg	2	☼	6020	Total/NA
Manganese	641		1.9	0.23	mg/Kg	2	☼	6020	Total/NA
Nickel	21.0	B	0.77	0.075	mg/Kg	2	☼	6020	Total/NA
Lead	2660	B	3.8	0.86	mg/Kg	20	☼	6020	Total/NA
Antimony	48.3		0.77	0.027	mg/Kg	2	☼	6020	Total/NA
Selenium	4.7		1.9	0.077	mg/Kg	2	☼	6020	Total/NA
Thallium	0.18	J	0.77	0.036	mg/Kg	2	☼	6020	Total/NA
Vanadium	5.6		1.9	0.071	mg/Kg	2	☼	6020	Total/NA
Zinc	2780		7.7	0.96	mg/Kg	2	☼	6020	Total/NA
Barium	2340	B	1.9	0.42	mg/Kg	2	☼	6020	Total/NA
Mercury	0.61	B	0.20	0.028	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	101000		2070	1030	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-013

Lab Sample ID: 240-62022-3

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	16000		970	50	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	380	J	970	330	ug/Kg	1	☼	8260B	Total/NA
Toluene	83	J B	970	39	ug/Kg	1	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	5900		970	58	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	2400		1900	120	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	1000		970	50	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	2000	F1	1900	150	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	3300	F1	1500	110	ug/Kg	20	☼	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	27000	B	15000	4200	ug/Kg	20	☼	8270C	Total/NA
Butyl benzyl phthalate	56000		15000	2200	ug/Kg	20	☼	8270C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-031016-JN-013 (Continued)

Lab Sample ID: 240-62022-3

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Di-n-butyl phthalate	5300	J F1	15000	3300	ug/Kg	20	☼	8270C	Total/NA
Fluorene	2500	F1	1500	120	ug/Kg	20	☼	8270C	Total/NA
Benzo[g,h,i]perylene	6400	F1	1500	77	ug/Kg	20	☼	8270C	Total/NA
Phenanthrene	22000		1500	160	ug/Kg	20	☼	8270C	Total/NA
Benzo[k]fluoranthene	4500	F1	1500	150	ug/Kg	20	☼	8270C	Total/NA
Benzo[a]pyrene	7600		1500	140	ug/Kg	20	☼	8270C	Total/NA
Anthracene	4600	F1	1500	170	ug/Kg	20	☼	8270C	Total/NA
Pyrene	21000		1500	97	ug/Kg	20	☼	8270C	Total/NA
Naphthalene	4800	F1	1500	180	ug/Kg	20	☼	8270C	Total/NA
Fluoranthene	27000		1500	120	ug/Kg	20	☼	8270C	Total/NA
Benzo[a]anthracene	11000		1500	140	ug/Kg	20	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	4300	F1	1500	77	ug/Kg	20	☼	8270C	Total/NA
Chrysene	12000		1500	240	ug/Kg	20	☼	8270C	Total/NA
Acenaphthene	2300	F1	1500	170	ug/Kg	20	☼	8270C	Total/NA
Benzo[b]fluoranthene	12000		1500	130	ug/Kg	20	☼	8270C	Total/NA
Aroclor-1254	200	J	400	170	ug/Kg	5	☼	8082	Total/NA
Aroclor-1268	670		400	160	ug/Kg	5	☼	8082	Total/NA
Arsenic	0.027	J	0.50	0.0029	mg/L	1		6010B	TCLP
Barium	0.17	J B	10.0	0.0010	mg/L	1		6010B	TCLP
Cadmium	0.0016	J	0.10	0.00014	mg/L	1		6010B	TCLP
Chromium	0.013	J B	0.50	0.00055	mg/L	1		6010B	TCLP
Lead	0.19	J	0.50	0.0019	mg/L	1		6010B	TCLP
Silver	0.0013	J	0.50	0.00092	mg/L	1		6010B	TCLP
Silver	1.3		0.44	0.0031	mg/Kg	2	☼	6020	Total/NA
Arsenic	40.4		2.2	0.057	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.38	J	0.44	0.024	mg/Kg	2	☼	6020	Total/NA
Cadmium	31.9		0.44	0.0081	mg/Kg	2	☼	6020	Total/NA
Cobalt	9.3	B	0.44	0.0037	mg/Kg	2	☼	6020	Total/NA
Chromium	746	B F1	0.87	0.13	mg/Kg	2	☼	6020	Total/NA
Copper	159	B	0.87	0.21	mg/Kg	2	☼	6020	Total/NA
Manganese	678	F1	2.2	0.26	mg/Kg	2	☼	6020	Total/NA
Nickel	103	B	0.87	0.085	mg/Kg	2	☼	6020	Total/NA
Lead	8570	B	4.4	0.98	mg/Kg	20	☼	6020	Total/NA
Antimony	511		8.7	0.31	mg/Kg	20	☼	6020	Total/NA
Selenium	5.4		2.2	0.087	mg/Kg	2	☼	6020	Total/NA
Thallium	0.24	J	0.87	0.041	mg/Kg	2	☼	6020	Total/NA
Vanadium	11.3		2.2	0.081	mg/Kg	2	☼	6020	Total/NA
Zinc	5590		87.3	10.9	mg/Kg	20	☼	6020	Total/NA
Barium	3880	B	2.2	0.48	mg/Kg	2	☼	6020	Total/NA
Mercury	1.7	B	0.24	0.034	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	176000	F1	2490	1240	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-014

Lab Sample ID: 240-62022-4

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	39	B	38	11	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	10	J B	38	2.1	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	2.0	J B	9.6	1.4	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	2.8	J	19	1.1	ug/Kg	1	☼	8260B	Total/NA
Methyl Mercury	0.97		0.19	0.058	ug/Kg	1	☼	1630	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-031016-JN-014 (Continued) — Lab Sample ID: 240-62022-4

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Silver	0.15	J	0.34	0.0024	mg/Kg	2	☼	6020	Total/NA
Arsenic	6.2		1.7	0.045	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.53		0.34	0.019	mg/Kg	2	☼	6020	Total/NA
Cadmium	0.62		0.34	0.0064	mg/Kg	2	☼	6020	Total/NA
Cobalt	5.7	B	0.34	0.0029	mg/Kg	2	☼	6020	Total/NA
Chromium	20.4	B	0.69	0.10	mg/Kg	2	☼	6020	Total/NA
Copper	26.4	B	0.69	0.17	mg/Kg	2	☼	6020	Total/NA
Manganese	355		1.7	0.21	mg/Kg	2	☼	6020	Total/NA
Nickel	13.7	B	0.69	0.067	mg/Kg	2	☼	6020	Total/NA
Lead	137	B	0.34	0.077	mg/Kg	2	☼	6020	Total/NA
Antimony	0.27	J	0.69	0.024	mg/Kg	2	☼	6020	Total/NA
Selenium	1.5	J	1.7	0.069	mg/Kg	2	☼	6020	Total/NA
Thallium	0.21	J	0.69	0.033	mg/Kg	2	☼	6020	Total/NA
Vanadium	21.5		1.7	0.064	mg/Kg	2	☼	6020	Total/NA
Zinc	213		6.9	0.86	mg/Kg	2	☼	6020	Total/NA
Barium	153	B	1.7	0.38	mg/Kg	2	☼	6020	Total/NA
Mercury	27.5	B	2.2	0.31	mg/Kg	10	☼	7471A	Total/NA
Total Organic Carbon	71900		2030	1020	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-015 — Lab Sample ID: 240-62022-5

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	36	B	36	10	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	11	J B	36	2.0	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	2.1	J B	9.1	1.3	ug/Kg	1	☼	8260B	Total/NA
Bis(2-ethylhexyl) phthalate	43	J B	140	39	ug/Kg	1	☼	8270C	Total/NA
Phenol	26	J	100	15	ug/Kg	1	☼	8270C	Total/NA
Benzo[g,h,i]perylene	10	J	14	0.71	ug/Kg	1	☼	8270C	Total/NA
Phenanthrene	36		14	1.5	ug/Kg	1	☼	8270C	Total/NA
Benzo[a]pyrene	19		14	1.3	ug/Kg	1	☼	8270C	Total/NA
Anthracene	8.3	J	14	1.6	ug/Kg	1	☼	8270C	Total/NA
Pyrene	49		14	0.90	ug/Kg	1	☼	8270C	Total/NA
Fluoranthene	45		14	1.1	ug/Kg	1	☼	8270C	Total/NA
Benzo[a]anthracene	24		14	1.3	ug/Kg	1	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	12	J	14	0.71	ug/Kg	1	☼	8270C	Total/NA
Chrysene	28		14	2.2	ug/Kg	1	☼	8270C	Total/NA
Benzo[b]fluoranthene	25		14	1.2	ug/Kg	1	☼	8270C	Total/NA
Silver	0.080	J	0.32	0.0023	mg/Kg	2	☼	6020	Total/NA
Arsenic	3.9		1.6	0.042	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.57		0.32	0.018	mg/Kg	2	☼	6020	Total/NA
Cadmium	0.29	J	0.32	0.0060	mg/Kg	2	☼	6020	Total/NA
Cobalt	5.9	B	0.32	0.0027	mg/Kg	2	☼	6020	Total/NA
Chromium	17.0	B	0.65	0.097	mg/Kg	2	☼	6020	Total/NA
Copper	15.4	B	0.65	0.16	mg/Kg	2	☼	6020	Total/NA
Manganese	343		1.6	0.19	mg/Kg	2	☼	6020	Total/NA
Nickel	13.5	B	0.65	0.063	mg/Kg	2	☼	6020	Total/NA
Lead	21.4	B	0.32	0.073	mg/Kg	2	☼	6020	Total/NA
Antimony	0.078	J	0.65	0.023	mg/Kg	2	☼	6020	Total/NA
Selenium	1.4	J	1.6	0.065	mg/Kg	2	☼	6020	Total/NA
Thallium	0.16	J	0.65	0.031	mg/Kg	2	☼	6020	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-031016-JN-015 (Continued) — Lab Sample ID: 240-62022-5

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Vanadium	22.4		1.6	0.060	mg/Kg	2	☼	6020	Total/NA
Zinc	68.1		6.5	0.81	mg/Kg	2	☼	6020	Total/NA
Barium	142	B	1.6	0.35	mg/Kg	2	☼	6020	Total/NA
Mercury	0.93	B	0.17	0.024	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	51000		2030	1020	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-016 — Lab Sample ID: 240-62022-6

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	37	J B	43	12	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	10	J B	43	2.4	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	2.3	J B	11	1.6	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	40	J	58	4.4	ug/Kg	4	☼	8270C	Total/NA
Acenaphthylene	35	J	58	3.0	ug/Kg	4	☼	8270C	Total/NA
Benzo[g,h,i]perylene	150		58	3.0	ug/Kg	4	☼	8270C	Total/NA
Phenanthrene	360		58	6.4	ug/Kg	4	☼	8270C	Total/NA
Benzo[k]fluoranthene	170		58	5.9	ug/Kg	4	☼	8270C	Total/NA
Benzo[a]pyrene	240		58	5.6	ug/Kg	4	☼	8270C	Total/NA
Anthracene	76		58	6.8	ug/Kg	4	☼	8270C	Total/NA
Pyrene	580		58	3.8	ug/Kg	4	☼	8270C	Total/NA
Naphthalene	59		58	7.1	ug/Kg	4	☼	8270C	Total/NA
Fluoranthene	600		58	4.8	ug/Kg	4	☼	8270C	Total/NA
Benzo[a]anthracene	260		58	5.5	ug/Kg	4	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	140		58	3.0	ug/Kg	4	☼	8270C	Total/NA
Chrysene	330		58	9.6	ug/Kg	4	☼	8270C	Total/NA
Benzo[b]fluoranthene	270		58	5.1	ug/Kg	4	☼	8270C	Total/NA
Arsenic	0.030	J	0.50	0.0029	mg/L	1		6010B	TCLP
Barium	1.2	J B	10.0	0.0010	mg/L	1		6010B	TCLP
Cadmium	0.0031	J	0.10	0.00014	mg/L	1		6010B	TCLP
Chromium	0.0044	J B	0.50	0.00055	mg/L	1		6010B	TCLP
Lead	0.078	J	0.50	0.0019	mg/L	1		6010B	TCLP
Silver	0.0010	J	0.50	0.00092	mg/L	1		6010B	TCLP
Silver	0.097	J	0.37	0.0026	mg/Kg	2	☼	6020	Total/NA
Arsenic	5.2		1.8	0.048	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.68		0.37	0.020	mg/Kg	2	☼	6020	Total/NA
Cadmium	0.39		0.37	0.0068	mg/Kg	2	☼	6020	Total/NA
Cobalt	6.1	B	0.37	0.0031	mg/Kg	2	☼	6020	Total/NA
Chromium	16.8	B	0.73	0.11	mg/Kg	2	☼	6020	Total/NA
Copper	18.0	B	0.73	0.18	mg/Kg	2	☼	6020	Total/NA
Manganese	352		1.8	0.22	mg/Kg	2	☼	6020	Total/NA
Nickel	12.7	B	0.73	0.071	mg/Kg	2	☼	6020	Total/NA
Lead	54.5	B	0.37	0.082	mg/Kg	2	☼	6020	Total/NA
Antimony	0.17	J	0.73	0.026	mg/Kg	2	☼	6020	Total/NA
Selenium	1.4	J	1.8	0.073	mg/Kg	2	☼	6020	Total/NA
Thallium	0.16	J	0.73	0.035	mg/Kg	2	☼	6020	Total/NA
Vanadium	19.5		1.8	0.068	mg/Kg	2	☼	6020	Total/NA
Zinc	101		7.3	0.92	mg/Kg	2	☼	6020	Total/NA
Barium	136	B	1.8	0.40	mg/Kg	2	☼	6020	Total/NA
Mercury	2.8	B	0.23	0.032	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	64100		2200	1100	mg/Kg	1	☼	Lloyd Kahn	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: SE-031016-JN-017 — Lab Sample ID: 240-62022-7

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	44	B	39	11	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	13	J B	39	2.2	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	2.0	J B	9.8	1.5	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	22		15	1.1	ug/Kg	1	☼	8270C	Total/NA
Benzaldehyde	38	J	220	27	ug/Kg	1	☼	8270C	Total/NA
Dibenzofuran	19	J	110	1.5	ug/Kg	1	☼	8270C	Total/NA
Di-n-butyl phthalate	34	J	150	33	ug/Kg	1	☼	8270C	Total/NA
Phenol	32	J	110	16	ug/Kg	1	☼	8270C	Total/NA
3 & 4 Methylphenol	77	J	880	44	ug/Kg	1	☼	8270C	Total/NA
Fluorene	28		15	1.2	ug/Kg	1	☼	8270C	Total/NA
Acenaphthylene	20		15	0.77	ug/Kg	1	☼	8270C	Total/NA
Benzo[g,h,i]perylene	95		15	0.77	ug/Kg	1	☼	8270C	Total/NA
Phenanthrene	250		15	1.6	ug/Kg	1	☼	8270C	Total/NA
Benzo[k]fluoranthene	53		15	1.5	ug/Kg	1	☼	8270C	Total/NA
Benzo[a]pyrene	130		15	1.4	ug/Kg	1	☼	8270C	Total/NA
Anthracene	53		15	1.7	ug/Kg	1	☼	8270C	Total/NA
Pyrene	360		15	0.97	ug/Kg	1	☼	8270C	Total/NA
Naphthalene	33		15	1.8	ug/Kg	1	☼	8270C	Total/NA
Fluoranthene	350		15	1.2	ug/Kg	1	☼	8270C	Total/NA
Benzo[a]anthracene	150		15	1.4	ug/Kg	1	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	79		15	0.77	ug/Kg	1	☼	8270C	Total/NA
Chrysene	190		15	2.4	ug/Kg	1	☼	8270C	Total/NA
Acenaphthene	13	J	15	1.7	ug/Kg	1	☼	8270C	Total/NA
Benzo[b]fluoranthene	180		15	1.3	ug/Kg	1	☼	8270C	Total/NA
Arsenic	0.025	J	0.50	0.0029	mg/L	1		6010B	TCLP
Barium	1.1	J B	10.0	0.0010	mg/L	1		6010B	TCLP
Cadmium	0.0033	J	0.10	0.00014	mg/L	1		6010B	TCLP
Chromium	0.0046	J B	0.50	0.00055	mg/L	1		6010B	TCLP
Lead	0.046	J	0.50	0.0019	mg/L	1		6010B	TCLP
Silver	0.0015	J	0.50	0.00092	mg/L	1		6010B	TCLP
Silver	0.14	J	0.36	0.0025	mg/Kg	2	☼	6020	Total/NA
Arsenic	5.6		1.8	0.047	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.49		0.36	0.020	mg/Kg	2	☼	6020	Total/NA
Cadmium	0.56		0.36	0.0067	mg/Kg	2	☼	6020	Total/NA
Cobalt	7.3	B	0.36	0.0031	mg/Kg	2	☼	6020	Total/NA
Chromium	17.6	B	0.72	0.11	mg/Kg	2	☼	6020	Total/NA
Copper	20.8	B	0.72	0.17	mg/Kg	2	☼	6020	Total/NA
Manganese	363		1.8	0.22	mg/Kg	2	☼	6020	Total/NA
Nickel	13.3	B	0.72	0.070	mg/Kg	2	☼	6020	Total/NA
Lead	99.2	B	0.36	0.081	mg/Kg	2	☼	6020	Total/NA
Antimony	0.89		0.72	0.025	mg/Kg	2	☼	6020	Total/NA
Selenium	1.6	J	1.8	0.072	mg/Kg	2	☼	6020	Total/NA
Thallium	0.20	J	0.72	0.034	mg/Kg	2	☼	6020	Total/NA
Vanadium	20.3		1.8	0.067	mg/Kg	2	☼	6020	Total/NA
Zinc	118		7.2	0.90	mg/Kg	2	☼	6020	Total/NA
Barium	128	B	1.8	0.40	mg/Kg	2	☼	6020	Total/NA
Mercury	13.6	B	2.2	0.31	mg/Kg	10	☼	7471A	Total/NA
Total Organic Carbon	53400		2180	1090	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-018 — Lab Sample ID: 240-62022-8

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: SE-031016-JN-018 (Continued)

Lab Sample ID: 240-62022-8

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	69	B	66	19	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	22	J B	66	3.7	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	6.3	J B	17	2.5	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	39		33	1.9	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	100		54	4.1	ug/Kg	4	☼	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	360	J B	570	160	ug/Kg	4	☼	8270C	Total/NA
Butyl benzyl phthalate	130	J	570	82	ug/Kg	4	☼	8270C	Total/NA
Dibenzofuran	62	J	410	5.4	ug/Kg	4	☼	8270C	Total/NA
Di-n-butyl phthalate	130	J	570	120	ug/Kg	4	☼	8270C	Total/NA
Methyl Mercury	1.2		0.19	0.058	ug/Kg	1	☼	1630	Total/NA
Aroclor-1254	180		66	28	ug/Kg	1	☼	8082	Total/NA
Silver	0.19	J	0.35	0.0025	mg/Kg	2	☼	6020	Total/NA
Arsenic	6.2		1.8	0.046	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.31	J	0.35	0.019	mg/Kg	2	☼	6020	Total/NA
Cadmium	0.96		0.35	0.0065	mg/Kg	2	☼	6020	Total/NA
Cobalt	3.9	B	0.35	0.0030	mg/Kg	2	☼	6020	Total/NA
Chromium	20.0	B	0.70	0.11	mg/Kg	2	☼	6020	Total/NA
Copper	27.1	B	0.70	0.17	mg/Kg	2	☼	6020	Total/NA
Manganese	324		1.8	0.21	mg/Kg	2	☼	6020	Total/NA
Nickel	8.5	B	0.70	0.068	mg/Kg	2	☼	6020	Total/NA
Lead	294	B	0.35	0.079	mg/Kg	2	☼	6020	Total/NA
Antimony	0.35	J	0.70	0.025	mg/Kg	2	☼	6020	Total/NA
Selenium	1.2	J	1.8	0.070	mg/Kg	2	☼	6020	Total/NA
Thallium	0.12	J	0.70	0.033	mg/Kg	2	☼	6020	Total/NA
Vanadium	12.8		1.8	0.065	mg/Kg	2	☼	6020	Total/NA
Zinc	289		7.0	0.88	mg/Kg	2	☼	6020	Total/NA
Barium	171	B	1.8	0.39	mg/Kg	2	☼	6020	Total/NA
Mercury	2.4	B	0.19	0.027	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	46100		2020	1010	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-019

Lab Sample ID: 240-62022-9

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	31	J B	39	11	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	8.3	J B	39	2.2	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	3.1	J B	9.8	1.5	ug/Kg	1	☼	8260B	Total/NA
Bis(2-ethylhexyl) phthalate	52	J B	140	39	ug/Kg	1	☼	8270C	Total/NA
Phenol	24	J	100	15	ug/Kg	1	☼	8270C	Total/NA
Fluorene	14		14	1.1	ug/Kg	1	☼	8270C	Total/NA
Acenaphthylene	8.5	J	14	0.72	ug/Kg	1	☼	8270C	Total/NA
Benzo[g,h,i]perylene	30		14	0.72	ug/Kg	1	☼	8270C	Total/NA
Phenanthrene	98		14	1.5	ug/Kg	1	☼	8270C	Total/NA
Benzo[k]fluoranthene	31		14	1.4	ug/Kg	1	☼	8270C	Total/NA
Benzo[a]pyrene	49		14	1.3	ug/Kg	1	☼	8270C	Total/NA
Anthracene	24		14	1.6	ug/Kg	1	☼	8270C	Total/NA
Pyrene	120		14	0.90	ug/Kg	1	☼	8270C	Total/NA
Naphthalene	9.1	J	14	1.7	ug/Kg	1	☼	8270C	Total/NA
Fluoranthene	120		14	1.1	ug/Kg	1	☼	8270C	Total/NA
Benzo[a]anthracene	56		14	1.3	ug/Kg	1	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	23		14	0.72	ug/Kg	1	☼	8270C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-031016-JN-019 (Continued)

Lab Sample ID: 240-62022-9

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Chrysene	64		14	2.3	ug/Kg	1	☼	8270C	Total/NA
Benzo[b]fluoranthene	49		14	1.2	ug/Kg	1	☼	8270C	Total/NA
Silver	0.077	J	0.31	0.0022	mg/Kg	2	☼	6020	Total/NA
Arsenic	3.8		1.6	0.040	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.44		0.31	0.017	mg/Kg	2	☼	6020	Total/NA
Cadmium	0.43		0.31	0.0058	mg/Kg	2	☼	6020	Total/NA
Cobalt	5.6	B	0.31	0.0026	mg/Kg	2	☼	6020	Total/NA
Chromium	15.1	B	0.62	0.093	mg/Kg	2	☼	6020	Total/NA
Copper	15.2	B	0.62	0.15	mg/Kg	2	☼	6020	Total/NA
Manganese	384		1.6	0.19	mg/Kg	2	☼	6020	Total/NA
Nickel	11.4	B	0.62	0.061	mg/Kg	2	☼	6020	Total/NA
Lead	37.6	B	0.31	0.070	mg/Kg	2	☼	6020	Total/NA
Antimony	0.082	J	0.62	0.022	mg/Kg	2	☼	6020	Total/NA
Selenium	1.5	J	1.6	0.062	mg/Kg	2	☼	6020	Total/NA
Thallium	0.13	J	0.62	0.030	mg/Kg	2	☼	6020	Total/NA
Vanadium	17.6		1.6	0.058	mg/Kg	2	☼	6020	Total/NA
Zinc	75.2		6.2	0.78	mg/Kg	2	☼	6020	Total/NA
Barium	116	B	1.6	0.34	mg/Kg	2	☼	6020	Total/NA
Mercury	1.5	B	0.22	0.031	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	60300		2050	1030	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-020

Lab Sample ID: 240-62022-10

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	75	B	35	10	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	22	J B	35	2.0	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	3.2	J B	8.7	1.3	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	3.5	J	17	1.0	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	100		64	4.8	ug/Kg	5	☼	8270C	Total/NA
Di-n-butyl phthalate	170	J	670	140	ug/Kg	5	☼	8270C	Total/NA
Fluorene	52	J	64	5.1	ug/Kg	5	☼	8270C	Total/NA
Benzo[g,h,i]perylene	170		64	3.4	ug/Kg	5	☼	8270C	Total/NA
Phenanthrene	540		64	7.0	ug/Kg	5	☼	8270C	Total/NA
Benzo[k]fluoranthene	150		64	6.5	ug/Kg	5	☼	8270C	Total/NA
Benzo[a]pyrene	260		64	6.2	ug/Kg	5	☼	8270C	Total/NA
Anthracene	140		64	7.5	ug/Kg	5	☼	8270C	Total/NA
Pyrene	660		64	4.2	ug/Kg	5	☼	8270C	Total/NA
Naphthalene	150		64	7.9	ug/Kg	5	☼	8270C	Total/NA
Fluoranthene	700		64	5.3	ug/Kg	5	☼	8270C	Total/NA
Benzo[a]anthracene	300		64	6.1	ug/Kg	5	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	140		64	3.4	ug/Kg	5	☼	8270C	Total/NA
Chrysene	400		64	11	ug/Kg	5	☼	8270C	Total/NA
Acenaphthene	57	J	64	7.3	ug/Kg	5	☼	8270C	Total/NA
Benzo[b]fluoranthene	290		64	5.7	ug/Kg	5	☼	8270C	Total/NA
Arsenic	0.036	J	0.50	0.0029	mg/L	1		6010B	TCLP
Barium	1.2	J B	10.0	0.0010	mg/L	1		6010B	TCLP
Cadmium	0.0049	J	0.10	0.00014	mg/L	1		6010B	TCLP
Chromium	0.0060	J B	0.50	0.00055	mg/L	1		6010B	TCLP
Lead	0.18	J	0.50	0.0019	mg/L	1		6010B	TCLP
Silver	0.0014	J	0.50	0.00092	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-031016-JN-020 (Continued) — Lab Sample ID: 240-62022-10

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Silver	0.18	J B	0.34	0.0024	mg/Kg	2	☼	6020	Total/NA
Arsenic	6.2	B	1.7	0.044	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.58		0.34	0.018	mg/Kg	2	☼	6020	Total/NA
Cadmium	0.77		0.34	0.0062	mg/Kg	2	☼	6020	Total/NA
Cobalt	5.1	B	0.34	0.0029	mg/Kg	2	☼	6020	Total/NA
Chromium	19.0	B	0.67	0.10	mg/Kg	2	☼	6020	Total/NA
Copper	25.0	B	0.67	0.16	mg/Kg	2	☼	6020	Total/NA
Manganese	409	B	1.7	0.20	mg/Kg	2	☼	6020	Total/NA
Nickel	10.6		0.67	0.066	mg/Kg	2	☼	6020	Total/NA
Lead	213	B	0.34	0.076	mg/Kg	2	☼	6020	Total/NA
Antimony	0.57	J	0.67	0.024	mg/Kg	2	☼	6020	Total/NA
Selenium	1.6	J B	1.7	0.067	mg/Kg	2	☼	6020	Total/NA
Thallium	0.19	J	0.67	0.032	mg/Kg	2	☼	6020	Total/NA
Vanadium	17.8		1.7	0.062	mg/Kg	2	☼	6020	Total/NA
Zinc	203	B	6.7	0.84	mg/Kg	2	☼	6020	Total/NA
Barium	156		1.7	0.37	mg/Kg	2	☼	6020	Total/NA
Mercury	3.1		0.50	0.070	mg/Kg	3	☼	7471A	Total/NA
Total Organic Carbon	43800		1920	958	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-021 — Lab Sample ID: 240-62022-11

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	3.0	J B	9.2	1.4	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	23	J	28	2.1	ug/Kg	2	☼	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	250	J B	290	79	ug/Kg	2	☼	8270C	Total/NA
Butyl benzyl phthalate	2300		290	42	ug/Kg	2	☼	8270C	Total/NA
Di-n-butyl phthalate	150	J	290	62	ug/Kg	2	☼	8270C	Total/NA
Methyl Mercury	1.5		0.20	0.060	ug/Kg	1	☼	1630	Total/NA
Aroclor-1254	47	J	70	30	ug/Kg	1	☼	8082	Total/NA
Silver	0.24	J B	0.34	0.0024	mg/Kg	2	☼	6020	Total/NA
Arsenic	4.6	B	1.7	0.044	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.38		0.34	0.019	mg/Kg	2	☼	6020	Total/NA
Cadmium	0.88		0.34	0.0063	mg/Kg	2	☼	6020	Total/NA
Cobalt	5.0	B	0.34	0.0029	mg/Kg	2	☼	6020	Total/NA
Chromium	20.5	B	0.68	0.10	mg/Kg	2	☼	6020	Total/NA
Copper	16.7	B	0.68	0.16	mg/Kg	2	☼	6020	Total/NA
Manganese	239	B	1.7	0.20	mg/Kg	2	☼	6020	Total/NA
Nickel	11.6		0.68	0.066	mg/Kg	2	☼	6020	Total/NA
Lead	99.9	B	0.34	0.077	mg/Kg	2	☼	6020	Total/NA
Antimony	0.44	J	0.68	0.024	mg/Kg	2	☼	6020	Total/NA
Selenium	1.5	J B	1.7	0.068	mg/Kg	2	☼	6020	Total/NA
Thallium	0.14	J	0.68	0.032	mg/Kg	2	☼	6020	Total/NA
Vanadium	14.9		1.7	0.063	mg/Kg	2	☼	6020	Total/NA
Zinc	101	B	6.8	0.85	mg/Kg	2	☼	6020	Total/NA
Barium	89.5		1.7	0.37	mg/Kg	2	☼	6020	Total/NA
Mercury	4.9		1.1	0.15	mg/Kg	5	☼	7471A	Total/NA
Total Organic Carbon	46300		2090	1050	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-022 — Lab Sample ID: 240-62022-12

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-031016-JN-022 (Continued)

Lab Sample ID: 240-62022-12

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	3.8	J B	11	1.6	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	30		15	1.1	ug/Kg	1	☼	8270C	Total/NA
Dibenzofuran	39	J	110	1.5	ug/Kg	1	☼	8270C	Total/NA
Isophorone	31	J	110	29	ug/Kg	1	☼	8270C	Total/NA
Fluorene	81		15	1.2	ug/Kg	1	☼	8270C	Total/NA
Acenaphthylene	32		15	0.79	ug/Kg	1	☼	8270C	Total/NA
Benzo[g,h,i]perylene	150		15	0.79	ug/Kg	1	☼	8270C	Total/NA
Phenanthrene	550		15	1.6	ug/Kg	1	☼	8270C	Total/NA
Benzo[k]fluoranthene	170		15	1.5	ug/Kg	1	☼	8270C	Total/NA
Benzo[a]pyrene	240		15	1.4	ug/Kg	1	☼	8270C	Total/NA
Anthracene	150		15	1.8	ug/Kg	1	☼	8270C	Total/NA
Pyrene	670		15	0.99	ug/Kg	1	☼	8270C	Total/NA
Dibenz(a,h)anthracene	35		15	1.5	ug/Kg	1	☼	8270C	Total/NA
Naphthalene	33		15	1.8	ug/Kg	1	☼	8270C	Total/NA
Fluoranthene	690		15	1.2	ug/Kg	1	☼	8270C	Total/NA
Benzo[a]anthracene	310		15	1.4	ug/Kg	1	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	120		15	0.79	ug/Kg	1	☼	8270C	Total/NA
Chrysene	320		15	2.5	ug/Kg	1	☼	8270C	Total/NA
Acenaphthene	51		15	1.7	ug/Kg	1	☼	8270C	Total/NA
Benzo[b]fluoranthene	270		15	1.3	ug/Kg	1	☼	8270C	Total/NA
Silver	0.15	J B	0.40	0.0028	mg/Kg	2	☼	6020	Total/NA
Arsenic	4.5	B	2.0	0.052	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.57		0.40	0.022	mg/Kg	2	☼	6020	Total/NA
Cadmium	0.52		0.40	0.0074	mg/Kg	2	☼	6020	Total/NA
Cobalt	6.0	B	0.40	0.0034	mg/Kg	2	☼	6020	Total/NA
Chromium	15.7	B	0.81	0.12	mg/Kg	2	☼	6020	Total/NA
Copper	18.3	B	0.81	0.20	mg/Kg	2	☼	6020	Total/NA
Manganese	246	B	2.0	0.24	mg/Kg	2	☼	6020	Total/NA
Nickel	12.8		0.81	0.079	mg/Kg	2	☼	6020	Total/NA
Lead	43.7	B	0.40	0.091	mg/Kg	2	☼	6020	Total/NA
Antimony	0.13	J	0.81	0.028	mg/Kg	2	☼	6020	Total/NA
Selenium	1.8	J B	2.0	0.081	mg/Kg	2	☼	6020	Total/NA
Thallium	0.21	J	0.81	0.038	mg/Kg	2	☼	6020	Total/NA
Vanadium	20.5		2.0	0.074	mg/Kg	2	☼	6020	Total/NA
Zinc	91.1	B	8.1	1.0	mg/Kg	2	☼	6020	Total/NA
Barium	113		2.0	0.44	mg/Kg	2	☼	6020	Total/NA
Mercury	12.3		2.2	0.30	mg/Kg	10	☼	7471A	Total/NA
Total Organic Carbon	49100		2230	1120	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-023

Lab Sample ID: 240-62022-13

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	4.8	J B	11	1.6	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	8.7	J	15	1.1	ug/Kg	1	☼	8270C	Total/NA
Butyl benzyl phthalate	38	J F1	160	22	ug/Kg	1	☼	8270C	Total/NA
Fluorene	14	J	15	1.2	ug/Kg	1	☼	8270C	Total/NA
Acenaphthylene	11	J	15	0.78	ug/Kg	1	☼	8270C	Total/NA
Benzo[g,h,i]perylene	60		15	0.78	ug/Kg	1	☼	8270C	Total/NA
Phenanthrene	110		15	1.6	ug/Kg	1	☼	8270C	Total/NA
Benzo[k]fluoranthene	33		15	1.5	ug/Kg	1	☼	8270C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-031016-JN-023 (Continued)

Lab Sample ID: 240-62022-13

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	82		15	1.4	ug/Kg	1	☼	8270C	Total/NA
Anthracene	25		15	1.7	ug/Kg	1	☼	8270C	Total/NA
Pyrene	190		15	0.98	ug/Kg	1	☼	8270C	Total/NA
Naphthalene	12	J	15	1.8	ug/Kg	1	☼	8270C	Total/NA
Fluoranthene	190		15	1.2	ug/Kg	1	☼	8270C	Total/NA
Benzo[a]anthracene	86		15	1.4	ug/Kg	1	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	52		15	0.78	ug/Kg	1	☼	8270C	Total/NA
Chrysene	100		15	2.5	ug/Kg	1	☼	8270C	Total/NA
Benzo[b]fluoranthene	100		15	1.3	ug/Kg	1	☼	8270C	Total/NA
Arsenic	0.0076	J B	0.50	0.0029	mg/L	1		6010B	TCLP
Barium	0.75	J B	10.0	0.0010	mg/L	1		6010B	TCLP
Cadmium	0.00061	J	0.10	0.00014	mg/L	1		6010B	TCLP
Chromium	0.0035	J B	0.50	0.00055	mg/L	1		6010B	TCLP
Silver	0.11	J B	0.41	0.0029	mg/Kg	2	☼	6020	Total/NA
Arsenic	3.5	B	2.1	0.053	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.64	F1	0.41	0.023	mg/Kg	2	☼	6020	Total/NA
Cadmium	0.42		0.41	0.0076	mg/Kg	2	☼	6020	Total/NA
Cobalt	5.4	B	0.41	0.0035	mg/Kg	2	☼	6020	Total/NA
Chromium	16.3	B	0.82	0.12	mg/Kg	2	☼	6020	Total/NA
Copper	13.7	B	0.82	0.20	mg/Kg	2	☼	6020	Total/NA
Manganese	242	B F1	2.1	0.25	mg/Kg	2	☼	6020	Total/NA
Nickel	11.8		0.82	0.080	mg/Kg	2	☼	6020	Total/NA
Lead	26.1	B	0.41	0.092	mg/Kg	2	☼	6020	Total/NA
Antimony	0.12	J F1	0.82	0.029	mg/Kg	2	☼	6020	Total/NA
Selenium	1.7	J B	2.1	0.082	mg/Kg	2	☼	6020	Total/NA
Thallium	0.20	J	0.82	0.039	mg/Kg	2	☼	6020	Total/NA
Vanadium	20.2		2.1	0.076	mg/Kg	2	☼	6020	Total/NA
Zinc	61.9	B	8.2	1.0	mg/Kg	2	☼	6020	Total/NA
Barium	101		2.1	0.45	mg/Kg	2	☼	6020	Total/NA
Mercury	3.1		1.0	0.14	mg/Kg	5	☼	7471A	Total/NA
Total Organic Carbon	66800		2240	1120	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-024

Lab Sample ID: 240-62022-14

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	16	J B	41	12	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	4.8	J B	41	2.3	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	3.4	J B	10	1.5	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	360		280	21	ug/Kg	20	☼	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	3900	B	2900	790	ug/Kg	20	☼	8270C	Total/NA
Butyl benzyl phthalate	3200		2900	420	ug/Kg	20	☼	8270C	Total/NA
Di-n-butyl phthalate	1700	J	2900	630	ug/Kg	20	☼	8270C	Total/NA
Methyl Mercury	0.48		0.20	0.061	ug/Kg	1	☼	1630	Total/NA
Aroclor-1254	66	J	70	30	ug/Kg	1	☼	8082	Total/NA
Aroclor-1268	380		70	28	ug/Kg	1	☼	8082	Total/NA
Silver	0.25	J B	0.35	0.0025	mg/Kg	2	☼	6020	Total/NA
Arsenic	8.1	B	1.8	0.046	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.36		0.35	0.019	mg/Kg	2	☼	6020	Total/NA
Cadmium	14.1		0.35	0.0065	mg/Kg	2	☼	6020	Total/NA
Cobalt	6.1	B	0.35	0.0030	mg/Kg	2	☼	6020	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-031016-JN-024 (Continued) — Lab Sample ID: 240-62022-14

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Chromium	183	B	0.71	0.11	mg/Kg	2	☼	6020	Total/NA
Copper	78.7	B	0.71	0.17	mg/Kg	2	☼	6020	Total/NA
Manganese	218	B	1.8	0.21	mg/Kg	2	☼	6020	Total/NA
Nickel	14.7		0.71	0.069	mg/Kg	2	☼	6020	Total/NA
Lead	1390	B	0.35	0.079	mg/Kg	2	☼	6020	Total/NA
Antimony	23.0		0.71	0.025	mg/Kg	2	☼	6020	Total/NA
Selenium	4.3	B	1.8	0.071	mg/Kg	2	☼	6020	Total/NA
Thallium	0.15	J	0.71	0.034	mg/Kg	2	☼	6020	Total/NA
Vanadium	14.1		1.8	0.065	mg/Kg	2	☼	6020	Total/NA
Zinc	2040	B	7.1	0.88	mg/Kg	2	☼	6020	Total/NA
Barium	1340		1.8	0.39	mg/Kg	2	☼	6020	Total/NA
Mercury	0.62		0.22	0.030	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	131000		2100	1050	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-025 — Lab Sample ID: 240-62022-15

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	130	J B	210	59	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	32	J B	210	12	ug/Kg	1	☼	8260B	Total/NA
Carbon disulfide	25	J	52	6.1	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	23	J B	52	7.7	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	230	J	300	23	ug/Kg	20	☼	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	1100	J B	3200	860	ug/Kg	20	☼	8270C	Total/NA
Benzo[g,h,i]perylene	450		300	16	ug/Kg	20	☼	8270C	Total/NA
Phenanthrene	500		300	33	ug/Kg	20	☼	8270C	Total/NA
Benzo[k]fluoranthene	300		300	31	ug/Kg	20	☼	8270C	Total/NA
Benzo[a]pyrene	440		300	29	ug/Kg	20	☼	8270C	Total/NA
Anthracene	260	J	300	35	ug/Kg	20	☼	8270C	Total/NA
Pyrene	2000		300	20	ug/Kg	20	☼	8270C	Total/NA
Naphthalene	180	J	300	37	ug/Kg	20	☼	8270C	Total/NA
Fluoranthene	1700		300	25	ug/Kg	20	☼	8270C	Total/NA
Benzo[a]anthracene	740		300	29	ug/Kg	20	☼	8270C	Total/NA
Chrysene	920		300	50	ug/Kg	20	☼	8270C	Total/NA
Benzo[b]fluoranthene	770		300	27	ug/Kg	20	☼	8270C	Total/NA
Silver	0.25	J B	0.42	0.0029	mg/Kg	2	☼	6020	Total/NA
Arsenic	12.0	B	2.1	0.054	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.56		0.42	0.023	mg/Kg	2	☼	6020	Total/NA
Cadmium	1.1		0.42	0.0077	mg/Kg	2	☼	6020	Total/NA
Cobalt	5.9	B	0.42	0.0036	mg/Kg	2	☼	6020	Total/NA
Chromium	31.0	B	0.84	0.13	mg/Kg	2	☼	6020	Total/NA
Copper	33.9	B	0.84	0.20	mg/Kg	2	☼	6020	Total/NA
Manganese	180	B	2.1	0.25	mg/Kg	2	☼	6020	Total/NA
Nickel	14.4		0.84	0.082	mg/Kg	2	☼	6020	Total/NA
Lead	370	B	0.42	0.094	mg/Kg	2	☼	6020	Total/NA
Antimony	2.5		0.84	0.029	mg/Kg	2	☼	6020	Total/NA
Selenium	2.2	B	2.1	0.084	mg/Kg	2	☼	6020	Total/NA
Thallium	0.23	J	0.84	0.040	mg/Kg	2	☼	6020	Total/NA
Vanadium	23.8		2.1	0.077	mg/Kg	2	☼	6020	Total/NA
Zinc	338	B	8.4	1.0	mg/Kg	2	☼	6020	Total/NA
Barium	175		2.1	0.46	mg/Kg	2	☼	6020	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-031016-JN-025 (Continued) — Lab Sample ID: 240-62022-15

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Mercury	2.6		0.24	0.034	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	66500		2240	1120	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-026 — Lab Sample ID: 240-62022-16

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	50	B	42	12	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	9.3	J B	42	2.3	ug/Kg	1	☼	8260B	Total/NA
Carbon disulfide	3.8	J	10	1.2	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	3.5	J B	10	1.5	ug/Kg	1	☼	8260B	Total/NA
2-Methylnaphthalene	400		300	22	ug/Kg	20	☼	8270C	Total/NA
Di-n-butyl phthalate	1200	J	3100	670	ug/Kg	20	☼	8270C	Total/NA
Benzo[g,h,i]perylene	610		300	16	ug/Kg	20	☼	8270C	Total/NA
Phenanthrene	700		300	33	ug/Kg	20	☼	8270C	Total/NA
Benzo[k]fluoranthene	700		300	30	ug/Kg	20	☼	8270C	Total/NA
Benzo[a]pyrene	1000		300	29	ug/Kg	20	☼	8270C	Total/NA
Anthracene	360		300	35	ug/Kg	20	☼	8270C	Total/NA
Pyrene	2600		300	20	ug/Kg	20	☼	8270C	Total/NA
Naphthalene	300		300	37	ug/Kg	20	☼	8270C	Total/NA
Fluoranthene	2900		300	25	ug/Kg	20	☼	8270C	Total/NA
Benzo[a]anthracene	1200		300	28	ug/Kg	20	☼	8270C	Total/NA
Chrysene	1400		300	49	ug/Kg	20	☼	8270C	Total/NA
Benzo[b]fluoranthene	1200		300	26	ug/Kg	20	☼	8270C	Total/NA
Aroclor-1268	28	J	72	28	ug/Kg	1	☼	8082	Total/NA
Silver	0.25	J B	0.42	0.0029	mg/Kg	2	☼	6020	Total/NA
Arsenic	6.7	B	2.1	0.054	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.48		0.42	0.023	mg/Kg	2	☼	6020	Total/NA
Cadmium	1.9		0.42	0.0077	mg/Kg	2	☼	6020	Total/NA
Cobalt	5.2	B	0.42	0.0035	mg/Kg	2	☼	6020	Total/NA
Chromium	65.1	B	0.83	0.12	mg/Kg	2	☼	6020	Total/NA
Copper	47.3	B	0.83	0.20	mg/Kg	2	☼	6020	Total/NA
Manganese	185	B	2.1	0.25	mg/Kg	2	☼	6020	Total/NA
Nickel	12.9		0.83	0.081	mg/Kg	2	☼	6020	Total/NA
Lead	602	B	0.42	0.094	mg/Kg	2	☼	6020	Total/NA
Antimony	13.8		0.83	0.029	mg/Kg	2	☼	6020	Total/NA
Selenium	2.1	B	2.1	0.083	mg/Kg	2	☼	6020	Total/NA
Thallium	0.20	J	0.83	0.040	mg/Kg	2	☼	6020	Total/NA
Vanadium	16.5		2.1	0.077	mg/Kg	2	☼	6020	Total/NA
Zinc	530	B	8.3	1.0	mg/Kg	2	☼	6020	Total/NA
Barium	317		2.1	0.46	mg/Kg	2	☼	6020	Total/NA
Mercury	2.1		0.20	0.028	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	90800		2200	1100	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: SE-031016-JN-027 — Lab Sample ID: 240-62022-17

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	27	J B	38	11	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	6.7	J B	38	2.1	ug/Kg	1	☼	8260B	Total/NA
Carbon disulfide	2.3	J	9.5	1.1	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	3.6	J B	9.5	1.4	ug/Kg	1	☼	8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-031016-JN-027 (Continued) — Lab Sample ID: 240-62022-17

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Methylcyclohexane	2.7	J F1	19	1.1	ug/Kg	1	☼	8260B	Total/NA
Bis(2-ethylhexyl) phthalate	1900	J B	3700	1000	ug/Kg	25	☼	8270C	Total/NA
Butyl benzyl phthalate	2700	J	3700	520	ug/Kg	25	☼	8270C	Total/NA
Di-n-butyl phthalate	2900	J B	3700	790	ug/Kg	25	☼	8270C	Total/NA
Fluorene	260	J	350	28	ug/Kg	25	☼	8270C	Total/NA
Benzo[g,h,i]perylene	590		350	18	ug/Kg	25	☼	8270C	Total/NA
Phenanthrene	1200		350	38	ug/Kg	25	☼	8270C	Total/NA
Benzo[k]fluoranthene	360		350	36	ug/Kg	25	☼	8270C	Total/NA
Benzo[a]pyrene	760		350	34	ug/Kg	25	☼	8270C	Total/NA
Anthracene	430		350	41	ug/Kg	25	☼	8270C	Total/NA
Pyrene	2300		350	23	ug/Kg	25	☼	8270C	Total/NA
Naphthalene	230	J	350	43	ug/Kg	25	☼	8270C	Total/NA
Fluoranthene	4500		350	29	ug/Kg	25	☼	8270C	Total/NA
Benzo[a]anthracene	880		350	33	ug/Kg	25	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	510		350	18	ug/Kg	25	☼	8270C	Total/NA
Chrysene	1400		350	58	ug/Kg	25	☼	8270C	Total/NA
Acenaphthene	210	J	350	40	ug/Kg	25	☼	8270C	Total/NA
Benzo[b]fluoranthene	1100		350	31	ug/Kg	25	☼	8270C	Total/NA
Aroclor-1268	59	J	68	27	ug/Kg	1	☼	8082	Total/NA
Arsenic	0.012	J B	0.50	0.0029	mg/L	1		6010B	TCLP
Barium	0.86	J B	10.0	0.0010	mg/L	1		6010B	TCLP
Cadmium	0.00016	J	0.10	0.00014	mg/L	1		6010B	TCLP
Chromium	0.0038	J B	0.50	0.00055	mg/L	1		6010B	TCLP
Lead	0.055	J	0.50	0.0019	mg/L	1		6010B	TCLP
Silver	0.26	J B	0.38	0.0027	mg/Kg	2	☼	6020	Total/NA
Arsenic	10	B	1.9	0.050	mg/Kg	2	☼	6020	Total/NA
Beryllium	0.49		0.38	0.021	mg/Kg	2	☼	6020	Total/NA
Cadmium	4.8		0.38	0.0071	mg/Kg	2	☼	6020	Total/NA
Cobalt	4.9	B	0.38	0.0033	mg/Kg	2	☼	6020	Total/NA
Chromium	40.4	B	0.77	0.12	mg/Kg	2	☼	6020	Total/NA
Copper	61.9	B	0.77	0.19	mg/Kg	2	☼	6020	Total/NA
Manganese	200	B	1.9	0.23	mg/Kg	2	☼	6020	Total/NA
Nickel	12.9		0.77	0.075	mg/Kg	2	☼	6020	Total/NA
Lead	607	B	0.38	0.086	mg/Kg	2	☼	6020	Total/NA
Antimony	1.7		0.77	0.027	mg/Kg	2	☼	6020	Total/NA
Selenium	3.3	B	1.9	0.077	mg/Kg	2	☼	6020	Total/NA
Thallium	0.22	J	0.77	0.037	mg/Kg	2	☼	6020	Total/NA
Vanadium	17.6		1.9	0.071	mg/Kg	2	☼	6020	Total/NA
Zinc	437	B	7.7	0.96	mg/Kg	2	☼	6020	Total/NA
Barium	250		1.9	0.42	mg/Kg	2	☼	6020	Total/NA
Mercury	5.9		1.1	0.16	mg/Kg	5	☼	7471A	Total/NA
Total Organic Carbon	72000		2090	1050	mg/Kg	1	☼	Lloyd Kahn	Total/NA

Client Sample ID: TB-031016-JN-001 — Lab Sample ID: 240-62022-18

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	1.6		1.0	0.33	ug/L	1		8260B	Total/NA

Client Sample ID: SE-031016-JN-011 — Lab Sample ID: 240-62022-19

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-031016-JN-011 (Continued) — Lab Sample ID: 240-62022-19

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Cadmium SEM	4.6		0.20	0.010	mg/Kg	1	☼	6010B	SEM/AVS
Copper SEM	11.6		0.98	0.038	mg/Kg	1	☼	6010B	SEM/AVS
Lead SEM	3560		3.9	0.82	mg/Kg	10	☼	6010B	SEM/AVS
Nickel SEM	58.8	B	1.6	0.035	mg/Kg	1	☼	6010B	SEM/AVS
Zinc SEM	2690	B	19.6	0.57	mg/Kg	5	☼	6010B	SEM/AVS
Mercury SEM	0.0047	J	0.0078	0.0020	mg/Kg	1	☼	7470A	SEM/AVS
SEM/AVS Ratio	3.48		0.00100	0.00100	NONE	1		SEM	SEM/AVS
Acid Volatile Sulfides (AVS)	549		23.5	4.7	mg/Kg	1	☼	9034	SEM/AVS

Client Sample ID: SE-031016-JN-014 — Lab Sample ID: 240-62022-20

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Cadmium SEM	0.64		0.28	0.014	mg/Kg	1	☼	6010B	SEM/AVS
Copper SEM	12.6		1.4	0.054	mg/Kg	1	☼	6010B	SEM/AVS
Lead SEM	101		0.55	0.12	mg/Kg	1	☼	6010B	SEM/AVS
Nickel SEM	7.6	B	2.2	0.049	mg/Kg	1	☼	6010B	SEM/AVS
Zinc SEM	123	B	5.5	0.16	mg/Kg	1	☼	6010B	SEM/AVS
SEM/AVS Ratio	0.220		0.00100	0.00100	NONE	1		SEM	SEM/AVS
Acid Volatile Sulfides (AVS)	393		33.2	6.6	mg/Kg	1	☼	9034	SEM/AVS

Client Sample ID: SE-031016-JN-018 — Lab Sample ID: 240-62022-21

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Cadmium SEM	0.80		0.22	0.011	mg/Kg	1	☼	6010B	SEM/AVS
Copper SEM	10		1.1	0.043	mg/Kg	1	☼	6010B	SEM/AVS
Lead SEM	120		0.88	0.19	mg/Kg	2	☼	6010B	SEM/AVS
Nickel SEM	4.5	B	3.5	0.078	mg/Kg	2	☼	6010B	SEM/AVS
Zinc SEM	115	B	4.4	0.13	mg/Kg	1	☼	6010B	SEM/AVS
Mercury SEM	0.0023	J	0.0088	0.0023	mg/Kg	1	☼	7470A	SEM/AVS
SEM/AVS Ratio	0.243		0.00100	0.00100	NONE	1		SEM	SEM/AVS
Acid Volatile Sulfides (AVS)	340		26.5	5.3	mg/Kg	1	☼	9034	SEM/AVS

Client Sample ID: SE-031016-JN-021 — Lab Sample ID: 240-62022-22

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Cadmium SEM	0.94		0.30	0.015	mg/Kg	1	☼	6010B	SEM/AVS
Copper SEM	17.0		1.5	0.058	mg/Kg	1	☼	6010B	SEM/AVS
Lead SEM	83.5		0.59	0.12	mg/Kg	1	☼	6010B	SEM/AVS
Nickel SEM	7.9	B	2.4	0.053	mg/Kg	1	☼	6010B	SEM/AVS
Zinc SEM	91.0	B	5.9	0.17	mg/Kg	1	☼	6010B	SEM/AVS
Mercury SEM	0.033		0.012	0.0031	mg/Kg	1	☼	7470A	SEM/AVS
SEM/AVS Ratio	NC		0.00100	0.00100	NONE	1		SEM	SEM/AVS

Client Sample ID: SE-031016-JN-024 — Lab Sample ID: 240-62022-23

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Cadmium SEM	12.5		0.24	0.012	mg/Kg	1	☼	6010B	SEM/AVS
Copper SEM	46.9	F1	1.2	0.046	mg/Kg	1	☼	6010B	SEM/AVS
Lead SEM	1230		2.4	0.50	mg/Kg	5	☼	6010B	SEM/AVS
Nickel SEM	5.7	B	1.9	0.042	mg/Kg	1	☼	6010B	SEM/AVS

This Detection Summary does not include radiochemical test results.

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: SE-031016-JN-024 (Continued)

Lab Sample ID: 240-62022-23

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Zinc SEM	1060	B	4.7	0.14	mg/Kg	1	☼	6010B	SEM/AVS
SEM/AVS Ratio	3.13		0.00100	0.00100	NONE	1		SEM	SEM/AVS
Acid Volatile Sulfides (AVS)	237		28.3	5.7	mg/Kg	1	☼	9034	SEM/AVS

This Detection Summary does not include radiochemical test results.

Client Sample ID: SE-031016-JN-011
Date Collected: 03/10/16 09:35
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-1
Matrix: Solid
Percent Solids: 79.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**130**	**J**	240	67	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Benzene	<11		59	11	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Dichlorobromomethane	<3.4		59	3.4	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Bromoform	<2.8		59	2.8	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Bromomethane	<5.0		59	5.0	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
2-Butanone (MEK)	**23**	**J**	240	13	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Carbon disulfide	<7.0		59	7.0	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Carbon tetrachloride	<7.7		59	7.7	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Chlorobenzene	<6.3		59	6.3	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Chloroethane	<5.2		59	5.2	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Chloroform	<4.3		59	4.3	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Chloromethane	<9.3		59	9.3	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,1-Dichloroethane	<4.0		59	4.0	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,2-Dichloroethane	<5.4		59	5.4	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,1-Dichloroethene	<9.5		59	9.5	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,2-Dichloropropane	<1.7		59	1.7	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,2,4-Trimethylbenzene	**600**		59	6.9	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
cis-1,3-Dichloropropene	<8.4		59	8.4	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
trans-1,3-Dichloropropene	<3.4		59	3.4	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Ethylbenzene	<3.8		59	3.8	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
2-Hexanone	<8.0		240	8.0	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Methylene Chloride	**40**	**J B**	59	8.7	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
4-Methyl-2-pentanone (MIBK)	<14		240	14	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Styrene	<4.7		59	4.7	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,1,2,2-Tetrachloroethane	<3.7		59	3.7	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Tetrachloroethene	<9.5		59	9.5	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Toluene	<3.2		59	3.2	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Trichloroethene	<4.5		59	4.5	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,3,5-Trimethylbenzene	**250**		59	3.4	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Vinyl chloride	<3.5		59	3.5	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Xylenes, Total	**53**	**J**	120	6.4	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,1,1-Trichloroethane	<7.7		59	7.7	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,1,2-Trichloroethane	<4.4		59	4.4	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Cyclohexane	**84**	**J**	120	5.7	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,2-Dibromo-3-Chloropropane	<32		120	32	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Ethylene Dibromide	<6.3		59	6.3	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Dichlorodifluoromethane	<3.3		59	3.3	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
cis-1,2-Dichloroethene	<3.3		59	3.3	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
trans-1,2-Dichloroethene	<3.8		59	3.8	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Isopropylbenzene	**140**		59	2.4	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Methyl acetate	<24		120	24	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Methyl tert-butyl ether	<5.1		59	5.1	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<5.0		59	5.0	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,2,4-Trichlorobenzene	<4.5		59	4.5	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,2-Dichlorobenzene	<4.0		59	4.0	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,3-Dichlorobenzene	<8.2		59	8.2	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
1,4-Dichlorobenzene	<3.3		59	3.3	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Trichlorofluoromethane	<3.4		59	3.4	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1
Chlorodibromomethane	<4.4		59	4.4	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1

Client Sample ID: SE-031016-JN-011
Date Collected: 03/10/16 09:35
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-1
Matrix: Solid
Percent Solids: 79.9

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**390**		120	6.9	ug/Kg	☼	03/16/16 02:01	03/16/16 11:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*83*		*58 - 123*	*03/16/16 02:01*	*03/16/16 11:55*	*1*
4-Bromofluorobenzene (Surr)	*86*		*52 - 136*	*03/16/16 02:01*	*03/16/16 11:55*	*1*
Toluene-d8 (Surr)	*109*		*67 - 125*	*03/16/16 02:01*	*03/16/16 11:55*	*1*
Dibromofluoromethane (Surr)	*87*		*37 - 132*	*03/16/16 02:01*	*03/16/16 11:55*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<890		13000	890	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
bis (2-chloroisopropyl) ether	<2400		25000	2400	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
2,4,5-Trichlorophenol	<6400		38000	6400	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
2,4,6-Trichlorophenol	<2300		38000	2300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
2,4-Dichlorophenol	<5100		38000	5100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
2,4-Dimethylphenol	<5100		38000	5100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
2,4-Dinitrophenol	<5300		84000	5300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
2,4-Dinitrotoluene	<4300		51000	4300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
2,6-Dinitrotoluene	<5300		51000	5300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
2-Chloronaphthalene	<110		13000	110	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
2-Chlorophenol	<2100		13000	2100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
2-Methylnaphthalene	**1300**	**J**	1700	130	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
2-Methylphenol	<2800		51000	2800	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
2-Nitroaniline	<2300		51000	2300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
2-Nitrophenol	<2100		13000	2100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
3,3'-Dichlorobenzidine	<4600		25000	4600	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
3-Nitroaniline	<4100		51000	4100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
4,6-Dinitro-2-methylphenol	<2300		38000	2300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
4-Bromophenyl phenyl ether	<3300		13000	3300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
4-Chloro-3-methylphenol	<5300		38000	5300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
4-Chloroaniline	<4300		38000	4300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
4-Chlorophenyl phenyl ether	<3300		13000	3300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
4-Nitroaniline	<6600		51000	6600	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
4-Nitrophenol	<4300		84000	4300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Acetophenone	<2300		25000	2300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Atrazine	<2300		51000	2300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Benzaldehyde	<3100		25000	3100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Bis(2-chloroethoxy)methane	<5600		25000	5600	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Bis(2-chloroethyl)ether	<510		25000	510	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Bis(2-ethylhexyl) phthalate	**13000**	**J B**	18000	4800	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Butyl benzyl phthalate	**290000**		18000	2500	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Caprolactam	<9400		84000	9400	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Carbazole	<6900		13000	6900	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Dibenzofuran	<170		13000	170	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Diethyl phthalate	<4100		18000	4100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Dimethyl phthalate	<4300		18000	4300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Di-n-butyl phthalate	**13000**	**J**	18000	3800	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Di-n-octyl phthalate	<2000		18000	2000	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Hexachlorobenzene	<530		1700	530	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Hexachlorobutadiene	<1400		13000	1400	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200

Client Sample ID: SE-031016-JN-011
Date Collected: 03/10/16 09:35
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-1
Matrix: Solid
Percent Solids: 79.9

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<2100		84000	2100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Hexachloroethane	<2300		13000	2300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Isophorone	<3300		13000	3300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Nitrobenzene	<560		25000	560	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
N-Nitrosodi-n-propylamine	<1600		13000	1600	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
N-Nitrosodiphenylamine	<5300		13000	5300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Pentachlorophenol	<2300		38000	2300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
Phenol	<1900		13000	1900	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200
3 & 4 Methylphenol	<5100		100000	5100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:28	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*24 - 110*	*03/14/16 07:06*	*03/17/16 18:28*	*200*
2-Fluorophenol (Surr)	*0*	*X*	*24 - 110*	*03/14/16 07:06*	*03/17/16 18:28*	*200*
2,4,6-Tribromophenol (Surr)	*0*	*X*	*10 - 110*	*03/14/16 07:06*	*03/17/16 18:28*	*200*
Nitrobenzene-d5 (Surr)	*0*	*X*	*20 - 110*	*03/14/16 07:06*	*03/17/16 18:28*	*200*
Phenol-d5 (Surr)	*0*	*X*	*26 - 110*	*03/14/16 07:06*	*03/17/16 18:28*	*200*
Terphenyl-d14 (Surr)	*0*	*X*	*36 - 110*	*03/14/16 07:06*	*03/17/16 18:28*	*200*

Method: 1630 - Methyl Mercury (GC)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.22**		0.12	0.035	ug/Kg	☼	03/14/16 11:58	03/18/16 22:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Propyl Mercury Chloride	*37*		*10 - 149*	*03/14/16 11:58*	*03/18/16 22:29*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<75		210	75	ug/Kg	☼	03/18/16 08:15	03/23/16 19:56	5
Aroclor-1221	<100		210	100	ug/Kg	☼	03/18/16 08:15	03/23/16 19:56	5
Aroclor-1232	<130		210	130	ug/Kg	☼	03/18/16 08:15	03/23/16 19:56	5
Aroclor-1242	<69		210	69	ug/Kg	☼	03/18/16 08:15	03/23/16 19:56	5
Aroclor-1248	<50		210	50	ug/Kg	☼	03/18/16 08:15	03/23/16 19:56	5
Aroclor-1254	**140**	**J**	210	88	ug/Kg	☼	03/18/16 08:15	03/23/16 19:56	5
Aroclor-1260	<56		210	56	ug/Kg	☼	03/18/16 08:15	03/23/16 19:56	5
Aroclor-1262	<63		210	63	ug/Kg	☼	03/18/16 08:15	03/23/16 19:56	5
Aroclor-1268	**330**		210	81	ug/Kg	☼	03/18/16 08:15	03/23/16 19:56	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*92*		*13 - 134*	*03/18/16 08:15*	*03/23/16 19:56*	*5*
DCB Decachlorobiphenyl	*3151*	*X*	*10 - 155*	*03/18/16 08:15*	*03/23/16 19:56*	*5*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.21**	**J**	0.22	0.0015	mg/Kg	☼	03/14/16 10:54	03/21/16 20:44	2
Arsenic	**7.1**		1.1	0.028	mg/Kg	☼	03/14/16 10:54	03/23/16 00:31	2
Beryllium	**0.17**	**J**	0.22	0.012	mg/Kg	☼	03/14/16 10:54	03/23/16 00:31	2
Cadmium	**8.0**		0.22	0.0040	mg/Kg	☼	03/14/16 10:54	03/21/16 20:44	2
Cobalt	**3.8**	**B**	0.22	0.0018	mg/Kg	☼	03/14/16 10:54	03/21/16 20:44	2
Chromium	**176**	**B**	0.43	0.065	mg/Kg	☼	03/14/16 10:54	03/21/16 20:44	2
Copper	**40.3**	**B**	0.43	0.10	mg/Kg	☼	03/14/16 10:54	03/21/16 20:44	2
Manganese	**371**		1.1	0.13	mg/Kg	☼	03/14/16 10:54	03/21/16 20:44	2

Client Sample ID: SE-031016-JN-011
Date Collected: 03/10/16 09:35
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-1
Matrix: Solid
Percent Solids: 79.9

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	29.2	B	0.43	0.042	mg/Kg	☼	03/14/16 10:54	03/21/16 20:44	2
Lead	1470	B	2.2	0.49	mg/Kg	☼	03/14/16 10:54	03/23/16 13:08	20
Antimony	32.0		0.43	0.015	mg/Kg	☼	03/14/16 10:54	03/23/16 00:31	2
Selenium	2.0		1.1	0.043	mg/Kg	☼	03/14/16 10:54	03/21/16 20:44	2
Thallium	0.10	J	0.43	0.021	mg/Kg	☼	03/14/16 10:54	03/21/16 20:44	2
Vanadium	<0.040		1.1	0.040	mg/Kg	☼	03/14/16 10:54	03/21/16 20:44	2
Zinc	1970		4.3	0.54	mg/Kg	☼	03/14/16 10:54	03/23/16 00:31	2
Barium	1120	B	1.1	0.24	mg/Kg	☼	03/14/16 10:54	03/23/16 00:31	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.27	B	0.15	0.021	mg/Kg	☼	03/14/16 15:00	03/15/16 08:52	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	78800		1250	626	mg/Kg	☼		03/22/16 09:14	1
Percent Solids	79.9		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	20.1		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-012
Date Collected: 03/10/16 09:40
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-2
Matrix: Solid
Percent Solids: 48.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<640		2800	640	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Benzene	<26		710	26	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Dichlorobromomethane	<110		710	110	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Bromoform	<170		710	170	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Bromomethane	<140		710	140	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
2-Butanone (MEK)	<210		2800	210	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Carbon disulfide	<160		710	160	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Carbon tetrachloride	<51		710	51	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Chlorobenzene	<37		710	37	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Chloroethane	<140		710	140	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Chloroform	<100		710	100	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Chloromethane	<140		710	140	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,1-Dichloroethane	<99		710	99	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,2-Dichloroethane	<28		710	28	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,1-Dichloroethene	<85		710	85	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,2-Dichloropropane	<91		710	91	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,2,4-Trimethylbenzene	**7700**		710	37	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
cis-1,3-Dichloropropene	<62		710	62	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
trans-1,3-Dichloropropene	<74		710	74	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Ethylbenzene	<99		710	99	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
2-Hexanone	<240		2800	240	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Methylene Chloride	**300**	**J**	710	240	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
4-Methyl-2-pentanone (MIBK)	<160		2800	160	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Styrene	<77		710	77	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,1,2,2-Tetrachloroethane	<71		710	71	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Tetrachloroethene	<77		710	77	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Toluene	**67**	**J B**	710	28	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Trichloroethene	<110		710	110	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,3,5-Trimethylbenzene	**3200**		710	43	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Vinyl chloride	<48		710	48	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Xylenes, Total	**1500**		1400	91	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,1,1-Trichloroethane	<77		710	77	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,1,2-Trichloroethane	<54		710	54	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Cyclohexane	<85		1400	85	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,2-Dibromo-3-Chloropropane	<200		1400	200	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Ethylene Dibromide	<91		710	91	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Dichlorodifluoromethane	<170		710	170	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
cis-1,2-Dichloroethene	<110		710	110	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
trans-1,2-Dichloroethene	<74		710	74	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Isopropylbenzene	**630**	**J**	710	37	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Methyl acetate	<160		1400	160	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Methyl tert-butyl ether	<85		710	85	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<120		710	120	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,2,4-Trichlorobenzene	**130**	**J**	710	85	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,2-Dichlorobenzene	<54		710	54	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,3-Dichlorobenzene	<85		710	85	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
1,4-Dichlorobenzene	<120		710	120	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Trichlorofluoromethane	<99		710	99	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1
Chlorodibromomethane	<57		710	57	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1

Client Sample ID: SE-031016-JN-012
Date Collected: 03/10/16 09:40
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-2
Matrix: Solid
Percent Solids: 48.4

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**800**	**J**	1400	110	ug/Kg	☼	03/14/16 18:21	03/16/16 16:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*39 - 128*	*03/14/16 18:21*	*03/16/16 16:21*	*1*
4-Bromofluorobenzene (Surr)	*58*		*26 - 141*	*03/14/16 18:21*	*03/16/16 16:21*	*1*
Toluene-d8 (Surr)	*62*		*33 - 134*	*03/14/16 18:21*	*03/16/16 16:21*	*1*
Dibromofluoromethane (Surr)	*75*		*30 - 122*	*03/14/16 18:21*	*03/16/16 16:21*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<540		7700	540	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
bis (2-chloroisopropyl) ether	<1500		15000	1500	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
2,4,5-Trichlorophenol	<3800		23000	3800	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
2,4,6-Trichlorophenol	<1400		23000	1400	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
2,4-Dichlorophenol	<3100		23000	3100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
2,4-Dimethylphenol	<3100		23000	3100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
2,4-Dinitrophenol	<3200		51000	3200	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
2,4-Dinitrotoluene	<2600		31000	2600	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
2,6-Dinitrotoluene	<3200		31000	3200	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
2-Chloronaphthalene	<69		7700	69	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
2-Chlorophenol	<1300		7700	1300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
2-Methylnaphthalene	**3500**		1000	77	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
2-Methylphenol	<1700		31000	1700	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
2-Nitroaniline	<1400		31000	1400	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
2-Nitrophenol	<1300		7700	1300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
3,3'-Dichlorobenzidine	<2800		15000	2800	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
3-Nitroaniline	<2500		31000	2500	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
4,6-Dinitro-2-methylphenol	<1400		23000	1400	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
4-Bromophenyl phenyl ether	<2000		7700	2000	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
4-Chloro-3-methylphenol	<3200		23000	3200	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
4-Chloroaniline	<2600		23000	2600	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
4-Chlorophenyl phenyl ether	<2000		7700	2000	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
4-Nitroaniline	<4000		31000	4000	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
4-Nitrophenol	<2600		51000	2600	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Acetophenone	<1400		15000	1400	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Atrazine	<1400		31000	1400	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Benzaldehyde	<1800		15000	1800	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Bis(2-chloroethoxy)methane	<3400		15000	3400	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Bis(2-chloroethyl)ether	<310		15000	310	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Bis(2-ethylhexyl) phthalate	**18000**	**B**	11000	2900	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Butyl benzyl phthalate	**3100**	**J**	11000	1500	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Caprolactam	<5700		51000	5700	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Carbazole	**8800**		7700	4100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Dibenzofuran	**3800**	**J**	7700	100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Diethyl phthalate	<2500		11000	2500	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Dimethyl phthalate	<2600		11000	2600	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Di-n-butyl phthalate	**13000**		11000	2300	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Di-n-octyl phthalate	<1200		11000	1200	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Hexachlorobenzene	<320		1000	320	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Hexachlorobutadiene	<860		7700	860	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50

Client Sample ID: SE-031016-JN-012
Date Collected: 03/10/16 09:40
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-2
Matrix: Solid
Percent Solids: 48.4

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<1200		51000	1200	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Hexachloroethane	<1400		7700	1400	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Isophorone	<2000		7700	2000	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Nitrobenzene	<340		15000	340	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
N-Nitrosodi-n-propylamine	<970		7700	970	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
N-Nitrosodiphenylamine	<3200		7700	3200	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Pentachlorophenol	<1400		23000	1400	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Phenol	<1100		7700	1100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
3 & 4 Methylphenol	<3100		61000	3100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Fluorene	**7800**		1000	81	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Acenaphthylene	<54		1000	54	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Benzo[g,h,i]perylene	**9000**		1000	54	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Phenanthrene	**59000**		1000	110	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Benzo[k]fluoranthene	**9100**		1000	100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Benzo[a]pyrene	**15000**		1000	98	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Anthracene	**12000**		1000	120	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Pyrene	**44000**		1000	68	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Dibenz(a,h)anthracene	**2600**		1000	100	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Naphthalene	**5200**		1000	130	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Fluoranthene	**60000**		1000	84	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Benzo[a]anthracene	**20000**		1000	97	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Indeno[1,2,3-cd]pyrene	**8200**		1000	54	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Chrysene	**23000**		1000	170	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Acenaphthene	**7100**		1000	120	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50
Benzo[b]fluoranthene	**23000**		1000	91	ug/Kg	☼	03/14/16 07:06	03/17/16 18:53	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*24 - 110*	*03/14/16 07:06*	*03/17/16 18:53*	*50*
2-Fluorophenol (Surr)	*87*		*24 - 110*	*03/14/16 07:06*	*03/17/16 18:53*	*50*
2,4,6-Tribromophenol (Surr)	*39*		*10 - 110*	*03/14/16 07:06*	*03/17/16 18:53*	*50*
Nitrobenzene-d5 (Surr)	*155*	*X*	*20 - 110*	*03/14/16 07:06*	*03/17/16 18:53*	*50*
Phenol-d5 (Surr)	*89*		*26 - 110*	*03/14/16 07:06*	*03/17/16 18:53*	*50*
Terphenyl-d14 (Surr)	*79*		*36 - 110*	*03/14/16 07:06*	*03/17/16 18:53*	*50*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<25		69	25	ug/Kg	☼	03/18/16 08:15	03/23/16 20:13	1
Aroclor-1221	<34		69	34	ug/Kg	☼	03/18/16 08:15	03/23/16 20:13	1
Aroclor-1232	<42		69	42	ug/Kg	☼	03/18/16 08:15	03/23/16 20:13	1
Aroclor-1242	<23		69	23	ug/Kg	☼	03/18/16 08:15	03/23/16 20:13	1
Aroclor-1248	<17		69	17	ug/Kg	☼	03/18/16 08:15	03/23/16 20:13	1
Aroclor-1254	**270**		69	29	ug/Kg	☼	03/18/16 08:15	03/23/16 20:13	1
Aroclor-1260	<19		69	19	ug/Kg	☼	03/18/16 08:15	03/23/16 20:13	1
Aroclor-1262	<21		69	21	ug/Kg	☼	03/18/16 08:15	03/23/16 20:13	1
Aroclor-1268	**560**		69	27	ug/Kg	☼	03/18/16 08:15	03/23/16 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*13 - 134*	*03/18/16 08:15*	*03/23/16 20:13*	*1*
DCB Decachlorobiphenyl	*583*	*X*	*10 - 155*	*03/18/16 08:15*	*03/23/16 20:13*	*1*

Client Sample ID: SE-031016-JN-012

Date Collected: 03/10/16 09:40
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-2

Matrix: Solid
Percent Solids: 48.4

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.40		0.38	0.0027	mg/Kg	☼	03/14/16 10:54	03/21/16 20:49	2
Arsenic	14.7		1.9	0.050	mg/Kg	☼	03/14/16 10:54	03/23/16 00:39	2
Beryllium	0.39		0.38	0.021	mg/Kg	☼	03/14/16 10:54	03/23/16 00:39	2
Cadmium	19.4		0.38	0.0071	mg/Kg	☼	03/14/16 10:54	03/21/16 20:49	2
Cobalt	10.6	B	0.38	0.0033	mg/Kg	☼	03/14/16 10:54	03/21/16 20:49	2
Chromium	272	B	0.77	0.11	mg/Kg	☼	03/14/16 10:54	03/21/16 20:49	2
Copper	113	B	0.77	0.19	mg/Kg	☼	03/14/16 10:54	03/21/16 20:49	2
Manganese	641		1.9	0.23	mg/Kg	☼	03/14/16 10:54	03/21/16 20:49	2
Nickel	21.0	B	0.77	0.075	mg/Kg	☼	03/14/16 10:54	03/21/16 20:49	2
Lead	2660	B	3.8	0.86	mg/Kg	☼	03/14/16 10:54	03/23/16 13:20	20
Antimony	48.3		0.77	0.027	mg/Kg	☼	03/14/16 10:54	03/23/16 00:39	2
Selenium	4.7		1.9	0.077	mg/Kg	☼	03/14/16 10:54	03/21/16 20:49	2
Thallium	0.18	J	0.77	0.036	mg/Kg	☼	03/14/16 10:54	03/21/16 20:49	2
Vanadium	5.6		1.9	0.071	mg/Kg	☼	03/14/16 10:54	03/21/16 20:49	2
Zinc	2780		7.7	0.96	mg/Kg	☼	03/14/16 10:54	03/23/16 00:39	2
Barium	2340	B	1.9	0.42	mg/Kg	☼	03/14/16 10:54	03/23/16 00:39	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.61	B	0.20	0.028	mg/Kg	☼	03/14/16 15:00	03/15/16 08:53	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	101000		2070	1030	mg/Kg	☼		03/22/16 09:40	1
Percent Solids	48.4		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	51.6		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-013
Date Collected: 03/10/16 09:45
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-3
Matrix: Solid
Percent Solids: 40.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<870		3900	870	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Benzene	<35		970	35	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Dichlorobromomethane	<150		970	150	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Bromoform	<240		970	240	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Bromomethane	<200		970	200	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
2-Butanone (MEK)	<280		3900	280	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Carbon disulfide	<220		970	220	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Carbon tetrachloride	<70		970	70	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Chlorobenzene	<50		970	50	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Chloroethane	<200		970	200	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Chloroform	<140		970	140	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Chloromethane	<190		970	190	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,1-Dichloroethane	<140		970	140	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,2-Dichloroethane	<39		970	39	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,1-Dichloroethene	<120		970	120	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,2-Dichloropropane	<120		970	120	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,2,4-Trimethylbenzene	**16000**		970	50	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
cis-1,3-Dichloropropene	<85		970	85	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
trans-1,3-Dichloropropene	<100		970	100	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Ethylbenzene	<140		970	140	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
2-Hexanone	<320		3900	320	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Methylene Chloride	**380**	**J**	970	330	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
4-Methyl-2-pentanone (MIBK)	<220		3900	220	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Styrene	<100		970	100	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,1,2,2-Tetrachloroethane	<97		970	97	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Tetrachloroethene	<100		970	100	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Toluene	**83**	**J B**	970	39	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Trichloroethene	<150		970	150	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,3,5-Trimethylbenzene	**5900**		970	58	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Vinyl chloride	<66		970	66	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Xylenes, Total	**2400**		1900	120	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,1,1-Trichloroethane	<100		970	100	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,1,2-Trichloroethane	<73		970	73	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Cyclohexane	<120		1900	120	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,2-Dibromo-3-Chloropropane	<270		1900	270	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Ethylene Dibromide	<120		970	120	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Dichlorodifluoromethane	<240		970	240	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
cis-1,2-Dichloroethene	<150		970	150	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
trans-1,2-Dichloroethene	<100		970	100	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Isopropylbenzene	**1000**		970	50	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Methyl acetate	<210		1900	210	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Methyl tert-butyl ether	<120		970	120	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<160		970	160	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,2,4-Trichlorobenzene	<120		970	120	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,2-Dichlorobenzene	<73		970	73	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,3-Dichlorobenzene	<120		970	120	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
1,4-Dichlorobenzene	<160		970	160	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Trichlorofluoromethane	<140		970	140	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1
Chlorodibromomethane	<77		970	77	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1

Client Sample ID: SE-031016-JN-013
Date Collected: 03/10/16 09:45
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-3
Matrix: Solid
Percent Solids: 40.2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**2000**	**F1**	1900	150	ug/Kg	☼	03/14/16 18:21	03/16/16 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*39 - 128*	*03/14/16 18:21*	*03/16/16 16:43*	*1*
4-Bromofluorobenzene (Surr)	*86*		*26 - 141*	*03/14/16 18:21*	*03/16/16 16:43*	*1*
Toluene-d8 (Surr)	*85*		*33 - 134*	*03/14/16 18:21*	*03/16/16 16:43*	*1*
Dibromofluoromethane (Surr)	*89*		*30 - 122*	*03/14/16 18:21*	*03/16/16 16:43*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<770	F1	11000	770	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
bis (2-chloroisopropyl) ether	<2100	F1	22000	2100	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
2,4,5-Trichlorophenol	<5500	F1	33000	5500	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
2,4,6-Trichlorophenol	<2000	F1	33000	2000	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
2,4-Dichlorophenol	<4400	F1	33000	4400	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
2,4-Dimethylphenol	<4400	F1	33000	4400	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
2,4-Dinitrophenol	<4600	F1	73000	4600	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
2,4-Dinitrotoluene	<3800	F1	44000	3800	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
2,6-Dinitrotoluene	<4600	F1	44000	4600	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
2-Chloronaphthalene	<100	F1	11000	100	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
2-Chlorophenol	<1800	F1	11000	1800	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
2-Methylnaphthalene	**3300**	**F1**	1500	110	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
2-Methylphenol	<2400	F1	44000	2400	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
2-Nitroaniline	<2000	F1	44000	2000	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
2-Nitrophenol	<1800		11000	1800	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
3,3'-Dichlorobenzidine	<4000	F1	22000	4000	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
3-Nitroaniline	<3500	F1	44000	3500	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
4,6-Dinitro-2-methylphenol	<2000	F1	33000	2000	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
4-Bromophenyl phenyl ether	<2900	F1	11000	2900	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
4-Chloro-3-methylphenol	<4600	F1	33000	4600	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
4-Chloroaniline	<3800	F1	33000	3800	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
4-Chlorophenyl phenyl ether	<2900	F1	11000	2900	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
4-Nitroaniline	<5800	F1	44000	5800	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
4-Nitrophenol	<3800	F1	73000	3800	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Acetophenone	<2000	F1	22000	2000	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Atrazine	<2000	F1	44000	2000	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Benzaldehyde	<2700		22000	2700	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Bis(2-chloroethoxy)methane	<4900	F1	22000	4900	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Bis(2-chloroethyl)ether	<440	F1	22000	440	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Bis(2-ethylhexyl) phthalate	**27000**	**B**	15000	4200	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Butyl benzyl phthalate	**56000**		15000	2200	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Caprolactam	<8200	F1	73000	8200	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Carbazole	<6000	F1	11000	6000	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Dibenzofuran	<150		11000	150	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Diethyl phthalate	<3500	F1	15000	3500	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Dimethyl phthalate	<3800	F1	15000	3800	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Di-n-butyl phthalate	**5300**	**J F1**	15000	3300	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Di-n-octyl phthalate	<1700		15000	1700	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Hexachlorobenzene	<460	F1	1500	460	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Hexachlorobutadiene	<1200		11000	1200	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20

Client Sample ID: SE-031016-JN-013
Date Collected: 03/10/16 09:45
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-3
Matrix: Solid
Percent Solids: 40.2

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<1800	F1	73000	1800	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Hexachloroethane	<2000	F1	11000	2000	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Isophorone	<2900	F1	11000	2900	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Nitrobenzene	<490		22000	490	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
N-Nitrosodi-n-propylamine	<1400	F1	11000	1400	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
N-Nitrosodiphenylamine	<4600	F1	11000	4600	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Pentachlorophenol	<2000	F1	33000	2000	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Phenol	<1600		11000	1600	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
3 & 4 Methylphenol	<4400	F1	88000	4400	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Fluorene	**2500**	**F1**	1500	120	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Acenaphthylene	<77	F1	1500	77	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Benzo[g,h,i]perylene	**6400**	**F1**	1500	77	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Phenanthrene	**22000**		1500	160	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Benzo[k]fluoranthene	**4500**	**F1**	1500	150	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Benzo[a]pyrene	**7600**		1500	140	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Anthracene	**4600**	**F1**	1500	170	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Pyrene	**21000**		1500	97	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Dibenz(a,h)anthracene	<150		1500	150	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Naphthalene	**4800**	**F1**	1500	180	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Fluoranthene	**27000**		1500	120	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Benzo[a]anthracene	**11000**		1500	140	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Indeno[1,2,3-cd]pyrene	**4300**	**F1**	1500	77	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Chrysene	**12000**		1500	240	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Acenaphthene	**2300**	**F1**	1500	170	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20
Benzo[b]fluoranthene	**12000**		1500	130	ug/Kg	☼	03/14/16 07:06	03/19/16 16:42	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*89*		*24 - 110*	*03/14/16 07:06*	*03/19/16 16:42*	*20*
2-Fluorophenol (Surr)	*77*		*24 - 110*	*03/14/16 07:06*	*03/19/16 16:42*	*20*
2,4,6-Tribromophenol (Surr)	*0*	*X*	*10 - 110*	*03/14/16 07:06*	*03/19/16 16:42*	*20*
Nitrobenzene-d5 (Surr)	*59*		*20 - 110*	*03/14/16 07:06*	*03/19/16 16:42*	*20*
Phenol-d5 (Surr)	*53*		*26 - 110*	*03/14/16 07:06*	*03/19/16 16:42*	*20*
Terphenyl-d14 (Surr)	*105*		*36 - 110*	*03/14/16 07:06*	*03/19/16 16:42*	*20*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<150	F1	400	150	ug/Kg	☼	03/18/16 08:15	03/23/16 20:49	5
Aroclor-1221	<200		400	200	ug/Kg	☼	03/18/16 08:15	03/23/16 20:49	5
Aroclor-1232	<250		400	250	ug/Kg	☼	03/18/16 08:15	03/23/16 20:49	5
Aroclor-1242	<130		400	130	ug/Kg	☼	03/18/16 08:15	03/23/16 20:49	5
Aroclor-1248	<98		400	98	ug/Kg	☼	03/18/16 08:15	03/23/16 20:49	5
Aroclor-1254	**200**	**J**	400	170	ug/Kg	☼	03/18/16 08:15	03/23/16 20:49	5
Aroclor-1260	<110		400	110	ug/Kg	☼	03/18/16 08:15	03/23/16 20:49	5
Aroclor-1262	<120		400	120	ug/Kg	☼	03/18/16 08:15	03/23/16 20:49	5
Aroclor-1268	**670**		400	160	ug/Kg	☼	03/18/16 08:15	03/23/16 20:49	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*		*13 - 134*	*03/18/16 08:15*	*03/23/16 20:49*	*5*
DCB Decachlorobiphenyl	*1841*	*X*	*10 - 155*	*03/18/16 08:15*	*03/23/16 20:49*	*5*

Client Sample ID: SE-031016-JN-013

Date Collected: 03/10/16 09:45
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-3

Matrix: Solid
Percent Solids: 40.2

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.027	J	0.50	0.0029	mg/L		03/16/16 11:10	03/17/16 20:44	1
Barium	0.17	J B	10.0	0.0010	mg/L		03/16/16 11:10	03/17/16 20:44	1
Cadmium	0.0016	J	0.10	0.00014	mg/L		03/16/16 11:10	03/17/16 20:44	1
Chromium	0.013	J B	0.50	0.00055	mg/L		03/16/16 11:10	03/17/16 20:44	1
Lead	0.19	J	0.50	0.0019	mg/L		03/16/16 11:10	03/17/16 20:44	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:10	03/17/16 20:44	1
Silver	0.0013	J	0.50	0.00092	mg/L		03/16/16 11:10	03/17/16 20:44	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	1.3		0.44	0.0031	mg/Kg	☼	03/14/16 10:54	03/21/16 20:16	2
Arsenic	40.4		2.2	0.057	mg/Kg	☼	03/14/16 10:54	03/22/16 23:42	2
Beryllium	0.38	J	0.44	0.024	mg/Kg	☼	03/14/16 10:54	03/22/16 23:42	2
Cadmium	31.9		0.44	0.0081	mg/Kg	☼	03/14/16 10:54	03/21/16 20:16	2
Cobalt	9.3	B	0.44	0.0037	mg/Kg	☼	03/14/16 10:54	03/21/16 20:16	2
Chromium	746	B F1	0.87	0.13	mg/Kg	☼	03/14/16 10:54	03/21/16 20:16	2
Copper	159	B	0.87	0.21	mg/Kg	☼	03/14/16 10:54	03/21/16 20:16	2
Manganese	678	F1	2.2	0.26	mg/Kg	☼	03/14/16 10:54	03/21/16 20:16	2
Nickel	103	B	0.87	0.085	mg/Kg	☼	03/14/16 10:54	03/21/16 20:16	2
Lead	8570	B	4.4	0.98	mg/Kg	☼	03/14/16 10:54	03/23/16 12:47	20
Antimony	511		8.7	0.31	mg/Kg	☼	03/14/16 10:54	03/22/16 23:46	20
Selenium	5.4		2.2	0.087	mg/Kg	☼	03/14/16 10:54	03/21/16 20:16	2
Thallium	0.24	J	0.87	0.041	mg/Kg	☼	03/14/16 10:54	03/21/16 20:16	2
Vanadium	11.3		2.2	0.081	mg/Kg	☼	03/14/16 10:54	03/21/16 20:16	2
Zinc	5590		87.3	10.9	mg/Kg	☼	03/14/16 10:54	03/22/16 23:46	20
Barium	3880	B	2.2	0.48	mg/Kg	☼	03/14/16 10:54	03/22/16 23:42	2

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 11:47	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.7	B	0.24	0.034	mg/Kg	☼	03/14/16 15:00	03/15/16 08:48	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	176000	F1	2490	1240	mg/Kg	☼		03/22/16 09:51	1
Percent Solids	40.2		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	59.8		0.1	0.1	%			03/14/16 16:52	1

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: SE-031016-JN-014
Date Collected: 03/10/16 10:35
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-4
Matrix: Solid
Percent Solids: 49.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	39	B	38	11	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Benzene	<1.7		9.6	1.7	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Dichlorobromomethane	<0.56		9.6	0.56	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Bromoform	<0.46		9.6	0.46	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Bromomethane	<0.81		9.6	0.81	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
2-Butanone (MEK)	10	J B	38	2.1	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Carbon disulfide	<1.1		9.6	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Carbon tetrachloride	<1.2		9.6	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Chlorobenzene	<1.0		9.6	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Chloroethane	<0.84		9.6	0.84	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Chloroform	<0.69		9.6	0.69	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Chloromethane	<1.5		9.6	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,1-Dichloroethane	<0.65		9.6	0.65	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,2-Dichloroethane	<0.88		9.6	0.88	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,1-Dichloroethene	<1.5		9.6	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,2-Dichloropropane	<0.27		9.6	0.27	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,2,4-Trimethylbenzene	<1.1		9.6	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
cis-1,3-Dichloropropene	<1.4		9.6	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
trans-1,3-Dichloropropene	<0.56		9.6	0.56	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Ethylbenzene	<0.61		9.6	0.61	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
2-Hexanone	<1.3		38	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Methylene Chloride	2.0	J B	9.6	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
4-Methyl-2-pentanone (MIBK)	<2.3		38	2.3	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Styrene	<0.77		9.6	0.77	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,1,2,2-Tetrachloroethane	<0.59		9.6	0.59	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Tetrachloroethene	<1.5		9.6	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Toluene	<0.52		9.6	0.52	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Trichloroethene	<0.73		9.6	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,3,5-Trimethylbenzene	<0.56		9.6	0.56	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Vinyl chloride	<0.58		9.6	0.58	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Xylenes, Total	<1.0		19	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,1,1-Trichloroethane	<1.2		9.6	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,1,2-Trichloroethane	<0.71		9.6	0.71	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Cyclohexane	<0.92		19	0.92	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,2-Dibromo-3-Chloropropane	<5.2		19	5.2	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Ethylene Dibromide	<1.0		9.6	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Dichlorodifluoromethane	<0.54		9.6	0.54	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
cis-1,2-Dichloroethene	<0.54		9.6	0.54	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
trans-1,2-Dichloroethene	<0.61		9.6	0.61	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Isopropylbenzene	<0.38		9.6	0.38	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Methyl acetate	<3.9		19	3.9	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Methyl tert-butyl ether	<0.83		9.6	0.83	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.81		9.6	0.81	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,2,4-Trichlorobenzene	<0.73		9.6	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,2-Dichlorobenzene	<0.65		9.6	0.65	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,3-Dichlorobenzene	<1.3		9.6	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
1,4-Dichlorobenzene	<0.54		9.6	0.54	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Trichlorofluoromethane	<0.56		9.6	0.56	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1
Chlorodibromomethane	<0.71		9.6	0.71	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: SE-031016-JN-014
Date Collected: 03/10/16 10:35
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-4
Matrix: Solid
Percent Solids: 49.2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	2.8	J	19	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 16:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*58 - 123*	*03/14/16 13:31*	*03/14/16 16:24*	*1*
4-Bromofluorobenzene (Surr)	*111*		*52 - 136*	*03/14/16 13:31*	*03/14/16 16:24*	*1*
Toluene-d8 (Surr)	*107*		*67 - 125*	*03/14/16 13:31*	*03/14/16 16:24*	*1*
Dibromofluoromethane (Surr)	*98*		*37 - 132*	*03/14/16 13:31*	*03/14/16 16:24*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<71		1000	71	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
bis (2-chloroisopropyl) ether	<190		2000	190	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
2,4,5-Trichlorophenol	<510		3000	510	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
2,4,6-Trichlorophenol	<180		3000	180	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
2,4-Dichlorophenol	<410		3000	410	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
2,4-Dimethylphenol	<410		3000	410	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
2,4-Dinitrophenol	<430		6700	430	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
2,4-Dinitrotoluene	<350		4100	350	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
2,6-Dinitrotoluene	<430		4100	430	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
2-Chloronaphthalene	<9.1		1000	9.1	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
2-Chlorophenol	<170		1000	170	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
2-Methylnaphthalene	<10		140	10	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
2-Methylphenol	<220		4100	220	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
2-Nitroaniline	<180		4100	180	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
2-Nitrophenol	<170		1000	170	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
3,3'-Dichlorobenzidine	<370		2000	370	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
3-Nitroaniline	<320		4100	320	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
4,6-Dinitro-2-methylphenol	<190		3000	190	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
4-Bromophenyl phenyl ether	<260		1000	260	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
4-Chloro-3-methylphenol	<430		3000	430	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
4-Chloroaniline	<350		3000	350	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
4-Chlorophenyl phenyl ether	<260		1000	260	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
4-Nitroaniline	<530		4100	530	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
4-Nitrophenol	<350		6700	350	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Acetophenone	<190		2000	190	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Atrazine	<180		4100	180	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Benzaldehyde	<240		2000	240	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Bis(2-chloroethoxy)methane	<450		2000	450	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Bis(2-chloroethyl)ether	<41		2000	41	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Bis(2-ethylhexyl) phthalate	<390		1400	390	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Butyl benzyl phthalate	<200		1400	200	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Caprolactam	<750		6700	750	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Carbazole	<550		1000	550	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Dibenzofuran	<13		1000	13	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Diethyl phthalate	<320		1400	320	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Dimethyl phthalate	<350		1400	350	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Di-n-butyl phthalate	<300		1400	300	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Di-n-octyl phthalate	<160		1400	160	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Hexachlorobenzene	<43		140	43	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Hexachlorobutadiene	<110		1000	110	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10

Client Sample ID: SE-031016-JN-014

Date Collected: 03/10/16 10:35
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-4

Matrix: Solid
Percent Solids: 49.2

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<160		6700	160	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Hexachloroethane	<180		1000	180	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Isophorone	<260		1000	260	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Nitrobenzene	<45		2000	45	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
N-Nitrosodi-n-propylamine	<130		1000	130	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
N-Nitrosodiphenylamine	<430		1000	430	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Pentachlorophenol	<180		3000	180	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
Phenol	<150		1000	150	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10
3 & 4 Methylphenol	<410		8100	410	ug/Kg	☼	03/14/16 07:06	03/19/16 19:14	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*69*		*24 - 110*	*03/14/16 07:06*	*03/19/16 19:14*	*10*
2-Fluorophenol (Surr)	*80*		*24 - 110*	*03/14/16 07:06*	*03/19/16 19:14*	*10*
2,4,6-Tribromophenol (Surr)	*52*		*10 - 110*	*03/14/16 07:06*	*03/19/16 19:14*	*10*
Nitrobenzene-d5 (Surr)	*84*		*20 - 110*	*03/14/16 07:06*	*03/19/16 19:14*	*10*
Phenol-d5 (Surr)	*82*		*26 - 110*	*03/14/16 07:06*	*03/19/16 19:14*	*10*
Terphenyl-d14 (Surr)	*71*		*36 - 110*	*03/14/16 07:06*	*03/19/16 19:14*	*10*

Method: 1630 - Methyl Mercury (GC)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.97**		0.19	0.058	ug/Kg	☼	03/14/16 11:58	03/18/16 22:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Propyl Mercury Chloride	*27*		*10 - 149*	*03/14/16 11:58*	*03/18/16 22:50*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<24		66	24	ug/Kg	☼	03/18/16 08:15	03/23/16 21:59	1
Aroclor-1221	<32		66	32	ug/Kg	☼	03/18/16 08:15	03/23/16 21:59	1
Aroclor-1232	<40		66	40	ug/Kg	☼	03/18/16 08:15	03/23/16 21:59	1
Aroclor-1242	<22		66	22	ug/Kg	☼	03/18/16 08:15	03/23/16 21:59	1
Aroclor-1248	<16		66	16	ug/Kg	☼	03/18/16 08:15	03/23/16 21:59	1
Aroclor-1254	<28		66	28	ug/Kg	☼	03/18/16 08:15	03/23/16 21:59	1
Aroclor-1260	<18		66	18	ug/Kg	☼	03/18/16 08:15	03/23/16 21:59	1
Aroclor-1262	<20		66	20	ug/Kg	☼	03/18/16 08:15	03/23/16 21:59	1
Aroclor-1268	<26		66	26	ug/Kg	☼	03/18/16 08:15	03/23/16 21:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*18*		*13 - 134*	*03/18/16 08:15*	*03/23/16 21:59*	*1*
DCB Decachlorobiphenyl	*18*		*10 - 155*	*03/18/16 08:15*	*03/23/16 21:59*	*1*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.15**	**J**	0.34	0.0024	mg/Kg	☼	03/14/16 10:54	03/21/16 20:53	2
Arsenic	**6.2**		1.7	0.045	mg/Kg	☼	03/14/16 10:54	03/23/16 00:47	2
Beryllium	**0.53**		0.34	0.019	mg/Kg	☼	03/14/16 10:54	03/23/16 00:47	2
Cadmium	**0.62**		0.34	0.0064	mg/Kg	☼	03/14/16 10:54	03/21/16 20:53	2
Cobalt	**5.7**	**B**	0.34	0.0029	mg/Kg	☼	03/14/16 10:54	03/21/16 20:53	2
Chromium	**20.4**	**B**	0.69	0.10	mg/Kg	☼	03/14/16 10:54	03/21/16 20:53	2
Copper	**26.4**	**B**	0.69	0.17	mg/Kg	☼	03/14/16 10:54	03/21/16 20:53	2
Manganese	**355**		1.7	0.21	mg/Kg	☼	03/14/16 10:54	03/21/16 20:53	2

Client Sample ID: SE-031016-JN-014
Date Collected: 03/10/16 10:35
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-4
Matrix: Solid
Percent Solids: 49.2

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	13.7	B	0.69	0.067	mg/Kg	☼	03/14/16 10:54	03/21/16 20:53	2
Lead	137	B	0.34	0.077	mg/Kg	☼	03/14/16 10:54	03/23/16 13:24	2
Antimony	0.27	J	0.69	0.024	mg/Kg	☼	03/14/16 10:54	03/23/16 00:47	2
Selenium	1.5	J	1.7	0.069	mg/Kg	☼	03/14/16 10:54	03/21/16 20:53	2
Thallium	0.21	J	0.69	0.033	mg/Kg	☼	03/14/16 10:54	03/21/16 20:53	2
Vanadium	21.5		1.7	0.064	mg/Kg	☼	03/14/16 10:54	03/21/16 20:53	2
Zinc	213		6.9	0.86	mg/Kg	☼	03/14/16 10:54	03/23/16 00:47	2
Barium	153	B	1.7	0.38	mg/Kg	☼	03/14/16 10:54	03/23/16 00:47	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	27.5	B	2.2	0.31	mg/Kg	☼	03/14/16 15:00	03/15/16 09:10	10

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	71900		2030	1020	mg/Kg	☼		03/22/16 10:54	1
Percent Solids	49.3		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	50.7		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-015
Date Collected: 03/10/16 10:40
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-5
Matrix: Solid
Percent Solids: 49.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**36**	**B**	36	10	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Benzene	<1.6		9.1	1.6	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Dichlorobromomethane	<0.53		9.1	0.53	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Bromoform	<0.44		9.1	0.44	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Bromomethane	<0.77		9.1	0.77	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
2-Butanone (MEK)	**11**	**J B**	36	2.0	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Carbon disulfide	<1.1		9.1	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Carbon tetrachloride	<1.2		9.1	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Chlorobenzene	<0.97		9.1	0.97	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Chloroethane	<0.80		9.1	0.80	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Chloroform	<0.66		9.1	0.66	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Chloromethane	<1.4		9.1	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,1-Dichloroethane	<0.62		9.1	0.62	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,2-Dichloroethane	<0.84		9.1	0.84	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,1-Dichloroethene	<1.5		9.1	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,2-Dichloropropane	<0.26		9.1	0.26	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,2,4-Trimethylbenzene	<1.1		9.1	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
cis-1,3-Dichloropropene	<1.3		9.1	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
trans-1,3-Dichloropropene	<0.53		9.1	0.53	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Ethylbenzene	<0.58		9.1	0.58	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
2-Hexanone	<1.2		36	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Methylene Chloride	**2.1**	**J B**	9.1	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
4-Methyl-2-pentanone (MIBK)	<2.2		36	2.2	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Styrene	<0.73		9.1	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,1,2,2-Tetrachloroethane	<0.57		9.1	0.57	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Tetrachloroethene	<1.5		9.1	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Toluene	<0.49		9.1	0.49	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Trichloroethene	<0.69		9.1	0.69	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,3,5-Trimethylbenzene	<0.53		9.1	0.53	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Vinyl chloride	<0.55		9.1	0.55	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Xylenes, Total	<0.99		18	0.99	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,1,1-Trichloroethane	<1.2		9.1	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,1,2-Trichloroethane	<0.67		9.1	0.67	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Cyclohexane	<0.88		18	0.88	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,2-Dibromo-3-Chloropropane	<4.9		18	4.9	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Ethylene Dibromide	<0.97		9.1	0.97	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Dichlorodifluoromethane	<0.51		9.1	0.51	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
cis-1,2-Dichloroethene	<0.51		9.1	0.51	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
trans-1,2-Dichloroethene	<0.58		9.1	0.58	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Isopropylbenzene	<0.36		9.1	0.36	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Methyl acetate	<3.7		18	3.7	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Methyl tert-butyl ether	<0.78		9.1	0.78	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.77		9.1	0.77	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,2,4-Trichlorobenzene	<0.69		9.1	0.69	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,2-Dichlorobenzene	<0.62		9.1	0.62	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,3-Dichlorobenzene	<1.3		9.1	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
1,4-Dichlorobenzene	<0.51		9.1	0.51	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Trichlorofluoromethane	<0.53		9.1	0.53	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1
Chlorodibromomethane	<0.67		9.1	0.67	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1

Client Sample ID: SE-031016-JN-015
Date Collected: 03/10/16 10:40
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-5
Matrix: Solid
Percent Solids: 49.2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	<1.1		18	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*58 - 123*	*03/14/16 13:31*	*03/14/16 16:50*	*1*
4-Bromofluorobenzene (Surr)	*104*		*52 - 136*	*03/14/16 13:31*	*03/14/16 16:50*	*1*
Toluene-d8 (Surr)	*105*		*67 - 125*	*03/14/16 13:31*	*03/14/16 16:50*	*1*
Dibromofluoromethane (Surr)	*102*		*37 - 132*	*03/14/16 13:31*	*03/14/16 16:50*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<7.1		100	7.1	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
bis (2-chloroisopropyl) ether	<19		200	19	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
2,4,5-Trichlorophenol	<51		310	51	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
2,4,6-Trichlorophenol	<18		310	18	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
2,4-Dichlorophenol	<41		310	41	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
2,4-Dimethylphenol	<41		310	41	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
2,4-Dinitrophenol	<43		670	43	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
2,4-Dinitrotoluene	<35		410	35	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
2,6-Dinitrotoluene	<43		410	43	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
2-Chloronaphthalene	<0.92		100	0.92	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
2-Chlorophenol	<17		100	17	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
2-Methylnaphthalene	<1.0		14	1.0	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
2-Methylphenol	<22		410	22	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
2-Nitroaniline	<19		410	19	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
2-Nitrophenol	<17		100	17	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
3,3'-Dichlorobenzidine	<37		200	37	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
3-Nitroaniline	<33		410	33	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
4,6-Dinitro-2-methylphenol	<19		310	19	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
4-Bromophenyl phenyl ether	<26		100	26	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
4-Chloro-3-methylphenol	<43		310	43	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
4-Chloroaniline	<35		310	35	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
4-Chlorophenyl phenyl ether	<26		100	26	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
4-Nitroaniline	<53		410	53	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
4-Nitrophenol	<35		670	35	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Acetophenone	<19		200	19	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Atrazine	<19		410	19	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Benzaldehyde	<24		200	24	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Bis(2-chloroethoxy)methane	<45		200	45	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Bis(2-chloroethyl)ether	<4.1		200	4.1	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Bis(2-ethylhexyl) phthalate	**43**	**J B**	140	39	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Butyl benzyl phthalate	<20		140	20	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Caprolactam	<75		670	75	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Carbazole	<55		100	55	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Dibenzofuran	<1.3		100	1.3	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Diethyl phthalate	<33		140	33	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Dimethyl phthalate	<35		140	35	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Di-n-butyl phthalate	<31		140	31	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Di-n-octyl phthalate	<16		140	16	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Hexachlorobenzene	<4.3		14	4.3	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Hexachlorobutadiene	<11		100	11	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1

Client Sample ID: SE-031016-JN-015
Date Collected: 03/10/16 10:40
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-5
Matrix: Solid
Percent Solids: 49.2

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<16		670	16	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Hexachloroethane	<18		100	18	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Isophorone	<26		100	26	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Nitrobenzene	<4.5		200	4.5	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
N-Nitrosodi-n-propylamine	<13		100	13	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
N-Nitrosodiphenylamine	<43		100	43	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Pentachlorophenol	<19		310	19	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Phenol	**26**	**J**	100	15	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
3 & 4 Methylphenol	<41		810	41	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Fluorene	<1.1		14	1.1	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Acenaphthylene	<0.71		14	0.71	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Benzo[g,h,i]perylene	**10**	**J**	14	0.71	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Phenanthrene	**36**		14	1.5	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Benzo[k]fluoranthene	<1.4		14	1.4	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Benzo[a]pyrene	**19**		14	1.3	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Anthracene	**8.3**	**J**	14	1.6	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Pyrene	**49**		14	0.90	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Dibenz(a,h)anthracene	<1.3		14	1.3	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Naphthalene	<1.7		14	1.7	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Fluoranthene	**45**		14	1.1	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Benzo[a]anthracene	**24**		14	1.3	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Indeno[1,2,3-cd]pyrene	**12**	**J**	14	0.71	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Chrysene	**28**		14	2.2	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Acenaphthene	<1.5		14	1.5	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1
Benzo[b]fluoranthene	**25**		14	1.2	ug/Kg	☼	03/14/16 07:06	03/17/16 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*56*		*24 - 110*	*03/14/16 07:06*	*03/17/16 16:46*	*1*
2-Fluorophenol (Surr)	*59*		*24 - 110*	*03/14/16 07:06*	*03/17/16 16:46*	*1*
2,4,6-Tribromophenol (Surr)	*49*		*10 - 110*	*03/14/16 07:06*	*03/17/16 16:46*	*1*
Nitrobenzene-d5 (Surr)	*50*		*20 - 110*	*03/14/16 07:06*	*03/17/16 16:46*	*1*
Phenol-d5 (Surr)	*59*		*26 - 110*	*03/14/16 07:06*	*03/17/16 16:46*	*1*
Terphenyl-d14 (Surr)	*64*		*36 - 110*	*03/14/16 07:06*	*03/17/16 16:46*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<24		67	24	ug/Kg	☼	03/18/16 08:15	03/23/16 22:17	1
Aroclor-1221	<32		67	32	ug/Kg	☼	03/18/16 08:15	03/23/16 22:17	1
Aroclor-1232	<41		67	41	ug/Kg	☼	03/18/16 08:15	03/23/16 22:17	1
Aroclor-1242	<22		67	22	ug/Kg	☼	03/18/16 08:15	03/23/16 22:17	1
Aroclor-1248	<16		67	16	ug/Kg	☼	03/18/16 08:15	03/23/16 22:17	1
Aroclor-1254	<28		67	28	ug/Kg	☼	03/18/16 08:15	03/23/16 22:17	1
Aroclor-1260	<18		67	18	ug/Kg	☼	03/18/16 08:15	03/23/16 22:17	1
Aroclor-1262	<20		67	20	ug/Kg	☼	03/18/16 08:15	03/23/16 22:17	1
Aroclor-1268	<26		67	26	ug/Kg	☼	03/18/16 08:15	03/23/16 22:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*54*		*13 - 134*	*03/18/16 08:15*	*03/23/16 22:17*	*1*
DCB Decachlorobiphenyl	*51*		*10 - 155*	*03/18/16 08:15*	*03/23/16 22:17*	*1*

Client Sample ID: SE-031016-JN-015
Date Collected: 03/10/16 10:40
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-5
Matrix: Solid
Percent Solids: 49.2

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.080	J	0.32	0.0023	mg/Kg	☼	03/14/16 10:54	03/21/16 20:57	2
Arsenic	3.9		1.6	0.042	mg/Kg	☼	03/14/16 10:54	03/23/16 00:51	2
Beryllium	0.57		0.32	0.018	mg/Kg	☼	03/14/16 10:54	03/23/16 00:51	2
Cadmium	0.29	J	0.32	0.0060	mg/Kg	☼	03/14/16 10:54	03/21/16 20:57	2
Cobalt	5.9	B	0.32	0.0027	mg/Kg	☼	03/14/16 10:54	03/21/16 20:57	2
Chromium	17.0	B	0.65	0.097	mg/Kg	☼	03/14/16 10:54	03/21/16 20:57	2
Copper	15.4	B	0.65	0.16	mg/Kg	☼	03/14/16 10:54	03/21/16 20:57	2
Manganese	343		1.6	0.19	mg/Kg	☼	03/14/16 10:54	03/21/16 20:57	2
Nickel	13.5	B	0.65	0.063	mg/Kg	☼	03/14/16 10:54	03/21/16 20:57	2
Lead	21.4	B	0.32	0.073	mg/Kg	☼	03/14/16 10:54	03/23/16 13:28	2
Antimony	0.078	J	0.65	0.023	mg/Kg	☼	03/14/16 10:54	03/23/16 00:51	2
Selenium	1.4	J	1.6	0.065	mg/Kg	☼	03/14/16 10:54	03/21/16 20:57	2
Thallium	0.16	J	0.65	0.031	mg/Kg	☼	03/14/16 10:54	03/21/16 20:57	2
Vanadium	22.4		1.6	0.060	mg/Kg	☼	03/14/16 10:54	03/21/16 20:57	2
Zinc	68.1		6.5	0.81	mg/Kg	☼	03/14/16 10:54	03/23/16 00:51	2
Barium	142	B	1.6	0.35	mg/Kg	☼	03/14/16 10:54	03/23/16 00:51	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.93	B	0.17	0.024	mg/Kg	☼	03/14/16 15:00	03/15/16 08:58	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	51000		2030	1020	mg/Kg	☼		03/22/16 11:04	1
Percent Solids	49.2		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	50.8		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-016
Date Collected: 03/10/16 10:45
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-6
Matrix: Solid
Percent Solids: 45.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**37**	**J B**	43	12	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Benzene	<1.9		11	1.9	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Dichlorobromomethane	<0.62		11	0.62	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Bromoform	<0.52		11	0.52	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Bromomethane	<0.90		11	0.90	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
2-Butanone (MEK)	**10**	**J B**	43	2.4	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Carbon disulfide	<1.3		11	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Carbon tetrachloride	<1.4		11	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Chlorobenzene	<1.1		11	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Chloroethane	<0.95		11	0.95	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Chloroform	<0.78		11	0.78	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Chloromethane	<1.7		11	1.7	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,1-Dichloroethane	<0.73		11	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,2-Dichloroethane	<0.99		11	0.99	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,1-Dichloroethene	<1.7		11	1.7	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,2-Dichloropropane	<0.30		11	0.30	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,2,4-Trimethylbenzene	<1.2		11	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
cis-1,3-Dichloropropene	<1.5		11	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
trans-1,3-Dichloropropene	<0.62		11	0.62	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Ethylbenzene	<0.69		11	0.69	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
2-Hexanone	<1.5		43	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Methylene Chloride	**2.3**	**J B**	11	1.6	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
4-Methyl-2-pentanone (MIBK)	<2.6		43	2.6	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Styrene	<0.86		11	0.86	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,1,2,2-Tetrachloroethane	<0.67		11	0.67	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Tetrachloroethene	<1.7		11	1.7	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Toluene	<0.58		11	0.58	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Trichloroethene	<0.82		11	0.82	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,3,5-Trimethylbenzene	<0.62		11	0.62	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Vinyl chloride	<0.65		11	0.65	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Xylenes, Total	<1.2		22	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,1,1-Trichloroethane	<1.4		11	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,1,2-Trichloroethane	<0.80		11	0.80	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Cyclohexane	<1.0		22	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,2-Dibromo-3-Chloropropane	<5.8		22	5.8	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Ethylene Dibromide	<1.1		11	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Dichlorodifluoromethane	<0.60		11	0.60	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
cis-1,2-Dichloroethene	<0.60		11	0.60	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
trans-1,2-Dichloroethene	<0.69		11	0.69	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Isopropylbenzene	<0.43		11	0.43	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Methyl acetate	<4.3		22	4.3	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Methyl tert-butyl ether	<0.93		11	0.93	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.90		11	0.90	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,2,4-Trichlorobenzene	<0.82		11	0.82	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,2-Dichlorobenzene	<0.73		11	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,3-Dichlorobenzene	<1.5		11	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
1,4-Dichlorobenzene	<0.60		11	0.60	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Trichlorofluoromethane	<0.62		11	0.62	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1
Chlorodibromomethane	<0.80		11	0.80	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1

Client Sample ID: SE-031016-JN-016
Date Collected: 03/10/16 10:45
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-6
Matrix: Solid
Percent Solids: 45.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	<1.2		22	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 17:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*58 - 123*	*03/14/16 13:31*	*03/14/16 17:16*	*1*
4-Bromofluorobenzene (Surr)	*106*		*52 - 136*	*03/14/16 13:31*	*03/14/16 17:16*	*1*
Toluene-d8 (Surr)	*105*		*67 - 125*	*03/14/16 13:31*	*03/14/16 17:16*	*1*
Dibromofluoromethane (Surr)	*99*		*37 - 132*	*03/14/16 13:31*	*03/14/16 17:16*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<30		440	30	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
bis (2-chloroisopropyl) ether	<83		870	83	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
2,4,5-Trichlorophenol	<220		1300	220	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
2,4,6-Trichlorophenol	<78		1300	78	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
2,4-Dichlorophenol	<170		1300	170	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
2,4-Dimethylphenol	<170		1300	170	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
2,4-Dinitrophenol	<180		2900	180	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
2,4-Dinitrotoluene	<150		1700	150	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
2,6-Dinitrotoluene	<180		1700	180	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
2-Chloronaphthalene	<3.9		440	3.9	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
2-Chlorophenol	<71		440	71	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
2-Methylnaphthalene	**40**	**J**	58	4.4	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
2-Methylphenol	<96		1700	96	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
2-Nitroaniline	<79		1700	79	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
2-Nitrophenol	<72		440	72	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
3,3'-Dichlorobenzidine	<160		870	160	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
3-Nitroaniline	<140		1700	140	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
4,6-Dinitro-2-methylphenol	<80		1300	80	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
4-Bromophenyl phenyl ether	<110		440	110	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
4-Chloro-3-methylphenol	<180		1300	180	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
4-Chloroaniline	<150		1300	150	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
4-Chlorophenyl phenyl ether	<110		440	110	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
4-Nitroaniline	<230		1700	230	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
4-Nitrophenol	<150		2900	150	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Acetophenone	<80		870	80	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Atrazine	<79		1700	79	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Benzaldehyde	<100		870	100	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Bis(2-chloroethoxy)methane	<190		870	190	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Bis(2-chloroethyl)ether	<17		870	17	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Bis(2-ethylhexyl) phthalate	<170		610	170	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Butyl benzyl phthalate	<87		610	87	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Caprolactam	<320		2900	320	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Carbazole	<240		440	240	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Dibenzofuran	<5.7		440	5.7	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Diethyl phthalate	<140		610	140	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Dimethyl phthalate	<150		610	150	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Di-n-butyl phthalate	<130		610	130	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Di-n-octyl phthalate	<69		610	69	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Hexachlorobenzene	<18		58	18	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Hexachlorobutadiene	<49		440	49	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4

Client Sample ID: SE-031016-JN-016
Date Collected: 03/10/16 10:45
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-6
Matrix: Solid
Percent Solids: 45.5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<71		2900	71	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Hexachloroethane	<78		440	78	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Isophorone	<110		440	110	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Nitrobenzene	<19		870	19	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
N-Nitrosodi-n-propylamine	<55		440	55	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
N-Nitrosodiphenylamine	<180		440	180	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Pentachlorophenol	<79		1300	79	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Phenol	<64		440	64	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
3 & 4 Methylphenol	<170		3500	170	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Fluorene	<4.6		58	4.6	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Acenaphthylene	**35**	**J**	58	3.0	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Benzo[g,h,i]perylene	**150**		58	3.0	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Phenanthrene	**360**		58	6.4	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Benzo[k]fluoranthene	**170**		58	5.9	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Benzo[a]pyrene	**240**		58	5.6	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Anthracene	**76**		58	6.8	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Pyrene	**580**		58	3.8	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Dibenz(a,h)anthracene	<5.7		58	5.7	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Naphthalene	**59**		58	7.1	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Fluoranthene	**600**		58	4.8	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Benzo[a]anthracene	**260**		58	5.5	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Indeno[1,2,3-cd]pyrene	**140**		58	3.0	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Chrysene	**330**		58	9.6	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Acenaphthene	<6.6		58	6.6	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4
Benzo[b]fluoranthene	**270**		58	5.1	ug/Kg	☼	03/14/16 07:06	03/19/16 20:30	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*51*		*24 - 110*	*03/14/16 07:06*	*03/19/16 20:30*	*4*
2-Fluorophenol (Surr)	*57*		*24 - 110*	*03/14/16 07:06*	*03/19/16 20:30*	*4*
2,4,6-Tribromophenol (Surr)	*55*		*10 - 110*	*03/14/16 07:06*	*03/19/16 20:30*	*4*
Nitrobenzene-d5 (Surr)	*55*		*20 - 110*	*03/14/16 07:06*	*03/19/16 20:30*	*4*
Phenol-d5 (Surr)	*56*		*26 - 110*	*03/14/16 07:06*	*03/19/16 20:30*	*4*
Terphenyl-d14 (Surr)	*57*		*36 - 110*	*03/14/16 07:06*	*03/19/16 20:30*	*4*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<27	^c	74	27	ug/Kg	☼	03/14/16 06:37	03/16/16 23:16	1
Aroclor-1221	<36		74	36	ug/Kg	☼	03/14/16 06:37	03/16/16 23:16	1
Aroclor-1232	<45		74	45	ug/Kg	☼	03/14/16 06:37	03/16/16 23:16	1
Aroclor-1242	<25		74	25	ug/Kg	☼	03/14/16 06:37	03/16/16 23:16	1
Aroclor-1248	<18		74	18	ug/Kg	☼	03/14/16 06:37	03/16/16 23:16	1
Aroclor-1254	<31		74	31	ug/Kg	☼	03/14/16 06:37	03/16/16 23:16	1
Aroclor-1260	<20	^c	74	20	ug/Kg	☼	03/14/16 06:37	03/16/16 23:16	1
Aroclor-1262	<22		74	22	ug/Kg	☼	03/14/16 06:37	03/16/16 23:16	1
Aroclor-1268	<29		74	29	ug/Kg	☼	03/14/16 06:37	03/16/16 23:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*14*	*^c*	*13 - 134*	*03/14/16 06:37*	*03/16/16 23:16*	*1*
DCB Decachlorobiphenyl	*15*	*^c*	*10 - 155*	*03/14/16 06:37*	*03/16/16 23:16*	*1*

Client Sample ID: SE-031016-JN-016
Date Collected: 03/10/16 10:45
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-6
Matrix: Solid
Percent Solids: 45.5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.030	J	0.50	0.0029	mg/L		03/16/16 11:10	03/17/16 21:05	1
Barium	1.2	J B	10.0	0.0010	mg/L		03/16/16 11:10	03/17/16 21:05	1
Cadmium	0.0031	J	0.10	0.00014	mg/L		03/16/16 11:10	03/17/16 21:05	1
Chromium	0.0044	J B	0.50	0.00055	mg/L		03/16/16 11:10	03/17/16 21:05	1
Lead	0.078	J	0.50	0.0019	mg/L		03/16/16 11:10	03/17/16 21:05	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:10	03/17/16 21:05	1
Silver	0.0010	J	0.50	0.00092	mg/L		03/16/16 11:10	03/17/16 21:05	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.097	J	0.37	0.0026	mg/Kg	☼	03/14/16 10:54	03/21/16 21:01	2
Arsenic	5.2		1.8	0.048	mg/Kg	☼	03/14/16 10:54	03/23/16 01:04	2
Beryllium	0.68		0.37	0.020	mg/Kg	☼	03/14/16 10:54	03/23/16 01:04	2
Cadmium	0.39		0.37	0.0068	mg/Kg	☼	03/14/16 10:54	03/21/16 21:01	2
Cobalt	6.1	B	0.37	0.0031	mg/Kg	☼	03/14/16 10:54	03/21/16 21:01	2
Chromium	16.8	B	0.73	0.11	mg/Kg	☼	03/14/16 10:54	03/21/16 21:01	2
Copper	18.0	B	0.73	0.18	mg/Kg	☼	03/14/16 10:54	03/21/16 21:01	2
Manganese	352		1.8	0.22	mg/Kg	☼	03/14/16 10:54	03/21/16 21:01	2
Nickel	12.7	B	0.73	0.071	mg/Kg	☼	03/14/16 10:54	03/21/16 21:01	2
Lead	54.5	B	0.37	0.082	mg/Kg	☼	03/14/16 10:54	03/23/16 13:33	2
Antimony	0.17	J	0.73	0.026	mg/Kg	☼	03/14/16 10:54	03/23/16 01:04	2
Selenium	1.4	J	1.8	0.073	mg/Kg	☼	03/14/16 10:54	03/21/16 21:01	2
Thallium	0.16	J	0.73	0.035	mg/Kg	☼	03/14/16 10:54	03/21/16 21:01	2
Vanadium	19.5		1.8	0.068	mg/Kg	☼	03/14/16 10:54	03/21/16 21:01	2
Zinc	101		7.3	0.92	mg/Kg	☼	03/14/16 10:54	03/23/16 01:04	2
Barium	136	B	1.8	0.40	mg/Kg	☼	03/14/16 10:54	03/23/16 01:04	2

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 11:53	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.8	B	0.23	0.032	mg/Kg	☼	03/14/16 15:00	03/15/16 08:59	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	64100		2200	1100	mg/Kg	☼		03/22/16 11:15	1
Percent Solids	45.5		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	54.5		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-017
Date Collected: 03/10/16 10:50
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-7
Matrix: Solid
Percent Solids: 45.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**44**	**B**	39	11	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Benzene	<1.8		9.8	1.8	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Dichlorobromomethane	<0.57		9.8	0.57	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Bromoform	<0.47		9.8	0.47	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Bromomethane	<0.82		9.8	0.82	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
2-Butanone (MEK)	**13**	**J B**	39	2.2	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Carbon disulfide	<1.2		9.8	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Carbon tetrachloride	<1.3		9.8	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Chlorobenzene	<1.0		9.8	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Chloroethane	<0.86		9.8	0.86	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Chloroform	<0.71		9.8	0.71	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Chloromethane	<1.5		9.8	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,1-Dichloroethane	<0.67		9.8	0.67	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,2-Dichloroethane	<0.90		9.8	0.90	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,1-Dichloroethene	<1.6		9.8	1.6	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,2-Dichloropropane	<0.27		9.8	0.27	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,2,4-Trimethylbenzene	<1.1		9.8	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
cis-1,3-Dichloropropene	<1.4		9.8	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
trans-1,3-Dichloropropene	<0.57		9.8	0.57	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Ethylbenzene	<0.63		9.8	0.63	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
2-Hexanone	<1.3		39	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Methylene Chloride	**2.0**	**J B**	9.8	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
4-Methyl-2-pentanone (MIBK)	<2.4		39	2.4	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Styrene	<0.78		9.8	0.78	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,1,2,2-Tetrachloroethane	<0.61		9.8	0.61	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Tetrachloroethene	<1.6		9.8	1.6	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Toluene	<0.53		9.8	0.53	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Trichloroethene	<0.75		9.8	0.75	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,3,5-Trimethylbenzene	<0.57		9.8	0.57	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Vinyl chloride	<0.59		9.8	0.59	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Xylenes, Total	<1.1		20	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,1,1-Trichloroethane	<1.3		9.8	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,1,2-Trichloroethane	<0.73		9.8	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Cyclohexane	<0.94		20	0.94	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,2-Dibromo-3-Chloropropane	<5.3		20	5.3	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Ethylene Dibromide	<1.0		9.8	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Dichlorodifluoromethane	<0.55		9.8	0.55	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
cis-1,2-Dichloroethene	<0.55		9.8	0.55	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
trans-1,2-Dichloroethene	<0.63		9.8	0.63	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Isopropylbenzene	<0.39		9.8	0.39	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Methyl acetate	<3.9		20	3.9	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Methyl tert-butyl ether	<0.84		9.8	0.84	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.82		9.8	0.82	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,2,4-Trichlorobenzene	<0.75		9.8	0.75	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,2-Dichlorobenzene	<0.67		9.8	0.67	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,3-Dichlorobenzene	<1.4		9.8	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
1,4-Dichlorobenzene	<0.55		9.8	0.55	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Trichlorofluoromethane	<0.57		9.8	0.57	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1
Chlorodibromomethane	<0.73		9.8	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1

Client Sample ID: SE-031016-JN-017
Date Collected: 03/10/16 10:50
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-7
Matrix: Solid
Percent Solids: 45.9

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	<1.1		20	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 17:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*58 - 123*	*03/14/16 13:31*	*03/14/16 17:42*	*1*
4-Bromofluorobenzene (Surr)	*105*		*52 - 136*	*03/14/16 13:31*	*03/14/16 17:42*	*1*
Toluene-d8 (Surr)	*103*		*67 - 125*	*03/14/16 13:31*	*03/14/16 17:42*	*1*
Dibromofluoromethane (Surr)	*100*		*37 - 132*	*03/14/16 13:31*	*03/14/16 17:42*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<7.7		110	7.7	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
bis (2-chloroisopropyl) ether	<21		220	21	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
2,4,5-Trichlorophenol	<55		330	55	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
2,4,6-Trichlorophenol	<20		330	20	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
2,4-Dichlorophenol	<44		330	44	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
2,4-Dimethylphenol	<44		330	44	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
2,4-Dinitrophenol	<46		730	46	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
2,4-Dinitrotoluene	<38		440	38	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
2,6-Dinitrotoluene	<46		440	46	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
2-Chloronaphthalene	<0.99		110	0.99	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
2-Chlorophenol	<18		110	18	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
2-Methylnaphthalene	**22**		15	1.1	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
2-Methylphenol	<24		440	24	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
2-Nitroaniline	<20		440	20	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
2-Nitrophenol	<18		110	18	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
3,3'-Dichlorobenzidine	<40		220	40	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
3-Nitroaniline	<35		440	35	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
4,6-Dinitro-2-methylphenol	<20		330	20	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
4-Bromophenyl phenyl ether	<29		110	29	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
4-Chloro-3-methylphenol	<46		330	46	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
4-Chloroaniline	<38		330	38	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
4-Chlorophenyl phenyl ether	<29		110	29	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
4-Nitroaniline	<57		440	57	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
4-Nitrophenol	<38		730	38	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Acetophenone	<20		220	20	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Atrazine	<20		440	20	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Benzaldehyde	**38**	**J**	220	27	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Bis(2-chloroethoxy)methane	<49		220	49	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Bis(2-chloroethyl)ether	<4.4		220	4.4	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Bis(2-ethylhexyl) phthalate	<42		150	42	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Butyl benzyl phthalate	<22		150	22	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Caprolactam	<82		730	82	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Carbazole	<60		110	60	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Dibenzofuran	**19**	**J**	110	1.5	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Diethyl phthalate	<35		150	35	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Dimethyl phthalate	<38		150	38	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Di-n-butyl phthalate	**34**	**J**	150	33	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Di-n-octyl phthalate	<17		150	17	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Hexachlorobenzene	<4.6		15	4.6	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Hexachlorobutadiene	<12		110	12	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1

Client Sample ID: SE-031016-JN-017
Date Collected: 03/10/16 10:50
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-7
Matrix: Solid
Percent Solids: 45.9

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<18		730	18	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Hexachloroethane	<20		110	20	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Isophorone	<29		110	29	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Nitrobenzene	<4.9		220	4.9	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
N-Nitrosodi-n-propylamine	<14		110	14	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
N-Nitrosodiphenylamine	<46		110	46	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Pentachlorophenol	<20		330	20	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Phenol	**32**	**J**	110	16	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
3 & 4 Methylphenol	**77**	**J**	880	44	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Fluorene	**28**		15	1.2	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Acenaphthylene	**20**		15	0.77	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Benzo[g,h,i]perylene	**95**		15	0.77	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Phenanthrene	**250**		15	1.6	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Benzo[k]fluoranthene	**53**		15	1.5	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Benzo[a]pyrene	**130**		15	1.4	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Anthracene	**53**		15	1.7	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Pyrene	**360**		15	0.97	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Dibenz(a,h)anthracene	<1.5		15	1.5	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Naphthalene	**33**		15	1.8	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Fluoranthene	**350**		15	1.2	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Benzo[a]anthracene	**150**		15	1.4	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Indeno[1,2,3-cd]pyrene	**79**		15	0.77	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Chrysene	**190**		15	2.4	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Acenaphthene	**13**	**J**	15	1.7	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1
Benzo[b]fluoranthene	**180**		15	1.3	ug/Kg	☼	03/14/16 07:06	03/17/16 17:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*70*		*24 - 110*	*03/14/16 07:06*	*03/17/16 17:11*	*1*
2-Fluorophenol (Surr)	*84*		*24 - 110*	*03/14/16 07:06*	*03/17/16 17:11*	*1*
2,4,6-Tribromophenol (Surr)	*74*		*10 - 110*	*03/14/16 07:06*	*03/17/16 17:11*	*1*
Nitrobenzene-d5 (Surr)	*68*		*20 - 110*	*03/14/16 07:06*	*03/17/16 17:11*	*1*
Phenol-d5 (Surr)	*82*		*26 - 110*	*03/14/16 07:06*	*03/17/16 17:11*	*1*
Terphenyl-d14 (Surr)	*73*		*36 - 110*	*03/14/16 07:06*	*03/17/16 17:11*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<26		72	26	ug/Kg	☼	03/18/16 08:15	03/23/16 22:35	1
Aroclor-1221	<35		72	35	ug/Kg	☼	03/18/16 08:15	03/23/16 22:35	1
Aroclor-1232	<43		72	43	ug/Kg	☼	03/18/16 08:15	03/23/16 22:35	1
Aroclor-1242	<24		72	24	ug/Kg	☼	03/18/16 08:15	03/23/16 22:35	1
Aroclor-1248	<17		72	17	ug/Kg	☼	03/18/16 08:15	03/23/16 22:35	1
Aroclor-1254	<30		72	30	ug/Kg	☼	03/18/16 08:15	03/23/16 22:35	1
Aroclor-1260	<20		72	20	ug/Kg	☼	03/18/16 08:15	03/23/16 22:35	1
Aroclor-1262	<22		72	22	ug/Kg	☼	03/18/16 08:15	03/23/16 22:35	1
Aroclor-1268	<28		72	28	ug/Kg	☼	03/18/16 08:15	03/23/16 22:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*		*13 - 134*	*03/18/16 08:15*	*03/23/16 22:35*	*1*
DCB Decachlorobiphenyl	*73*		*10 - 155*	*03/18/16 08:15*	*03/23/16 22:35*	*1*

Client Sample ID: SE-031016-JN-017

Date Collected: 03/10/16 10:50
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-7

Matrix: Solid
Percent Solids: 45.9

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.025	J	0.50	0.0029	mg/L		03/16/16 11:10	03/17/16 21:09	1
Barium	1.1	J B	10.0	0.0010	mg/L		03/16/16 11:10	03/17/16 21:09	1
Cadmium	0.0033	J	0.10	0.00014	mg/L		03/16/16 11:10	03/17/16 21:09	1
Chromium	0.0046	J B	0.50	0.00055	mg/L		03/16/16 11:10	03/17/16 21:09	1
Lead	0.046	J	0.50	0.0019	mg/L		03/16/16 11:10	03/17/16 21:09	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:10	03/17/16 21:09	1
Silver	0.0015	J	0.50	0.00092	mg/L		03/16/16 11:10	03/17/16 21:09	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.14	J	0.36	0.0025	mg/Kg	☼	03/14/16 10:54	03/21/16 21:05	2
Arsenic	5.6		1.8	0.047	mg/Kg	☼	03/14/16 10:54	03/23/16 01:08	2
Beryllium	0.49		0.36	0.020	mg/Kg	☼	03/14/16 10:54	03/23/16 01:08	2
Cadmium	0.56		0.36	0.0067	mg/Kg	☼	03/14/16 10:54	03/21/16 21:05	2
Cobalt	7.3	B	0.36	0.0031	mg/Kg	☼	03/14/16 10:54	03/21/16 21:05	2
Chromium	17.6	B	0.72	0.11	mg/Kg	☼	03/14/16 10:54	03/21/16 21:05	2
Copper	20.8	B	0.72	0.17	mg/Kg	☼	03/14/16 10:54	03/21/16 21:05	2
Manganese	363		1.8	0.22	mg/Kg	☼	03/14/16 10:54	03/21/16 21:05	2
Nickel	13.3	B	0.72	0.070	mg/Kg	☼	03/14/16 10:54	03/21/16 21:05	2
Lead	99.2	B	0.36	0.081	mg/Kg	☼	03/14/16 10:54	03/23/16 13:37	2
Antimony	0.89		0.72	0.025	mg/Kg	☼	03/14/16 10:54	03/23/16 01:08	2
Selenium	1.6	J	1.8	0.072	mg/Kg	☼	03/14/16 10:54	03/21/16 21:05	2
Thallium	0.20	J	0.72	0.034	mg/Kg	☼	03/14/16 10:54	03/21/16 21:05	2
Vanadium	20.3		1.8	0.067	mg/Kg	☼	03/14/16 10:54	03/21/16 21:05	2
Zinc	118		7.2	0.90	mg/Kg	☼	03/14/16 10:54	03/23/16 01:08	2
Barium	128	B	1.8	0.40	mg/Kg	☼	03/14/16 10:54	03/23/16 01:08	2

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 11:55	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	13.6	B	2.2	0.31	mg/Kg	☼	03/14/16 15:00	03/15/16 09:11	10

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	53400		2180	1090	mg/Kg	☼		03/22/16 11:25	1
Percent Solids	45.9		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	54.1		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-018
Date Collected: 03/10/16 11:40
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-8
Matrix: Solid
Percent Solids: 49.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**69**	**B**	66	19	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Benzene	<3.0		17	3.0	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Dichlorobromomethane	<0.96		17	0.96	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Bromoform	<0.80		17	0.80	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Bromomethane	<1.4		17	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
2-Butanone (MEK)	**22**	**J B**	66	3.7	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Carbon disulfide	<2.0		17	2.0	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Carbon tetrachloride	<2.2		17	2.2	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Chlorobenzene	<1.8		17	1.8	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Chloroethane	<1.5		17	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Chloroform	<1.2		17	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Chloromethane	<2.6		17	2.6	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,1-Dichloroethane	<1.1		17	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,2-Dichloroethane	<1.5		17	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,1-Dichloroethene	<2.7		17	2.7	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,2-Dichloropropane	<0.46		17	0.46	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,2,4-Trimethylbenzene	<1.9		17	1.9	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
cis-1,3-Dichloropropene	<2.4		17	2.4	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
trans-1,3-Dichloropropene	<0.96		17	0.96	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Ethylbenzene	<1.1		17	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
2-Hexanone	<2.3		66	2.3	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Methylene Chloride	**6.3**	**J B**	17	2.5	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
4-Methyl-2-pentanone (MIBK)	<4.1		66	4.1	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Styrene	<1.3		17	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,1,2,2-Tetrachloroethane	<1.0		17	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Tetrachloroethene	<2.7		17	2.7	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Toluene	<0.90		17	0.90	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Trichloroethene	<1.3		17	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,3,5-Trimethylbenzene	<0.96		17	0.96	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Vinyl chloride	<1.0		17	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Xylenes, Total	<1.8		33	1.8	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,1,1-Trichloroethane	<2.2		17	2.2	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,1,2-Trichloroethane	<1.2		17	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Cyclohexane	<1.6		33	1.6	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,2-Dibromo-3-Chloropropane	<9.0		33	9.0	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Ethylene Dibromide	<1.8		17	1.8	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Dichlorodifluoromethane	<0.93		17	0.93	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
cis-1,2-Dichloroethene	<0.93		17	0.93	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
trans-1,2-Dichloroethene	<1.1		17	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Isopropylbenzene	<0.66		17	0.66	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Methyl acetate	<6.7		33	6.7	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Methyl tert-butyl ether	<1.4		17	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<1.4		17	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,2,4-Trichlorobenzene	<1.3		17	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,2-Dichlorobenzene	<1.1		17	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,3-Dichlorobenzene	<2.3		17	2.3	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
1,4-Dichlorobenzene	<0.93		17	0.93	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Trichlorofluoromethane	<0.96		17	0.96	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1
Chlorodibromomethane	<1.2		17	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1

Client Sample ID: SE-031016-JN-018
Date Collected: 03/10/16 11:40
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-8
Matrix: Solid
Percent Solids: 49.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**39**		33	1.9	ug/Kg	☼	03/14/16 13:31	03/14/16 19:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*58 - 123*	*03/14/16 13:31*	*03/14/16 19:25*	*1*
4-Bromofluorobenzene (Surr)	*207*	*X*	*52 - 136*	*03/14/16 13:31*	*03/14/16 19:25*	*1*
Toluene-d8 (Surr)	*129*	*X*	*67 - 125*	*03/14/16 13:31*	*03/14/16 19:25*	*1*
Dibromofluoromethane (Surr)	*95*		*37 - 132*	*03/14/16 13:31*	*03/14/16 19:25*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<29		410	29	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
bis (2-chloroisopropyl) ether	<78		820	78	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
2,4,5-Trichlorophenol	<200		1200	200	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
2,4,6-Trichlorophenol	<73		1200	73	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
2,4-Dichlorophenol	<160		1200	160	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
2,4-Dimethylphenol	<160		1200	160	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
2,4-Dinitrophenol	<170		2700	170	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
2,4-Dinitrotoluene	<140		1600	140	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
2,6-Dinitrotoluene	<170		1600	170	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
2-Chloronaphthalene	<3.7		410	3.7	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
2-Chlorophenol	<67		410	67	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
2-Methylnaphthalene	**100**		54	4.1	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
2-Methylphenol	<90		1600	90	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
2-Nitroaniline	<74		1600	74	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
2-Nitrophenol	<68		410	68	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
3,3'-Dichlorobenzidine	<150		820	150	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
3-Nitroaniline	<130		1600	130	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
4,6-Dinitro-2-methylphenol	<75		1200	75	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
4-Bromophenyl phenyl ether	<110		410	110	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
4-Chloro-3-methylphenol	<170		1200	170	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
4-Chloroaniline	<140		1200	140	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
4-Chlorophenyl phenyl ether	<110		410	110	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
4-Nitroaniline	<210		1600	210	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
4-Nitrophenol	<140		2700	140	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Acetophenone	<75		820	75	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Atrazine	<74		1600	74	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Benzaldehyde	<98		820	98	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Bis(2-chloroethoxy)methane	<180		820	180	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Bis(2-chloroethyl)ether	<16		820	16	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Bis(2-ethylhexyl) phthalate	**360**	**J B**	570	160	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Butyl benzyl phthalate	**130**	**J**	570	82	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Caprolactam	<300		2700	300	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Carbazole	<220		410	220	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Dibenzofuran	**62**	**J**	410	5.4	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Diethyl phthalate	<130		570	130	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Dimethyl phthalate	<140		570	140	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Di-n-butyl phthalate	**130**	**J**	570	120	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Di-n-octyl phthalate	<64		570	64	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Hexachlorobenzene	<17		54	17	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Hexachlorobutadiene	<46		410	46	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4

Client Sample ID: SE-031016-JN-018

Date Collected: 03/10/16 11:40
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-8

Matrix: Solid
Percent Solids: 49.5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<66		2700	66	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Hexachloroethane	<73		410	73	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Isophorone	<110		410	110	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Nitrobenzene	<18		820	18	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
N-Nitrosodi-n-propylamine	<51		410	51	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
N-Nitrosodiphenylamine	<170		410	170	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Pentachlorophenol	<74		1200	74	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
Phenol	<60		410	60	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4
3 & 4 Methylphenol	<160		3300	160	ug/Kg	☼	03/14/16 07:06	03/19/16 20:05	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*53*		*24 - 110*	*03/14/16 07:06*	*03/19/16 20:05*	*4*
2-Fluorophenol (Surr)	*59*		*24 - 110*	*03/14/16 07:06*	*03/19/16 20:05*	*4*
2,4,6-Tribromophenol (Surr)	*57*		*10 - 110*	*03/14/16 07:06*	*03/19/16 20:05*	*4*
Nitrobenzene-d5 (Surr)	*61*		*20 - 110*	*03/14/16 07:06*	*03/19/16 20:05*	*4*
Phenol-d5 (Surr)	*59*		*26 - 110*	*03/14/16 07:06*	*03/19/16 20:05*	*4*
Terphenyl-d14 (Surr)	*60*		*36 - 110*	*03/14/16 07:06*	*03/19/16 20:05*	*4*

Method: 1630 - Methyl Mercury (GC)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**1.2**		0.19	0.058	ug/Kg	☼	03/14/16 11:58	03/18/16 23:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Propyl Mercury Chloride	*28*		*10 - 149*	*03/14/16 11:58*	*03/18/16 23:11*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<24		66	24	ug/Kg	☼	03/18/16 08:15	03/23/16 22:52	1
Aroclor-1221	<32		66	32	ug/Kg	☼	03/18/16 08:15	03/23/16 22:52	1
Aroclor-1232	<40		66	40	ug/Kg	☼	03/18/16 08:15	03/23/16 22:52	1
Aroclor-1242	<22		66	22	ug/Kg	☼	03/18/16 08:15	03/23/16 22:52	1
Aroclor-1248	<16		66	16	ug/Kg	☼	03/18/16 08:15	03/23/16 22:52	1
Aroclor-1254	**180**		66	28	ug/Kg	☼	03/18/16 08:15	03/23/16 22:52	1
Aroclor-1260	<18		66	18	ug/Kg	☼	03/18/16 08:15	03/23/16 22:52	1
Aroclor-1262	<20		66	20	ug/Kg	☼	03/18/16 08:15	03/23/16 22:52	1
Aroclor-1268	<26		66	26	ug/Kg	☼	03/18/16 08:15	03/23/16 22:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*73*		*13 - 134*	*03/18/16 08:15*	*03/23/16 22:52*	*1*
DCB Decachlorobiphenyl	*382*	*X*	*10 - 155*	*03/18/16 08:15*	*03/23/16 22:52*	*1*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.19**	**J**	0.35	0.0025	mg/Kg	☼	03/14/16 10:54	03/21/16 21:18	2
Arsenic	**6.2**		1.8	0.046	mg/Kg	☼	03/14/16 10:54	03/23/16 01:12	2
Beryllium	**0.31**	**J**	0.35	0.019	mg/Kg	☼	03/14/16 10:54	03/23/16 01:12	2
Cadmium	**0.96**		0.35	0.0065	mg/Kg	☼	03/14/16 10:54	03/21/16 21:18	2
Cobalt	**3.9**	**B**	0.35	0.0030	mg/Kg	☼	03/14/16 10:54	03/21/16 21:18	2
Chromium	**20.0**	**B**	0.70	0.11	mg/Kg	☼	03/14/16 10:54	03/21/16 21:18	2
Copper	**27.1**	**B**	0.70	0.17	mg/Kg	☼	03/14/16 10:54	03/21/16 21:18	2
Manganese	**324**		1.8	0.21	mg/Kg	☼	03/14/16 10:54	03/21/16 21:18	2

Client Sample ID: SE-031016-JN-018
Date Collected: 03/10/16 11:40
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-8
Matrix: Solid
Percent Solids: 49.5

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	8.5	B	0.70	0.068	mg/Kg	☼	03/14/16 10:54	03/21/16 21:18	2
Lead	294	B	0.35	0.079	mg/Kg	☼	03/14/16 10:54	03/23/16 13:41	2
Antimony	0.35	J	0.70	0.025	mg/Kg	☼	03/14/16 10:54	03/23/16 01:12	2
Selenium	1.2	J	1.8	0.070	mg/Kg	☼	03/14/16 10:54	03/21/16 21:18	2
Thallium	0.12	J	0.70	0.033	mg/Kg	☼	03/14/16 10:54	03/21/16 21:18	2
Vanadium	12.8		1.8	0.065	mg/Kg	☼	03/14/16 10:54	03/21/16 21:18	2
Zinc	289		7.0	0.88	mg/Kg	☼	03/14/16 10:54	03/23/16 01:12	2
Barium	171	B	1.8	0.39	mg/Kg	☼	03/14/16 10:54	03/23/16 01:12	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.4	B	0.19	0.027	mg/Kg	☼	03/14/16 15:00	03/15/16 09:02	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	46100		2020	1010	mg/Kg	☼		03/22/16 11:36	1
Percent Solids	49.5		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	50.5		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-019
Date Collected: 03/10/16 11:45
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-9
Matrix: Solid
Percent Solids: 48.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**31**	**J B**	39	11	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Benzene	<1.8		9.8	1.8	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Dichlorobromomethane	<0.57		9.8	0.57	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Bromoform	<0.47		9.8	0.47	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Bromomethane	<0.83		9.8	0.83	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
2-Butanone (MEK)	**8.3**	**J B**	39	2.2	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Carbon disulfide	<1.2		9.8	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Carbon tetrachloride	<1.3		9.8	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Chlorobenzene	<1.0		9.8	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Chloroethane	<0.86		9.8	0.86	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Chloroform	<0.71		9.8	0.71	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Chloromethane	<1.6		9.8	1.6	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,1-Dichloroethane	<0.67		9.8	0.67	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,2-Dichloroethane	<0.90		9.8	0.90	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,1-Dichloroethene	<1.6		9.8	1.6	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,2-Dichloropropane	<0.28		9.8	0.28	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,2,4-Trimethylbenzene	<1.1		9.8	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
cis-1,3-Dichloropropene	<1.4		9.8	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
trans-1,3-Dichloropropene	<0.57		9.8	0.57	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Ethylbenzene	<0.63		9.8	0.63	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
2-Hexanone	<1.3		39	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Methylene Chloride	**3.1**	**J B**	9.8	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
4-Methyl-2-pentanone (MIBK)	<2.4		39	2.4	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Styrene	<0.79		9.8	0.79	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,1,2,2-Tetrachloroethane	<0.61		9.8	0.61	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Tetrachloroethene	<1.6		9.8	1.6	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Toluene	<0.53		9.8	0.53	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Trichloroethene	<0.75		9.8	0.75	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,3,5-Trimethylbenzene	<0.57		9.8	0.57	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Vinyl chloride	<0.59		9.8	0.59	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Xylenes, Total	<1.1		20	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,1,1-Trichloroethane	<1.3		9.8	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,1,2-Trichloroethane	<0.73		9.8	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Cyclohexane	<0.94		20	0.94	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,2-Dibromo-3-Chloropropane	<5.3		20	5.3	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Ethylene Dibromide	<1.0		9.8	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Dichlorodifluoromethane	<0.55		9.8	0.55	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
cis-1,2-Dichloroethene	<0.55		9.8	0.55	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
trans-1,2-Dichloroethene	<0.63		9.8	0.63	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Isopropylbenzene	<0.39		9.8	0.39	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Methyl acetate	<4.0		20	4.0	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Methyl tert-butyl ether	<0.85		9.8	0.85	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.83		9.8	0.83	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,2,4-Trichlorobenzene	<0.75		9.8	0.75	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,2-Dichlorobenzene	<0.67		9.8	0.67	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,3-Dichlorobenzene	<1.4		9.8	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
1,4-Dichlorobenzene	<0.55		9.8	0.55	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Trichlorofluoromethane	<0.57		9.8	0.57	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1
Chlorodibromomethane	<0.73		9.8	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: SE-031016-JN-019
Date Collected: 03/10/16 11:45
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-9
Matrix: Solid
Percent Solids: 48.7

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	<1.1		20	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 19:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*58 - 123*	*03/14/16 13:31*	*03/14/16 19:51*	*1*
4-Bromofluorobenzene (Surr)	*103*		*52 - 136*	*03/14/16 13:31*	*03/14/16 19:51*	*1*
Toluene-d8 (Surr)	*102*		*67 - 125*	*03/14/16 13:31*	*03/14/16 19:51*	*1*
Dibromofluoromethane (Surr)	*94*		*37 - 132*	*03/14/16 13:31*	*03/14/16 19:51*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<7.2		100	7.2	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
bis (2-chloroisopropyl) ether	<19		210	19	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
2,4,5-Trichlorophenol	<51		310	51	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
2,4,6-Trichlorophenol	<18		310	18	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
2,4-Dichlorophenol	<41		310	41	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
2,4-Dimethylphenol	<41		310	41	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
2,4-Dinitrophenol	<43		680	43	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
2,4-Dinitrotoluene	<35		410	35	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
2,6-Dinitrotoluene	<43		410	43	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
2-Chloronaphthalene	<0.92		100	0.92	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
2-Chlorophenol	<17		100	17	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
2-Methylnaphthalene	<1.0		14	1.0	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
2-Methylphenol	<23		410	23	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
2-Nitroaniline	<19		410	19	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
2-Nitrophenol	<17		100	17	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
3,3'-Dichlorobenzidine	<37		210	37	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
3-Nitroaniline	<33		410	33	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
4,6-Dinitro-2-methylphenol	<19		310	19	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
4-Bromophenyl phenyl ether	<27		100	27	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
4-Chloro-3-methylphenol	<43		310	43	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
4-Chloroaniline	<35		310	35	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
4-Chlorophenyl phenyl ether	<27		100	27	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
4-Nitroaniline	<53		410	53	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
4-Nitrophenol	<35		680	35	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Acetophenone	<19		210	19	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Atrazine	<19		410	19	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Benzaldehyde	<25		210	25	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Bis(2-chloroethoxy)methane	<45		210	45	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Bis(2-chloroethyl)ether	<4.1		210	4.1	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Bis(2-ethylhexyl) phthalate	**52**	**J B**	140	39	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Butyl benzyl phthalate	<21		140	21	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Caprolactam	<76		680	76	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Carbazole	<55		100	55	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Dibenzofuran	<1.4		100	1.4	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Diethyl phthalate	<33		140	33	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Dimethyl phthalate	<35		140	35	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Di-n-butyl phthalate	<31		140	31	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Di-n-octyl phthalate	<16		140	16	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Hexachlorobenzene	<4.3		14	4.3	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Hexachlorobutadiene	<11		100	11	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1

Client Sample ID: SE-031016-JN-019
Date Collected: 03/10/16 11:45
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-9
Matrix: Solid
Percent Solids: 48.7

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<17		680	17	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Hexachloroethane	<18		100	18	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Isophorone	<27		100	27	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Nitrobenzene	<4.5		210	4.5	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
N-Nitrosodi-n-propylamine	<13		100	13	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
N-Nitrosodiphenylamine	<43		100	43	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Pentachlorophenol	<19		310	19	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Phenol	**24**	**J**	100	15	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
3 & 4 Methylphenol	<41		820	41	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Fluorene	**14**		14	1.1	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Acenaphthylene	**8.5**	**J**	14	0.72	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Benzo[g,h,i]perylene	**30**		14	0.72	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Phenanthrene	**98**		14	1.5	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Benzo[k]fluoranthene	**31**		14	1.4	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Benzo[a]pyrene	**49**		14	1.3	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Anthracene	**24**		14	1.6	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Pyrene	**120**		14	0.90	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Dibenz(a,h)anthracene	<1.4		14	1.4	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Naphthalene	**9.1**	**J**	14	1.7	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Fluoranthene	**120**		14	1.1	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Benzo[a]anthracene	**56**		14	1.3	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Indeno[1,2,3-cd]pyrene	**23**		14	0.72	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Chrysene	**64**		14	2.3	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Acenaphthene	<1.6		14	1.6	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1
Benzo[b]fluoranthene	**49**		14	1.2	ug/Kg	☼	03/14/16 07:06	03/17/16 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*71*		*24 - 110*	*03/14/16 07:06*	*03/17/16 17:37*	*1*
2-Fluorophenol (Surr)	*80*		*24 - 110*	*03/14/16 07:06*	*03/17/16 17:37*	*1*
2,4,6-Tribromophenol (Surr)	*72*		*10 - 110*	*03/14/16 07:06*	*03/17/16 17:37*	*1*
Nitrobenzene-d5 (Surr)	*61*		*20 - 110*	*03/14/16 07:06*	*03/17/16 17:37*	*1*
Phenol-d5 (Surr)	*81*		*26 - 110*	*03/14/16 07:06*	*03/17/16 17:37*	*1*
Terphenyl-d14 (Surr)	*85*		*36 - 110*	*03/14/16 07:06*	*03/17/16 17:37*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<24		67	24	ug/Kg	☼	03/18/16 08:15	03/23/16 23:10	1
Aroclor-1221	<32		67	32	ug/Kg	☼	03/18/16 08:15	03/23/16 23:10	1
Aroclor-1232	<40		67	40	ug/Kg	☼	03/18/16 08:15	03/23/16 23:10	1
Aroclor-1242	<22		67	22	ug/Kg	☼	03/18/16 08:15	03/23/16 23:10	1
Aroclor-1248	<16		67	16	ug/Kg	☼	03/18/16 08:15	03/23/16 23:10	1
Aroclor-1254	<28		67	28	ug/Kg	☼	03/18/16 08:15	03/23/16 23:10	1
Aroclor-1260	<18		67	18	ug/Kg	☼	03/18/16 08:15	03/23/16 23:10	1
Aroclor-1262	<20		67	20	ug/Kg	☼	03/18/16 08:15	03/23/16 23:10	1
Aroclor-1268	<26		67	26	ug/Kg	☼	03/18/16 08:15	03/23/16 23:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*30*		*13 - 134*	*03/18/16 08:15*	*03/23/16 23:10*	*1*
DCB Decachlorobiphenyl	*54*	*p*	*10 - 155*	*03/18/16 08:15*	*03/23/16 23:10*	*1*

Client Sample ID: SE-031016-JN-019
Date Collected: 03/10/16 11:45
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-9
Matrix: Solid
Percent Solids: 48.7

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.077	J	0.31	0.0022	mg/Kg	☼	03/14/16 10:54	03/21/16 21:22	2
Arsenic	3.8		1.6	0.040	mg/Kg	☼	03/14/16 10:54	03/23/16 01:17	2
Beryllium	0.44		0.31	0.017	mg/Kg	☼	03/14/16 10:54	03/23/16 01:17	2
Cadmium	0.43		0.31	0.0058	mg/Kg	☼	03/14/16 10:54	03/21/16 21:22	2
Cobalt	5.6	B	0.31	0.0026	mg/Kg	☼	03/14/16 10:54	03/21/16 21:22	2
Chromium	15.1	B	0.62	0.093	mg/Kg	☼	03/14/16 10:54	03/21/16 21:22	2
Copper	15.2	B	0.62	0.15	mg/Kg	☼	03/14/16 10:54	03/21/16 21:22	2
Manganese	384		1.6	0.19	mg/Kg	☼	03/14/16 10:54	03/21/16 21:22	2
Nickel	11.4	B	0.62	0.061	mg/Kg	☼	03/14/16 10:54	03/21/16 21:22	2
Lead	37.6	B	0.31	0.070	mg/Kg	☼	03/14/16 10:54	03/23/16 13:45	2
Antimony	0.082	J	0.62	0.022	mg/Kg	☼	03/14/16 10:54	03/23/16 01:17	2
Selenium	1.5	J	1.6	0.062	mg/Kg	☼	03/14/16 10:54	03/21/16 21:22	2
Thallium	0.13	J	0.62	0.030	mg/Kg	☼	03/14/16 10:54	03/21/16 21:22	2
Vanadium	17.6		1.6	0.058	mg/Kg	☼	03/14/16 10:54	03/21/16 21:22	2
Zinc	75.2		6.2	0.78	mg/Kg	☼	03/14/16 10:54	03/23/16 01:17	2
Barium	116	B	1.6	0.34	mg/Kg	☼	03/14/16 10:54	03/23/16 01:17	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.5	B	0.22	0.031	mg/Kg	☼	03/14/16 15:00	03/15/16 09:03	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	60300		2050	1030	mg/Kg	☼		03/22/16 11:46	1
Percent Solids	48.7		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	51.3		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-020
Date Collected: 03/10/16 11:50
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-10
Matrix: Solid
Percent Solids: 52.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**75**	**B**	35	10	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Benzene	<1.6		8.7	1.6	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Dichlorobromomethane	<0.51		8.7	0.51	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Bromoform	<0.42		8.7	0.42	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Bromomethane	<0.73		8.7	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
2-Butanone (MEK)	**22**	**J B**	35	2.0	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Carbon disulfide	<1.0		8.7	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Carbon tetrachloride	<1.1		8.7	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Chlorobenzene	<0.93		8.7	0.93	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Chloroethane	<0.77		8.7	0.77	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Chloroform	<0.63		8.7	0.63	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Chloromethane	<1.4		8.7	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,1-Dichloroethane	<0.59		8.7	0.59	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,2-Dichloroethane	<0.80		8.7	0.80	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,1-Dichloroethene	<1.4		8.7	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,2-Dichloropropane	<0.24		8.7	0.24	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,2,4-Trimethylbenzene	<1.0		8.7	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
cis-1,3-Dichloropropene	<1.2		8.7	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
trans-1,3-Dichloropropene	<0.51		8.7	0.51	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Ethylbenzene	<0.56		8.7	0.56	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
2-Hexanone	<1.2		35	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Methylene Chloride	**3.2**	**J B**	8.7	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
4-Methyl-2-pentanone (MIBK)	<2.1		35	2.1	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Styrene	<0.70		8.7	0.70	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,1,2,2-Tetrachloroethane	<0.54		8.7	0.54	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Tetrachloroethene	<1.4		8.7	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Toluene	<0.47		8.7	0.47	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Trichloroethene	<0.66		8.7	0.66	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,3,5-Trimethylbenzene	<0.51		8.7	0.51	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Vinyl chloride	<0.52		8.7	0.52	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Xylenes, Total	<0.94		17	0.94	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,1,1-Trichloroethane	<1.1		8.7	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,1,2-Trichloroethane	<0.65		8.7	0.65	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Cyclohexane	<0.84		17	0.84	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,2-Dibromo-3-Chloropropane	<4.7		17	4.7	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Ethylene Dibromide	<0.93		8.7	0.93	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Dichlorodifluoromethane	<0.49		8.7	0.49	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
cis-1,2-Dichloroethene	<0.49		8.7	0.49	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
trans-1,2-Dichloroethene	<0.56		8.7	0.56	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Isopropylbenzene	<0.35		8.7	0.35	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Methyl acetate	<3.5		17	3.5	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Methyl tert-butyl ether	<0.75		8.7	0.75	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.73		8.7	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,2,4-Trichlorobenzene	<0.66		8.7	0.66	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,2-Dichlorobenzene	<0.59		8.7	0.59	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,3-Dichlorobenzene	<1.2		8.7	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
1,4-Dichlorobenzene	<0.49		8.7	0.49	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Trichlorofluoromethane	<0.51		8.7	0.51	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1
Chlorodibromomethane	<0.65		8.7	0.65	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1

Client Sample ID: SE-031016-JN-020
Date Collected: 03/10/16 11:50
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-10
Matrix: Solid
Percent Solids: 52.2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	3.5	J	17	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*58 - 123*	*03/14/16 13:31*	*03/14/16 20:16*	*1*
4-Bromofluorobenzene (Surr)	*119*		*52 - 136*	*03/14/16 13:31*	*03/14/16 20:16*	*1*
Toluene-d8 (Surr)	*107*		*67 - 125*	*03/14/16 13:31*	*03/14/16 20:16*	*1*
Dibromofluoromethane (Surr)	*96*		*37 - 132*	*03/14/16 13:31*	*03/14/16 20:16*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<34		480	34	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
bis (2-chloroisopropyl) ether	<91		960	91	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
2,4,5-Trichlorophenol	<240		1400	240	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
2,4,6-Trichlorophenol	<86		1400	86	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
2,4-Dichlorophenol	<190		1400	190	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
2,4-Dimethylphenol	<190		1400	190	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
2,4-Dinitrophenol	<200		3200	200	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
2,4-Dinitrotoluene	<160		1900	160	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
2,6-Dinitrotoluene	<200		1900	200	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
2-Chloronaphthalene	<4.3		480	4.3	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
2-Chlorophenol	<79		480	79	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
2-Methylnaphthalene	100		64	4.8	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
2-Methylphenol	<110		1900	110	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
2-Nitroaniline	<88		1900	88	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
2-Nitrophenol	<80		480	80	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
3,3'-Dichlorobenzidine	<170		960	170	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
3-Nitroaniline	<150		1900	150	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
4,6-Dinitro-2-methylphenol	<89		1400	89	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
4-Bromophenyl phenyl ether	<130		480	130	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
4-Chloro-3-methylphenol	<200		1400	200	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
4-Chloroaniline	<160		1400	160	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
4-Chlorophenyl phenyl ether	<130		480	130	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
4-Nitroaniline	<250		1900	250	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
4-Nitrophenol	<160		3200	160	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Acetophenone	<89		960	89	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Atrazine	<88		1900	88	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Benzaldehyde	<120		960	120	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Bis(2-chloroethoxy)methane	<210		960	210	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Bis(2-chloroethyl)ether	<19		960	19	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Bis(2-ethylhexyl) phthalate	<180		670	180	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Butyl benzyl phthalate	<96		670	96	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Caprolactam	<360		3200	360	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Carbazole	<260		480	260	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Dibenzofuran	<6.4		480	6.4	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Diethyl phthalate	<150		670	150	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Dimethyl phthalate	<160		670	160	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Di-n-butyl phthalate	170	J	670	140	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Di-n-octyl phthalate	<76		670	76	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Hexachlorobenzene	<20		64	20	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Hexachlorobutadiene	<54		480	54	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5

Client Sample ID: SE-031016-JN-020
Date Collected: 03/10/16 11:50
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-10
Matrix: Solid
Percent Solids: 52.2

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<78		3200	78	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Hexachloroethane	<87		480	87	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Isophorone	<130		480	130	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Nitrobenzene	<21		960	21	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
N-Nitrosodi-n-propylamine	<61		480	61	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
N-Nitrosodiphenylamine	<200		480	200	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Pentachlorophenol	<88		1400	88	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Phenol	<70		480	70	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
3 & 4 Methylphenol	<190		3800	190	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Fluorene	**52**	**J**	64	5.1	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Acenaphthylene	<3.4		64	3.4	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Benzo[g,h,i]perylene	**170**		64	3.4	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Phenanthrene	**540**		64	7.0	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Benzo[k]fluoranthene	**150**		64	6.5	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Benzo[a]pyrene	**260**		64	6.2	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Anthracene	**140**		64	7.5	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Pyrene	**660**		64	4.2	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Dibenz(a,h)anthracene	<6.4		64	6.4	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Naphthalene	**150**		64	7.9	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Fluoranthene	**700**		64	5.3	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Benzo[a]anthracene	**300**		64	6.1	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Indeno[1,2,3-cd]pyrene	**140**		64	3.4	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Chrysene	**400**		64	11	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Acenaphthene	**57**	**J**	64	7.3	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5
Benzo[b]fluoranthene	**290**		64	5.7	ug/Kg	☼	03/14/16 07:06	03/19/16 19:40	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*61*		*24 - 110*	*03/14/16 07:06*	*03/19/16 19:40*	*5*
2-Fluorophenol (Surr)	*71*		*24 - 110*	*03/14/16 07:06*	*03/19/16 19:40*	*5*
2,4,6-Tribromophenol (Surr)	*66*		*10 - 110*	*03/14/16 07:06*	*03/19/16 19:40*	*5*
Nitrobenzene-d5 (Surr)	*89*		*20 - 110*	*03/14/16 07:06*	*03/19/16 19:40*	*5*
Phenol-d5 (Surr)	*72*		*26 - 110*	*03/14/16 07:06*	*03/19/16 19:40*	*5*
Terphenyl-d14 (Surr)	*66*		*36 - 110*	*03/14/16 07:06*	*03/19/16 19:40*	*5*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<23	^c	63	23	ug/Kg	☼	03/14/16 06:37	03/17/16 00:29	1
Aroclor-1221	<31		63	31	ug/Kg	☼	03/14/16 06:37	03/17/16 00:29	1
Aroclor-1232	<38		63	38	ug/Kg	☼	03/14/16 06:37	03/17/16 00:29	1
Aroclor-1242	<21		63	21	ug/Kg	☼	03/14/16 06:37	03/17/16 00:29	1
Aroclor-1248	<15		63	15	ug/Kg	☼	03/14/16 06:37	03/17/16 00:29	1
Aroclor-1254	<27		63	27	ug/Kg	☼	03/14/16 06:37	03/17/16 00:29	1
Aroclor-1260	<17	^c	63	17	ug/Kg	☼	03/14/16 06:37	03/17/16 00:29	1
Aroclor-1262	<19		63	19	ug/Kg	☼	03/14/16 06:37	03/17/16 00:29	1
Aroclor-1268	<25		63	25	ug/Kg	☼	03/14/16 06:37	03/17/16 00:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*47*	*^c*	*13 - 134*	*03/14/16 06:37*	*03/17/16 00:29*	*1*
DCB Decachlorobiphenyl	*38*	*^c*	*10 - 155*	*03/14/16 06:37*	*03/17/16 00:29*	*1*

Client Sample ID: SE-031016-JN-020

Date Collected: 03/10/16 11:50
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-10

Matrix: Solid
Percent Solids: 52.2

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.036	J	0.50	0.0029	mg/L		03/16/16 11:10	03/17/16 21:14	1
Barium	1.2	J B	10.0	0.0010	mg/L		03/16/16 11:10	03/17/16 21:14	1
Cadmium	0.0049	J	0.10	0.00014	mg/L		03/16/16 11:10	03/17/16 21:14	1
Chromium	0.0060	J B	0.50	0.00055	mg/L		03/16/16 11:10	03/17/16 21:14	1
Lead	0.18	J	0.50	0.0019	mg/L		03/16/16 11:10	03/17/16 21:14	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:10	03/17/16 21:14	1
Silver	0.0014	J	0.50	0.00092	mg/L		03/16/16 11:10	03/17/16 21:14	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.18	J B	0.34	0.0024	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Arsenic	6.2	B	1.7	0.044	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Beryllium	0.58		0.34	0.018	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Cadmium	0.77		0.34	0.0062	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Cobalt	5.1	B	0.34	0.0029	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Chromium	19.0	B	0.67	0.10	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Copper	25.0	B	0.67	0.16	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Manganese	409	B	1.7	0.20	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Nickel	10.6		0.67	0.066	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Lead	213	B	0.34	0.076	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Antimony	0.57	J	0.67	0.024	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Selenium	1.6	J B	1.7	0.067	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Thallium	0.19	J	0.67	0.032	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Vanadium	17.8		1.7	0.062	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Zinc	203	B	6.7	0.84	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2
Barium	156		1.7	0.37	mg/Kg	☼	03/15/16 11:27	03/19/16 23:04	2

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 12:01	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	3.1		0.50	0.070	mg/Kg	☼	03/15/16 15:00	03/17/16 14:22	3

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	43800		1920	958	mg/Kg	☼		03/22/16 11:57	1
Percent Solids	52.2		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	47.8		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-021
Date Collected: 03/10/16 12:50
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-11
Matrix: Solid
Percent Solids: 47.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<11		37	11	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Benzene	<1.7		9.2	1.7	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Dichlorobromomethane	<0.53		9.2	0.53	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Bromoform	<0.44		9.2	0.44	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Bromomethane	<0.77		9.2	0.77	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
2-Butanone (MEK)	<2.1		37	2.1	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Carbon disulfide	<1.1		9.2	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Carbon tetrachloride	<1.2		9.2	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Chlorobenzene	<0.98		9.2	0.98	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Chloroethane	<0.81		9.2	0.81	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Chloroform	<0.66		9.2	0.66	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Chloromethane	<1.5		9.2	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,1-Dichloroethane	<0.63		9.2	0.63	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,2-Dichloroethane	<0.85		9.2	0.85	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,1-Dichloroethene	<1.5		9.2	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,2-Dichloropropane	<0.26		9.2	0.26	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,2,4-Trimethylbenzene	<1.1		9.2	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
cis-1,3-Dichloropropene	<1.3		9.2	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
trans-1,3-Dichloropropene	<0.53		9.2	0.53	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Ethylbenzene	<0.59		9.2	0.59	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
2-Hexanone	<1.3		37	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Methylene Chloride	**3.0**	**J B**	9.2	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
4-Methyl-2-pentanone (MIBK)	<2.2		37	2.2	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Styrene	<0.74		9.2	0.74	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,1,2,2-Tetrachloroethane	<0.57		9.2	0.57	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Tetrachloroethene	<1.5		9.2	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Toluene	<0.50		9.2	0.50	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Trichloroethene	<0.70		9.2	0.70	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,3,5-Trimethylbenzene	<0.53		9.2	0.53	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Vinyl chloride	<0.55		9.2	0.55	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Xylenes, Total	<1.0		18	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,1,1-Trichloroethane	<1.2		9.2	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,1,2-Trichloroethane	<0.68		9.2	0.68	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Cyclohexane	<0.89		18	0.89	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,2-Dibromo-3-Chloropropane	<5.0		18	5.0	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Ethylene Dibromide	<0.98		9.2	0.98	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Dichlorodifluoromethane	<0.52		9.2	0.52	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
cis-1,2-Dichloroethene	<0.52		9.2	0.52	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
trans-1,2-Dichloroethene	<0.59		9.2	0.59	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Isopropylbenzene	<0.37		9.2	0.37	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Methyl acetate	<3.7		18	3.7	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Methyl tert-butyl ether	<0.79		9.2	0.79	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.77		9.2	0.77	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,2,4-Trichlorobenzene	<0.70		9.2	0.70	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,2-Dichlorobenzene	<0.63		9.2	0.63	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,3-Dichlorobenzene	<1.3		9.2	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
1,4-Dichlorobenzene	<0.52		9.2	0.52	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Trichlorofluoromethane	<0.53		9.2	0.53	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1
Chlorodibromomethane	<0.68		9.2	0.68	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1

Client Sample ID: SE-031016-JN-021
Date Collected: 03/10/16 12:50
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-11
Matrix: Solid
Percent Solids: 47.8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	<1.1		18	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 20:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*58 - 123*	*03/14/16 13:31*	*03/14/16 20:42*	*1*
4-Bromofluorobenzene (Surr)	*104*		*52 - 136*	*03/14/16 13:31*	*03/14/16 20:42*	*1*
Toluene-d8 (Surr)	*102*		*67 - 125*	*03/14/16 13:31*	*03/14/16 20:42*	*1*
Dibromofluoromethane (Surr)	*98*		*37 - 132*	*03/14/16 13:31*	*03/14/16 20:42*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<15		210	15	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
bis (2-chloroisopropyl) ether	<40		420	40	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
2,4,5-Trichlorophenol	<100		620	100	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
2,4,6-Trichlorophenol	<37		620	37	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
2,4-Dichlorophenol	<83		620	83	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
2,4-Dimethylphenol	<83		620	83	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
2,4-Dinitrophenol	<87		1400	87	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
2,4-Dinitrotoluene	<71		830	71	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
2,6-Dinitrotoluene	<87		830	87	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
2-Chloronaphthalene	<1.9		210	1.9	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
2-Chlorophenol	<34		210	34	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
2-Methylnaphthalene	**23**	**J**	28	2.1	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
2-Methylphenol	<46		830	46	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
2-Nitroaniline	<38		830	38	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
2-Nitrophenol	<35		210	35	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
3,3'-Dichlorobenzidine	<75		420	75	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
3-Nitroaniline	<67		830	67	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
4,6-Dinitro-2-methylphenol	<38		620	38	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
4-Bromophenyl phenyl ether	<54		210	54	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
4-Chloro-3-methylphenol	<87		620	87	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
4-Chloroaniline	<71		620	71	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
4-Chlorophenyl phenyl ether	<54		210	54	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
4-Nitroaniline	<110		830	110	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
4-Nitrophenol	<71		1400	71	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Acetophenone	<38		420	38	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Atrazine	<38		830	38	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Benzaldehyde	<50		420	50	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Bis(2-chloroethoxy)methane	<92		420	92	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Bis(2-chloroethyl)ether	<8.3		420	8.3	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Bis(2-ethylhexyl) phthalate	**250**	**J B**	290	79	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Butyl benzyl phthalate	**2300**		290	42	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Caprolactam	<150		1400	150	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Carbazole	<110		210	110	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Dibenzofuran	<2.7		210	2.7	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Diethyl phthalate	<67		290	67	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Dimethyl phthalate	<71		290	71	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Di-n-butyl phthalate	**150**	**J**	290	62	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Di-n-octyl phthalate	<33		290	33	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Hexachlorobenzene	<8.7		28	8.7	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Hexachlorobutadiene	<23		210	23	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2

Client Sample ID: SE-031016-JN-021
Date Collected: 03/10/16 12:50
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-11
Matrix: Solid
Percent Solids: 47.8

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<34		1400	34	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Hexachloroethane	<37		210	37	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Isophorone	<54		210	54	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Nitrobenzene	<9.2		420	9.2	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
N-Nitrosodi-n-propylamine	<26		210	26	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
N-Nitrosodiphenylamine	<87		210	87	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Pentachlorophenol	<38		620	38	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
Phenol	<30		210	30	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2
3 & 4 Methylphenol	<83		1700	83	ug/Kg	☼	03/14/16 07:06	03/17/16 19:19	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*51*		*24 - 110*	*03/14/16 07:06*	*03/17/16 19:19*	*2*
2-Fluorophenol (Surr)	*57*		*24 - 110*	*03/14/16 07:06*	*03/17/16 19:19*	*2*
2,4,6-Tribromophenol (Surr)	*51*		*10 - 110*	*03/14/16 07:06*	*03/17/16 19:19*	*2*
Nitrobenzene-d5 (Surr)	*45*		*20 - 110*	*03/14/16 07:06*	*03/17/16 19:19*	*2*
Phenol-d5 (Surr)	*55*		*26 - 110*	*03/14/16 07:06*	*03/17/16 19:19*	*2*
Terphenyl-d14 (Surr)	*61*		*36 - 110*	*03/14/16 07:06*	*03/17/16 19:19*	*2*

Method: 1630 - Methyl Mercury (GC)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**1.5**		0.20	0.060	ug/Kg	☼	03/14/16 11:58	03/18/16 23:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Propyl Mercury Chloride	*36*		*10 - 149*	*03/14/16 11:58*	*03/18/16 23:33*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<25		70	25	ug/Kg	☼	03/18/16 08:15	03/23/16 23:28	1
Aroclor-1221	<34		70	34	ug/Kg	☼	03/18/16 08:15	03/23/16 23:28	1
Aroclor-1232	<42		70	42	ug/Kg	☼	03/18/16 08:15	03/23/16 23:28	1
Aroclor-1242	<23		70	23	ug/Kg	☼	03/18/16 08:15	03/23/16 23:28	1
Aroclor-1248	<17		70	17	ug/Kg	☼	03/18/16 08:15	03/23/16 23:28	1
Aroclor-1254	**47**	**J**	70	30	ug/Kg	☼	03/18/16 08:15	03/23/16 23:28	1
Aroclor-1260	<19		70	19	ug/Kg	☼	03/18/16 08:15	03/23/16 23:28	1
Aroclor-1262	<21		70	21	ug/Kg	☼	03/18/16 08:15	03/23/16 23:28	1
Aroclor-1268	<27		70	27	ug/Kg	☼	03/18/16 08:15	03/23/16 23:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*37*		*13 - 134*	*03/18/16 08:15*	*03/23/16 23:28*	*1*
DCB Decachlorobiphenyl	*48*		*10 - 155*	*03/18/16 08:15*	*03/23/16 23:28*	*1*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.24**	**J B**	0.34	0.0024	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Arsenic	**4.6**	**B**	1.7	0.044	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Beryllium	**0.38**		0.34	0.019	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Cadmium	**0.88**		0.34	0.0063	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Cobalt	**5.0**	**B**	0.34	0.0029	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Chromium	**20.5**	**B**	0.68	0.10	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Copper	**16.7**	**B**	0.68	0.16	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Manganese	**239**	**B**	1.7	0.20	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2

Client Sample ID: SE-031016-JN-021
Date Collected: 03/10/16 12:50
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-11
Matrix: Solid
Percent Solids: 47.8

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	11.6		0.68	0.066	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Lead	99.9	B	0.34	0.077	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Antimony	0.44	J	0.68	0.024	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Selenium	1.5	J B	1.7	0.068	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Thallium	0.14	J	0.68	0.032	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Vanadium	14.9		1.7	0.063	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Zinc	101	B	6.8	0.85	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2
Barium	89.5		1.7	0.37	mg/Kg	☼	03/15/16 11:27	03/19/16 23:08	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	4.9		1.1	0.15	mg/Kg	☼	03/15/16 15:00	03/17/16 14:23	5

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	46300		2090	1050	mg/Kg	☼		03/22/16 12:07	1
Percent Solids	47.8		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	52.2		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-022
Date Collected: 03/10/16 12:55
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-12
Matrix: Solid
Percent Solids: 44.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<12		43	12	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Benzene	<1.9		11	1.9	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Dichlorobromomethane	<0.62		11	0.62	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Bromoform	<0.51		11	0.51	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Bromomethane	<0.90		11	0.90	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
2-Butanone (MEK)	<2.4		43	2.4	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Carbon disulfide	<1.3		11	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Carbon tetrachloride	<1.4		11	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Chlorobenzene	<1.1		11	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Chloroethane	<0.94		11	0.94	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Chloroform	<0.77		11	0.77	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Chloromethane	<1.7		11	1.7	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,1-Dichloroethane	<0.73		11	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,2-Dichloroethane	<0.98		11	0.98	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,1-Dichloroethene	<1.7		11	1.7	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,2-Dichloropropane	<0.30		11	0.30	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,2,4-Trimethylbenzene	<1.2		11	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
cis-1,3-Dichloropropene	<1.5		11	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
trans-1,3-Dichloropropene	<0.62		11	0.62	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Ethylbenzene	<0.68		11	0.68	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
2-Hexanone	<1.5		43	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Methylene Chloride	**3.8**	**J B**	11	1.6	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
4-Methyl-2-pentanone (MIBK)	<2.6		43	2.6	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Styrene	<0.85		11	0.85	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,1,2,2-Tetrachloroethane	<0.66		11	0.66	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Tetrachloroethene	<1.7		11	1.7	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Toluene	<0.58		11	0.58	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Trichloroethene	<0.81		11	0.81	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,3,5-Trimethylbenzene	<0.62		11	0.62	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Vinyl chloride	<0.64		11	0.64	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Xylenes, Total	<1.2		21	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,1,1-Trichloroethane	<1.4		11	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,1,2-Trichloroethane	<0.79		11	0.79	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Cyclohexane	<1.0		21	1.0	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,2-Dibromo-3-Chloropropane	<5.8		21	5.8	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Ethylene Dibromide	<1.1		11	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Dichlorodifluoromethane	<0.60		11	0.60	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
cis-1,2-Dichloroethene	<0.60		11	0.60	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
trans-1,2-Dichloroethene	<0.68		11	0.68	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Isopropylbenzene	<0.43		11	0.43	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Methyl acetate	<4.3		21	4.3	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Methyl tert-butyl ether	<0.92		11	0.92	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.90		11	0.90	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,2,4-Trichlorobenzene	<0.81		11	0.81	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,2-Dichlorobenzene	<0.73		11	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,3-Dichlorobenzene	<1.5		11	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
1,4-Dichlorobenzene	<0.60		11	0.60	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Trichlorofluoromethane	<0.62		11	0.62	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1
Chlorodibromomethane	<0.79		11	0.79	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1

Client Sample ID: SE-031016-JN-022
Date Collected: 03/10/16 12:55
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-12
Matrix: Solid
Percent Solids: 44.8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	<1.2		21	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 21:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*58 - 123*	*03/14/16 13:31*	*03/14/16 21:08*	*1*
4-Bromofluorobenzene (Surr)	*105*		*52 - 136*	*03/14/16 13:31*	*03/14/16 21:08*	*1*
Toluene-d8 (Surr)	*106*		*67 - 125*	*03/14/16 13:31*	*03/14/16 21:08*	*1*
Dibromofluoromethane (Surr)	*103*		*37 - 132*	*03/14/16 13:31*	*03/14/16 21:08*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<7.9		110	7.9	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
bis (2-chloroisopropyl) ether	<21		230	21	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
2,4,5-Trichlorophenol	<56		340	56	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
2,4,6-Trichlorophenol	<20		340	20	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
2,4-Dichlorophenol	<45		340	45	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
2,4-Dimethylphenol	<45		340	45	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
2,4-Dinitrophenol	<47		740	47	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
2,4-Dinitrotoluene	<38		450	38	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
2,6-Dinitrotoluene	<47		450	47	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
2-Chloronaphthalene	<1.0		110	1.0	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
2-Chlorophenol	<18		110	18	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
2-Methylnaphthalene	**30**		15	1.1	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
2-Methylphenol	<25		450	25	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
2-Nitroaniline	<21		450	21	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
2-Nitrophenol	<19		110	19	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
3,3'-Dichlorobenzidine	<41		230	41	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
3-Nitroaniline	<36		450	36	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
4,6-Dinitro-2-methylphenol	<21		340	21	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
4-Bromophenyl phenyl ether	<29		110	29	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
4-Chloro-3-methylphenol	<47		340	47	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
4-Chloroaniline	<38		340	38	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
4-Chlorophenyl phenyl ether	<29		110	29	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
4-Nitroaniline	<59		450	59	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
4-Nitrophenol	<38		740	38	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Acetophenone	<21		230	21	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Atrazine	<21		450	21	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Benzaldehyde	<27		230	27	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Bis(2-chloroethoxy)methane	<50		230	50	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Bis(2-chloroethyl)ether	<4.5		230	4.5	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Bis(2-ethylhexyl) phthalate	<43		160	43	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Butyl benzyl phthalate	<23		160	23	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Caprolactam	<83		740	83	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Carbazole	<61		110	61	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Dibenzofuran	**39**	**J**	110	1.5	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Diethyl phthalate	<36		160	36	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Dimethyl phthalate	<38		160	38	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Di-n-butyl phthalate	<34		160	34	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Di-n-octyl phthalate	<18		160	18	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Hexachlorobenzene	<4.7		15	4.7	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Hexachlorobutadiene	<13		110	13	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1

Client Sample ID: SE-031016-JN-022
Date Collected: 03/10/16 12:55
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-12
Matrix: Solid
Percent Solids: 44.8

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<18		740	18	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Hexachloroethane	<20		110	20	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Isophorone	**31**	**J**	110	29	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Nitrobenzene	<5.0		230	5.0	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
N-Nitrosodi-n-propylamine	<14		110	14	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
N-Nitrosodiphenylamine	<47		110	47	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Pentachlorophenol	<21		340	21	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Phenol	<16		110	16	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
3 & 4 Methylphenol	<45		900	45	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Fluorene	**81**		15	1.2	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Acenaphthylene	**32**		15	0.79	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Benzo[g,h,i]perylene	**150**		15	0.79	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Phenanthrene	**550**		15	1.6	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Benzo[k]fluoranthene	**170**		15	1.5	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Benzo[a]pyrene	**240**		15	1.4	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Anthracene	**150**		15	1.8	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Pyrene	**670**		15	0.99	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Dibenz(a,h)anthracene	**35**		15	1.5	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Naphthalene	**33**		15	1.8	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Fluoranthene	**690**		15	1.2	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Benzo[a]anthracene	**310**		15	1.4	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Indeno[1,2,3-cd]pyrene	**120**		15	0.79	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Chrysene	**320**		15	2.5	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Acenaphthene	**51**		15	1.7	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1
Benzo[b]fluoranthene	**270**		15	1.3	ug/Kg	☼	03/14/16 07:06	03/17/16 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*65*		*24 - 110*	*03/14/16 07:06*	*03/17/16 18:02*	*1*
2-Fluorophenol (Surr)	*68*		*24 - 110*	*03/14/16 07:06*	*03/17/16 18:02*	*1*
2,4,6-Tribromophenol (Surr)	*44*		*10 - 110*	*03/14/16 07:06*	*03/17/16 18:02*	*1*
Nitrobenzene-d5 (Surr)	*57*		*20 - 110*	*03/14/16 07:06*	*03/17/16 18:02*	*1*
Phenol-d5 (Surr)	*65*		*26 - 110*	*03/14/16 07:06*	*03/17/16 18:02*	*1*
Terphenyl-d14 (Surr)	*69*		*36 - 110*	*03/14/16 07:06*	*03/17/16 18:02*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<27	^c	73	27	ug/Kg	☼	03/14/16 06:37	03/17/16 01:06	1
Aroclor-1221	<35		73	35	ug/Kg	☼	03/14/16 06:37	03/17/16 01:06	1
Aroclor-1232	<44		73	44	ug/Kg	☼	03/14/16 06:37	03/17/16 01:06	1
Aroclor-1242	<24		73	24	ug/Kg	☼	03/14/16 06:37	03/17/16 01:06	1
Aroclor-1248	<18		73	18	ug/Kg	☼	03/14/16 06:37	03/17/16 01:06	1
Aroclor-1254	<31		73	31	ug/Kg	☼	03/14/16 06:37	03/17/16 01:06	1
Aroclor-1260	<20	^c	73	20	ug/Kg	☼	03/14/16 06:37	03/17/16 01:06	1
Aroclor-1262	<22		73	22	ug/Kg	☼	03/14/16 06:37	03/17/16 01:06	1
Aroclor-1268	<29		73	29	ug/Kg	☼	03/14/16 06:37	03/17/16 01:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*73*	*^c*	*13 - 134*	*03/14/16 06:37*	*03/17/16 01:06*	*1*
DCB Decachlorobiphenyl	*59*	*^c*	*10 - 155*	*03/14/16 06:37*	*03/17/16 01:06*	*1*

Client Sample ID: SE-031016-JN-022
Date Collected: 03/10/16 12:55
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-12
Matrix: Solid
Percent Solids: 44.8

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.15	J B	0.40	0.0028	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Arsenic	4.5	B	2.0	0.052	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Beryllium	0.57		0.40	0.022	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Cadmium	0.52		0.40	0.0074	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Cobalt	6.0	B	0.40	0.0034	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Chromium	15.7	B	0.81	0.12	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Copper	18.3	B	0.81	0.20	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Manganese	246	B	2.0	0.24	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Nickel	12.8		0.81	0.079	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Lead	43.7	B	0.40	0.091	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Antimony	0.13	J	0.81	0.028	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Selenium	1.8	J B	2.0	0.081	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Thallium	0.21	J	0.81	0.038	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Vanadium	20.5		2.0	0.074	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Zinc	91.1	B	8.1	1.0	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2
Barium	113		2.0	0.44	mg/Kg	☼	03/15/16 11:27	03/19/16 23:12	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	12.3		2.2	0.30	mg/Kg	☼	03/15/16 15:00	03/17/16 14:25	10

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	49100		2230	1120	mg/Kg	☼		03/22/16 12:18	1
Percent Solids	44.8		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	55.2		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-023
Date Collected: 03/10/16 13:00
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-13
Matrix: Solid
Percent Solids: 44.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<12		44	12	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Benzene	<2.0		11	2.0	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Dichlorobromomethane	<0.63		11	0.63	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Bromoform	<0.52		11	0.52	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Bromomethane	<0.92		11	0.92	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
2-Butanone (MEK)	<2.4		44	2.4	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Carbon disulfide	<1.3		11	1.3	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Carbon tetrachloride	<1.4		11	1.4	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Chlorobenzene	<1.2		11	1.2	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Chloroethane	<0.96		11	0.96	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Chloroform	<0.78		11	0.78	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Chloromethane	<1.7		11	1.7	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,1-Dichloroethane	<0.74		11	0.74	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,2-Dichloroethane	<1.0		11	1.0	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,1-Dichloroethene	<1.7		11	1.7	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,2-Dichloropropane	<0.31	F1	11	0.31	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,2,4-Trimethylbenzene	<1.3		11	1.3	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
cis-1,3-Dichloropropene	<1.5		11	1.5	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
trans-1,3-Dichloropropene	<0.63		11	0.63	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Ethylbenzene	<0.70		11	0.70	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
2-Hexanone	<1.5		44	1.5	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Methylene Chloride	**4.8**	**J B**	11	1.6	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
4-Methyl-2-pentanone (MIBK)	<2.7		44	2.7	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Styrene	<0.87		11	0.87	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,1,2,2-Tetrachloroethane	<0.68		11	0.68	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Tetrachloroethene	<1.7		11	1.7	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Toluene	<0.59		11	0.59	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Trichloroethene	<0.83		11	0.83	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,3,5-Trimethylbenzene	<0.63		11	0.63	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Vinyl chloride	<0.65		11	0.65	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Xylenes, Total	<1.2		22	1.2	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,1,1-Trichloroethane	<1.4		11	1.4	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,1,2-Trichloroethane	<0.81		11	0.81	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Cyclohexane	<1.0		22	1.0	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,2-Dibromo-3-Chloropropane	<5.9		22	5.9	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Ethylene Dibromide	<1.2		11	1.2	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Dichlorodifluoromethane	<0.61		11	0.61	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
cis-1,2-Dichloroethene	<0.61		11	0.61	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
trans-1,2-Dichloroethene	<0.70		11	0.70	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Isopropylbenzene	<0.44		11	0.44	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Methyl acetate	<4.4		22	4.4	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Methyl tert-butyl ether	<0.94		11	0.94	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.92		11	0.92	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,2,4-Trichlorobenzene	<0.83		11	0.83	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,2-Dichlorobenzene	<0.74		11	0.74	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,3-Dichlorobenzene	<1.5		11	1.5	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
1,4-Dichlorobenzene	<0.61		11	0.61	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Trichlorofluoromethane	<0.63		11	0.63	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1
Chlorodibromomethane	<0.81		11	0.81	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1

Client Sample ID: SE-031016-JN-023
Date Collected: 03/10/16 13:00
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-13
Matrix: Solid
Percent Solids: 44.6

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	<1.3		22	1.3	ug/Kg	☼	03/16/16 02:01	03/16/16 03:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*81*		*58 - 123*	*03/16/16 02:01*	*03/16/16 03:54*	*1*
4-Bromofluorobenzene (Surr)	*81*		*52 - 136*	*03/16/16 02:01*	*03/16/16 03:54*	*1*
Toluene-d8 (Surr)	*88*		*67 - 125*	*03/16/16 02:01*	*03/16/16 03:54*	*1*
Dibromofluoromethane (Surr)	*84*		*37 - 132*	*03/16/16 02:01*	*03/16/16 03:54*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<7.8		110	7.8	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
bis (2-chloroisopropyl) ether	<21		220	21	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
2,4,5-Trichlorophenol	<56		330	56	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
2,4,6-Trichlorophenol	<20		330	20	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
2,4-Dichlorophenol	<45		330	45	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
2,4-Dimethylphenol	<45		330	45	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
2,4-Dinitrophenol	<47		740	47	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
2,4-Dinitrotoluene	<38		450	38	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
2,6-Dinitrotoluene	<47		450	47	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
2-Chloronaphthalene	<1.0		110	1.0	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
2-Chlorophenol	<18		110	18	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
2-Methylnaphthalene	**8.7**	**J**	15	1.1	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
2-Methylphenol	<25		450	25	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
2-Nitroaniline	<20		450	20	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
2-Nitrophenol	<19		110	19	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
3,3'-Dichlorobenzidine	<40		220	40	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
3-Nitroaniline	<36		450	36	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
4,6-Dinitro-2-methylphenol	<21		330	21	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
4-Bromophenyl phenyl ether	<29		110	29	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
4-Chloro-3-methylphenol	<47		330	47	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
4-Chloroaniline	<38		330	38	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
4-Chlorophenyl phenyl ether	<29		110	29	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
4-Nitroaniline	<58		450	58	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
4-Nitrophenol	<38		740	38	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Acetophenone	<21		220	21	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Atrazine	<20		450	20	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Benzaldehyde	<27		220	27	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Bis(2-chloroethoxy)methane	<49		220	49	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Bis(2-chloroethyl)ether	<4.5		220	4.5	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Bis(2-ethylhexyl) phthalate	<42		160	42	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Butyl benzyl phthalate	**38**	**J F1**	160	22	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Caprolactam	<83		740	83	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Carbazole	<60		110	60	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Dibenzofuran	<1.5		110	1.5	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Diethyl phthalate	<36		160	36	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Dimethyl phthalate	<38		160	38	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Di-n-butyl phthalate	<33		160	33	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Di-n-octyl phthalate	<18		160	18	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Hexachlorobenzene	<4.7		15	4.7	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Hexachlorobutadiene	<13		110	13	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1

Client Sample ID: SE-031016-JN-023
Date Collected: 03/10/16 13:00
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-13
Matrix: Solid
Percent Solids: 44.6

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<18	F1	740	18	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Hexachloroethane	<20	F1	110	20	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Isophorone	<29		110	29	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Nitrobenzene	<4.9		220	4.9	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
N-Nitrosodi-n-propylamine	<14		110	14	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
N-Nitrosodiphenylamine	<47		110	47	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Pentachlorophenol	<20		330	20	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Phenol	<16		110	16	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
3 & 4 Methylphenol	<45		890	45	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Fluorene	**14**	**J**	15	1.2	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Acenaphthylene	**11**	**J**	15	0.78	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Benzo[g,h,i]perylene	**60**		15	0.78	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Phenanthrene	**110**		15	1.6	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Benzo[k]fluoranthene	**33**		15	1.5	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Benzo[a]pyrene	**82**		15	1.4	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Anthracene	**25**		15	1.7	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Pyrene	**190**		15	0.98	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Dibenz(a,h)anthracene	<1.5		15	1.5	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Naphthalene	**12**	**J**	15	1.8	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Fluoranthene	**190**		15	1.2	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Benzo[a]anthracene	**86**		15	1.4	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Indeno[1,2,3-cd]pyrene	**52**		15	0.78	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Chrysene	**100**		15	2.5	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Acenaphthene	<1.7		15	1.7	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1
Benzo[b]fluoranthene	**100**		15	1.3	ug/Kg	☼	03/14/16 07:06	03/17/16 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*48*		*24 - 110*	*03/14/16 07:06*	*03/17/16 15:29*	*1*
2-Fluorophenol (Surr)	*52*		*24 - 110*	*03/14/16 07:06*	*03/17/16 15:29*	*1*
2,4,6-Tribromophenol (Surr)	*40*		*10 - 110*	*03/14/16 07:06*	*03/17/16 15:29*	*1*
Nitrobenzene-d5 (Surr)	*43*		*20 - 110*	*03/14/16 07:06*	*03/17/16 15:29*	*1*
Phenol-d5 (Surr)	*51*		*26 - 110*	*03/14/16 07:06*	*03/17/16 15:29*	*1*
Terphenyl-d14 (Surr)	*54*		*36 - 110*	*03/14/16 07:06*	*03/17/16 15:29*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<140	F1	370	140	ug/Kg	☼	03/18/16 08:15	03/23/16 23:46	5
Aroclor-1221	<180		370	180	ug/Kg	☼	03/18/16 08:15	03/23/16 23:46	5
Aroclor-1232	<230		370	230	ug/Kg	☼	03/18/16 08:15	03/23/16 23:46	5
Aroclor-1242	<120		370	120	ug/Kg	☼	03/18/16 08:15	03/23/16 23:46	5
Aroclor-1248	<90		370	90	ug/Kg	☼	03/18/16 08:15	03/23/16 23:46	5
Aroclor-1254	<160		370	160	ug/Kg	☼	03/18/16 08:15	03/23/16 23:46	5
Aroclor-1260	<100	F1	370	100	ug/Kg	☼	03/18/16 08:15	03/23/16 23:46	5
Aroclor-1262	<110		370	110	ug/Kg	☼	03/18/16 08:15	03/23/16 23:46	5
Aroclor-1268	<150		370	150	ug/Kg	☼	03/18/16 08:15	03/23/16 23:46	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*45*		*13 - 134*	*03/18/16 08:15*	*03/23/16 23:46*	*5*
DCB Decachlorobiphenyl	*80*	*p*	*10 - 155*	*03/18/16 08:15*	*03/23/16 23:46*	*5*

Client Sample ID: SE-031016-JN-023

Date Collected: 03/10/16 13:00
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-13

Matrix: Solid
Percent Solids: 44.6

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0076	J B	0.50	0.0029	mg/L		03/16/16 11:41	03/17/16 19:50	1
Barium	0.75	J B	10.0	0.0010	mg/L		03/16/16 11:41	03/17/16 19:50	1
Cadmium	0.00061	J	0.10	0.00014	mg/L		03/16/16 11:41	03/17/16 19:50	1
Chromium	0.0035	J B	0.50	0.00055	mg/L		03/16/16 11:41	03/17/16 19:50	1
Lead	<0.0019		0.50	0.0019	mg/L		03/16/16 11:41	03/17/16 19:50	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:41	03/17/16 19:50	1
Silver	<0.00092		0.50	0.00092	mg/L		03/16/16 11:41	03/17/16 19:50	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.11	J B	0.41	0.0029	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Arsenic	3.5	B	2.1	0.053	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Beryllium	0.64	F1	0.41	0.023	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Cadmium	0.42		0.41	0.0076	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Cobalt	5.4	B	0.41	0.0035	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Chromium	16.3	B	0.82	0.12	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Copper	13.7	B	0.82	0.20	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Manganese	242	B F1	2.1	0.25	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Nickel	11.8		0.82	0.080	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Lead	26.1	B	0.41	0.092	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Antimony	0.12	J F1	0.82	0.029	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Selenium	1.7	J B	2.1	0.082	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Thallium	0.20	J	0.82	0.039	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Vanadium	20.2		2.1	0.076	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Zinc	61.9	B	8.2	1.0	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2
Barium	101		2.1	0.45	mg/Kg	☼	03/15/16 11:27	03/19/16 22:35	2

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 12:33	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	3.1		1.0	0.14	mg/Kg	☼	03/15/16 15:00	03/17/16 14:17	5

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	66800		2240	1120	mg/Kg	☼		03/22/16 12:49	1
Percent Solids	44.6		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	55.4		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-024
Date Collected: 03/10/16 14:05
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-14
Matrix: Solid
Percent Solids: 47.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**16**	**J B**	41	12	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Benzene	<1.8		10	1.8	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Dichlorobromomethane	<0.59		10	0.59	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Bromoform	<0.49		10	0.49	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Bromomethane	<0.85		10	0.85	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
2-Butanone (MEK)	**4.8**	**J B**	41	2.3	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Carbon disulfide	<1.2		10	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Carbon tetrachloride	<1.3		10	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Chlorobenzene	<1.1		10	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Chloroethane	<0.90		10	0.90	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Chloroform	<0.73		10	0.73	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Chloromethane	<1.6		10	1.6	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,1-Dichloroethane	<0.69		10	0.69	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,2-Dichloroethane	<0.94		10	0.94	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,1-Dichloroethene	<1.6		10	1.6	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,2-Dichloropropane	<0.28		10	0.28	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,2,4-Trimethylbenzene	<1.2		10	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
cis-1,3-Dichloropropene	<1.4		10	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
trans-1,3-Dichloropropene	<0.59		10	0.59	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Ethylbenzene	<0.65		10	0.65	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
2-Hexanone	<1.4		41	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Methylene Chloride	**3.4**	**J B**	10	1.5	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
4-Methyl-2-pentanone (MIBK)	<2.5		41	2.5	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Styrene	<0.81		10	0.81	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,1,2,2-Tetrachloroethane	<0.63		10	0.63	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Tetrachloroethene	<1.6		10	1.6	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Toluene	<0.55		10	0.55	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Trichloroethene	<0.77		10	0.77	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,3,5-Trimethylbenzene	<0.59		10	0.59	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Vinyl chloride	<0.61		10	0.61	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Xylenes, Total	<1.1		20	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,1,1-Trichloroethane	<1.3		10	1.3	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,1,2-Trichloroethane	<0.75		10	0.75	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Cyclohexane	<0.98		20	0.98	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,2-Dibromo-3-Chloropropane	<5.5		20	5.5	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Ethylene Dibromide	<1.1		10	1.1	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Dichlorodifluoromethane	<0.57		10	0.57	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
cis-1,2-Dichloroethene	<0.57		10	0.57	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
trans-1,2-Dichloroethene	<0.65		10	0.65	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Isopropylbenzene	<0.41		10	0.41	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Methyl acetate	<4.1		20	4.1	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Methyl tert-butyl ether	<0.88		10	0.88	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.85		10	0.85	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,2,4-Trichlorobenzene	<0.77		10	0.77	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,2-Dichlorobenzene	<0.69		10	0.69	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,3-Dichlorobenzene	<1.4		10	1.4	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
1,4-Dichlorobenzene	<0.57		10	0.57	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Trichlorofluoromethane	<0.59		10	0.59	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1
Chlorodibromomethane	<0.75		10	0.75	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1

Client Sample ID: SE-031016-JN-024
Date Collected: 03/10/16 14:05
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-14
Matrix: Solid
Percent Solids: 47.6

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	<1.2		20	1.2	ug/Kg	☼	03/14/16 13:31	03/14/16 22:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*58 - 123*	*03/14/16 13:31*	*03/14/16 22:25*	*1*
4-Bromofluorobenzene (Surr)	*108*		*52 - 136*	*03/14/16 13:31*	*03/14/16 22:25*	*1*
Toluene-d8 (Surr)	*107*		*67 - 125*	*03/14/16 13:31*	*03/14/16 22:25*	*1*
Dibromofluoromethane (Surr)	*99*		*37 - 132*	*03/14/16 13:31*	*03/14/16 22:25*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<150		2100	150	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
bis (2-chloroisopropyl) ether	<400		4200	400	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
2,4,5-Trichlorophenol	<1000		6300	1000	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
2,4,6-Trichlorophenol	<370		6300	370	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
2,4-Dichlorophenol	<840		6300	840	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
2,4-Dimethylphenol	<840		6300	840	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
2,4-Dinitrophenol	<880		14000	880	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
2,4-Dinitrotoluene	<710		8400	710	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
2,6-Dinitrotoluene	<880		8400	880	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
2-Chloronaphthalene	<19		2100	19	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
2-Chlorophenol	<340		2100	340	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
2-Methylnaphthalene	**360**		280	21	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
2-Methylphenol	<460		8400	460	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
2-Nitroaniline	<380		8400	380	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
2-Nitrophenol	<350		2100	350	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
3,3'-Dichlorobenzidine	<750		4200	750	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
3-Nitroaniline	<670		8400	670	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
4,6-Dinitro-2-methylphenol	<380		6300	380	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
4-Bromophenyl phenyl ether	<540		2100	540	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
4-Chloro-3-methylphenol	<880		6300	880	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
4-Chloroaniline	<710		6300	710	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
4-Chlorophenyl phenyl ether	<540		2100	540	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
4-Nitroaniline	<1100		8400	1100	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
4-Nitrophenol	<710		14000	710	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Acetophenone	<380		4200	380	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Atrazine	<380		8400	380	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Benzaldehyde	<500		4200	500	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Bis(2-chloroethoxy)methane	<920		4200	920	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Bis(2-chloroethyl)ether	<84		4200	84	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Bis(2-ethylhexyl) phthalate	**3900**	**B**	2900	790	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Butyl benzyl phthalate	**3200**		2900	420	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Caprolactam	<1500		14000	1500	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Carbazole	<1100		2100	1100	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Dibenzofuran	<28		2100	28	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Diethyl phthalate	<670		2900	670	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Dimethyl phthalate	<710		2900	710	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Di-n-butyl phthalate	**1700**	**J**	2900	630	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Di-n-octyl phthalate	<330		2900	330	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Hexachlorobenzene	<88		280	88	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Hexachlorobutadiene	<230		2100	230	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20

Client Sample ID: SE-031016-JN-024

Date Collected: 03/10/16 14:05
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-14

Matrix: Solid
Percent Solids: 47.6

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<340		14000	340	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Hexachloroethane	<380		2100	380	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Isophorone	<540		2100	540	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Nitrobenzene	<92		4200	92	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
N-Nitrosodi-n-propylamine	<260		2100	260	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
N-Nitrosodiphenylamine	<880		2100	880	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Pentachlorophenol	<380		6300	380	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
Phenol	<300		2100	300	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20
3 & 4 Methylphenol	<840		17000	840	ug/Kg	☼	03/14/16 07:06	03/19/16 17:58	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*53*		*24 - 110*	*03/14/16 07:06*	*03/19/16 17:58*	*20*
2-Fluorophenol (Surr)	*66*		*24 - 110*	*03/14/16 07:06*	*03/19/16 17:58*	*20*
2,4,6-Tribromophenol (Surr)	*54*		*10 - 110*	*03/14/16 07:06*	*03/19/16 17:58*	*20*
Nitrobenzene-d5 (Surr)	*60*		*20 - 110*	*03/14/16 07:06*	*03/19/16 17:58*	*20*
Phenol-d5 (Surr)	*58*		*26 - 110*	*03/14/16 07:06*	*03/19/16 17:58*	*20*
Terphenyl-d14 (Surr)	*59*		*36 - 110*	*03/14/16 07:06*	*03/19/16 17:58*	*20*

Method: 1630 - Methyl Mercury (GC)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.48**		0.20	0.061	ug/Kg	☼	03/14/16 11:58	03/18/16 23:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Propyl Mercury Chloride	*33*		*10 - 149*	*03/14/16 11:58*	*03/18/16 23:54*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<26		70	26	ug/Kg	☼	03/18/16 08:15	03/24/16 00:39	1
Aroclor-1221	<34		70	34	ug/Kg	☼	03/18/16 08:15	03/24/16 00:39	1
Aroclor-1232	<43		70	43	ug/Kg	☼	03/18/16 08:15	03/24/16 00:39	1
Aroclor-1242	<23		70	23	ug/Kg	☼	03/18/16 08:15	03/24/16 00:39	1
Aroclor-1248	<17		70	17	ug/Kg	☼	03/18/16 08:15	03/24/16 00:39	1
Aroclor-1254	**66**	**J**	70	30	ug/Kg	☼	03/18/16 08:15	03/24/16 00:39	1
Aroclor-1260	<19		70	19	ug/Kg	☼	03/18/16 08:15	03/24/16 00:39	1
Aroclor-1262	<21		70	21	ug/Kg	☼	03/18/16 08:15	03/24/16 00:39	1
Aroclor-1268	**380**		70	28	ug/Kg	☼	03/18/16 08:15	03/24/16 00:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*57*		*13 - 134*	*03/18/16 08:15*	*03/24/16 00:39*	*1*
DCB Decachlorobiphenyl	*1520*	*X*	*10 - 155*	*03/18/16 08:15*	*03/24/16 00:39*	*1*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	**0.25**	**J B**	0.35	0.0025	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Arsenic	**8.1**	**B**	1.8	0.046	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Beryllium	**0.36**		0.35	0.019	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Cadmium	**14.1**		0.35	0.0065	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Cobalt	**6.1**	**B**	0.35	0.0030	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Chromium	**183**	**B**	0.71	0.11	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Copper	**78.7**	**B**	0.71	0.17	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Manganese	**218**	**B**	1.8	0.21	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2

Client Sample ID: SE-031016-JN-024
Date Collected: 03/10/16 14:05
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-14
Matrix: Solid
Percent Solids: 47.6

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	14.7		0.71	0.069	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Lead	1390	B	0.35	0.079	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Antimony	23.0		0.71	0.025	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Selenium	4.3	B	1.8	0.071	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Thallium	0.15	J	0.71	0.034	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Vanadium	14.1		1.8	0.065	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Zinc	2040	B	7.1	0.88	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2
Barium	1340		1.8	0.39	mg/Kg	☼	03/15/16 11:27	03/19/16 23:16	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.62		0.22	0.030	mg/Kg	☼	03/15/16 15:00	03/17/16 11:53	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	131000		2100	1050	mg/Kg	☼		03/22/16 12:28	1
Percent Solids	47.6		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	52.4		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-025
Date Collected: 03/10/16 14:10
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-15
Matrix: Solid
Percent Solids: 44.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**130**	**J B**	210	59	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Benzene	<9.3		52	9.3	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Dichlorobromomethane	<3.0		52	3.0	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Bromoform	<2.5		52	2.5	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Bromomethane	<4.4		52	4.4	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
2-Butanone (MEK)	**32**	**J B**	210	12	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Carbon disulfide	**25**	**J**	52	6.1	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Carbon tetrachloride	<6.7		52	6.7	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Chlorobenzene	<5.5		52	5.5	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Chloroethane	<4.6		52	4.6	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Chloroform	<3.7		52	3.7	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Chloromethane	<8.2		52	8.2	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,1-Dichloroethane	<3.5		52	3.5	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,2-Dichloroethane	<4.8		52	4.8	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,1-Dichloroethene	<8.3		52	8.3	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,2-Dichloropropane	<1.5		52	1.5	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,2,4-Trimethylbenzene	<6.0		52	6.0	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
cis-1,3-Dichloropropene	<7.4		52	7.4	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
trans-1,3-Dichloropropene	<3.0		52	3.0	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Ethylbenzene	<3.3		52	3.3	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
2-Hexanone	<7.0		210	7.0	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Methylene Chloride	**23**	**J B**	52	7.7	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
4-Methyl-2-pentanone (MIBK)	<13		210	13	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Styrene	<4.1		52	4.1	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,1,2,2-Tetrachloroethane	<3.2		52	3.2	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Tetrachloroethene	<8.3		52	8.3	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Toluene	<2.8		52	2.8	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Trichloroethene	<3.9		52	3.9	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,3,5-Trimethylbenzene	<3.0		52	3.0	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Vinyl chloride	<3.1		52	3.1	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Xylenes, Total	<5.6		100	5.6	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,1,1-Trichloroethane	<6.7		52	6.7	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,1,2-Trichloroethane	<3.8		52	3.8	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Cyclohexane	<5.0		100	5.0	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,2-Dibromo-3-Chloropropane	<28		100	28	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Ethylene Dibromide	<5.5		52	5.5	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Dichlorodifluoromethane	<2.9		52	2.9	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
cis-1,2-Dichloroethene	<2.9		52	2.9	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
trans-1,2-Dichloroethene	<3.3		52	3.3	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Isopropylbenzene	<2.1		52	2.1	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Methyl acetate	<21		100	21	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Methyl tert-butyl ether	<4.5		52	4.5	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<4.4		52	4.4	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,2,4-Trichlorobenzene	<3.9		52	3.9	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,2-Dichlorobenzene	<3.5		52	3.5	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,3-Dichlorobenzene	<7.1		52	7.1	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
1,4-Dichlorobenzene	<2.9		52	2.9	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Trichlorofluoromethane	<3.0		52	3.0	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1
Chlorodibromomethane	<3.8		52	3.8	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1

Client Sample ID: SE-031016-JN-025
Date Collected: 03/10/16 14:10
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-15
Matrix: Solid
Percent Solids: 44.7

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	<6.0		100	6.0	ug/Kg	☼	03/16/16 13:22	03/16/16 22:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*85*		*58 - 123*	*03/16/16 13:22*	*03/16/16 22:23*	*1*
4-Bromofluorobenzene (Surr)	*121*		*52 - 136*	*03/16/16 13:22*	*03/16/16 22:23*	*1*
Toluene-d8 (Surr)	*110*		*67 - 125*	*03/16/16 13:22*	*03/16/16 22:23*	*1*
Dibromofluoromethane (Surr)	*97*		*37 - 132*	*03/16/16 13:22*	*03/16/16 22:23*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<160		2300	160	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
bis (2-chloroisopropyl) ether	<430		4500	430	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
2,4,5-Trichlorophenol	<1100		6800	1100	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
2,4,6-Trichlorophenol	<400		6800	400	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
2,4-Dichlorophenol	<910		6800	910	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
2,4-Dimethylphenol	<910		6800	910	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
2,4-Dinitrophenol	<950		15000	950	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
2,4-Dinitrotoluene	<770		9100	770	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
2,6-Dinitrotoluene	<950		9100	950	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
2-Chloronaphthalene	<20		2300	20	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
2-Chlorophenol	<370		2300	370	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
2-Methylnaphthalene	**230**	**J**	300	23	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
2-Methylphenol	<500		9100	500	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
2-Nitroaniline	<410		9100	410	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
2-Nitrophenol	<380		2300	380	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
3,3'-Dichlorobenzidine	<820		4500	820	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
3-Nitroaniline	<730		9100	730	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
4,6-Dinitro-2-methylphenol	<420		6800	420	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
4-Bromophenyl phenyl ether	<590		2300	590	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
4-Chloro-3-methylphenol	<950		6800	950	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
4-Chloroaniline	<770		6800	770	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
4-Chlorophenyl phenyl ether	<590		2300	590	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
4-Nitroaniline	<1200		9100	1200	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
4-Nitrophenol	<770		15000	770	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Acetophenone	<420		4500	420	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Atrazine	<410		9100	410	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Benzaldehyde	<540		4500	540	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Bis(2-chloroethoxy)methane	<1000		4500	1000	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Bis(2-chloroethyl)ether	<91		4500	91	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Bis(2-ethylhexyl) phthalate	**1100**	**J B**	3200	860	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Butyl benzyl phthalate	<450		3200	450	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Caprolactam	<1700		15000	1700	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Carbazole	<1200		2300	1200	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Dibenzofuran	<30		2300	30	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Diethyl phthalate	<730		3200	730	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Dimethyl phthalate	<770		3200	770	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Di-n-butyl phthalate	<680		3200	680	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Di-n-octyl phthalate	<360		3200	360	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Hexachlorobenzene	<95		300	95	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Hexachlorobutadiene	<250		2300	250	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20

Client Sample ID: SE-031016-JN-025
Date Collected: 03/10/16 14:10
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-15
Matrix: Solid
Percent Solids: 44.7

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<370		15000	370	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Hexachloroethane	<410		2300	410	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Isophorone	<590		2300	590	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Nitrobenzene	<100		4500	100	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
N-Nitrosodi-n-propylamine	<290		2300	290	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
N-Nitrosodiphenylamine	<950		2300	950	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Pentachlorophenol	<410		6800	410	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Phenol	<330		2300	330	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
3 & 4 Methylphenol	<910		18000	910	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Fluorene	<24		300	24	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Acenaphthylene	<16		300	16	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Benzo[g,h,i]perylene	**450**		300	16	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Phenanthrene	**500**		300	33	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Benzo[k]fluoranthene	**300**		300	31	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Benzo[a]pyrene	**440**		300	29	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Anthracene	**260**	**J**	300	35	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Pyrene	**2000**		300	20	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Dibenz(a,h)anthracene	<30		300	30	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Naphthalene	**180**	**J**	300	37	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Fluoranthene	**1700**		300	25	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Benzo[a]anthracene	**740**		300	29	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Indeno[1,2,3-cd]pyrene	<16		300	16	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Chrysene	**920**		300	50	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Acenaphthene	<34		300	34	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20
Benzo[b]fluoranthene	**770**		300	27	ug/Kg	☼	03/14/16 07:06	03/19/16 18:23	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*69*		*24 - 110*	*03/14/16 07:06*	*03/19/16 18:23*	*20*
2-Fluorophenol (Surr)	*75*		*24 - 110*	*03/14/16 07:06*	*03/19/16 18:23*	*20*
2,4,6-Tribromophenol (Surr)	*53*		*10 - 110*	*03/14/16 07:06*	*03/19/16 18:23*	*20*
Nitrobenzene-d5 (Surr)	*89*		*20 - 110*	*03/14/16 07:06*	*03/19/16 18:23*	*20*
Phenol-d5 (Surr)	*74*		*26 - 110*	*03/14/16 07:06*	*03/19/16 18:23*	*20*
Terphenyl-d14 (Surr)	*76*		*36 - 110*	*03/14/16 07:06*	*03/19/16 18:23*	*20*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<26		73	26	ug/Kg	☼	03/14/16 06:37	03/17/16 03:32	1
Aroclor-1221	<35		73	35	ug/Kg	☼	03/14/16 06:37	03/17/16 03:32	1
Aroclor-1232	<44		73	44	ug/Kg	☼	03/14/16 06:37	03/17/16 03:32	1
Aroclor-1242	<24		73	24	ug/Kg	☼	03/14/16 06:37	03/17/16 03:32	1
Aroclor-1248	<18		73	18	ug/Kg	☼	03/14/16 06:37	03/17/16 03:32	1
Aroclor-1254	<31		73	31	ug/Kg	☼	03/14/16 06:37	03/17/16 03:32	1
Aroclor-1260	<20		73	20	ug/Kg	☼	03/14/16 06:37	03/17/16 03:32	1
Aroclor-1262	<22		73	22	ug/Kg	☼	03/14/16 06:37	03/17/16 03:32	1
Aroclor-1268	<29		73	29	ug/Kg	☼	03/14/16 06:37	03/17/16 03:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*48*		*13 - 134*	*03/14/16 06:37*	*03/17/16 03:32*	*1*
DCB Decachlorobiphenyl	*48*	*^c*	*10 - 155*	*03/14/16 06:37*	*03/17/16 03:32*	*1*

Client Sample ID: SE-031016-JN-025
Date Collected: 03/10/16 14:10
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-15
Matrix: Solid
Percent Solids: 44.7

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.25	J B	0.42	0.0029	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Arsenic	12.0	B	2.1	0.054	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Beryllium	0.56		0.42	0.023	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Cadmium	1.1		0.42	0.0077	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Cobalt	5.9	B	0.42	0.0036	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Chromium	31.0	B	0.84	0.13	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Copper	33.9	B	0.84	0.20	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Manganese	180	B	2.1	0.25	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Nickel	14.4		0.84	0.082	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Lead	370	B	0.42	0.094	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Antimony	2.5		0.84	0.029	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Selenium	2.2	B	2.1	0.084	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Thallium	0.23	J	0.84	0.040	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Vanadium	23.8		2.1	0.077	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Zinc	338	B	8.4	1.0	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2
Barium	175		2.1	0.46	mg/Kg	☼	03/15/16 11:27	03/19/16 23:20	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.6		0.24	0.034	mg/Kg	☼	03/15/16 15:00	03/17/16 11:55	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	66500		2240	1120	mg/Kg	☼		03/22/16 13:31	1
Percent Solids	44.7		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	55.3		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-026
Date Collected: 03/10/16 14:15
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-16
Matrix: Solid
Percent Solids: 45.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**50**	**B**	42	12	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Benzene	<1.9		10	1.9	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Dichlorobromomethane	<0.60		10	0.60	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Bromoform	<0.50		10	0.50	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Bromomethane	<0.87		10	0.87	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
2-Butanone (MEK)	**9.3**	**J B**	42	2.3	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Carbon disulfide	**3.8**	**J**	10	1.2	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Carbon tetrachloride	<1.3		10	1.3	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Chlorobenzene	<1.1		10	1.1	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Chloroethane	<0.91		10	0.91	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Chloroform	<0.75		10	0.75	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Chloromethane	<1.6		10	1.6	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,1-Dichloroethane	<0.71		10	0.71	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,2-Dichloroethane	<0.95		10	0.95	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,1-Dichloroethene	<1.7		10	1.7	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,2-Dichloropropane	<0.29		10	0.29	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,2,4-Trimethylbenzene	<1.2		10	1.2	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
cis-1,3-Dichloropropene	<1.5		10	1.5	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
trans-1,3-Dichloropropene	<0.60		10	0.60	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Ethylbenzene	<0.66		10	0.66	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
2-Hexanone	<1.4		42	1.4	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Methylene Chloride	**3.5**	**J B**	10	1.5	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
4-Methyl-2-pentanone (MIBK)	<2.5		42	2.5	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Styrene	<0.83		10	0.83	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,1,2,2-Tetrachloroethane	<0.64		10	0.64	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Tetrachloroethene	<1.7		10	1.7	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Toluene	<0.56		10	0.56	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Trichloroethene	<0.79		10	0.79	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,3,5-Trimethylbenzene	<0.60		10	0.60	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Vinyl chloride	<0.62		10	0.62	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Xylenes, Total	<1.1		21	1.1	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,1,1-Trichloroethane	<1.3		10	1.3	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,1,2-Trichloroethane	<0.77		10	0.77	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Cyclohexane	<1.0		21	1.0	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,2-Dibromo-3-Chloropropane	<5.6		21	5.6	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Ethylene Dibromide	<1.1		10	1.1	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Dichlorodifluoromethane	<0.58		10	0.58	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
cis-1,2-Dichloroethene	<0.58		10	0.58	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
trans-1,2-Dichloroethene	<0.66		10	0.66	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Isopropylbenzene	<0.42		10	0.42	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Methyl acetate	<4.2		21	4.2	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Methyl tert-butyl ether	<0.89		10	0.89	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.87		10	0.87	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,2,4-Trichlorobenzene	<0.79		10	0.79	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,2-Dichlorobenzene	<0.71		10	0.71	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,3-Dichlorobenzene	<1.4		10	1.4	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
1,4-Dichlorobenzene	<0.58		10	0.58	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Trichlorofluoromethane	<0.60		10	0.60	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1
Chlorodibromomethane	<0.77		10	0.77	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1

Client Sample ID: SE-031016-JN-026
Date Collected: 03/10/16 14:15
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-16
Matrix: Solid
Percent Solids: 45.4

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	<1.2		21	1.2	ug/Kg	☼	03/16/16 13:22	03/16/16 20:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*58 - 123*	*03/16/16 13:22*	*03/16/16 20:41*	*1*
4-Bromofluorobenzene (Surr)	*105*		*52 - 136*	*03/16/16 13:22*	*03/16/16 20:41*	*1*
Toluene-d8 (Surr)	*106*		*67 - 125*	*03/16/16 13:22*	*03/16/16 20:41*	*1*
Dibromofluoromethane (Surr)	*101*		*37 - 132*	*03/16/16 13:22*	*03/16/16 20:41*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<160		2200	160	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
bis (2-chloroisopropyl) ether	<420		4500	420	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
2,4,5-Trichlorophenol	<1100		6700	1100	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
2,4,6-Trichlorophenol	<400		6700	400	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
2,4-Dichlorophenol	<890		6700	890	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
2,4-Dimethylphenol	<890		6700	890	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
2,4-Dinitrophenol	<940		15000	940	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
2,4-Dinitrotoluene	<760		8900	760	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
2,6-Dinitrotoluene	<940		8900	940	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
2-Chloronaphthalene	<20		2200	20	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
2-Chlorophenol	<370		2200	370	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
2-Methylnaphthalene	**400**		300	22	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
2-Methylphenol	<490		8900	490	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
2-Nitroaniline	<410		8900	410	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
2-Nitrophenol	<370		2200	370	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
3,3'-Dichlorobenzidine	<810		4500	810	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
3-Nitroaniline	<720		8900	720	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
4,6-Dinitro-2-methylphenol	<410		6700	410	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
4-Bromophenyl phenyl ether	<580		2200	580	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
4-Chloro-3-methylphenol	<940		6700	940	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
4-Chloroaniline	<760		6700	760	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
4-Chlorophenyl phenyl ether	<580		2200	580	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
4-Nitroaniline	<1200		8900	1200	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
4-Nitrophenol	<760		15000	760	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Acetophenone	<410		4500	410	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Atrazine	<410		8900	410	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Benzaldehyde	<540		4500	540	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Bis(2-chloroethoxy)methane	<980		4500	980	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Bis(2-chloroethyl)ether	<89		4500	89	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Bis(2-ethylhexyl) phthalate	<850		3100	850	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Butyl benzyl phthalate	<450		3100	450	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Caprolactam	<1700		15000	1700	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Carbazole	<1200		2200	1200	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Dibenzofuran	<30		2200	30	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Diethyl phthalate	<720		3100	720	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Dimethyl phthalate	<760		3100	760	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Di-n-butyl phthalate	**1200**	**J**	3100	670	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Di-n-octyl phthalate	<350		3100	350	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Hexachlorobenzene	<94		300	94	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Hexachlorobutadiene	<250		2200	250	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20

Client Sample ID: SE-031016-JN-026
Date Collected: 03/10/16 14:15
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-16
Matrix: Solid
Percent Solids: 45.4

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<360		15000	360	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Hexachloroethane	<400		2200	400	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Isophorone	<580		2200	580	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Nitrobenzene	<98		4500	98	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
N-Nitrosodi-n-propylamine	<280		2200	280	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
N-Nitrosodiphenylamine	<940		2200	940	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Pentachlorophenol	<410		6700	410	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Phenol	<330		2200	330	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
3 & 4 Methylphenol	<890		18000	890	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Fluorene	<24		300	24	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Acenaphthylene	<16		300	16	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Benzo[g,h,i]perylene	**610**		300	16	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Phenanthrene	**700**		300	33	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Benzo[k]fluoranthene	**700**		300	30	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Benzo[a]pyrene	**1000**		300	29	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Anthracene	**360**		300	35	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Pyrene	**2600**		300	20	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Dibenz(a,h)anthracene	<30		300	30	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Naphthalene	**300**		300	37	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Fluoranthene	**2900**		300	25	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Benzo[a]anthracene	**1200**		300	28	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Indeno[1,2,3-cd]pyrene	<16		300	16	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Chrysene	**1400**		300	49	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Acenaphthene	<34		300	34	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20
Benzo[b]fluoranthene	**1200**		300	26	ug/Kg	☼	03/14/16 07:06	03/19/16 18:49	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*72*		*24 - 110*	*03/14/16 07:06*	*03/19/16 18:49*	*20*
2-Fluorophenol (Surr)	*91*		*24 - 110*	*03/14/16 07:06*	*03/19/16 18:49*	*20*
2,4,6-Tribromophenol (Surr)	*76*		*10 - 110*	*03/14/16 07:06*	*03/19/16 18:49*	*20*
Nitrobenzene-d5 (Surr)	*73*		*20 - 110*	*03/14/16 07:06*	*03/19/16 18:49*	*20*
Phenol-d5 (Surr)	*91*		*26 - 110*	*03/14/16 07:06*	*03/19/16 18:49*	*20*
Terphenyl-d14 (Surr)	*82*		*36 - 110*	*03/14/16 07:06*	*03/19/16 18:49*	*20*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<26		72	26	ug/Kg	☼	03/18/16 08:15	03/24/16 02:07	1
Aroclor-1221	<35		72	35	ug/Kg	☼	03/18/16 08:15	03/24/16 02:07	1
Aroclor-1232	<43		72	43	ug/Kg	☼	03/18/16 08:15	03/24/16 02:07	1
Aroclor-1242	<24		72	24	ug/Kg	☼	03/18/16 08:15	03/24/16 02:07	1
Aroclor-1248	<17		72	17	ug/Kg	☼	03/18/16 08:15	03/24/16 02:07	1
Aroclor-1254	<30		72	30	ug/Kg	☼	03/18/16 08:15	03/24/16 02:07	1
Aroclor-1260	<20		72	20	ug/Kg	☼	03/18/16 08:15	03/24/16 02:07	1
Aroclor-1262	<22		72	22	ug/Kg	☼	03/18/16 08:15	03/24/16 02:07	1
Aroclor-1268	**28**	**J**	72	28	ug/Kg	☼	03/18/16 08:15	03/24/16 02:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*49*		*13 - 134*	*03/18/16 08:15*	*03/24/16 02:07*	*1*
DCB Decachlorobiphenyl	*170*	*X*	*10 - 155*	*03/18/16 08:15*	*03/24/16 02:07*	*1*

Client Sample ID: SE-031016-JN-026

Date Collected: 03/10/16 14:15
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-16

Matrix: Solid
Percent Solids: 45.4

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.25	J B	0.42	0.0029	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Arsenic	6.7	B	2.1	0.054	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Beryllium	0.48		0.42	0.023	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Cadmium	1.9		0.42	0.0077	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Cobalt	5.2	B	0.42	0.0035	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Chromium	65.1	B	0.83	0.12	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Copper	47.3	B	0.83	0.20	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Manganese	185	B	2.1	0.25	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Nickel	12.9		0.83	0.081	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Lead	602	B	0.42	0.094	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Antimony	13.8		0.83	0.029	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Selenium	2.1	B	2.1	0.083	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Thallium	0.20	J	0.83	0.040	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Vanadium	16.5		2.1	0.077	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Zinc	530	B	8.3	1.0	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2
Barium	317		2.1	0.46	mg/Kg	☼	03/15/16 11:27	03/19/16 23:25	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.1		0.20	0.028	mg/Kg	☼	03/15/16 15:00	03/17/16 11:56	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	90800		2200	1100	mg/Kg	☼		03/22/16 13:41	1
Percent Solids	45.4		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	54.6		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: SE-031016-JN-027
Date Collected: 03/10/16 14:20
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-17
Matrix: Solid
Percent Solids: 47.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**27**	**J B**	38	11	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Benzene	<1.7	F1	9.5	1.7	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Dichlorobromomethane	<0.55		9.5	0.55	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Bromoform	<0.45		9.5	0.45	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Bromomethane	<0.80		9.5	0.80	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
2-Butanone (MEK)	**6.7**	**J B**	38	2.1	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Carbon disulfide	**2.3**	**J**	9.5	1.1	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Carbon tetrachloride	<1.2	F1	9.5	1.2	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Chlorobenzene	<1.0	F1	9.5	1.0	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Chloroethane	<0.83		9.5	0.83	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Chloroform	<0.68		9.5	0.68	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Chloromethane	<1.5		9.5	1.5	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,1-Dichloroethane	<0.64		9.5	0.64	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,2-Dichloroethane	<0.87		9.5	0.87	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,1-Dichloroethene	<1.5		9.5	1.5	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,2-Dichloropropane	<0.27	F1	9.5	0.27	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,2,4-Trimethylbenzene	<1.1		9.5	1.1	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
cis-1,3-Dichloropropene	<1.3		9.5	1.3	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
trans-1,3-Dichloropropene	<0.55		9.5	0.55	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Ethylbenzene	<0.61	F1	9.5	0.61	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
2-Hexanone	<1.3	F1	38	1.3	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Methylene Chloride	**3.6**	**J B**	9.5	1.4	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
4-Methyl-2-pentanone (MIBK)	<2.3		38	2.3	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Styrene	<0.76	F1	9.5	0.76	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,1,2,2-Tetrachloroethane	<0.59		9.5	0.59	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Tetrachloroethene	<1.5	F1	9.5	1.5	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Toluene	<0.51	F1	9.5	0.51	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Trichloroethene	<0.72		9.5	0.72	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,3,5-Trimethylbenzene	<0.55		9.5	0.55	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Vinyl chloride	<0.57		9.5	0.57	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Xylenes, Total	<1.0	F1	19	1.0	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,1,1-Trichloroethane	<1.2	F1	9.5	1.2	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,1,2-Trichloroethane	<0.70		9.5	0.70	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Cyclohexane	<0.91	F1	19	0.91	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,2-Dibromo-3-Chloropropane	<5.1		19	5.1	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Ethylene Dibromide	<1.0		9.5	1.0	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Dichlorodifluoromethane	<0.53		9.5	0.53	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
cis-1,2-Dichloroethene	<0.53		9.5	0.53	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
trans-1,2-Dichloroethene	<0.61	F1	9.5	0.61	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Isopropylbenzene	<0.38	F1	9.5	0.38	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Methyl acetate	<3.8		19	3.8	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Methyl tert-butyl ether	<0.81		9.5	0.81	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.80	F1	9.5	0.80	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,2,4-Trichlorobenzene	<0.72	F1	9.5	0.72	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,2-Dichlorobenzene	<0.64	F1	9.5	0.64	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,3-Dichlorobenzene	<1.3	F1	9.5	1.3	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
1,4-Dichlorobenzene	<0.53	F1	9.5	0.53	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Trichlorofluoromethane	<0.55		9.5	0.55	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1
Chlorodibromomethane	<0.70		9.5	0.70	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1

Client Sample ID: SE-031016-JN-027
Date Collected: 03/10/16 14:20
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-17
Matrix: Solid
Percent Solids: 47.8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**2.7**	**J F1**	19	1.1	ug/Kg	☼	03/16/16 13:22	03/16/16 21:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*58 - 123*	*03/16/16 13:22*	*03/16/16 21:06*	*1*
4-Bromofluorobenzene (Surr)	*117*		*52 - 136*	*03/16/16 13:22*	*03/16/16 21:06*	*1*
Toluene-d8 (Surr)	*109*		*67 - 125*	*03/16/16 13:22*	*03/16/16 21:06*	*1*
Dibromofluoromethane (Surr)	*100*		*37 - 132*	*03/16/16 13:22*	*03/16/16 21:06*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<180		2600	180	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
bis (2-chloroisopropyl) ether	<500		5200	500	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
2,4,5-Trichlorophenol	<1300		7900	1300	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
2,4,6-Trichlorophenol	<470		7900	470	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
2,4-Dichlorophenol	<1000		7900	1000	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
2,4-Dimethylphenol	<1000		7900	1000	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
2,4-Dinitrophenol	<1100		17000	1100	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
2,4-Dinitrotoluene	<890		10000	890	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
2,6-Dinitrotoluene	<1100		10000	1100	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
2-Chloronaphthalene	<24		2600	24	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
2-Chlorophenol	<430		2600	430	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
2-Methylnaphthalene	<26		350	26	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
2-Methylphenol	<580		10000	580	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
2-Nitroaniline	<480		10000	480	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
2-Nitrophenol	<440		2600	440	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
3,3'-Dichlorobenzidine	<940		5200	940	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
3-Nitroaniline	<840		10000	840	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
4,6-Dinitro-2-methylphenol	<480		7900	480	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
4-Bromophenyl phenyl ether	<680		2600	680	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
4-Chloro-3-methylphenol	<1100		7900	1100	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
4-Chloroaniline	<890		7900	890	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
4-Chlorophenyl phenyl ether	<680		2600	680	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
4-Nitroaniline	<1400		10000	1400	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
4-Nitrophenol	<890		17000	890	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Acetophenone	<480		5200	480	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Atrazine	<480		10000	480	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Benzaldehyde	<630		5200	630	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Bis(2-chloroethoxy)methane	<1200		5200	1200	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Bis(2-chloroethyl)ether	<100		5200	100	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Bis(2-ethylhexyl) phthalate	**1900**	**J B**	3700	1000	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Butyl benzyl phthalate	**2700**	**J**	3700	520	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Caprolactam	<1900		17000	1900	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Carbazole	<1400		2600	1400	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Dibenzofuran	<35		2600	35	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Diethyl phthalate	<840		3700	840	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Dimethyl phthalate	<890		3700	890	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Di-n-butyl phthalate	**2900**	**J B**	3700	790	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Di-n-octyl phthalate	<410		3700	410	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Hexachlorobenzene	<110		350	110	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Hexachlorobutadiene	<290		2600	290	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25

Client Sample ID: SE-031016-JN-027
Date Collected: 03/10/16 14:20
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-17
Matrix: Solid
Percent Solids: 47.8

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	<420		17000	420	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Hexachloroethane	<470		2600	470	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Isophorone	<680		2600	680	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Nitrobenzene	<120		5200	120	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
N-Nitrosodi-n-propylamine	<330		2600	330	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
N-Nitrosodiphenylamine	<1100		2600	1100	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Pentachlorophenol	<480		7900	480	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Phenol	<380		2600	380	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
3 & 4 Methylphenol	<1000		21000	1000	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Fluorene	**260**	**J**	350	28	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Acenaphthylene	<18		350	18	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Benzo[g,h,i]perylene	**590**		350	18	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Phenanthrene	**1200**		350	38	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Benzo[k]fluoranthene	**360**		350	36	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Benzo[a]pyrene	**760**		350	34	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Anthracene	**430**		350	41	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Pyrene	**2300**		350	23	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Dibenz(a,h)anthracene	<35		350	35	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Naphthalene	**230**	**J**	350	43	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Fluoranthene	**4500**		350	29	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Benzo[a]anthracene	**880**		350	33	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Indeno[1,2,3-cd]pyrene	**510**		350	18	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Chrysene	**1400**		350	58	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Acenaphthene	**210**	**J**	350	40	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25
Benzo[b]fluoranthene	**1100**		350	31	ug/Kg	☼	03/14/16 07:57	03/16/16 19:40	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*52*		*24 - 110*	*03/14/16 07:57*	*03/16/16 19:40*	*25*
2-Fluorophenol (Surr)	*38*		*24 - 110*	*03/14/16 07:57*	*03/16/16 19:40*	*25*
2,4,6-Tribromophenol (Surr)	*31*		*10 - 110*	*03/14/16 07:57*	*03/16/16 19:40*	*25*
Nitrobenzene-d5 (Surr)	*58*		*20 - 110*	*03/14/16 07:57*	*03/16/16 19:40*	*25*
Phenol-d5 (Surr)	*57*		*26 - 110*	*03/14/16 07:57*	*03/16/16 19:40*	*25*
Terphenyl-d14 (Surr)	*59*		*36 - 110*	*03/14/16 07:57*	*03/16/16 19:40*	*25*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<25		68	25	ug/Kg	☼	03/18/16 08:15	03/24/16 02:25	1
Aroclor-1221	<33		68	33	ug/Kg	☼	03/18/16 08:15	03/24/16 02:25	1
Aroclor-1232	<41		68	41	ug/Kg	☼	03/18/16 08:15	03/24/16 02:25	1
Aroclor-1242	<23		68	23	ug/Kg	☼	03/18/16 08:15	03/24/16 02:25	1
Aroclor-1248	<17		68	17	ug/Kg	☼	03/18/16 08:15	03/24/16 02:25	1
Aroclor-1254	<29		68	29	ug/Kg	☼	03/18/16 08:15	03/24/16 02:25	1
Aroclor-1260	<19		68	19	ug/Kg	☼	03/18/16 08:15	03/24/16 02:25	1
Aroclor-1262	<21		68	21	ug/Kg	☼	03/18/16 08:15	03/24/16 02:25	1
Aroclor-1268	**59**	**J**	68	27	ug/Kg	☼	03/18/16 08:15	03/24/16 02:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*52*		*13 - 134*	*03/18/16 08:15*	*03/24/16 02:25*	*1*
DCB Decachlorobiphenyl	*289*	*X*	*10 - 155*	*03/18/16 08:15*	*03/24/16 02:25*	*1*

Client Sample ID: SE-031016-JN-027

Date Collected: 03/10/16 14:20
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-17

Matrix: Solid
Percent Solids: 47.8

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.012	J B	0.50	0.0029	mg/L		03/16/16 11:41	03/17/16 20:11	1
Barium	0.86	J B	10.0	0.0010	mg/L		03/16/16 11:41	03/17/16 20:11	1
Cadmium	0.00016	J	0.10	0.00014	mg/L		03/16/16 11:41	03/17/16 20:11	1
Chromium	0.0038	J B	0.50	0.00055	mg/L		03/16/16 11:41	03/17/16 20:11	1
Lead	0.055	J	0.50	0.0019	mg/L		03/16/16 11:41	03/17/16 20:11	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:41	03/17/16 20:11	1
Silver	<0.00092		0.50	0.00092	mg/L		03/16/16 11:41	03/17/16 20:11	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.26	J B	0.38	0.0027	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Arsenic	10	B	1.9	0.050	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Beryllium	0.49		0.38	0.021	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Cadmium	4.8		0.38	0.0071	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Cobalt	4.9	B	0.38	0.0033	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Chromium	40.4	B	0.77	0.12	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Copper	61.9	B	0.77	0.19	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Manganese	200	B	1.9	0.23	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Nickel	12.9		0.77	0.075	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Lead	607	B	0.38	0.086	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Antimony	1.7		0.77	0.027	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Selenium	3.3	B	1.9	0.077	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Thallium	0.22	J	0.77	0.037	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Vanadium	17.6		1.9	0.071	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Zinc	437	B	7.7	0.96	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2
Barium	250		1.9	0.42	mg/Kg	☼	03/15/16 11:27	03/19/16 23:29	2

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 12:39	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	5.9		1.1	0.16	mg/Kg	☼	03/15/16 15:00	03/17/16 14:26	5

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	72000		2090	1050	mg/Kg	☼		03/22/16 13:52	1
Percent Solids	47.8		0.1	0.1	%			03/14/16 16:52	1
Percent Moisture	52.2		0.1	0.1	%			03/14/16 16:52	1

Client Sample ID: TB-031016-JN-001
Date Collected: 03/10/16 08:00
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-18
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.94		10	0.94	ug/L			03/16/16 15:23	1
Benzene	<0.35		1.0	0.35	ug/L			03/16/16 15:23	1
Dichlorobromomethane	<0.29		1.0	0.29	ug/L			03/16/16 15:23	1
Bromoform	<0.56		1.0	0.56	ug/L			03/16/16 15:23	1
Bromomethane	<0.44		1.0	0.44	ug/L			03/16/16 15:23	1
2-Butanone (MEK)	<0.53		10	0.53	ug/L			03/16/16 15:23	1
Carbon disulfide	<0.38		1.0	0.38	ug/L			03/16/16 15:23	1
Carbon tetrachloride	<0.43		1.0	0.43	ug/L			03/16/16 15:23	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			03/16/16 15:23	1
Chloroethane	<0.32		1.0	0.32	ug/L			03/16/16 15:23	1
Chloroform	<0.25		1.0	0.25	ug/L			03/16/16 15:23	1
Chloromethane	<0.44		1.0	0.44	ug/L			03/16/16 15:23	1
1,1-Dichloroethane	<0.30		1.0	0.30	ug/L			03/16/16 15:23	1
1,2-Dichloroethane	<0.23		1.0	0.23	ug/L			03/16/16 15:23	1
1,1-Dichloroethene	<0.45		1.0	0.45	ug/L			03/16/16 15:23	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			03/16/16 15:23	1
1,2,4-Trimethylbenzene	<0.41		1.0	0.41	ug/L			03/16/16 15:23	1
cis-1,3-Dichloropropene	<0.46		1.0	0.46	ug/L			03/16/16 15:23	1
trans-1,3-Dichloropropene	<0.56		1.0	0.56	ug/L			03/16/16 15:23	1
Ethylbenzene	<0.25		1.0	0.25	ug/L			03/16/16 15:23	1
2-Hexanone	<0.48		10	0.48	ug/L			03/16/16 15:23	1
Methylene Chloride	**1.6**		1.0	0.33	ug/L			03/16/16 15:23	1
4-Methyl-2-pentanone (MIBK)	<0.99		10	0.99	ug/L			03/16/16 15:23	1
Styrene	<0.45		1.0	0.45	ug/L			03/16/16 15:23	1
1,1,2,2-Tetrachloroethane	<0.22		1.0	0.22	ug/L			03/16/16 15:23	1
Tetrachloroethene	<0.31		1.0	0.31	ug/L			03/16/16 15:23	1
Toluene	<0.23		1.0	0.23	ug/L			03/16/16 15:23	1
Trichloroethene	<0.22		1.0	0.22	ug/L			03/16/16 15:23	1
1,3,5-Trimethylbenzene	<0.48		1.0	0.48	ug/L			03/16/16 15:23	1
Vinyl chloride	<0.29		1.0	0.29	ug/L			03/16/16 15:23	1
Xylenes, Total	<0.52		2.0	0.52	ug/L			03/16/16 15:23	1
1,1,1-Trichloroethane	<0.44		1.0	0.44	ug/L			03/16/16 15:23	1
1,1,2-Trichloroethane	<0.24		1.0	0.24	ug/L			03/16/16 15:23	1
Cyclohexane	<0.45		1.0	0.45	ug/L			03/16/16 15:23	1
1,2-Dibromo-3-Chloropropane	<0.82		2.0	0.82	ug/L			03/16/16 15:23	1
Ethylene Dibromide	<0.32		1.0	0.32	ug/L			03/16/16 15:23	1
Dichlorodifluoromethane	<0.32		1.0	0.32	ug/L			03/16/16 15:23	1
cis-1,2-Dichloroethene	<0.26		1.0	0.26	ug/L			03/16/16 15:23	1
trans-1,2-Dichloroethene	<0.30		1.0	0.30	ug/L			03/16/16 15:23	1
Isopropylbenzene	<0.35		1.0	0.35	ug/L			03/16/16 15:23	1
Methyl acetate	<2.3		10	2.3	ug/L			03/16/16 15:23	1
Methyl tert-butyl ether	<0.20		1.0	0.20	ug/L			03/16/16 15:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.45		1.0	0.45	ug/L			03/16/16 15:23	1
1,2,4-Trichlorobenzene	<0.32		1.0	0.32	ug/L			03/16/16 15:23	1
1,2-Dichlorobenzene	<0.25		1.0	0.25	ug/L			03/16/16 15:23	1
1,3-Dichlorobenzene	<0.19		1.0	0.19	ug/L			03/16/16 15:23	1
1,4-Dichlorobenzene	<0.27		1.0	0.27	ug/L			03/16/16 15:23	1
Trichlorofluoromethane	<0.49		1.0	0.49	ug/L			03/16/16 15:23	1
Chlorodibromomethane	<0.43		1.0	0.43	ug/L			03/16/16 15:23	1

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: TB-031016-JN-001
Date Collected: 03/10/16 08:00
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-18
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	<0.43		1.0	0.43	ug/L			03/16/16 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*78 - 125*		*03/16/16 15:23*	*1*
4-Bromofluorobenzene (Surr)	*85*		*61 - 120*		*03/16/16 15:23*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*03/16/16 15:23*	*1*
Dibromofluoromethane (Surr)	*92*		*79 - 120*		*03/16/16 15:23*	*1*

Client Sample ID: SE-031016-JN-011

Date Collected: 03/10/16 09:35
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-19

Matrix: Sediment
Percent Solids: 63.8

Method: 6010B - Metals (ICP) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium SEM	**4.6**		0.20	0.010	mg/Kg	☼	03/16/16 14:00	03/18/16 18:18	1
Silver SEM	<0.14		0.98	0.14	mg/Kg	☼	03/16/16 14:00	03/21/16 11:33	5
Copper SEM	**11.6**		0.98	0.038	mg/Kg	☼	03/16/16 14:00	03/18/16 18:18	1
Lead SEM	**3560**		3.9	0.82	mg/Kg	☼	03/16/16 14:00	03/21/16 11:38	10
Nickel SEM	**58.8**	**B**	1.6	0.035	mg/Kg	☼	03/16/16 14:00	03/18/16 18:18	1
Zinc SEM	**2690**	**B**	19.6	0.57	mg/Kg	☼	03/16/16 14:00	03/21/16 11:33	5

Method: 7470A - Mercury (CVAA) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury SEM	**0.0047**	**J**	0.0078	0.0020	mg/Kg	☼	03/16/16 14:00	03/18/16 12:03	1

Method: SEM - Metals, Simultaneously Extracted Metals (SEM) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
SEM/AVS Ratio	**3.48**		0.00100	0.00100	NONE			03/22/16 10:39	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**36.2**		0.1	0.1	%			03/16/16 12:42	1
Percent Solids	**63.8**		0.1	0.1	%			03/16/16 12:42	1

General Chemistry - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acid Volatile Sulfides (AVS)	**549**		23.5	4.7	mg/Kg	☼	03/16/16 14:00	03/16/16 17:59	1

Client Sample ID: SE-031016-JN-014

Date Collected: 03/10/16 10:35
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-20

Matrix: Sediment
Percent Solids: 45.1

Method: 6010B - Metals (ICP) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium SEM	**0.64**		0.28	0.014	mg/Kg	☼	03/16/16 14:00	03/18/16 18:02	1
Silver SEM	<0.038		0.28	0.038	mg/Kg	☼	03/16/16 14:00	03/18/16 18:02	1
Copper SEM	**12.6**		1.4	0.054	mg/Kg	☼	03/16/16 14:00	03/18/16 18:02	1
Lead SEM	**101**		0.55	0.12	mg/Kg	☼	03/16/16 14:00	03/18/16 18:02	1
Nickel SEM	**7.6**	**B**	2.2	0.049	mg/Kg	☼	03/16/16 14:00	03/18/16 18:02	1
Zinc SEM	**123**	**B**	5.5	0.16	mg/Kg	☼	03/16/16 14:00	03/18/16 18:02	1

Method: 7470A - Mercury (CVAA) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury SEM	<0.0029		0.011	0.0029	mg/Kg	☼	03/16/16 14:00	03/18/16 12:05	1

Method: SEM - Metals, Simultaneously Extracted Metals (SEM) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
SEM/AVS Ratio	**0.220**		0.00100	0.00100	NONE			03/22/16 10:39	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**54.9**		0.1	0.1	%			03/16/16 12:42	1
Percent Solids	**45.1**		0.1	0.1	%			03/16/16 12:42	1

General Chemistry - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acid Volatile Sulfides (AVS)	**393**		33.2	6.6	mg/Kg	☼	03/16/16 14:00	03/16/16 18:02	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: SE-031016-JN-018
Date Collected: 03/10/16 11:40
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-21
Matrix: Sediment
Percent Solids: 56.5

Method: 6010B - Metals (ICP) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium SEM	0.80		0.22	0.011	mg/Kg	☼	03/16/16 14:00	03/18/16 17:57	1
Silver SEM	<0.031		0.22	0.031	mg/Kg	☼	03/16/16 14:00	03/18/16 17:57	1
Copper SEM	10		1.1	0.043	mg/Kg	☼	03/16/16 14:00	03/18/16 17:57	1
Lead SEM	120		0.88	0.19	mg/Kg	☼	03/16/16 14:00	03/21/16 11:43	2
Nickel SEM	4.5	B	3.5	0.078	mg/Kg	☼	03/16/16 14:00	03/21/16 11:43	2
Zinc SEM	115	B	4.4	0.13	mg/Kg	☼	03/16/16 14:00	03/18/16 17:57	1

Method: 7470A - Mercury (CVAA) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury SEM	0.0023	J	0.0088	0.0023	mg/Kg	☼	03/16/16 14:00	03/18/16 12:07	1

Method: SEM - Metals, Simultaneously Extracted Metals (SEM) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
SEM/AVS Ratio	0.243		0.00100	0.00100	NONE			03/22/16 10:39	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	43.5		0.1	0.1	%			03/16/16 12:42	1
Percent Solids	56.5		0.1	0.1	%			03/16/16 12:42	1

General Chemistry - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acid Volatile Sulfides (AVS)	340		26.5	5.3	mg/Kg	☼	03/16/16 14:00	03/16/16 18:04	1

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: SE-031016-JN-021
Date Collected: 03/10/16 12:50
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-22
Matrix: Sediment
Percent Solids: 42.0

Method: 6010B - Metals (ICP) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium SEM	0.94		0.30	0.015	mg/Kg	☼	03/16/16 14:00	03/18/16 17:52	1
Silver SEM	<0.041		0.30	0.041	mg/Kg	☼	03/16/16 14:00	03/18/16 17:52	1
Copper SEM	17.0		1.5	0.058	mg/Kg	☼	03/16/16 14:00	03/18/16 17:52	1
Lead SEM	83.5		0.59	0.12	mg/Kg	☼	03/16/16 14:00	03/18/16 17:52	1
Nickel SEM	7.9	B	2.4	0.053	mg/Kg	☼	03/16/16 14:00	03/18/16 17:52	1
Zinc SEM	91.0	B	5.9	0.17	mg/Kg	☼	03/16/16 14:00	03/18/16 17:52	1

Method: 7470A - Mercury (CVAA) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury SEM	0.033		0.012	0.0031	mg/Kg	☼	03/16/16 14:00	03/18/16 12:09	1

Method: SEM - Metals, Simultaneously Extracted Metals (SEM) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
SEM/AVS Ratio	NC		0.00100	0.00100	NONE			03/22/16 10:39	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	58.0		0.1	0.1	%			03/16/16 12:42	1
Percent Solids	42.0		0.1	0.1	%			03/16/16 12:42	1

General Chemistry - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acid Volatile Sulfides (AVS)	<7.1		35.6	7.1	mg/Kg	☼	03/16/16 14:00	03/16/16 18:07	1

Client Sample ID: SE-031016-JN-024

Date Collected: 03/10/16 14:05
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-23

Matrix: Sediment
Percent Solids: 52.7

Method: 6010B - Metals (ICP) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium SEM	**12.5**		0.24	0.012	mg/Kg	☼	03/16/16 14:00	03/18/16 17:25	1
Silver SEM	<0.033	F1	0.24	0.033	mg/Kg	☼	03/16/16 14:00	03/18/16 17:25	1
Copper SEM	**46.9**	**F1**	1.2	0.046	mg/Kg	☼	03/16/16 14:00	03/18/16 17:25	1
Lead SEM	**1230**		2.4	0.50	mg/Kg	☼	03/16/16 14:00	03/21/16 11:48	5
Nickel SEM	**5.7**	**B**	1.9	0.042	mg/Kg	☼	03/16/16 14:00	03/18/16 17:25	1
Zinc SEM	**1060**	**B**	4.7	0.14	mg/Kg	☼	03/16/16 14:00	03/18/16 17:25	1

Method: 7470A - Mercury (CVAA) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury SEM	<0.0025		0.0094	0.0025	mg/Kg	☼	03/16/16 14:00	03/18/16 12:11	1

Method: SEM - Metals, Simultaneously Extracted Metals (SEM) - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
SEM/AVS Ratio	**3.13**		0.00100	0.00100	NONE			03/22/16 10:39	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**47.3**		0.1	0.1	%			03/16/16 12:42	1
Percent Solids	**52.7**		0.1	0.1	%			03/16/16 12:42	1

General Chemistry - SEM/AVS

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acid Volatile Sulfides (AVS)	**237**		28.3	5.7	mg/Kg	☼	03/16/16 14:00	03/16/16 18:10	1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(58-123)	(52-136)	(67-125)	(37-132)
240-62022-1	SE-031016-JN-011	83	86	109	87
240-62022-4	SE-031016-JN-014	96	111	107	98
240-62022-5	SE-031016-JN-015	96	104	105	102
240-62022-6	SE-031016-JN-016	93	106	105	99
240-62022-7	SE-031016-JN-017	96	105	103	100
240-62022-7 MS	SE-031016-JN-017	93	105	103	104
240-62022-7 MSD	SE-031016-JN-017	91	108	103	98
240-62022-8	SE-031016-JN-018	89	207 X	129 X	95
240-62022-9	SE-031016-JN-019	90	103	102	94
240-62022-10	SE-031016-JN-020	92	119	107	96
240-62022-11	SE-031016-JN-021	92	104	102	98
240-62022-12	SE-031016-JN-022	97	105	106	103
240-62022-13	SE-031016-JN-023	81	81	88	84
240-62022-13 MS	SE-031016-JN-023	79	80	87	87
240-62022-13 MSD	SE-031016-JN-023	91	91	101	97
240-62022-14	SE-031016-JN-024	94	108	107	99
240-62022-15	SE-031016-JN-025	85	121	110	97
240-62022-16	SE-031016-JN-026	96	105	106	101
240-62022-17	SE-031016-JN-027	94	117	109	100
240-62022-17 MS	SE-031016-JN-027	90	118	107	101
240-62022-17 MSD	SE-031016-JN-027	89	118	114	99
LCS 240-221434/4	Lab Control Sample	95	103	105	105
LCS 240-221688/6	Lab Control Sample	95	101	108	108
LCS 240-221763/4	Lab Control Sample	91	102	105	102
MB 240-221434/5	Method Blank	97	103	106	104
MB 240-221688/8	Method Blank	73	80	84	80
MB 240-221763/5	Method Blank	93	103	108	101

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(39-128)	(26-141)	(33-134)	(30-122)
240-62022-2	SE-031016-JN-012	79	58	62	75
240-62022-3	SE-031016-JN-013	91	86	85	89
240-62022-3 MS	SE-031016-JN-013	84	78	72	89
240-62022-3 MSD	SE-031016-JN-013	86	80	73	89
LCS 240-221497/2-A	Lab Control Sample	81	86	91	87
MB 240-221497/1-A	Method Blank	86	90	94	86

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(78-125)	(61-120)	(80-120)	(79-120)
240-62022-18	TB-031016-JN-001	98	85	91	92
LCS 240-221822/4	Lab Control Sample	93	93	98	96
MB 240-221822/6	Method Blank	99	88	94	95

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	TBP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(24-110)	(24-110)	(10-110)	(20-110)	(26-110)	(36-110)
240-62022-1	SE-031016-JN-011	0 X	0 X	0 X	0 X	0 X	0 X
240-62022-2	SE-031016-JN-012	76	87	39	155 X	89	79
240-62022-3	SE-031016-JN-013	89	77	0 X	59	53	105
240-62022-3 MS	SE-031016-JN-013	15 X	29	18	57	44	22 X
240-62022-3 MSD	SE-031016-JN-013	33	66	33	57	75	40
240-62022-4	SE-031016-JN-014	69	80	52	84	82	71
240-62022-5	SE-031016-JN-015	56	59	49	50	59	64
240-62022-6	SE-031016-JN-016	51	57	55	55	56	57
240-62022-7	SE-031016-JN-017	70	84	74	68	82	73
240-62022-8	SE-031016-JN-018	53	59	57	61	59	60
240-62022-9	SE-031016-JN-019	71	80	72	61	81	85
240-62022-10	SE-031016-JN-020	61	71	66	89	72	66
240-62022-11	SE-031016-JN-021	51	57	51	45	55	61
240-62022-12	SE-031016-JN-022	65	68	44	57	65	69
240-62022-13	SE-031016-JN-023	48	52	40	43	51	54
240-62022-13 MS	SE-031016-JN-023	81	84	68	72	87	86
240-62022-13 MSD	SE-031016-JN-023	77	81	72	70	76	81
240-62022-14	SE-031016-JN-024	53	66	54	60	58	59
240-62022-15	SE-031016-JN-025	69	75	53	89	74	76
240-62022-16	SE-031016-JN-026	72	91	76	73	91	82
240-62022-17	SE-031016-JN-027	52	38	31	58	57	59
LCS 240-221358/24-A	Lab Control Sample	69	71	43	69	71	83
LCS 240-221375/24-A	Lab Control Sample	66	62	40	59	67	74
MB 240-221358/23-A	Method Blank	68	66	29	61	70	81
MB 240-221375/23-A	Method Blank	61	57	40	56	60	68

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 1630 - Methyl Mercury (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	nPMC (10-149)
240-62022-1	SE-031016-JN-011	37
240-62022-4	SE-031016-JN-014	27
240-62022-8	SE-031016-JN-018	28
240-62022-11	SE-031016-JN-021	36
240-62022-14	SE-031016-JN-024	33
LCS 240-221445/2-A	Lab Control Sample	19
MB 240-221445/1-A	Method Blank	22

Surrogate Legend
nPMC = n-Propyl Mercury Chloride

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (13-134)	DCB1 (10-155)
240-62022-1	SE-031016-JN-011	92	3151 X
240-62022-2	SE-031016-JN-012	60	583 X
240-62022-3	SE-031016-JN-013	65	1841 X
240-62022-3 MS	SE-031016-JN-013	67	1330 X
240-62022-3 MSD	SE-031016-JN-013	20	335 X
240-62022-4	SE-031016-JN-014	18	18
240-62022-5	SE-031016-JN-015	54	51
240-62022-7	SE-031016-JN-017	65	73
240-62022-8	SE-031016-JN-018	73	382 X
240-62022-9	SE-031016-JN-019	30	54 p
240-62022-11	SE-031016-JN-021	37	48
240-62022-13	SE-031016-JN-023	45	80 p
240-62022-13 MS	SE-031016-JN-023	23	25
240-62022-13 MSD	SE-031016-JN-023	32	14
240-62022-14	SE-031016-JN-024	57	1520 X
240-62022-16	SE-031016-JN-026	49	170 X
240-62022-17	SE-031016-JN-027	52	289 X
LCS 240-222138/20-A	Lab Control Sample	54	60
MB 240-222138/19-A	Method Blank	45	56

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		TCX2	DCB2								
Lab Sample ID	Client Sample ID	(13-134)	(10-155)								
240-62022-6	SE-031016-JN-016	14 ^c	15 ^c								
240-62022-10	SE-031016-JN-020	47 ^c	38 ^c								
240-62022-12	SE-031016-JN-022	73 ^c	59 ^c								
240-62022-15	SE-031016-JN-025	48	48 ^c								
LCS 240-221356/24-A	Lab Control Sample	77	64								
MB 240-221356/23-A	Method Blank	55	53								

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-221434/5
Matrix: Solid
Analysis Batch: 221434

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	9.67	J	20	5.7	ug/Kg			03/14/16 13:24	1
Benzene	<0.90		5.0	0.90	ug/Kg			03/14/16 13:24	1
Dichlorobromomethane	<0.29		5.0	0.29	ug/Kg			03/14/16 13:24	1
Bromoform	<0.24		5.0	0.24	ug/Kg			03/14/16 13:24	1
Bromomethane	<0.42		5.0	0.42	ug/Kg			03/14/16 13:24	1
2-Butanone (MEK)	1.40	J	20	1.1	ug/Kg			03/14/16 13:24	1
Carbon disulfide	<0.59		5.0	0.59	ug/Kg			03/14/16 13:24	1
Carbon tetrachloride	<0.65		5.0	0.65	ug/Kg			03/14/16 13:24	1
Chlorobenzene	<0.53		5.0	0.53	ug/Kg			03/14/16 13:24	1
Chloroethane	<0.44		5.0	0.44	ug/Kg			03/14/16 13:24	1
Chloroform	<0.36		5.0	0.36	ug/Kg			03/14/16 13:24	1
Chloromethane	<0.79		5.0	0.79	ug/Kg			03/14/16 13:24	1
1,1-Dichloroethane	<0.34		5.0	0.34	ug/Kg			03/14/16 13:24	1
1,2-Dichloroethane	<0.46		5.0	0.46	ug/Kg			03/14/16 13:24	1
1,1-Dichloroethene	<0.80		5.0	0.80	ug/Kg			03/14/16 13:24	1
1,2-Dichloropropane	<0.14		5.0	0.14	ug/Kg			03/14/16 13:24	1
1,2,4-Trimethylbenzene	<0.58		5.0	0.58	ug/Kg			03/14/16 13:24	1
cis-1,3-Dichloropropene	<0.71		5.0	0.71	ug/Kg			03/14/16 13:24	1
trans-1,3-Dichloropropene	<0.29		5.0	0.29	ug/Kg			03/14/16 13:24	1
Ethylbenzene	<0.32		5.0	0.32	ug/Kg			03/14/16 13:24	1
2-Hexanone	<0.68		20	0.68	ug/Kg			03/14/16 13:24	1
Methylene Chloride	1.32	J	5.0	0.74	ug/Kg			03/14/16 13:24	1
4-Methyl-2-pentanone (MIBK)	<1.2		20	1.2	ug/Kg			03/14/16 13:24	1
Styrene	<0.40		5.0	0.40	ug/Kg			03/14/16 13:24	1
1,1,2,2-Tetrachloroethane	<0.31		5.0	0.31	ug/Kg			03/14/16 13:24	1
Tetrachloroethene	<0.80		5.0	0.80	ug/Kg			03/14/16 13:24	1
Toluene	<0.27		5.0	0.27	ug/Kg			03/14/16 13:24	1
Trichloroethene	<0.38		5.0	0.38	ug/Kg			03/14/16 13:24	1
1,3,5-Trimethylbenzene	<0.29		5.0	0.29	ug/Kg			03/14/16 13:24	1
Vinyl chloride	<0.30		5.0	0.30	ug/Kg			03/14/16 13:24	1
Xylenes, Total	<0.54		10	0.54	ug/Kg			03/14/16 13:24	1
1,1,1-Trichloroethane	<0.65		5.0	0.65	ug/Kg			03/14/16 13:24	1
1,1,2-Trichloroethane	<0.37		5.0	0.37	ug/Kg			03/14/16 13:24	1
Cyclohexane	<0.48		10	0.48	ug/Kg			03/14/16 13:24	1
1,2-Dibromo-3-Chloropropane	<2.7		10	2.7	ug/Kg			03/14/16 13:24	1
Ethylene Dibromide	<0.53		5.0	0.53	ug/Kg			03/14/16 13:24	1
Dichlorodifluoromethane	<0.28		5.0	0.28	ug/Kg			03/14/16 13:24	1
cis-1,2-Dichloroethene	<0.28		5.0	0.28	ug/Kg			03/14/16 13:24	1
trans-1,2-Dichloroethene	<0.32		5.0	0.32	ug/Kg			03/14/16 13:24	1
Isopropylbenzene	<0.20		5.0	0.20	ug/Kg			03/14/16 13:24	1
Methyl acetate	<2.0		10	2.0	ug/Kg			03/14/16 13:24	1
Methyl tert-butyl ether	<0.43		5.0	0.43	ug/Kg			03/14/16 13:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.42		5.0	0.42	ug/Kg			03/14/16 13:24	1
1,2,4-Trichlorobenzene	<0.38		5.0	0.38	ug/Kg			03/14/16 13:24	1
1,2-Dichlorobenzene	<0.34		5.0	0.34	ug/Kg			03/14/16 13:24	1
1,3-Dichlorobenzene	<0.69		5.0	0.69	ug/Kg			03/14/16 13:24	1
1,4-Dichlorobenzene	<0.28		5.0	0.28	ug/Kg			03/14/16 13:24	1
Trichlorofluoromethane	<0.29		5.0	0.29	ug/Kg			03/14/16 13:24	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221434/5
Matrix: Solid
Analysis Batch: 221434

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Chlorodibromomethane	<0.37		5.0	0.37	ug/Kg			03/14/16 13:24	1
Methylcyclohexane	<0.58		10	0.58	ug/Kg			03/14/16 13:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*58 - 123*		*03/14/16 13:24*	*1*
4-Bromofluorobenzene (Surr)	*103*		*52 - 136*		*03/14/16 13:24*	*1*
Toluene-d8 (Surr)	*106*		*67 - 125*		*03/14/16 13:24*	*1*
Dibromofluoromethane (Surr)	*104*		*37 - 132*		*03/14/16 13:24*	*1*

Lab Sample ID: LCS 240-221434/4
Matrix: Solid
Analysis Batch: 221434

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	110		ug/Kg		110	41 - 137
Benzene	50.0	49.7		ug/Kg		99	79 - 120
Dichlorobromomethane	50.0	52.3		ug/Kg		105	80 - 122
Bromoform	50.0	51.4		ug/Kg		103	62 - 133
Bromomethane	20.0	15.5		ug/Kg		78	42 - 136
2-Butanone (MEK)	100	116		ug/Kg		116	52 - 131
Carbon disulfide	50.0	51.1		ug/Kg		102	62 - 146
Carbon tetrachloride	50.0	51.1		ug/Kg		102	71 - 129
Chlorobenzene	50.0	48.4		ug/Kg		97	78 - 120
Chloroethane	20.0	16.6		ug/Kg		83	58 - 120
Chloroform	50.0	50.4		ug/Kg		101	77 - 120
Chloromethane	20.0	13.9		ug/Kg		70	50 - 120
1,1-Dichloroethane	50.0	48.3		ug/Kg		97	76 - 120
1,2-Dichloroethane	50.0	49.5		ug/Kg		99	72 - 120
1,1-Dichloroethene	50.0	49.7		ug/Kg		99	75 - 135
1,2-Dichloropropane	50.0	50.4		ug/Kg		101	80 - 120
1,2,4-Trimethylbenzene	50.0	52.2		ug/Kg		104	80 - 129
cis-1,3-Dichloropropene	50.0	55.0		ug/Kg		110	74 - 128
trans-1,3-Dichloropropene	50.0	49.2		ug/Kg		98	73 - 131
Ethylbenzene	50.0	50.3		ug/Kg		101	79 - 120
2-Hexanone	100	113		ug/Kg		113	64 - 136
Methylene Chloride	50.0	46.2		ug/Kg		92	75 - 120
4-Methyl-2-pentanone (MIBK)	100	111		ug/Kg		111	67 - 135
Styrene	50.0	50.6		ug/Kg		101	80 - 120
1,1,2,2-Tetrachloroethane	50.0	53.1		ug/Kg		106	77 - 123
Tetrachloroethene	50.0	51.3		ug/Kg		103	79 - 120
Toluene	50.0	49.5		ug/Kg		99	75 - 120
Trichloroethene	50.0	54.0		ug/Kg		108	79 - 120
1,3,5-Trimethylbenzene	50.0	52.7		ug/Kg		105	78 - 128
Vinyl chloride	20.0	15.6		ug/Kg		78	57 - 120
Xylenes, Total	100	100		ug/Kg		100	80 - 120
1,1,1-Trichloroethane	50.0	50.2		ug/Kg		100	77 - 126
1,1,2-Trichloroethane	50.0	50.3		ug/Kg		101	80 - 120
Cyclohexane	50.0	46.0		ug/Kg		92	66 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221434/4
Matrix: Solid
Analysis Batch: 221434

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	50.0	62.0		ug/Kg		124	61 - 132
Ethylene Dibromide	50.0	54.3		ug/Kg		109	80 - 120
Dichlorodifluoromethane	20.0	10.0		ug/Kg		50	26 - 120
cis-1,2-Dichloroethene	50.0	51.6		ug/Kg		103	76 - 120
trans-1,2-Dichloroethene	50.0	52.7		ug/Kg		105	78 - 120
Isopropylbenzene	50.0	52.5		ug/Kg		105	76 - 122
Methyl acetate	250	276		ug/Kg		111	57 - 130
Methyl tert-butyl ether	50.0	53.9		ug/Kg		108	49 - 165
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	46.3		ug/Kg		93	80 - 138
1,2,4-Trichlorobenzene	50.0	49.7		ug/Kg		99	64 - 124
1,2-Dichlorobenzene	50.0	49.6		ug/Kg		99	76 - 120
1,3-Dichlorobenzene	50.0	49.3		ug/Kg		99	78 - 120
1,4-Dichlorobenzene	50.0	49.9		ug/Kg		100	75 - 120
Trichlorofluoromethane	20.0	17.7		ug/Kg		88	57 - 146
Methylcyclohexane	50.0	48.6		ug/Kg		97	70 - 126
m-Xylene & p-Xylene	50.0	50.9		ug/Kg		102	80 - 120
o-Xylene	50.0	49.2		ug/Kg		98	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*58 - 123*
4-Bromofluorobenzene (Surr)	*103*		*52 - 136*
Toluene-d8 (Surr)	*105*		*67 - 125*
Dibromofluoromethane (Surr)	*105*		*37 - 132*

Lab Sample ID: 240-62022-7 MS
Matrix: Solid
Analysis Batch: 221434

Client Sample ID: SE-031016-JN-017
Prep Type: Total/NA
Prep Batch: 221461

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	44	B	193	171		ug/Kg	☼	66	24 - 140
Benzene	<1.8		96.6	58.0		ug/Kg	☼	60	53 - 120
Dichlorobromomethane	<0.57		96.6	37.9		ug/Kg	☼	39	35 - 132
Bromoform	<0.47		96.6	23.3		ug/Kg	☼	24	18 - 129
Bromomethane	<0.82		38.7	15.1		ug/Kg	☼	39	33 - 130
2-Butanone (MEK)	13	J B	193	151		ug/Kg	☼	71	30 - 143
Carbon disulfide	<1.2		96.6	49.4		ug/Kg	☼	51	20 - 151
Carbon tetrachloride	<1.3		96.6	36.2		ug/Kg	☼	37	32 - 137
Chlorobenzene	<1.0		96.6	44.4		ug/Kg	☼	46	37 - 120
Chloroethane	<0.86		38.7	19.8		ug/Kg	☼	51	45 - 120
Chloroform	<0.71		96.6	60.8		ug/Kg	☼	63	53 - 120
Chloromethane	<1.5		38.7	17.4		ug/Kg	☼	45	34 - 120
1,1-Dichloroethane	<0.67		96.6	58.2		ug/Kg	☼	60	54 - 122
1,2-Dichloroethane	<0.90		96.6	59.0		ug/Kg	☼	61	49 - 123
1,1-Dichloroethene	<1.6		96.6	59.6		ug/Kg	☼	62	49 - 157
1,2-Dichloropropane	<0.27		96.6	59.7		ug/Kg	☼	62	61 - 120
1,2,4-Trimethylbenzene	<1.1		96.6	39.0		ug/Kg	☼	40	10 - 173
cis-1,3-Dichloropropene	<1.4		96.6	35.7		ug/Kg	☼	37	27 - 133

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-7 MS
Matrix: Solid
Analysis Batch: 221434

Client Sample ID: SE-031016-JN-017
Prep Type: Total/NA
Prep Batch: 221461

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	<0.57		96.6	31.8		ug/Kg	☼	33	28 - 137
Ethylbenzene	<0.63		96.6	47.2		ug/Kg	☼	49	30 - 131
2-Hexanone	<1.3		193	126		ug/Kg	☼	65	37 - 147
Methylene Chloride	2.0	J B	96.6	59.3		ug/Kg	☼	59	54 - 120
4-Methyl-2-pentanone (MIBK)	<2.4		193	129		ug/Kg	☼	66	43 - 147
Styrene	<0.78		96.6	30.2		ug/Kg	☼	31	27 - 127
1,1,2,2-Tetrachloroethane	<0.61		96.6	56.8		ug/Kg	☼	59	16 - 179
Tetrachloroethene	<1.6		96.6	47.8		ug/Kg	☼	50	31 - 135
Toluene	<0.53		96.6	52.6		ug/Kg	☼	54	39 - 129
Trichloroethene	<0.75		96.6	55.8		ug/Kg	☼	58	10 - 177
1,3,5-Trimethylbenzene	<0.57		96.6	41.3		ug/Kg	☼	43	10 - 171
Vinyl chloride	<0.59		38.7	18.6		ug/Kg	☼	48	42 - 120
Xylenes, Total	<1.1		193	90.9		ug/Kg	☼	47	30 - 131
1,1,1-Trichloroethane	<1.3		96.6	52.9		ug/Kg	☼	55	51 - 128
1,1,2-Trichloroethane	<0.73		96.6	60.0		ug/Kg	☼	62	10 - 166
Cyclohexane	<0.94		96.6	47.6		ug/Kg	☼	49	28 - 120
1,2-Dibromo-3-Chloropropane	<5.3		96.6	43.2		ug/Kg	☼	45	10 - 153
Ethylene Dibromide	<1.0		96.6	53.9		ug/Kg	☼	56	45 - 127
Dichlorodifluoromethane	<0.55		38.7	11.6		ug/Kg	☼	30	17 - 120
cis-1,2-Dichloroethene	<0.55		96.6	58.1		ug/Kg	☼	60	50 - 120
trans-1,2-Dichloroethene	<0.63		96.6	55.4		ug/Kg	☼	57	50 - 123
Isopropylbenzene	<0.39		96.6	45.4		ug/Kg	☼	47	21 - 134
Methyl acetate	<3.9		483	306		ug/Kg	☼	63	33 - 165
Methyl tert-butyl ether	<0.84		96.6	65.5		ug/Kg	☼	68	51 - 157
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.82		96.6	51.3		ug/Kg	☼	53	50 - 147
1,2,4-Trichlorobenzene	<0.75		96.6	16.4		ug/Kg	☼	17	10 - 120
1,2-Dichlorobenzene	<0.67		96.6	28.0		ug/Kg	☼	29	17 - 122
1,3-Dichlorobenzene	<1.4		96.6	29.0		ug/Kg	☼	30	16 - 126
1,4-Dichlorobenzene	<0.55		96.6	28.8		ug/Kg	☼	30	15 - 121
Trichlorofluoromethane	<0.57		38.7	18.8		ug/Kg	☼	49	36 - 142
Methylcyclohexane	<1.1		96.6	45.4		ug/Kg	☼	47	20 - 132
m-Xylene & p-Xylene	<0.82		96.6	45.2		ug/Kg	☼	47	29 - 131
o-Xylene	<1.1		96.6	45.7		ug/Kg	☼	47	29 - 134

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*58 - 123*
4-Bromofluorobenzene (Surr)	*105*		*52 - 136*
Toluene-d8 (Surr)	*103*		*67 - 125*
Dibromofluoromethane (Surr)	*104*		*37 - 132*

Lab Sample ID: 240-62022-7 MSD
Matrix: Solid
Analysis Batch: 221434

Client Sample ID: SE-031016-JN-017
Prep Type: Total/NA
Prep Batch: 221461

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	44	B	214	210		ug/Kg	☼	77	24 - 140	20	30
Benzene	<1.8		107	64.2		ug/Kg	☼	60	53 - 120	10	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-7 MSD
Matrix: Solid
Analysis Batch: 221434

Client Sample ID: SE-031016-JN-017
Prep Type: Total/NA
Prep Batch: 221461

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dichlorobromomethane	<0.57		107	43.6		ug/Kg	☼	41	35 - 132	14	30
Bromoform	<0.47		107	27.7		ug/Kg	☼	26	18 - 129	17	30
Bromomethane	<0.82		42.8	16.6		ug/Kg	☼	39	33 - 130	9	30
2-Butanone (MEK)	13	J B	214	172		ug/Kg	☼	74	30 - 143	13	30
Carbon disulfide	<1.2		107	55.4		ug/Kg	☼	52	20 - 151	11	30
Carbon tetrachloride	<1.3		107	39.8		ug/Kg	☼	37	32 - 137	9	30
Chlorobenzene	<1.0		107	49.0		ug/Kg	☼	46	37 - 120	10	30
Chloroethane	<0.86		42.8	22.9		ug/Kg	☼	53	45 - 120	15	30
Chloroform	<0.71		107	67.9		ug/Kg	☼	63	53 - 120	11	30
Chloromethane	<1.5		42.8	19.6		ug/Kg	☼	46	34 - 120	12	30
1,1-Dichloroethane	<0.67		107	64.4		ug/Kg	☼	60	54 - 122	10	30
1,2-Dichloroethane	<0.90		107	66.1		ug/Kg	☼	62	49 - 123	11	30
1,1-Dichloroethene	<1.6		107	67.9		ug/Kg	☼	63	49 - 157	13	30
1,2-Dichloropropane	<0.27		107	68.6		ug/Kg	☼	64	61 - 120	14	30
1,2,4-Trimethylbenzene	<1.1		107	44.0		ug/Kg	☼	41	10 - 173	12	30
cis-1,3-Dichloropropene	<1.4		107	40.2		ug/Kg	☼	38	27 - 133	12	30
trans-1,3-Dichloropropene	<0.57		107	35.9		ug/Kg	☼	34	28 - 137	12	30
Ethylbenzene	<0.63		107	51.4		ug/Kg	☼	48	30 - 131	9	30
2-Hexanone	<1.3		214	142		ug/Kg	☼	66	37 - 147	12	30
Methylene Chloride	2.0	J B	107	64.7		ug/Kg	☼	59	54 - 120	9	30
4-Methyl-2-pentanone (MIBK)	<2.4		214	146		ug/Kg	☼	68	43 - 147	13	30
Styrene	<0.78		107	33.0		ug/Kg	☼	31	27 - 127	9	30
1,1,2,2-Tetrachloroethane	<0.61		107	68.1		ug/Kg	☼	64	16 - 179	18	30
Tetrachloroethene	<1.6		107	52.0		ug/Kg	☼	49	31 - 135	8	30
Toluene	<0.53		107	57.9		ug/Kg	☼	54	39 - 129	10	30
Trichloroethene	<0.75		107	61.3		ug/Kg	☼	57	10 - 177	9	30
1,3,5-Trimethylbenzene	<0.57		107	46.5		ug/Kg	☼	43	10 - 171	12	30
Vinyl chloride	<0.59		42.8	20.4		ug/Kg	☼	48	42 - 120	9	30
Xylenes, Total	<1.1		214	99.9		ug/Kg	☼	47	30 - 131	9	30
1,1,1-Trichloroethane	<1.3		107	58.7		ug/Kg	☼	55	51 - 128	10	30
1,1,2-Trichloroethane	<0.73		107	69.4		ug/Kg	☼	65	10 - 166	15	30
Cyclohexane	<0.94		107	52.2		ug/Kg	☼	49	28 - 120	9	30
1,2-Dibromo-3-Chloropropane	<5.3		107	52.9		ug/Kg	☼	49	10 - 153	20	30
Ethylene Dibromide	<1.0		107	63.0		ug/Kg	☼	59	45 - 127	16	30
Dichlorodifluoromethane	<0.55		42.8	13.5		ug/Kg	☼	32	17 - 120	16	30
cis-1,2-Dichloroethene	<0.55		107	65.9		ug/Kg	☼	61	50 - 120	13	30
trans-1,2-Dichloroethene	<0.63		107	63.1		ug/Kg	☼	59	50 - 123	13	30
Isopropylbenzene	<0.39		107	49.1		ug/Kg	☼	46	21 - 134	8	30
Methyl acetate	<3.9		536	341		ug/Kg	☼	64	33 - 165	11	30
Methyl tert-butyl ether	<0.84		107	74.2		ug/Kg	☼	69	51 - 157	13	30
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.82		107	58.5		ug/Kg	☼	55	50 - 147	13	30
1,2,4-Trichlorobenzene	<0.75		107	19.8		ug/Kg	☼	19	10 - 120	19	30
1,2-Dichlorobenzene	<0.67		107	34.8		ug/Kg	☼	32	17 - 122	22	30
1,3-Dichlorobenzene	<1.4		107	34.3		ug/Kg	☼	32	16 - 126	17	30
1,4-Dichlorobenzene	<0.55		107	33.9		ug/Kg	☼	32	15 - 121	16	30
Trichlorofluoromethane	<0.57		42.8	20.6		ug/Kg	☼	48	36 - 142	9	30
Methylcyclohexane	<1.1		107	50.8		ug/Kg	☼	47	20 - 132	11	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-7 MSD
Matrix: Solid
Analysis Batch: 221434

Client Sample ID: SE-031016-JN-017
Prep Type: Total/NA
Prep Batch: 221461

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m-Xylene & p-Xylene	<0.82		107	49.8		ug/Kg	☼	47	29 - 131	10	30
o-Xylene	<1.1		107	50.1		ug/Kg	☼	47	29 - 134	9	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*58 - 123*
4-Bromofluorobenzene (Surr)	*108*		*52 - 136*
Toluene-d8 (Surr)	*103*		*67 - 125*
Dibromofluoromethane (Surr)	*98*		*37 - 132*

Lab Sample ID: MB 240-221497/1-A
Matrix: Solid
Analysis Batch: 221767

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221497

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<230		1000	230	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Benzene	<9.0		250	9.0	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Dichlorobromomethane	<38		250	38	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Bromoform	<61		250	61	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Bromomethane	<51		250	51	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
2-Butanone (MEK)	<73		1000	73	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Carbon disulfide	<56		250	56	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Carbon tetrachloride	<18		250	18	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Chlorobenzene	<13		250	13	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Chloroethane	<51		250	51	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Chloroform	<36		250	36	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Chloromethane	<48		250	48	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,1-Dichloroethane	<35		250	35	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,2-Dichloroethane	<10		250	10	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,1-Dichloroethene	<30		250	30	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,2-Dichloropropane	<32		250	32	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,2,4-Trimethylbenzene	<13		250	13	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
cis-1,3-Dichloropropene	<22		250	22	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
trans-1,3-Dichloropropene	<26		250	26	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Ethylbenzene	<35		250	35	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
2-Hexanone	<84		1000	84	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Methylene Chloride	<85		250	85	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
4-Methyl-2-pentanone (MIBK)	<56		1000	56	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Styrene	<27		250	27	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,1,2,2-Tetrachloroethane	<25		250	25	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Tetrachloroethene	<27		250	27	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Toluene	13.8	J	250	10	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Trichloroethene	<39		250	39	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,3,5-Trimethylbenzene	<15		250	15	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Vinyl chloride	<17		250	17	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Xylenes, Total	<32		500	32	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,1,1-Trichloroethane	<27		250	27	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,1,2-Trichloroethane	<19		250	19	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Cyclohexane	<30		500	30	ug/Kg		03/14/16 18:21	03/16/16 15:17	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221497/1-A
Matrix: Solid
Analysis Batch: 221767

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221497

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	<71		500	71	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Ethylene Dibromide	<32		250	32	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Dichlorodifluoromethane	<61		250	61	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
cis-1,2-Dichloroethene	<38		250	38	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
trans-1,2-Dichloroethene	<26		250	26	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Isopropylbenzene	<13		250	13	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Methyl acetate	<55		500	55	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Methyl tert-butyl ether	<30		250	30	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<42		250	42	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,2,4-Trichlorobenzene	<30		250	30	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,2-Dichlorobenzene	<19		250	19	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,3-Dichlorobenzene	<30		250	30	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
1,4-Dichlorobenzene	<41		250	41	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Trichlorofluoromethane	<35		250	35	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Chlorodibromomethane	<20		250	20	ug/Kg		03/14/16 18:21	03/16/16 15:17	1
Methylcyclohexane	<38		500	38	ug/Kg		03/14/16 18:21	03/16/16 15:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*39 - 128*	*03/14/16 18:21*	*03/16/16 15:17*	*1*
4-Bromofluorobenzene (Surr)	*90*		*26 - 141*	*03/14/16 18:21*	*03/16/16 15:17*	*1*
Toluene-d8 (Surr)	*94*		*33 - 134*	*03/14/16 18:21*	*03/16/16 15:17*	*1*
Dibromofluoromethane (Surr)	*86*		*30 - 122*	*03/14/16 18:21*	*03/16/16 15:17*	*1*

Lab Sample ID: LCS 240-221497/2-A
Matrix: Solid
Analysis Batch: 221767

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221497

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	2000	995	J	ug/Kg		50	16 - 156
Benzene	1000	901		ug/Kg		90	70 - 120
Dichlorobromomethane	1000	771		ug/Kg		77	28 - 123
Bromoform	1000	720		ug/Kg		72	10 - 120
Bromomethane	1000	381		ug/Kg		38	10 - 120
2-Butanone (MEK)	2000	1480		ug/Kg		74	10 - 199
Carbon disulfide	1000	569		ug/Kg		57	10 - 132
Carbon tetrachloride	1000	748		ug/Kg		75	29 - 120
Chlorobenzene	1000	919		ug/Kg		92	71 - 120
Chloroethane	1000	362		ug/Kg		36	10 - 120
Chloroform	1000	889		ug/Kg		89	63 - 120
Chloromethane	1000	689		ug/Kg		69	25 - 120
1,1-Dichloroethane	1000	838		ug/Kg		84	63 - 120
1,2-Dichloroethane	1000	836		ug/Kg		84	68 - 120
1,1-Dichloroethene	1000	718		ug/Kg		72	44 - 143
1,2-Dichloropropane	1000	950		ug/Kg		95	73 - 120
1,2,4-Trimethylbenzene	1000	873		ug/Kg		87	62 - 133
cis-1,3-Dichloropropene	1000	844		ug/Kg		84	25 - 120
trans-1,3-Dichloropropene	1000	801		ug/Kg		80	22 - 122
Ethylbenzene	1000	940		ug/Kg		94	66 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221497/2-A
Matrix: Solid
Analysis Batch: 221767

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221497

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Hexanone	2000	1680		ug/Kg		84	43 - 130
Methylene Chloride	1000	876		ug/Kg		88	27 - 172
4-Methyl-2-pentanone (MIBK)	2000	1850		ug/Kg		92	49 - 121
Styrene	1000	959		ug/Kg		96	60 - 120
1,1,2,2-Tetrachloroethane	1000	941		ug/Kg		94	54 - 121
Tetrachloroethene	1000	938		ug/Kg		94	58 - 131
Toluene	1000	955		ug/Kg		96	66 - 123
Trichloroethene	1000	963		ug/Kg		96	59 - 124
1,3,5-Trimethylbenzene	1000	891		ug/Kg		89	60 - 130
Vinyl chloride	1000	720		ug/Kg		72	33 - 120
Xylenes, Total	2000	1920		ug/Kg		96	68 - 120
1,1,1-Trichloroethane	1000	770		ug/Kg		77	38 - 122
1,1,2-Trichloroethane	1000	933		ug/Kg		93	74 - 120
Cyclohexane	1000	805		ug/Kg		81	40 - 120
1,2-Dibromo-3-Chloropropane	1000	796		ug/Kg		80	10 - 129
Ethylene Dibromide	1000	985		ug/Kg		99	47 - 123
Dichlorodifluoromethane	1000	431		ug/Kg		43	10 - 120
cis-1,2-Dichloroethene	1000	878		ug/Kg		88	60 - 125
trans-1,2-Dichloroethene	1000	856		ug/Kg		86	58 - 121
Isopropylbenzene	1000	1010		ug/Kg		101	61 - 123
Methyl acetate	5000	4340		ug/Kg		87	44 - 173
Methyl tert-butyl ether	1000	869		ug/Kg		87	34 - 157
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	770		ug/Kg		77	48 - 151
1,2,4-Trichlorobenzene	1000	954		ug/Kg		95	41 - 135
1,2-Dichlorobenzene	1000	930		ug/Kg		93	68 - 120
1,3-Dichlorobenzene	1000	919		ug/Kg		92	66 - 121
1,4-Dichlorobenzene	1000	921		ug/Kg		92	65 - 120
Trichlorofluoromethane	1000	729		ug/Kg		73	17 - 145
Methylcyclohexane	1000	817		ug/Kg		82	41 - 133
m-Xylene & p-Xylene	1000	951		ug/Kg		95	67 - 120
o-Xylene	1000	968		ug/Kg		97	68 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*81*		*39 - 128*
4-Bromofluorobenzene (Surr)	*86*		*26 - 141*
Toluene-d8 (Surr)	*91*		*33 - 134*
Dibromofluoromethane (Surr)	*87*		*30 - 122*

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 221767

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221497

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	<870		4520	3570	J	ug/Kg	☼	79	10 - 142
Benzene	<35		2260	1680		ug/Kg	☼	74	10 - 199
Dichlorobromomethane	<150		2260	1500		ug/Kg	☼	66	18 - 133
Bromoform	<240		2260	1430		ug/Kg	☼	63	10 - 147

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 221767

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221497

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	<200		2260	768	J	ug/Kg	☼	34	10 - 151
2-Butanone (MEK)	<280		4520	4020		ug/Kg	☼	89	10 - 172
Carbon disulfide	<220		2260	646	J	ug/Kg	☼	29	10 - 155
Carbon tetrachloride	<70		2260	1030		ug/Kg	☼	46	12 - 135
Chlorobenzene	<50		2260	1590		ug/Kg	☼	70	47 - 120
Chloroethane	<200		2260	784	J	ug/Kg	☼	35	10 - 168
Chloroform	<140		2260	1900		ug/Kg	☼	84	51 - 120
Chloromethane	<190		2260	1260		ug/Kg	☼	55	16 - 120
1,1-Dichloroethane	<140		2260	1710		ug/Kg	☼	76	18 - 160
1,2-Dichloroethane	<39		2260	1780		ug/Kg	☼	78	25 - 150
1,1-Dichloroethene	<120		2260	1100		ug/Kg	☼	49	10 - 179
1,2-Dichloropropane	<120		2260	1950		ug/Kg	☼	86	58 - 120
1,2,4-Trimethylbenzene	16000		2260	21600	4	ug/Kg	☼	255	10 - 199
cis-1,3-Dichloropropene	<85		2260	1520		ug/Kg	☼	67	19 - 121
trans-1,3-Dichloropropene	<100		2260	1400		ug/Kg	☼	62	10 - 136
Ethylbenzene	<140		2260	1450		ug/Kg	☼	64	27 - 143
2-Hexanone	<320		4520	5140		ug/Kg	☼	114	21 - 141
Methylene Chloride	380	J	2260	2040		ug/Kg	☼	74	10 - 148
4-Methyl-2-pentanone (MIBK)	<220		4520	5080		ug/Kg	☼	112	19 - 151
Styrene	<100		2260	1500		ug/Kg	☼	66	31 - 137
1,1,2,2-Tetrachloroethane	<97		2260	2300		ug/Kg	☼	102	16 - 158
Tetrachloroethene	<100		2260	1040		ug/Kg	☼	46	19 - 153
Toluene	83	J B	2260	1660		ug/Kg	☼	70	10 - 168
Trichloroethene	<150		2260	1590		ug/Kg	☼	70	10 - 193
1,3,5-Trimethylbenzene	5900		2260	8510		ug/Kg	☼	115	10 - 173
Vinyl chloride	<66		2260	1200		ug/Kg	☼	53	15 - 123
Xylenes, Total	2400		4520	5310		ug/Kg	☼	64	16 - 150
1,1,1-Trichloroethane	<100		2260	1300		ug/Kg	☼	57	10 - 159
1,1,2-Trichloroethane	<73		2260	2180		ug/Kg	☼	96	34 - 152
Cyclohexane	<120		2260	712	J	ug/Kg	☼	31	10 - 154
1,2-Dibromo-3-Chloropropane	<270		2260	1600	J	ug/Kg	☼	71	10 - 153
Ethylene Dibromide	<120		2260	1880		ug/Kg	☼	83	32 - 127
Dichlorodifluoromethane	<240		2260	420	J	ug/Kg	☼	19	10 - 120
cis-1,2-Dichloroethene	<150		2260	1810		ug/Kg	☼	80	34 - 137
trans-1,2-Dichloroethene	<100		2260	1440		ug/Kg	☼	64	40 - 126
Isopropylbenzene	1000		2260	2220		ug/Kg	☼	52	39 - 126
Methyl acetate	<210		11300	12700		ug/Kg	☼	112	10 - 175
Methyl tert-butyl ether	<120		2260	2170		ug/Kg	☼	96	26 - 159
1,1,2-Trichloro-1,2,2-trifluoroethane	<160		2260	904	J	ug/Kg	☼	40	23 - 168
1,2,4-Trichlorobenzene	<120		2260	935	J	ug/Kg	☼	41	10 - 136
1,2-Dichlorobenzene	<73		2260	1490		ug/Kg	☼	66	27 - 126
1,3-Dichlorobenzene	<120		2260	1270		ug/Kg	☼	56	29 - 124
1,4-Dichlorobenzene	<160		2260	1310		ug/Kg	☼	58	30 - 123
Trichlorofluoromethane	<140		2260	1040		ug/Kg	☼	46	10 - 157
Methylcyclohexane	2000	F1	2260	1470	J F1	ug/Kg	☼	-22	11 - 156
m-Xylene & p-Xylene	2400		2260	3890		ug/Kg	☼	66	14 - 151
o-Xylene	<66		2260	1420		ug/Kg	☼	63	18 - 151

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 221767

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221497

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*84*		*39 - 128*
4-Bromofluorobenzene (Surr)	*78*		*26 - 141*
Toluene-d8 (Surr)	*72*		*33 - 134*
Dibromofluoromethane (Surr)	*89*		*30 - 122*

Lab Sample ID: 240-62022-3 MSD
Matrix: Solid
Analysis Batch: 221767

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221497

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	<870		4630	3600	J	ug/Kg	☼	78	10 - 142	1	30
Benzene	<35		2310	1670		ug/Kg	☼	72	10 - 199	0	30
Dichlorobromomethane	<150		2310	1530		ug/Kg	☼	66	18 - 133	2	30
Bromoform	<240		2310	1390		ug/Kg	☼	60	10 - 147	3	30
Bromomethane	<200		2310	755	J	ug/Kg	☼	33	10 - 151	2	30
2-Butanone (MEK)	<280		4630	4260		ug/Kg	☼	92	10 - 172	6	30
Carbon disulfide	<220		2310	662	J	ug/Kg	☼	29	10 - 155	2	30
Carbon tetrachloride	<70		2310	1090		ug/Kg	☼	47	12 - 135	5	30
Chlorobenzene	<50		2310	1660		ug/Kg	☼	72	47 - 120	5	30
Chloroethane	<200		2310	748	J	ug/Kg	☼	32	10 - 168	5	30
Chloroform	<140		2310	1880		ug/Kg	☼	81	51 - 120	1	30
Chloromethane	<190		2310	1320		ug/Kg	☼	57	16 - 120	5	30
1,1-Dichloroethane	<140		2310	1740		ug/Kg	☼	75	18 - 160	2	30
1,2-Dichloroethane	<39		2310	1910		ug/Kg	☼	82	25 - 150	7	30
1,1-Dichloroethene	<120		2310	1140		ug/Kg	☼	49	10 - 179	4	30
1,2-Dichloropropane	<120		2310	1980		ug/Kg	☼	86	58 - 120	2	30
1,2,4-Trimethylbenzene	16000		2310	19800	4	ug/Kg	☼	171	10 - 199	9	30
cis-1,3-Dichloropropene	<85		2310	1580		ug/Kg	☼	68	19 - 121	4	30
trans-1,3-Dichloropropene	<100		2310	1540		ug/Kg	☼	66	10 - 136	9	30
Ethylbenzene	<140		2310	1500		ug/Kg	☼	65	27 - 143	4	30
2-Hexanone	<320		4630	5490		ug/Kg	☼	119	21 - 141	7	30
Methylene Chloride	380	J	2310	2020		ug/Kg	☼	71	10 - 148	1	30
4-Methyl-2-pentanone (MIBK)	<220		4630	5330		ug/Kg	☼	115	19 - 151	5	30
Styrene	<100		2310	1520		ug/Kg	☼	66	31 - 137	1	30
1,1,2,2-Tetrachloroethane	<97		2310	2400		ug/Kg	☼	104	16 - 158	4	30
Tetrachloroethene	<100		2310	1080		ug/Kg	☼	47	19 - 153	4	30
Toluene	83	J B	2310	1660		ug/Kg	☼	68	10 - 168	0	30
Trichloroethene	<150		2310	1610		ug/Kg	☼	70	10 - 193	2	30
1,3,5-Trimethylbenzene	5900		2310	7790		ug/Kg	☼	82	10 - 173	9	30
Vinyl chloride	<66		2310	1200		ug/Kg	☼	52	15 - 123	0	30
Xylenes, Total	2400		4630	5180		ug/Kg	☼	60	16 - 150	2	30
1,1,1-Trichloroethane	<100		2310	1250		ug/Kg	☼	54	10 - 159	4	30
1,1,2-Trichloroethane	<73		2310	2110		ug/Kg	☼	91	34 - 152	3	30
Cyclohexane	<120		2310	742	J	ug/Kg	☼	32	10 - 154	4	30
1,2-Dibromo-3-Chloropropane	<270		2310	1710	J	ug/Kg	☼	74	10 - 153	7	30
Ethylene Dibromide	<120		2310	1920		ug/Kg	☼	83	32 - 127	2	30
Dichlorodifluoromethane	<240		2310	383	J	ug/Kg	☼	17	10 - 120	9	30
cis-1,2-Dichloroethene	<150		2310	1860		ug/Kg	☼	81	34 - 137	3	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-3 MSD
Matrix: Solid
Analysis Batch: 221767

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221497

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	<100		2310	1510		ug/Kg	☼	65	40 - 126	5	30
Isopropylbenzene	1000		2310	2210		ug/Kg	☼	51	39 - 126	0	30
Methyl acetate	<210		11600	13000		ug/Kg	☼	112	10 - 175	2	30
Methyl tert-butyl ether	<120		2310	2240		ug/Kg	☼	97	26 - 159	3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	<160		2310	976		ug/Kg	☼	42	23 - 168	8	30
1,2,4-Trichlorobenzene	<120		2310	929	J	ug/Kg	☼	40	10 - 136	1	30
1,2-Dichlorobenzene	<73		2310	1430		ug/Kg	☼	62	27 - 126	4	30
1,3-Dichlorobenzene	<120		2310	1280		ug/Kg	☼	55	29 - 124	1	30
1,4-Dichlorobenzene	<160		2310	1320		ug/Kg	☼	57	30 - 123	1	30
Trichlorofluoromethane	<140		2310	1050		ug/Kg	☼	46	10 - 157	1	30
Methylcyclohexane	2000	F1	2310	1510	J F1	ug/Kg	☼	-20	11 - 156	3	30
m-Xylene & p-Xylene	2400		2310	3730		ug/Kg	☼	57	14 - 151	4	30
o-Xylene	<66		2310	1450		ug/Kg	☼	63	18 - 151	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*39 - 128*
4-Bromofluorobenzene (Surr)	*80*		*26 - 141*
Toluene-d8 (Surr)	*73*		*33 - 134*
Dibromofluoromethane (Surr)	*89*		*30 - 122*

Lab Sample ID: MB 240-221688/8
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.7		20	5.7	ug/Kg			03/16/16 02:27	1
Benzene	<0.90		5.0	0.90	ug/Kg			03/16/16 02:27	1
Dichlorobromomethane	<0.29		5.0	0.29	ug/Kg			03/16/16 02:27	1
Bromoform	<0.24		5.0	0.24	ug/Kg			03/16/16 02:27	1
Bromomethane	<0.42		5.0	0.42	ug/Kg			03/16/16 02:27	1
2-Butanone (MEK)	<1.1		20	1.1	ug/Kg			03/16/16 02:27	1
Carbon disulfide	<0.59		5.0	0.59	ug/Kg			03/16/16 02:27	1
Carbon tetrachloride	<0.65		5.0	0.65	ug/Kg			03/16/16 02:27	1
Chlorobenzene	<0.53		5.0	0.53	ug/Kg			03/16/16 02:27	1
Chloroethane	<0.44		5.0	0.44	ug/Kg			03/16/16 02:27	1
Chloroform	<0.36		5.0	0.36	ug/Kg			03/16/16 02:27	1
Chloromethane	<0.79		5.0	0.79	ug/Kg			03/16/16 02:27	1
1,1-Dichloroethane	<0.34		5.0	0.34	ug/Kg			03/16/16 02:27	1
1,2-Dichloroethane	<0.46		5.0	0.46	ug/Kg			03/16/16 02:27	1
1,1-Dichloroethene	<0.80		5.0	0.80	ug/Kg			03/16/16 02:27	1
1,2-Dichloropropane	<0.14		5.0	0.14	ug/Kg			03/16/16 02:27	1
1,2,4-Trimethylbenzene	<0.58		5.0	0.58	ug/Kg			03/16/16 02:27	1
cis-1,3-Dichloropropene	<0.71		5.0	0.71	ug/Kg			03/16/16 02:27	1
trans-1,3-Dichloropropene	<0.29		5.0	0.29	ug/Kg			03/16/16 02:27	1
Ethylbenzene	<0.32		5.0	0.32	ug/Kg			03/16/16 02:27	1
2-Hexanone	<0.68		20	0.68	ug/Kg			03/16/16 02:27	1
Methylene Chloride	1.54	J	5.0	0.74	ug/Kg			03/16/16 02:27	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221688/8
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	<1.2		20	1.2	ug/Kg			03/16/16 02:27	1
Styrene	<0.40		5.0	0.40	ug/Kg			03/16/16 02:27	1
1,1,2,2-Tetrachloroethane	<0.31		5.0	0.31	ug/Kg			03/16/16 02:27	1
Tetrachloroethene	<0.80		5.0	0.80	ug/Kg			03/16/16 02:27	1
Toluene	<0.27		5.0	0.27	ug/Kg			03/16/16 02:27	1
Trichloroethene	<0.38		5.0	0.38	ug/Kg			03/16/16 02:27	1
1,3,5-Trimethylbenzene	<0.29		5.0	0.29	ug/Kg			03/16/16 02:27	1
Vinyl chloride	<0.30		5.0	0.30	ug/Kg			03/16/16 02:27	1
Xylenes, Total	<0.54		10	0.54	ug/Kg			03/16/16 02:27	1
1,1,1-Trichloroethane	<0.65		5.0	0.65	ug/Kg			03/16/16 02:27	1
1,1,2-Trichloroethane	<0.37		5.0	0.37	ug/Kg			03/16/16 02:27	1
Cyclohexane	<0.48		10	0.48	ug/Kg			03/16/16 02:27	1
1,2-Dibromo-3-Chloropropane	<2.7		10	2.7	ug/Kg			03/16/16 02:27	1
Ethylene Dibromide	<0.53		5.0	0.53	ug/Kg			03/16/16 02:27	1
Dichlorodifluoromethane	<0.28		5.0	0.28	ug/Kg			03/16/16 02:27	1
cis-1,2-Dichloroethene	<0.28		5.0	0.28	ug/Kg			03/16/16 02:27	1
trans-1,2-Dichloroethene	<0.32		5.0	0.32	ug/Kg			03/16/16 02:27	1
Isopropylbenzene	<0.20		5.0	0.20	ug/Kg			03/16/16 02:27	1
Methyl acetate	<2.0		10	2.0	ug/Kg			03/16/16 02:27	1
Methyl tert-butyl ether	<0.43		5.0	0.43	ug/Kg			03/16/16 02:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.42		5.0	0.42	ug/Kg			03/16/16 02:27	1
1,2,4-Trichlorobenzene	<0.38		5.0	0.38	ug/Kg			03/16/16 02:27	1
1,2-Dichlorobenzene	<0.34		5.0	0.34	ug/Kg			03/16/16 02:27	1
1,3-Dichlorobenzene	<0.69		5.0	0.69	ug/Kg			03/16/16 02:27	1
1,4-Dichlorobenzene	<0.28		5.0	0.28	ug/Kg			03/16/16 02:27	1
Trichlorofluoromethane	<0.29		5.0	0.29	ug/Kg			03/16/16 02:27	1
Chlorodibromomethane	<0.37		5.0	0.37	ug/Kg			03/16/16 02:27	1
Methylcyclohexane	<0.58		10	0.58	ug/Kg			03/16/16 02:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*73*		*58 - 123*		*03/16/16 02:27*	*1*
4-Bromofluorobenzene (Surr)	*80*		*52 - 136*		*03/16/16 02:27*	*1*
Toluene-d8 (Surr)	*84*		*67 - 125*		*03/16/16 02:27*	*1*
Dibromofluoromethane (Surr)	*80*		*37 - 132*		*03/16/16 02:27*	*1*

Lab Sample ID: LCS 240-221688/6
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	81.2		ug/Kg		81	41 - 137
Benzene	50.0	47.1		ug/Kg		94	79 - 120
Dichlorobromomethane	50.0	51.7		ug/Kg		103	80 - 122
Bromoform	50.0	58.3		ug/Kg		117	62 - 133
Bromomethane	50.0	45.4		ug/Kg		91	42 - 136
2-Butanone (MEK)	100	88.9		ug/Kg		89	52 - 131
Carbon disulfide	50.0	60.4		ug/Kg		121	62 - 146
Carbon tetrachloride	50.0	55.8		ug/Kg		112	71 - 129

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221688/6
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobenzene	50.0	45.4		ug/Kg		91	78 - 120
Chloroethane	50.0	42.4		ug/Kg		85	58 - 120
Chloroform	50.0	48.2		ug/Kg		96	77 - 120
Chloromethane	50.0	45.3		ug/Kg		91	50 - 120
1,1-Dichloroethane	50.0	47.7		ug/Kg		95	76 - 120
1,2-Dichloroethane	50.0	47.4		ug/Kg		95	72 - 120
1,1-Dichloroethene	50.0	53.6		ug/Kg		107	75 - 135
1,2-Dichloropropane	50.0	50.2		ug/Kg		100	80 - 120
1,2,4-Trimethylbenzene	50.0	50.5		ug/Kg		101	80 - 129
cis-1,3-Dichloropropene	50.0	48.9		ug/Kg		98	74 - 128
trans-1,3-Dichloropropene	50.0	41.7		ug/Kg		83	73 - 131
Ethylbenzene	50.0	47.4		ug/Kg		95	79 - 120
2-Hexanone	100	89.0		ug/Kg		89	64 - 136
Methylene Chloride	50.0	53.8		ug/Kg		108	75 - 120
4-Methyl-2-pentanone (MIBK)	100	107		ug/Kg		107	67 - 135
Styrene	50.0	51.8		ug/Kg		104	80 - 120
1,1,2,2-Tetrachloroethane	50.0	48.8		ug/Kg		98	77 - 123
Tetrachloroethene	50.0	49.1		ug/Kg		98	79 - 120
Toluene	50.0	47.1		ug/Kg		94	75 - 120
Trichloroethene	50.0	51.4		ug/Kg		103	79 - 120
1,3,5-Trimethylbenzene	50.0	50.5		ug/Kg		101	78 - 128
Vinyl chloride	50.0	47.5		ug/Kg		95	57 - 120
Xylenes, Total	100	96.3		ug/Kg		96	80 - 120
1,1,1-Trichloroethane	50.0	51.7		ug/Kg		103	77 - 126
1,1,2-Trichloroethane	50.0	49.5		ug/Kg		99	80 - 120
Cyclohexane	50.0	49.5		ug/Kg		99	66 - 120
1,2-Dibromo-3-Chloropropane	50.0	51.2		ug/Kg		102	61 - 132
Ethylene Dibromide	50.0	51.3		ug/Kg		103	80 - 120
Dichlorodifluoromethane	50.0	38.8		ug/Kg		78	26 - 120
cis-1,2-Dichloroethene	50.0	48.1		ug/Kg		96	76 - 120
trans-1,2-Dichloroethene	50.0	49.2		ug/Kg		98	78 - 120
Isopropylbenzene	50.0	50.7		ug/Kg		101	76 - 122
Methyl acetate	250	273		ug/Kg		109	57 - 130
Methyl tert-butyl ether	50.0	46.5		ug/Kg		93	49 - 165
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	53.3		ug/Kg		107	80 - 138
1,2,4-Trichlorobenzene	50.0	49.3		ug/Kg		99	64 - 124
1,2-Dichlorobenzene	50.0	46.6		ug/Kg		93	76 - 120
1,3-Dichlorobenzene	50.0	47.5		ug/Kg		95	78 - 120
1,4-Dichlorobenzene	50.0	46.8		ug/Kg		94	75 - 120
Trichlorofluoromethane	50.0	54.8		ug/Kg		110	57 - 146
Methylcyclohexane	50.0	48.1		ug/Kg		96	70 - 126
m-Xylene & p-Xylene	50.0	48.8		ug/Kg		98	80 - 120
o-Xylene	50.0	47.5		ug/Kg		95	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*58 - 123*
4-Bromofluorobenzene (Surr)	*101*		*52 - 136*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221688/6
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	*108*		*67 - 125*
Dibromofluoromethane (Surr)	*108*		*37 - 132*

Lab Sample ID: 240-62022-13 MS
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: SE-031016-JN-023
Prep Type: Total/NA
Prep Batch: 221689

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	<12		107	66.9		ug/Kg	☼	63	24 - 140
Benzene	<2.0		53.4	30.8		ug/Kg	☼	58	53 - 120
Dichlorobromomethane	<0.63		53.4	27.7		ug/Kg	☼	52	35 - 132
Bromoform	<0.52		53.4	21.3		ug/Kg	☼	40	18 - 129
Bromomethane	<0.92		53.4	30.8		ug/Kg	☼	58	33 - 130
2-Butanone (MEK)	<2.4		107	55.3		ug/Kg	☼	52	30 - 143
Carbon disulfide	<1.3		53.4	33.4		ug/Kg	☼	62	20 - 151
Carbon tetrachloride	<1.4		53.4	34.0		ug/Kg	☼	64	32 - 137
Chlorobenzene	<1.2		53.4	23.3		ug/Kg	☼	44	37 - 120
Chloroethane	<0.96		53.4	29.5		ug/Kg	☼	55	45 - 120
Chloroform	<0.78		53.4	31.1		ug/Kg	☼	58	53 - 120
Chloromethane	<1.7		53.4	28.9		ug/Kg	☼	54	34 - 120
1,1-Dichloroethane	<0.74		53.4	31.5		ug/Kg	☼	59	54 - 122
1,2-Dichloroethane	<1.0		53.4	28.3		ug/Kg	☼	53	49 - 123
1,1-Dichloroethene	<1.7		53.4	37.6		ug/Kg	☼	70	49 - 157
1,2-Dichloropropane	<0.31	F1	53.4	30.5	F1	ug/Kg	☼	57	61 - 120
1,2,4-Trimethylbenzene	<1.3		53.4	22.4		ug/Kg	☼	42	10 - 173
cis-1,3-Dichloropropene	<1.5		53.4	23.3		ug/Kg	☼	44	27 - 133
trans-1,3-Dichloropropene	<0.63		53.4	21.4		ug/Kg	☼	40	28 - 137
Ethylbenzene	<0.70		53.4	26.8		ug/Kg	☼	50	30 - 131
2-Hexanone	<1.5		107	48.2		ug/Kg	☼	45	37 - 147
Methylene Chloride	4.8	J B	53.4	39.0		ug/Kg	☼	64	54 - 120
4-Methyl-2-pentanone (MIBK)	<2.7		107	62.8		ug/Kg	☼	59	43 - 147
Styrene	<0.87		53.4	22.0		ug/Kg	☼	41	27 - 127
1,1,2,2-Tetrachloroethane	<0.68		53.4	25.0		ug/Kg	☼	47	16 - 179
Tetrachloroethene	<1.7		53.4	29.7		ug/Kg	☼	56	31 - 135
Toluene	<0.59		53.4	28.1		ug/Kg	☼	53	39 - 129
Trichloroethene	<0.83		53.4	30.2		ug/Kg	☼	56	10 - 177
1,3,5-Trimethylbenzene	<0.63		53.4	24.7		ug/Kg	☼	46	10 - 171
Vinyl chloride	<0.65		53.4	31.0		ug/Kg	☼	58	42 - 120
Xylenes, Total	<1.2		107	52.0		ug/Kg	☼	49	30 - 131
1,1,1-Trichloroethane	<1.4		53.4	34.0		ug/Kg	☼	64	51 - 128
1,1,2-Trichloroethane	<0.81		53.4	27.9		ug/Kg	☼	52	10 - 166
Cyclohexane	<1.0		53.4	32.9		ug/Kg	☼	62	28 - 120
1,2-Dibromo-3-Chloropropane	<5.9		53.4	14.7	J	ug/Kg	☼	28	10 - 153
Ethylene Dibromide	<1.2		53.4	26.9		ug/Kg	☼	50	45 - 127
Dichlorodifluoromethane	<0.61		53.4	25.9		ug/Kg	☼	49	17 - 120
cis-1,2-Dichloroethene	<0.61		53.4	31.0		ug/Kg	☼	58	50 - 120
trans-1,2-Dichloroethene	<0.70		53.4	33.2		ug/Kg	☼	62	50 - 123
Isopropylbenzene	<0.44		53.4	27.1		ug/Kg	☼	51	21 - 134

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-13 MS
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: SE-031016-JN-023
Prep Type: Total/NA
Prep Batch: 221689

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl acetate	<4.4		267	151		ug/Kg	☼	57	33 - 165
Methyl tert-butyl ether	<0.94		53.4	29.1		ug/Kg	☼	55	51 - 157
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.92		53.4	37.9		ug/Kg	☼	71	50 - 147
1,2,4-Trichlorobenzene	<0.83		53.4	8.08	J	ug/Kg	☼	15	10 - 120
1,2-Dichlorobenzene	<0.74		53.4	15.3		ug/Kg	☼	29	17 - 122
1,3-Dichlorobenzene	<1.5		53.4	17.4		ug/Kg	☼	33	16 - 126
1,4-Dichlorobenzene	<0.61		53.4	16.8		ug/Kg	☼	31	15 - 121
Trichlorofluoromethane	<0.63		53.4	34.3		ug/Kg	☼	64	36 - 142
Methylcyclohexane	<1.3		53.4	28.7		ug/Kg	☼	54	20 - 132
m-Xylene & p-Xylene	<0.92		53.4	26.3		ug/Kg	☼	49	29 - 131
o-Xylene	<1.2		53.4	25.7		ug/Kg	☼	48	29 - 134

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*79*		*58 - 123*
4-Bromofluorobenzene (Surr)	*80*		*52 - 136*
Toluene-d8 (Surr)	*87*		*67 - 125*
Dibromofluoromethane (Surr)	*87*		*37 - 132*

Lab Sample ID: 240-62022-13 MSD
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: SE-031016-JN-023
Prep Type: Total/NA
Prep Batch: 221689

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	<12		108	63.9		ug/Kg	☼	59	24 - 140	4	30
Benzene	<2.0		54.0	30.6		ug/Kg	☼	57	53 - 120	1	30
Dichlorobromomethane	<0.63		54.0	27.8		ug/Kg	☼	52	35 - 132	0	30
Bromoform	<0.52		54.0	21.0		ug/Kg	☼	39	18 - 129	1	30
Bromomethane	<0.92		54.0	35.9		ug/Kg	☼	66	33 - 130	15	30
2-Butanone (MEK)	<2.4		108	56.6		ug/Kg	☼	52	30 - 143	2	30
Carbon disulfide	<1.3		54.0	31.5		ug/Kg	☼	58	20 - 151	6	30
Carbon tetrachloride	<1.4		54.0	34.6		ug/Kg	☼	64	32 - 137	2	30
Chlorobenzene	<1.2		54.0	22.5		ug/Kg	☼	42	37 - 120	3	30
Chloroethane	<0.96		54.0	33.6		ug/Kg	☼	62	45 - 120	13	30
Chloroform	<0.78		54.0	31.7		ug/Kg	☼	59	53 - 120	2	30
Chloromethane	<1.7		54.0	32.4		ug/Kg	☼	60	34 - 120	12	30
1,1-Dichloroethane	<0.74		54.0	32.2		ug/Kg	☼	60	54 - 122	2	30
1,2-Dichloroethane	<1.0		54.0	29.9		ug/Kg	☼	55	49 - 123	6	30
1,1-Dichloroethene	<1.7		54.0	37.7		ug/Kg	☼	70	49 - 157	0	30
1,2-Dichloropropane	<0.31	F1	54.0	31.0	F1	ug/Kg	☼	57	61 - 120	2	30
1,2,4-Trimethylbenzene	<1.3		54.0	21.1		ug/Kg	☼	39	10 - 173	6	30
cis-1,3-Dichloropropene	<1.5		54.0	23.1		ug/Kg	☼	43	27 - 133	1	30
trans-1,3-Dichloropropene	<0.63		54.0	22.1		ug/Kg	☼	41	28 - 137	3	30
Ethylbenzene	<0.70		54.0	25.6		ug/Kg	☼	48	30 - 131	5	30
2-Hexanone	<1.5		108	48.8		ug/Kg	☼	45	37 - 147	1	30
Methylene Chloride	4.8	J B	54.0	40.2		ug/Kg	☼	66	54 - 120	3	30
4-Methyl-2-pentanone (MIBK)	<2.7		108	63.7		ug/Kg	☼	59	43 - 147	1	30
Styrene	<0.87		54.0	20.4		ug/Kg	☼	38	27 - 127	7	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-13 MSD
Matrix: Solid
Analysis Batch: 221688

Client Sample ID: SE-031016-JN-023
Prep Type: Total/NA
Prep Batch: 221689

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2,2-Tetrachloroethane	<0.68		54.0	24.9		ug/Kg	☼	46	16 - 179	1	30
Tetrachloroethene	<1.7		54.0	27.8		ug/Kg	☼	52	31 - 135	7	30
Toluene	<0.59		54.0	28.3		ug/Kg	☼	52	39 - 129	1	30
Trichloroethene	<0.83		54.0	29.1		ug/Kg	☼	54	10 - 177	4	30
1,3,5-Trimethylbenzene	<0.63		54.0	23.1		ug/Kg	☼	43	10 - 171	7	30
Vinyl chloride	<0.65		54.0	33.4		ug/Kg	☼	62	42 - 120	7	30
Xylenes, Total	<1.2		108	48.9		ug/Kg	☼	45	30 - 131	6	30
1,1,1-Trichloroethane	<1.4		54.0	33.6		ug/Kg	☼	62	51 - 128	1	30
1,1,2-Trichloroethane	<0.81		54.0	28.5		ug/Kg	☼	53	10 - 166	2	30
Cyclohexane	<1.0		54.0	33.6		ug/Kg	☼	62	28 - 120	2	30
1,2-Dibromo-3-Chloropropane	<5.9		54.0	14.6	J	ug/Kg	☼	27	10 - 153	1	30
Ethylene Dibromide	<1.2		54.0	27.3		ug/Kg	☼	51	45 - 127	1	30
Dichlorodifluoromethane	<0.61		54.0	28.6		ug/Kg	☼	53	17 - 120	10	30
cis-1,2-Dichloroethene	<0.61		54.0	30.8		ug/Kg	☼	57	50 - 120	1	30
trans-1,2-Dichloroethene	<0.70		54.0	32.3		ug/Kg	☼	60	50 - 123	3	30
Isopropylbenzene	<0.44		54.0	24.8		ug/Kg	☼	46	21 - 134	9	30
Methyl acetate	<4.4		270	143		ug/Kg	☼	53	33 - 165	5	30
Methyl tert-butyl ether	<0.94		54.0	31.0		ug/Kg	☼	57	51 - 157	6	30
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.92		54.0	36.5		ug/Kg	☼	68	50 - 147	4	30
1,2,4-Trichlorobenzene	<0.83		54.0	7.35	J	ug/Kg	☼	14	10 - 120	9	30
1,2-Dichlorobenzene	<0.74		54.0	14.1		ug/Kg	☼	26	17 - 122	8	30
1,3-Dichlorobenzene	<1.5		54.0	15.3		ug/Kg	☼	28	16 - 126	13	30
1,4-Dichlorobenzene	<0.61		54.0	15.2		ug/Kg	☼	28	15 - 121	10	30
Trichlorofluoromethane	<0.63		54.0	38.5		ug/Kg	☼	71	36 - 142	12	30
Methylcyclohexane	<1.3		54.0	30.2		ug/Kg	☼	56	20 - 132	5	30
m-Xylene & p-Xylene	<0.92		54.0	24.8		ug/Kg	☼	46	29 - 131	6	30
o-Xylene	<1.2		54.0	24.1		ug/Kg	☼	45	29 - 134	6	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*58 - 123*
4-Bromofluorobenzene (Surr)	*91*		*52 - 136*
Toluene-d8 (Surr)	*101*		*67 - 125*
Dibromofluoromethane (Surr)	*97*		*37 - 132*

Lab Sample ID: MB 240-221763/5
Matrix: Solid
Analysis Batch: 221763

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10.0	J	20	5.7	ug/Kg			03/16/16 12:09	1
Benzene	<0.90		5.0	0.90	ug/Kg			03/16/16 12:09	1
Dichlorobromomethane	<0.29		5.0	0.29	ug/Kg			03/16/16 12:09	1
Bromoform	<0.24		5.0	0.24	ug/Kg			03/16/16 12:09	1
Bromomethane	<0.42		5.0	0.42	ug/Kg			03/16/16 12:09	1
2-Butanone (MEK)	1.17	J	20	1.1	ug/Kg			03/16/16 12:09	1
Carbon disulfide	<0.59		5.0	0.59	ug/Kg			03/16/16 12:09	1
Carbon tetrachloride	<0.65		5.0	0.65	ug/Kg			03/16/16 12:09	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221763/5
Matrix: Solid
Analysis Batch: 221763

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	<0.53		5.0	0.53	ug/Kg			03/16/16 12:09	1
Chloroethane	<0.44		5.0	0.44	ug/Kg			03/16/16 12:09	1
Chloroform	<0.36		5.0	0.36	ug/Kg			03/16/16 12:09	1
Chloromethane	<0.79		5.0	0.79	ug/Kg			03/16/16 12:09	1
1,1-Dichloroethane	<0.34		5.0	0.34	ug/Kg			03/16/16 12:09	1
1,2-Dichloroethane	<0.46		5.0	0.46	ug/Kg			03/16/16 12:09	1
1,1-Dichloroethene	<0.80		5.0	0.80	ug/Kg			03/16/16 12:09	1
1,2-Dichloropropane	<0.14		5.0	0.14	ug/Kg			03/16/16 12:09	1
1,2,4-Trimethylbenzene	<0.58		5.0	0.58	ug/Kg			03/16/16 12:09	1
cis-1,3-Dichloropropene	<0.71		5.0	0.71	ug/Kg			03/16/16 12:09	1
trans-1,3-Dichloropropene	<0.29		5.0	0.29	ug/Kg			03/16/16 12:09	1
Ethylbenzene	<0.32		5.0	0.32	ug/Kg			03/16/16 12:09	1
2-Hexanone	<0.68		20	0.68	ug/Kg			03/16/16 12:09	1
Methylene Chloride	3.67	J	5.0	0.74	ug/Kg			03/16/16 12:09	1
4-Methyl-2-pentanone (MIBK)	<1.2		20	1.2	ug/Kg			03/16/16 12:09	1
Styrene	<0.40		5.0	0.40	ug/Kg			03/16/16 12:09	1
1,1,2,2-Tetrachloroethane	<0.31		5.0	0.31	ug/Kg			03/16/16 12:09	1
Tetrachloroethene	<0.80		5.0	0.80	ug/Kg			03/16/16 12:09	1
Toluene	<0.27		5.0	0.27	ug/Kg			03/16/16 12:09	1
Trichloroethene	<0.38		5.0	0.38	ug/Kg			03/16/16 12:09	1
1,3,5-Trimethylbenzene	<0.29		5.0	0.29	ug/Kg			03/16/16 12:09	1
Vinyl chloride	<0.30		5.0	0.30	ug/Kg			03/16/16 12:09	1
Xylenes, Total	<0.54		10	0.54	ug/Kg			03/16/16 12:09	1
1,1,1-Trichloroethane	<0.65		5.0	0.65	ug/Kg			03/16/16 12:09	1
1,1,2-Trichloroethane	<0.37		5.0	0.37	ug/Kg			03/16/16 12:09	1
Cyclohexane	<0.48		10	0.48	ug/Kg			03/16/16 12:09	1
1,2-Dibromo-3-Chloropropane	<2.7		10	2.7	ug/Kg			03/16/16 12:09	1
Ethylene Dibromide	<0.53		5.0	0.53	ug/Kg			03/16/16 12:09	1
Dichlorodifluoromethane	<0.28		5.0	0.28	ug/Kg			03/16/16 12:09	1
cis-1,2-Dichloroethene	<0.28		5.0	0.28	ug/Kg			03/16/16 12:09	1
trans-1,2-Dichloroethene	<0.32		5.0	0.32	ug/Kg			03/16/16 12:09	1
Isopropylbenzene	<0.20		5.0	0.20	ug/Kg			03/16/16 12:09	1
Methyl acetate	<2.0		10	2.0	ug/Kg			03/16/16 12:09	1
Methyl tert-butyl ether	<0.43		5.0	0.43	ug/Kg			03/16/16 12:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.42		5.0	0.42	ug/Kg			03/16/16 12:09	1
1,2,4-Trichlorobenzene	<0.38		5.0	0.38	ug/Kg			03/16/16 12:09	1
1,2-Dichlorobenzene	<0.34		5.0	0.34	ug/Kg			03/16/16 12:09	1
1,3-Dichlorobenzene	<0.69		5.0	0.69	ug/Kg			03/16/16 12:09	1
1,4-Dichlorobenzene	<0.28		5.0	0.28	ug/Kg			03/16/16 12:09	1
Trichlorofluoromethane	<0.29		5.0	0.29	ug/Kg			03/16/16 12:09	1
Chlorodibromomethane	<0.37		5.0	0.37	ug/Kg			03/16/16 12:09	1
Methylcyclohexane	<0.58		10	0.58	ug/Kg			03/16/16 12:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*58 - 123*		*03/16/16 12:09*	*1*
4-Bromofluorobenzene (Surr)	*103*		*52 - 136*		*03/16/16 12:09*	*1*
Toluene-d8 (Surr)	*108*		*67 - 125*		*03/16/16 12:09*	*1*
Dibromofluoromethane (Surr)	*101*		*37 - 132*		*03/16/16 12:09*	*1*

Lab Sample ID: LCS 240-221763/4
Matrix: Solid
Analysis Batch: 221763

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	105		ug/Kg		105	41 - 137
Benzene	50.0	48.4		ug/Kg		97	79 - 120
Dichlorobromomethane	50.0	52.1		ug/Kg		104	80 - 122
Bromoform	50.0	50.5		ug/Kg		101	62 - 133
Bromomethane	20.0	17.6		ug/Kg		88	42 - 136
2-Butanone (MEK)	100	109		ug/Kg		109	52 - 131
Carbon disulfide	50.0	53.7		ug/Kg		107	62 - 146
Carbon tetrachloride	50.0	52.2		ug/Kg		104	71 - 129
Chlorobenzene	50.0	48.4		ug/Kg		97	78 - 120
Chloroethane	20.0	18.5		ug/Kg		92	58 - 120
Chloroform	50.0	49.5		ug/Kg		99	77 - 120
Chloromethane	20.0	18.4		ug/Kg		92	50 - 120
1,1-Dichloroethane	50.0	47.3		ug/Kg		95	76 - 120
1,2-Dichloroethane	50.0	48.9		ug/Kg		98	72 - 120
1,1-Dichloroethene	50.0	51.7		ug/Kg		103	75 - 135
1,2-Dichloropropane	50.0	49.0		ug/Kg		98	80 - 120
1,2,4-Trimethylbenzene	50.0	53.1		ug/Kg		106	80 - 129
cis-1,3-Dichloropropene	50.0	52.9		ug/Kg		106	74 - 128
trans-1,3-Dichloropropene	50.0	48.9		ug/Kg		98	73 - 131
Ethylbenzene	50.0	50.9		ug/Kg		102	79 - 120
2-Hexanone	100	112		ug/Kg		112	64 - 136
Methylene Chloride	50.0	48.9		ug/Kg		98	75 - 120
4-Methyl-2-pentanone (MIBK)	100	107		ug/Kg		107	67 - 135
Styrene	50.0	51.3		ug/Kg		103	80 - 120
1,1,2,2-Tetrachloroethane	50.0	52.9		ug/Kg		106	77 - 123
Tetrachloroethene	50.0	51.9		ug/Kg		104	79 - 120
Toluene	50.0	49.2		ug/Kg		98	75 - 120
Trichloroethene	50.0	53.6		ug/Kg		107	79 - 120
1,3,5-Trimethylbenzene	50.0	53.4		ug/Kg		107	78 - 128
Vinyl chloride	20.0	18.8		ug/Kg		94	57 - 120
Xylenes, Total	100	101		ug/Kg		101	80 - 120
1,1,1-Trichloroethane	50.0	51.0		ug/Kg		102	77 - 126
1,1,2-Trichloroethane	50.0	50.2		ug/Kg		100	80 - 120
Cyclohexane	50.0	47.3		ug/Kg		95	66 - 120
1,2-Dibromo-3-Chloropropane	50.0	61.5		ug/Kg		123	61 - 132
Ethylene Dibromide	50.0	53.7		ug/Kg		107	80 - 120
Dichlorodifluoromethane	20.0	14.8		ug/Kg		74	26 - 120
cis-1,2-Dichloroethene	50.0	50.8		ug/Kg		102	76 - 120
trans-1,2-Dichloroethene	50.0	51.7		ug/Kg		103	78 - 120
Isopropylbenzene	50.0	53.6		ug/Kg		107	76 - 122
Methyl acetate	250	264		ug/Kg		106	57 - 130
Methyl tert-butyl ether	50.0	50.5		ug/Kg		101	49 - 165
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	48.4		ug/Kg		97	80 - 138
1,2,4-Trichlorobenzene	50.0	50.5		ug/Kg		101	64 - 124
1,2-Dichlorobenzene	50.0	49.6		ug/Kg		99	76 - 120
1,3-Dichlorobenzene	50.0	49.3		ug/Kg		99	78 - 120
1,4-Dichlorobenzene	50.0	50.0		ug/Kg		100	75 - 120
Trichlorofluoromethane	20.0	19.1		ug/Kg		95	57 - 146
Methylcyclohexane	50.0	49.2		ug/Kg		98	70 - 126

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221763/4
Matrix: Solid
Analysis Batch: 221763

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
m-Xylene & p-Xylene			50.0	50.8		ug/Kg		102	80 - 120		
o-Xylene			50.0	50.5		ug/Kg		101	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*58 - 123*
4-Bromofluorobenzene (Surr)	*102*		*52 - 136*
Toluene-d8 (Surr)	*105*		*67 - 125*
Dibromofluoromethane (Surr)	*102*		*37 - 132*

Lab Sample ID: MB 240-221822/6
Matrix: Water
Analysis Batch: 221822

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.94		10	0.94	ug/L			03/16/16 14:31	1
Benzene	<0.35		1.0	0.35	ug/L			03/16/16 14:31	1
Dichlorobromomethane	<0.29		1.0	0.29	ug/L			03/16/16 14:31	1
Bromoform	<0.56		1.0	0.56	ug/L			03/16/16 14:31	1
Bromomethane	<0.44		1.0	0.44	ug/L			03/16/16 14:31	1
2-Butanone (MEK)	<0.53		10	0.53	ug/L			03/16/16 14:31	1
Carbon disulfide	<0.38		1.0	0.38	ug/L			03/16/16 14:31	1
Carbon tetrachloride	<0.43		1.0	0.43	ug/L			03/16/16 14:31	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			03/16/16 14:31	1
Chloroethane	<0.32		1.0	0.32	ug/L			03/16/16 14:31	1
Chloroform	<0.25		1.0	0.25	ug/L			03/16/16 14:31	1
Chloromethane	<0.44		1.0	0.44	ug/L			03/16/16 14:31	1
1,1-Dichloroethane	<0.30		1.0	0.30	ug/L			03/16/16 14:31	1
1,2-Dichloroethane	<0.23		1.0	0.23	ug/L			03/16/16 14:31	1
1,1-Dichloroethene	<0.45		1.0	0.45	ug/L			03/16/16 14:31	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			03/16/16 14:31	1
1,2,4-Trimethylbenzene	<0.41		1.0	0.41	ug/L			03/16/16 14:31	1
cis-1,3-Dichloropropene	<0.46		1.0	0.46	ug/L			03/16/16 14:31	1
trans-1,3-Dichloropropene	<0.56		1.0	0.56	ug/L			03/16/16 14:31	1
Ethylbenzene	<0.25		1.0	0.25	ug/L			03/16/16 14:31	1
2-Hexanone	<0.48		10	0.48	ug/L			03/16/16 14:31	1
Methylene Chloride	<0.33		1.0	0.33	ug/L			03/16/16 14:31	1
4-Methyl-2-pentanone (MIBK)	<0.99		10	0.99	ug/L			03/16/16 14:31	1
Styrene	<0.45		1.0	0.45	ug/L			03/16/16 14:31	1
1,1,2,2-Tetrachloroethane	<0.22		1.0	0.22	ug/L			03/16/16 14:31	1
Tetrachloroethene	<0.31		1.0	0.31	ug/L			03/16/16 14:31	1
Toluene	<0.23		1.0	0.23	ug/L			03/16/16 14:31	1
Trichloroethene	<0.22		1.0	0.22	ug/L			03/16/16 14:31	1
1,3,5-Trimethylbenzene	<0.48		1.0	0.48	ug/L			03/16/16 14:31	1
Vinyl chloride	<0.29		1.0	0.29	ug/L			03/16/16 14:31	1
Xylenes, Total	<0.52		2.0	0.52	ug/L			03/16/16 14:31	1
1,1,1-Trichloroethane	<0.44		1.0	0.44	ug/L			03/16/16 14:31	1
1,1,2-Trichloroethane	<0.24		1.0	0.24	ug/L			03/16/16 14:31	1
Cyclohexane	<0.45		1.0	0.45	ug/L			03/16/16 14:31	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221822/6
Matrix: Water
Analysis Batch: 221822

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	<0.82		2.0	0.82	ug/L			03/16/16 14:31	1
Ethylene Dibromide	<0.32		1.0	0.32	ug/L			03/16/16 14:31	1
Dichlorodifluoromethane	<0.32		1.0	0.32	ug/L			03/16/16 14:31	1
cis-1,2-Dichloroethene	<0.26		1.0	0.26	ug/L			03/16/16 14:31	1
trans-1,2-Dichloroethene	<0.30		1.0	0.30	ug/L			03/16/16 14:31	1
Isopropylbenzene	<0.35		1.0	0.35	ug/L			03/16/16 14:31	1
Methyl acetate	<2.3		10	2.3	ug/L			03/16/16 14:31	1
Methyl tert-butyl ether	<0.20		1.0	0.20	ug/L			03/16/16 14:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.45		1.0	0.45	ug/L			03/16/16 14:31	1
1,2,4-Trichlorobenzene	<0.32		1.0	0.32	ug/L			03/16/16 14:31	1
1,2-Dichlorobenzene	<0.25		1.0	0.25	ug/L			03/16/16 14:31	1
1,3-Dichlorobenzene	<0.19		1.0	0.19	ug/L			03/16/16 14:31	1
1,4-Dichlorobenzene	<0.27		1.0	0.27	ug/L			03/16/16 14:31	1
Trichlorofluoromethane	<0.49		1.0	0.49	ug/L			03/16/16 14:31	1
Chlorodibromomethane	<0.43		1.0	0.43	ug/L			03/16/16 14:31	1
Methylcyclohexane	<0.43		1.0	0.43	ug/L			03/16/16 14:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*78 - 125*		*03/16/16 14:31*	*1*
4-Bromofluorobenzene (Surr)	*88*		*61 - 120*		*03/16/16 14:31*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*03/16/16 14:31*	*1*
Dibromofluoromethane (Surr)	*95*		*79 - 120*		*03/16/16 14:31*	*1*

Lab Sample ID: LCS 240-221822/4
Matrix: Water
Analysis Batch: 221822

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	20.6		ug/L		103	34 - 148
Benzene	10.0	10.3		ug/L		103	80 - 120
Dichlorobromomethane	10.0	9.99		ug/L		100	80 - 120
Bromoform	10.0	9.64		ug/L		96	56 - 122
Bromomethane	10.0	6.73		ug/L		67	38 - 132
2-Butanone (MEK)	20.0	23.6		ug/L		118	56 - 138
Carbon disulfide	10.0	10.7		ug/L		107	65 - 144
Carbon tetrachloride	10.0	10.4		ug/L		104	77 - 131
Chlorobenzene	10.0	10.2		ug/L		102	80 - 120
Chloroethane	10.0	8.22		ug/L		82	36 - 126
Chloroform	10.0	10.3		ug/L		103	80 - 120
Chloromethane	10.0	9.49		ug/L		95	48 - 133
1,1-Dichloroethane	10.0	9.78		ug/L		98	79 - 125
1,2-Dichloroethane	10.0	10.4		ug/L		104	80 - 120
1,1-Dichloroethene	10.0	11.0		ug/L		110	76 - 124
1,2-Dichloropropane	10.0	10.5		ug/L		105	78 - 124
1,2,4-Trimethylbenzene	10.0	10.2		ug/L		102	76 - 120
cis-1,3-Dichloropropene	10.0	9.41		ug/L		94	74 - 126
trans-1,3-Dichloropropene	10.0	8.32		ug/L		83	75 - 131
Ethylbenzene	10.0	10.3		ug/L		103	80 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221822/4
Matrix: Water
Analysis Batch: 221822

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Hexanone	20.0	22.1		ug/L		111	55 - 141
Methylene Chloride	10.0	10.6		ug/L		106	77 - 129
4-Methyl-2-pentanone (MIBK)	20.0	20.3		ug/L		101	64 - 135
Styrene	10.0	10.6		ug/L		106	76 - 122
1,1,2,2-Tetrachloroethane	10.0	11.3		ug/L		113	71 - 123
Tetrachloroethene	10.0	10.7		ug/L		107	78 - 121
Toluene	10.0	10.4		ug/L		104	80 - 120
Trichloroethene	10.0	10.4		ug/L		104	80 - 121
1,3,5-Trimethylbenzene	10.0	10.3		ug/L		103	77 - 120
Vinyl chloride	10.0	10.0		ug/L		100	52 - 121
Xylenes, Total	20.0	20.6		ug/L		103	80 - 120
1,1,1-Trichloroethane	10.0	9.60		ug/L		96	77 - 123
1,1,2-Trichloroethane	10.0	10.7		ug/L		107	80 - 120
Cyclohexane	10.0	10.4		ug/L		104	60 - 140
1,2-Dibromo-3-Chloropropane	10.0	9.05		ug/L		90	50 - 132
Ethylene Dibromide	10.0	11.0		ug/L		110	80 - 120
Dichlorodifluoromethane	10.0	8.61		ug/L		86	23 - 136
cis-1,2-Dichloroethene	10.0	10.2		ug/L		102	79 - 120
trans-1,2-Dichloroethene	10.0	10.8		ug/L		108	80 - 124
Isopropylbenzene	10.0	10.3		ug/L		103	77 - 120
Methyl acetate	50.0	54.6		ug/L		109	67 - 131
Methyl tert-butyl ether	10.0	9.12		ug/L		91	69 - 121
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.1		ug/L		111	67 - 138
1,2,4-Trichlorobenzene	10.0	7.38		ug/L		74	61 - 120
1,2-Dichlorobenzene	10.0	9.98		ug/L		100	79 - 120
1,3-Dichlorobenzene	10.0	10.2		ug/L		102	79 - 120
1,4-Dichlorobenzene	10.0	10.3		ug/L		103	79 - 120
Trichlorofluoromethane	10.0	10.8		ug/L		108	61 - 133
Methylcyclohexane	10.0	10.3		ug/L		103	61 - 134
m-Xylene & p-Xylene	10.0	10.4		ug/L		104	80 - 120
o-Xylene	10.0	10.2		ug/L		102	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*78 - 125*
4-Bromofluorobenzene (Surr)	*93*		*61 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*79 - 120*

Lab Sample ID: 240-62022-17 MS
Matrix: Solid
Analysis Batch: 221763

Client Sample ID: SE-031016-JN-027
Prep Type: Total/NA
Prep Batch: 221853

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	27	J B	207	161		ug/Kg	☼	65	24 - 140
Benzene	<1.7	F1	104	48.1	F1	ug/Kg	☼	46	53 - 120
Dichlorobromomethane	<0.55		104	43.6		ug/Kg	☼	42	35 - 132
Bromoform	<0.45		104	27.0		ug/Kg	☼	26	18 - 129

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-17 MS
Matrix: Solid
Analysis Batch: 221763

Client Sample ID: SE-031016-JN-027
Prep Type: Total/NA
Prep Batch: 221853

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	<0.80		41.5	16.0		ug/Kg	☼	39	33 - 130
2-Butanone (MEK)	6.7	J B	207	144		ug/Kg	☼	66	30 - 143
Carbon disulfide	2.3	J	104	38.4		ug/Kg	☼	35	20 - 151
Carbon tetrachloride	<1.2	F1	104	28.3	F1	ug/Kg	☼	27	32 - 137
Chlorobenzene	<1.0	F1	104	25.5	F1	ug/Kg	☼	25	37 - 120
Chloroethane	<0.83		41.5	22.8		ug/Kg	☼	55	45 - 120
Chloroform	<0.68		104	57.2		ug/Kg	☼	55	53 - 120
Chloromethane	<1.5		41.5	24.2		ug/Kg	☼	58	34 - 120
1,1-Dichloroethane	<0.64		104	56.1		ug/Kg	☼	54	54 - 122
1,2-Dichloroethane	<0.87		104	57.3		ug/Kg	☼	55	49 - 123
1,1-Dichloroethene	<1.5		104	50.4		ug/Kg	☼	49	49 - 157
1,2-Dichloropropane	<0.27	F1	104	50.7	F1	ug/Kg	☼	49	61 - 120
1,2,4-Trimethylbenzene	<1.1		104	14.8		ug/Kg	☼	14	10 - 173
cis-1,3-Dichloropropene	<1.3		104	31.5		ug/Kg	☼	30	27 - 133
trans-1,3-Dichloropropene	<0.55		104	29.3		ug/Kg	☼	28	28 - 137
Ethylbenzene	<0.61	F1	104	21.1	F1	ug/Kg	☼	20	30 - 131
2-Hexanone	<1.3	F1	207	132		ug/Kg	☼	64	37 - 147
Methylene Chloride	3.6	J B	104	60.7		ug/Kg	☼	55	54 - 120
4-Methyl-2-pentanone (MIBK)	<2.3		207	130		ug/Kg	☼	63	43 - 147
Styrene	<0.76	F1	104	19.3	F1	ug/Kg	☼	19	27 - 127
1,1,2,2-Tetrachloroethane	<0.59		104	44.2		ug/Kg	☼	43	16 - 179
Tetrachloroethene	<1.5	F1	104	21.5	F1	ug/Kg	☼	21	31 - 135
Toluene	<0.51	F1	104	33.6	F1	ug/Kg	☼	32	39 - 129
Trichloroethene	<0.72		104	38.7		ug/Kg	☼	37	10 - 177
1,3,5-Trimethylbenzene	<0.55		104	15.2		ug/Kg	☼	15	10 - 171
Vinyl chloride	<0.57		41.5	21.5		ug/Kg	☼	52	42 - 120
Xylenes, Total	<1.0	F1	207	40.4	F1	ug/Kg	☼	19	30 - 131
1,1,1-Trichloroethane	<1.2	F1	104	40.0	F1	ug/Kg	☼	39	51 - 128
1,1,2-Trichloroethane	<0.70		104	55.6		ug/Kg	☼	54	10 - 166
Cyclohexane	<0.91	F1	104	18.8	J F1	ug/Kg	☼	18	28 - 120
1,2-Dibromo-3-Chloropropane	<5.1		104	27.0		ug/Kg	☼	26	10 - 153
Ethylene Dibromide	<1.0		104	47.5		ug/Kg	☼	46	45 - 127
Dichlorodifluoromethane	<0.53		41.5	16.5		ug/Kg	☼	40	17 - 120
cis-1,2-Dichloroethene	<0.53		104	52.5		ug/Kg	☼	51	50 - 120
trans-1,2-Dichloroethene	<0.61	F1	104	46.0	F1	ug/Kg	☼	44	50 - 123
Isopropylbenzene	<0.38	F1	104	16.7	F1	ug/Kg	☼	16	21 - 134
Methyl acetate	<3.8		518	312		ug/Kg	☼	60	33 - 165
Methyl tert-butyl ether	<0.81		104	68.8		ug/Kg	☼	66	51 - 157
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.80	F1	104	29.2	F1	ug/Kg	☼	28	50 - 147
1,2,4-Trichlorobenzene	<0.72	F1	104	7.10	J F1	ug/Kg	☼	7	10 - 120
1,2-Dichlorobenzene	<0.64	F1	104	12.5	F1	ug/Kg	☼	12	17 - 122
1,3-Dichlorobenzene	<1.3	F1	104	13.0	F1	ug/Kg	☼	13	16 - 126
1,4-Dichlorobenzene	<0.53	F1	104	13.3	F1	ug/Kg	☼	13	15 - 121
Trichlorofluoromethane	<0.55		41.5	16.0		ug/Kg	☼	39	36 - 142
Methylcyclohexane	2.7	J F1	104	18.7	J F1	ug/Kg	☼	15	20 - 132
m-Xylene & p-Xylene	<0.80	F1	104	20.6	J F1	ug/Kg	☼	20	29 - 131
o-Xylene	<1.1	F1	104	19.8	F1	ug/Kg	☼	19	29 - 134

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-17 MS
Matrix: Solid
Analysis Batch: 221763

Client Sample ID: SE-031016-JN-027
Prep Type: Total/NA
Prep Batch: 221853

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*90*		*58 - 123*
4-Bromofluorobenzene (Surr)	*118*		*52 - 136*
Toluene-d8 (Surr)	*107*		*67 - 125*
Dibromofluoromethane (Surr)	*101*		*37 - 132*

Lab Sample ID: 240-62022-17 MSD
Matrix: Solid
Analysis Batch: 221763

Client Sample ID: SE-031016-JN-027
Prep Type: Total/NA
Prep Batch: 221853

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	27	J B	194	143		ug/Kg	☼	60	24 - 140	12	30
Benzene	<1.7	F1	96.8	58.9		ug/Kg	☼	61	53 - 120	20	30
Dichlorobromomethane	<0.55		96.8	49.2		ug/Kg	☼	51	35 - 132	12	30
Bromoform	<0.45		96.8	29.1		ug/Kg	☼	30	18 - 129	8	30
Bromomethane	<0.80		38.7	15.6		ug/Kg	☼	40	33 - 130	2	30
2-Butanone (MEK)	6.7	J B	194	139		ug/Kg	☼	68	30 - 143	3	30
Carbon disulfide	2.3	J	96.8	41.5		ug/Kg	☼	41	20 - 151	8	30
Carbon tetrachloride	<1.2	F1	96.8	40.3	F2	ug/Kg	☼	42	32 - 137	35	30
Chlorobenzene	<1.0	F1	96.8	37.9	F2	ug/Kg	☼	39	37 - 120	39	30
Chloroethane	<0.83		38.7	29.6		ug/Kg	☼	76	45 - 120	26	30
Chloroform	<0.68		96.8	65.9		ug/Kg	☼	68	53 - 120	14	30
Chloromethane	<1.5		38.7	26.4		ug/Kg	☼	68	34 - 120	9	30
1,1-Dichloroethane	<0.64		96.8	65.8		ug/Kg	☼	68	54 - 122	16	30
1,2-Dichloroethane	<0.87		96.8	62.5		ug/Kg	☼	65	49 - 123	9	30
1,1-Dichloroethene	<1.5		96.8	62.8		ug/Kg	☼	65	49 - 157	22	30
1,2-Dichloropropane	<0.27	F1	96.8	59.8		ug/Kg	☼	62	61 - 120	17	30
1,2,4-Trimethylbenzene	<1.1		96.8	21.5	F2	ug/Kg	☼	22	10 - 173	37	30
cis-1,3-Dichloropropene	<1.3		96.8	36.8		ug/Kg	☼	38	27 - 133	16	30
trans-1,3-Dichloropropene	<0.55		96.8	33.8		ug/Kg	☼	35	28 - 137	14	30
Ethylbenzene	<0.61	F1	96.8	34.8	F2	ug/Kg	☼	36	30 - 131	49	30
2-Hexanone	<1.3	F1	194	538	F1 F2	ug/Kg	☼	278	37 - 147	121	30
Methylene Chloride	3.6	J B	96.8	68.7		ug/Kg	☼	67	54 - 120	13	30
4-Methyl-2-pentanone (MIBK)	<2.3		194	136		ug/Kg	☼	70	43 - 147	4	30
Styrene	<0.76	F1	96.8	30.3	F2	ug/Kg	☼	31	27 - 127	44	30
1,1,2,2-Tetrachloroethane	<0.59		96.8	64.8	F2	ug/Kg	☼	67	16 - 179	38	30
Tetrachloroethene	<1.5	F1	96.8	35.8	F2	ug/Kg	☼	37	31 - 135	50	30
Toluene	<0.51	F1	96.8	50.2	F2	ug/Kg	☼	52	39 - 129	40	30
Trichloroethene	<0.72		96.8	50.6		ug/Kg	☼	52	10 - 177	27	30
1,3,5-Trimethylbenzene	<0.55		96.8	23.1	F2	ug/Kg	☼	24	10 - 171	42	30
Vinyl chloride	<0.57		38.7	26.0		ug/Kg	☼	67	42 - 120	19	30
Xylenes, Total	<1.0	F1	194	63.6	F2	ug/Kg	☼	33	30 - 131	45	30
1,1,1-Trichloroethane	<1.2	F1	96.8	54.4		ug/Kg	☼	56	51 - 128	30	30
1,1,2-Trichloroethane	<0.70		96.8	99.6	F2	ug/Kg	☼	103	10 - 166	57	30
Cyclohexane	<0.91	F1	96.8	31.4	F2	ug/Kg	☼	32	28 - 120	50	30
1,2-Dibromo-3-Chloropropane	<5.1		96.8	30.1		ug/Kg	☼	31	10 - 153	11	30
Ethylene Dibromide	<1.0		96.8	55.2		ug/Kg	☼	57	45 - 127	15	30
Dichlorodifluoromethane	<0.53		38.7	20.8		ug/Kg	☼	54	17 - 120	23	30
cis-1,2-Dichloroethene	<0.53		96.8	61.6		ug/Kg	☼	64	50 - 120	16	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-17 MSD
Matrix: Solid
Analysis Batch: 221763

Client Sample ID: SE-031016-JN-027
Prep Type: Total/NA
Prep Batch: 221853

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	<0.61	F1	96.8	57.8		ug/Kg	☼	60	50 - 123	23	30
Isopropylbenzene	<0.38	F1	96.8	29.0	F2	ug/Kg	☼	30	21 - 134	53	30
Methyl acetate	<3.8		484	300		ug/Kg	☼	62	33 - 165	4	30
Methyl tert-butyl ether	<0.81		96.8	72.1		ug/Kg	☼	74	51 - 157	5	30
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.80	F1	96.8	43.9	F1 F2	ug/Kg	☼	45	50 - 147	40	30
1,2,4-Trichlorobenzene	<0.72	F1	96.8	8.00	J F1	ug/Kg	☼	8	10 - 120	12	30
1,2-Dichlorobenzene	<0.64	F1	96.8	18.0	F2	ug/Kg	☼	19	17 - 122	36	30
1,3-Dichlorobenzene	<1.3	F1	96.8	19.6	F2	ug/Kg	☼	20	16 - 126	40	30
1,4-Dichlorobenzene	<0.53	F1	96.8	19.4	F2	ug/Kg	☼	20	15 - 121	37	30
Trichlorofluoromethane	<0.55		38.7	22.5	F2	ug/Kg	☼	58	36 - 142	34	30
Methylcyclohexane	2.7	J F1	96.8	43.7	F2	ug/Kg	☼	42	20 - 132	80	30
m-Xylene & p-Xylene	<0.80	F1	96.8	31.7	F2	ug/Kg	☼	33	29 - 131	42	30
o-Xylene	<1.1	F1	96.8	31.9	F2	ug/Kg	☼	33	29 - 134	47	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*89*		*58 - 123*
4-Bromofluorobenzene (Surr)	*118*		*52 - 136*
Toluene-d8 (Surr)	*114*		*67 - 125*
Dibromofluoromethane (Surr)	*99*		*37 - 132*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-221358/23-A
Matrix: Solid
Analysis Batch: 221725

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221358

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<3.5		50	3.5	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
bis (2-chloroisopropyl) ether	<9.5		100	9.5	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
2,4,5-Trichlorophenol	<25		150	25	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
2,4,6-Trichlorophenol	<8.9		150	8.9	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
2,4-Dichlorophenol	<20		150	20	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
2,4-Dimethylphenol	<20		150	20	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
2,4-Dinitrophenol	<21		330	21	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
2,4-Dinitrotoluene	<17		200	17	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
2,6-Dinitrotoluene	<21		200	21	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
2-Chloronaphthalene	<0.45		50	0.45	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
2-Chlorophenol	<8.2		50	8.2	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
2-Methylnaphthalene	<0.50		6.7	0.50	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
2-Methylphenol	<11		200	11	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
2-Nitroaniline	<9.1		200	9.1	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
2-Nitrophenol	<8.3		50	8.3	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
3,3'-Dichlorobenzidine	<18		100	18	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
3-Nitroaniline	<16		200	16	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
4,6-Dinitro-2-methylphenol	<9.2		150	9.2	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
4-Bromophenyl phenyl ether	<13		50	13	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
4-Chloro-3-methylphenol	<21		150	21	ug/Kg		03/14/16 07:06	03/16/16 08:14	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221358/23-A
Matrix: Solid
Analysis Batch: 221725

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221358

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	<17		150	17	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
4-Chlorophenyl phenyl ether	<13		50	13	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
4-Nitroaniline	<26		200	26	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
4-Nitrophenol	<17		330	17	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Acetophenone	<9.2		100	9.2	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Atrazine	<9.1		200	9.1	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Benzaldehyde	<12		100	12	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Bis(2-chloroethoxy)methane	<22		100	22	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Bis(2-chloroethyl)ether	<2.0		100	2.0	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Bis(2-ethylhexyl) phthalate	36.1	J	70	19	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Butyl benzyl phthalate	<10		70	10	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Caprolactam	<37		330	37	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Carbazole	<27		50	27	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Dibenzofuran	<0.66		50	0.66	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Diethyl phthalate	<16		70	16	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Dimethyl phthalate	<17		70	17	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Di-n-butyl phthalate	<15		70	15	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Di-n-octyl phthalate	<7.9		70	7.9	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Hexachlorobenzene	<2.1		6.7	2.1	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Hexachlorobutadiene	<5.6		50	5.6	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Hexachlorocyclopentadiene	<8.1		330	8.1	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Hexachloroethane	<9.0		50	9.0	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Isophorone	<13		50	13	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Nitrobenzene	<2.2		100	2.2	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
N-Nitrosodi-n-propylamine	<6.3		50	6.3	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
N-Nitrosodiphenylamine	<21		50	21	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Pentachlorophenol	<9.1		150	9.1	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Phenol	<7.3		50	7.3	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
3 & 4 Methylphenol	<20		400	20	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Fluorene	<0.53		6.7	0.53	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Acenaphthylene	<0.35		6.7	0.35	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Benzo[g,h,i]perylene	<0.35		6.7	0.35	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Phenanthrene	<0.73		6.7	0.73	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Benzo[k]fluoranthene	<0.68		6.7	0.68	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Benzo[a]pyrene	<0.64		6.7	0.64	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Anthracene	<0.78		6.7	0.78	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Pyrene	<0.44		6.7	0.44	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Dibenz(a,h)anthracene	<0.66		6.7	0.66	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Naphthalene	<0.82		6.7	0.82	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Fluoranthene	<0.55		6.7	0.55	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Benzo[a]anthracene	<0.63		6.7	0.63	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Indeno[1,2,3-cd]pyrene	<0.35		6.7	0.35	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Chrysene	<1.1		6.7	1.1	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Acenaphthene	<0.76		6.7	0.76	ug/Kg		03/14/16 07:06	03/16/16 08:14	1
Benzo[b]fluoranthene	<0.59		6.7	0.59	ug/Kg		03/14/16 07:06	03/16/16 08:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*68*		*24 - 110*	*03/14/16 07:06*	*03/16/16 08:14*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221358/23-A
Matrix: Solid
Analysis Batch: 221725

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221358

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	66		24 - 110	03/14/16 07:06	03/16/16 08:14	1
2,4,6-Tribromophenol (Surr)	29		10 - 110	03/14/16 07:06	03/16/16 08:14	1
Nitrobenzene-d5 (Surr)	61		20 - 110	03/14/16 07:06	03/16/16 08:14	1
Phenol-d5 (Surr)	70		26 - 110	03/14/16 07:06	03/16/16 08:14	1
Terphenyl-d14 (Surr)	81		36 - 110	03/14/16 07:06	03/16/16 08:14	1

Lab Sample ID: LCS 240-221358/24-A
Matrix: Solid
Analysis Batch: 221725

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221358

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	667	463		ug/Kg		69	35 - 110
bis (2-chloroisopropyl) ether	667	474		ug/Kg		71	29 - 110
2,4,5-Trichlorophenol	667	378		ug/Kg		57	25 - 110
2,4,6-Trichlorophenol	667	273		ug/Kg		41	12 - 110
2,4-Dichlorophenol	667	443		ug/Kg		66	39 - 110
2,4-Dimethylphenol	667	428		ug/Kg		64	29 - 110
2,4-Dinitrophenol	1330	761		ug/Kg		57	10 - 110
2,4-Dinitrotoluene	667	521		ug/Kg		78	48 - 110
2,6-Dinitrotoluene	667	477		ug/Kg		72	45 - 110
2-Chloronaphthalene	667	461		ug/Kg		69	32 - 110
2-Chlorophenol	667	456		ug/Kg		68	37 - 110
2-Methylnaphthalene	667	441		ug/Kg		66	36 - 110
2-Methylphenol	667	478		ug/Kg		72	41 - 110
2-Nitroaniline	667	494		ug/Kg		74	45 - 110
2-Nitrophenol	667	450		ug/Kg		68	34 - 110
3,3'-Dichlorobenzidine	1330	900		ug/Kg		68	28 - 110
3-Nitroaniline	667	490		ug/Kg		73	44 - 110
4,6-Dinitro-2-methylphenol	1330	844		ug/Kg		63	10 - 110
4-Bromophenyl phenyl ether	667	486		ug/Kg		73	39 - 110
4-Chloro-3-methylphenol	667	469		ug/Kg		70	48 - 110
4-Chloroaniline	667	400		ug/Kg		60	30 - 110
4-Chlorophenyl phenyl ether	667	463		ug/Kg		69	40 - 110
4-Nitroaniline	667	514		ug/Kg		77	48 - 110
4-Nitrophenol	1330	982		ug/Kg		74	28 - 110
Acetophenone	667	450		ug/Kg		68	40 - 110
Atrazine	1330	1150		ug/Kg		86	54 - 120
Benzaldehyde	1330	879		ug/Kg		66	32 - 110
Bis(2-chloroethoxy)methane	667	463		ug/Kg		70	32 - 110
Bis(2-chloroethyl)ether	667	436		ug/Kg		65	34 - 110
Bis(2-ethylhexyl) phthalate	667	544		ug/Kg		82	50 - 110
Butyl benzyl phthalate	667	507		ug/Kg		76	51 - 110
Caprolactam	1330	1020		ug/Kg		77	44 - 114
Carbazole	667	534		ug/Kg		80	50 - 110
Dibenzofuran	667	466		ug/Kg		70	43 - 110
Diethyl phthalate	667	493		ug/Kg		74	52 - 110
Dimethyl phthalate	667	476		ug/Kg		71	50 - 110
Di-n-butyl phthalate	667	575		ug/Kg		86	51 - 110

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221358/24-A
Matrix: Solid
Analysis Batch: 221725

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221358

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Di-n-octyl phthalate	667	505		ug/Kg		76	48 - 110
Hexachlorobenzene	667	479		ug/Kg		72	43 - 110
Hexachlorobutadiene	667	431		ug/Kg		65	29 - 110
Hexachlorocyclopentadiene	667	377		ug/Kg		56	12 - 110
Hexachloroethane	667	418		ug/Kg		63	30 - 110
Isophorone	667	467		ug/Kg		70	36 - 110
Nitrobenzene	667	464		ug/Kg		70	32 - 110
N-Nitrosodi-n-propylamine	667	472		ug/Kg		71	38 - 110
N-Nitrosodiphenylamine	667	485		ug/Kg		73	46 - 110
Pentachlorophenol	1330	773		ug/Kg		58	10 - 110
Phenol	667	471		ug/Kg		71	38 - 110
3 & 4 Methylphenol	667	467		ug/Kg		70	40 - 110
Fluorene	667	459		ug/Kg		69	46 - 110
Acenaphthylene	667	475		ug/Kg		71	40 - 110
Benzo[g,h,i]perylene	667	543		ug/Kg		81	51 - 110
Phenanthrene	667	492		ug/Kg		74	49 - 110
Benzo[k]fluoranthene	667	538		ug/Kg		81	38 - 105
Benzo[a]pyrene	667	512		ug/Kg		77	44 - 110
Anthracene	667	497		ug/Kg		75	48 - 110
Pyrene	667	536		ug/Kg		80	49 - 110
Dibenz(a,h)anthracene	667	527		ug/Kg		79	51 - 110
Naphthalene	667	441		ug/Kg		66	36 - 110
Fluoranthene	667	530		ug/Kg		80	51 - 110
Benzo[a]anthracene	667	487		ug/Kg		73	50 - 110
Indeno[1,2,3-cd]pyrene	667	540		ug/Kg		81	50 - 110
Chrysene	667	499		ug/Kg		75	50 - 110
Acenaphthene	667	459		ug/Kg		69	38 - 110
Benzo[b]fluoranthene	667	503		ug/Kg		76	43 - 110

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*69*		*24 - 110*
2-Fluorophenol (Surr)	*71*		*24 - 110*
2,4,6-Tribromophenol (Surr)	*43*		*10 - 110*
Nitrobenzene-d5 (Surr)	*69*		*20 - 110*
Phenol-d5 (Surr)	*71*		*26 - 110*
Terphenyl-d14 (Surr)	*83*		*36 - 110*

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 222298

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221358

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	<770	F1	1680	479	J F1	ug/Kg	☼	29	32 - 110
bis (2-chloroisopropyl) ether	<2100	F1	1680	<480	F1	ug/Kg	☼	0	11 - 110
2,4,5-Trichlorophenol	<5500	F1	1680	<1300	F1	ug/Kg	☼	0	10 - 117
2,4,6-Trichlorophenol	<2000	F1	1680	<450	F1	ug/Kg	☼	0	10 - 110
2,4-Dichlorophenol	<4400	F1	1680	<1000	F1	ug/Kg	☼	0	10 - 110
2,4-Dimethylphenol	<4400	F1	1680	<1000	F1	ug/Kg	☼	0	10 - 110

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 222298

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221358

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrophenol	<4600	F1	3360	<1100	F1	ug/Kg	☼	0	10 - 110
2,4-Dinitrotoluene	<3800	F1	1680	<860	F1	ug/Kg	☼	0	32 - 110
2,6-Dinitrotoluene	<4600	F1	1680	<1100	F1	ug/Kg	☼	0	35 - 110
2-Chloronaphthalene	<100	F1	1680	312	J F1	ug/Kg	☼	19	28 - 110
2-Chlorophenol	<1800	F1	1680	<410	F1	ug/Kg	☼	0	10 - 110
2-Methylnaphthalene	3300	F1	1680	1110	F1	ug/Kg	☼	-131	10 - 133
2-Methylphenol	<2400	F1	1680	<550	F1	ug/Kg	☼	0	24 - 110
2-Nitroaniline	<2000	F1	1680	549	J F1	ug/Kg	☼	33	39 - 110
2-Nitrophenol	<1800		1680	528	J	ug/Kg	☼	31	10 - 110
3,3'-Dichlorobenzidine	<4000	F1	3360	<910	F1	ug/Kg	☼	0	10 - 110
3-Nitroaniline	<3500	F1	1680	<810	F1	ug/Kg	☼	0	10 - 110
4,6-Dinitro-2-methylphenol	<2000	F1	3360	<460	F1	ug/Kg	☼	0	10 - 110
4-Bromophenyl phenyl ether	<2900	F1	1680	<650	F1	ug/Kg	☼	0	33 - 110
4-Chloro-3-methylphenol	<4600	F1	1680	<1100	F1	ug/Kg	☼	0	25 - 110
4-Chloroaniline	<3800	F1	1680	<860	F1	ug/Kg	☼	0	10 - 110
4-Chlorophenyl phenyl ether	<2900	F1	1680	<650	F1	ug/Kg	☼	0	32 - 110
4-Nitroaniline	<5800	F1	1680	<1300	F1	ug/Kg	☼	0	10 - 110
4-Nitrophenol	<3800	F1	3360	<860	F1	ug/Kg	☼	0	10 - 113
Acetophenone	<2000	F1	1680	<460	F1	ug/Kg	☼	0	31 - 110
Atrazine	<2000	F1	3360	862	J F1	ug/Kg	☼	26	45 - 118
Benzaldehyde	<2700		3360	1310	J	ug/Kg	☼	39	23 - 110
Bis(2-chloroethoxy)methane	<4900	F1	1680	<1100	F1	ug/Kg	☼	0	26 - 110
Bis(2-chloroethyl)ether	<440	F1	1680	304	J F1	ug/Kg	☼	18	21 - 110
Bis(2-ethylhexyl) phthalate	27000	B	1680	9560	4 B	ug/Kg	☼	-1018	40 - 110
Butyl benzyl phthalate	56000		1680	9170	4	ug/Kg	☼	-2809	44 - 110
Caprolactam	<8200	F1	3360	<1900	F1	ug/Kg	☼	0	10 - 134
Carbazole	<6000	F1	1680	<1400	F1	ug/Kg	☼	0	34 - 110
Dibenzofuran	<150		1680	595	J	ug/Kg	☼	35	29 - 110
Diethyl phthalate	<3500	F1	1680	<810	F1	ug/Kg	☼	0	42 - 110
Dimethyl phthalate	<3800	F1	1680	<860	F1	ug/Kg	☼	0	41 - 110
Di-n-butyl phthalate	5300	J F1	1680	1830	J F1	ug/Kg	☼	-205	43 - 110
Di-n-octyl phthalate	<1700		1680	436	J	ug/Kg	☼	26	24 - 119
Hexachlorobenzene	<460	F1	1680	483	F1	ug/Kg	☼	29	34 - 110
Hexachlorobutadiene	<1200		1680	432	J	ug/Kg	☼	26	25 - 110
Hexachlorocyclopentadiene	<1800	F1	1680	<410	F1	ug/Kg	☼	0	10 - 110
Hexachloroethane	<2000	F1	1680	<450	F1	ug/Kg	☼	0	12 - 110
Isophorone	<2900	F1	1680	<650	F1	ug/Kg	☼	0	29 - 110
Nitrobenzene	<490		1680	430	J	ug/Kg	☼	26	23 - 110
N-Nitrosodi-n-propylamine	<1400	F1	1680	<320	F1	ug/Kg	☼	0	26 - 110
N-Nitrosodiphenylamine	<4600	F1	1680	<1100	F1	ug/Kg	☼	0	22 - 110
Pentachlorophenol	<2000	F1	3360	<460	F1	ug/Kg	☼	0	10 - 110
Phenol	<1600		1680	646	J	ug/Kg	☼	38	17 - 110
3 & 4 Methylphenol	<4400	F1	1680	<1000	F1	ug/Kg	☼	0	25 - 110
Fluorene	2500	F1	1680	1050	F1	ug/Kg	☼	-87	23 - 110
Acenaphthylene	<77	F1	1680	391	F1	ug/Kg	☼	23	24 - 110
Benzo[g,h,i]perylene	6400	F1	1680	1700	F1	ug/Kg	☼	-278	10 - 117
Phenanthrene	22000		1680	5610	4	ug/Kg	☼	-1003	10 - 166
Benzo[k]fluoranthene	4500	F1	1680	1550	F1	ug/Kg	☼	-175	10 - 121

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 222298

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221358

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]pyrene	7600		1680	2540	4	ug/Kg	☼	-301	10 - 110
Anthracene	4600	F1	1680	1400	F1	ug/Kg	☼	-192	20 - 110
Pyrene	21000		1680	5510	4	ug/Kg	☼	-903	10 - 147
Dibenz(a,h)anthracene	<150		1680	699		ug/Kg	☼	42	14 - 113
Naphthalene	4800	F1	1680	1310	F1	ug/Kg	☼	-206	10 - 111
Fluoranthene	27000		1680	6970	4	ug/Kg	☼	-1167	10 - 110
Benzo[a]anthracene	11000		1680	2580	4	ug/Kg	☼	-484	10 - 122
Indeno[1,2,3-cd]pyrene	4300	F1	1680	1450	F1	ug/Kg	☼	-170	10 - 114
Chrysene	12000		1680	3210	4	ug/Kg	☼	-508	10 - 125
Acenaphthene	2300	F1	1680	910	F1	ug/Kg	☼	-81	22 - 110
Benzo[b]fluoranthene	12000		1680	2860	4	ug/Kg	☼	-547	12 - 118

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*15*	*X*	*24 - 110*
2-Fluorophenol (Surr)	*29*		*24 - 110*
2,4,6-Tribromophenol (Surr)	*18*		*10 - 110*
Nitrobenzene-d5 (Surr)	*57*		*20 - 110*
Phenol-d5 (Surr)	*44*		*26 - 110*
Terphenyl-d14 (Surr)	*22*	*X*	*36 - 110*

Lab Sample ID: 240-62022-3 MSD
Matrix: Solid
Analysis Batch: 222298

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221358

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl	<770	F1	1690	898	J F2	ug/Kg	☼	53	32 - 110	61	32
bis (2-chloroisopropyl) ether	<2100	F1	1690	780	J	ug/Kg	☼	46	11 - 110	NC	42
2,4,5-Trichlorophenol	<5500	F1	1690	<1300	F1	ug/Kg	☼	0	10 - 117	NC	99
2,4,6-Trichlorophenol	<2000	F1	1690	775	J	ug/Kg	☼	46	10 - 110	NC	38
2,4-Dichlorophenol	<4400	F1	1690	<1000	F1	ug/Kg	☼	0	10 - 110	NC	34
2,4-Dimethylphenol	<4400	F1	1690	1130	J	ug/Kg	☼	67	10 - 110	NC	31
2,4-Dinitrophenol	<4600	F1	3370	<1100	F1	ug/Kg	☼	0	10 - 110	NC	99
2,4-Dinitrotoluene	<3800	F1	1690	<860	F1	ug/Kg	☼	0	32 - 110	NC	30
2,6-Dinitrotoluene	<4600	F1	1690	<1100	F1	ug/Kg	☼	0	35 - 110	NC	30
2-Chloronaphthalene	<100	F1	1690	615	J F2	ug/Kg	☼	36	28 - 110	65	30
2-Chlorophenol	<1800	F1	1690	989	J	ug/Kg	☼	59	10 - 110	NC	47
2-Methylnaphthalene	3300	F1	1690	2050	F1 F2	ug/Kg	☼	-75	10 - 133	59	42
2-Methylphenol	<2400	F1	1690	1170	J	ug/Kg	☼	70	24 - 110	NC	51
2-Nitroaniline	<2000	F1	1690	743	J	ug/Kg	☼	44	39 - 110	30	31
2-Nitrophenol	<1800		1690	1380	J F2	ug/Kg	☼	82	10 - 110	90	49
3,3'-Dichlorobenzidine	<4000	F1	3370	<910	F1	ug/Kg	☼	0	10 - 110	NC	56
3-Nitroaniline	<3500	F1	1690	<810	F1	ug/Kg	☼	0	10 - 110	NC	30
4,6-Dinitro-2-methylphenol	<2000	F1	3370	<470	F1	ug/Kg	☼	0	10 - 110	NC	55
4-Bromophenyl phenyl ether	<2900	F1	1690	832	J	ug/Kg	☼	49	33 - 110	NC	30
4-Chloro-3-methylphenol	<4600	F1	1690	<1100	F1	ug/Kg	☼	0	25 - 110	NC	54
4-Chloroaniline	<3800	F1	1690	<860	F1	ug/Kg	☼	0	10 - 110	NC	36
4-Chlorophenyl phenyl ether	<2900	F1	1690	674	J	ug/Kg	☼	40	32 - 110	NC	30
4-Nitroaniline	<5800	F1	1690	<1300	F1	ug/Kg	☼	0	10 - 110	NC	48

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-3 MSD
Matrix: Solid
Analysis Batch: 222298

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221358

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Nitrophenol	<3800	F1	3370	2090	J	ug/Kg	☼	62	10 - 113	NC	49
Acetophenone	<2000	F1	1690	<470	F1	ug/Kg	☼	0	31 - 110	NC	43
Atrazine	<2000	F1	3370	2010	J F2	ug/Kg	☼	60	45 - 118	80	30
Benzaldehyde	<2700		3370	3310	J F2	ug/Kg	☼	98	23 - 110	87	42
Bis(2-chloroethoxy)methane	<4900	F1	1690	<1100	F1	ug/Kg	☼	0	26 - 110	NC	37
Bis(2-chloroethyl)ether	<440	F1	1690	720	J F2	ug/Kg	☼	43	21 - 110	81	55
Bis(2-ethylhexyl) phthalate	27000	B	1690	20000	4 F2 B	ug/Kg	☼	-397	40 - 110	70	30
Butyl benzyl phthalate	56000		1690	66500	4 F2	ug/Kg	☼	601	44 - 110	151	30
Caprolactam	<8200	F1	3370	<1900	F1	ug/Kg	☼	0	10 - 134	NC	32
Carbazole	<6000	F1	1690	1520	J	ug/Kg	☼	90	34 - 110	NC	30
Dibenzofuran	<150		1690	1170	J F2	ug/Kg	☼	69	29 - 110	65	30
Diethyl phthalate	<3500	F1	1690	<810	F1	ug/Kg	☼	0	42 - 110	NC	30
Dimethyl phthalate	<3800	F1	1690	950	J	ug/Kg	☼	56	41 - 110	NC	30
Di-n-butyl phthalate	5300	J F1	1690	4860	F1 F2	ug/Kg	☼	-24	43 - 110	91	30
Di-n-octyl phthalate	<1700		1690	1340	J F2	ug/Kg	☼	79	24 - 119	102	30
Hexachlorobenzene	<460	F1	1690	801	F2	ug/Kg	☼	47	34 - 110	50	30
Hexachlorobutadiene	<1200		1690	770	J F2	ug/Kg	☼	46	25 - 110	56	34
Hexachlorocyclopentadiene	<1800	F1	1690	<410	F1	ug/Kg	☼	0	10 - 110	NC	79
Hexachloroethane	<2000	F1	1690	<460	F1	ug/Kg	☼	0	12 - 110	NC	50
Isophorone	<2900	F1	1690	1030	J	ug/Kg	☼	61	29 - 110	NC	38
Nitrobenzene	<490		1690	1050	J F2	ug/Kg	☼	62	23 - 110	84	41
N-Nitrosodi-n-propylamine	<1400	F1	1690	<320	F1	ug/Kg	☼	0	26 - 110	NC	42
N-Nitrosodiphenylamine	<4600	F1	1690	1280	J	ug/Kg	☼	76	22 - 110	NC	30
Pentachlorophenol	<2000	F1	3370	<460	F1	ug/Kg	☼	0	10 - 110	NC	50
Phenol	<1600		1690	1320	J F2	ug/Kg	☼	78	17 - 110	68	53
3 & 4 Methylphenol	<4400	F1	1690	1390	J	ug/Kg	☼	83	25 - 110	NC	50
Fluorene	2500	F1	1690	2050	F1	ug/Kg	☼	-28	23 - 110	64	99
Acenaphthylene	<77	F1	1690	609		ug/Kg	☼	36	24 - 110	44	99
Benzo[g,h,i]perylene	6400	F1	1690	3400	F1	ug/Kg	☼	-176	10 - 117	67	99
Phenanthrene	22000		1690	11000	4	ug/Kg	☼	-678	10 - 166	65	99
Benzo[k]fluoranthene	4500	F1	1690	3450	F1	ug/Kg	☼	-61	10 - 121	76	99
Benzo[a]pyrene	7600		1690	5010	4	ug/Kg	☼	-154	10 - 110	65	99
Anthracene	4600	F1	1690	2610	F1	ug/Kg	☼	-120	20 - 110	60	99
Pyrene	21000		1690	11200	4	ug/Kg	☼	-564	10 - 147	68	99
Dibenz(a,h)anthracene	<150		1690	1060		ug/Kg	☼	63	14 - 113	41	99
Naphthalene	4800	F1	1690	2700	F1	ug/Kg	☼	-122	10 - 111	69	99
Fluoranthene	27000		1690	14800	4	ug/Kg	☼	-699	10 - 110	72	99
Benzo[a]anthracene	11000		1690	4850	4	ug/Kg	☼	-347	10 - 122	61	99
Indeno[1,2,3-cd]pyrene	4300	F1	1690	2900	F1	ug/Kg	☼	-83	10 - 114	66	99
Chrysene	12000		1690	6290	4	ug/Kg	☼	-323	10 - 125	65	99
Acenaphthene	2300	F1	1690	1870	F1	ug/Kg	☼	-24	22 - 110	69	99
Benzo[b]fluoranthene	12000		1690	6280	4	ug/Kg	☼	-342	12 - 118	75	99

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*33*		*24 - 110*
2-Fluorophenol (Surr)	*66*		*24 - 110*
2,4,6-Tribromophenol (Surr)	*33*		*10 - 110*
Nitrobenzene-d5 (Surr)	*57*		*20 - 110*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-3 MSD
Matrix: Solid
Analysis Batch: 222298

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221358

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Phenol-d5 (Surr)	*75*		*26 - 110*
Terphenyl-d14 (Surr)	*40*		*36 - 110*

Lab Sample ID: 240-62022-13 MS
Matrix: Solid
Analysis Batch: 221929

Client Sample ID: SE-031016-JN-023
Prep Type: Total/NA
Prep Batch: 221358

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	<7.8		1490	1230		ug/Kg	☼	83	32 - 110
bis (2-chloroisopropyl) ether	<21		1490	1150		ug/Kg	☼	77	11 - 110
2,4,5-Trichlorophenol	<56		1490	1190		ug/Kg	☼	80	10 - 117
2,4,6-Trichlorophenol	<20		1490	946		ug/Kg	☼	64	10 - 110
2,4-Dichlorophenol	<45		1490	1260		ug/Kg	☼	85	10 - 110
2,4-Dimethylphenol	<45		1490	1240		ug/Kg	☼	83	10 - 110
2,4-Dinitrophenol	<47		2970	772	J	ug/Kg	☼	26	10 - 110
2,4-Dinitrotoluene	<38		1490	1080		ug/Kg	☼	72	32 - 110
2,6-Dinitrotoluene	<47		1490	1180		ug/Kg	☼	79	35 - 110
2-Chloronaphthalene	<1.0		1490	1240		ug/Kg	☼	83	28 - 110
2-Chlorophenol	<18		1490	1310		ug/Kg	☼	88	10 - 110
2-Methylnaphthalene	8.7	J	1490	1190		ug/Kg	☼	80	10 - 133
2-Methylphenol	<25		1490	1320		ug/Kg	☼	89	24 - 110
2-Nitroaniline	<20		1490	716	J	ug/Kg	☼	48	39 - 110
2-Nitrophenol	<19		1490	1110		ug/Kg	☼	75	10 - 110
3,3'-Dichlorobenzidine	<40		2970	1520		ug/Kg	☼	51	10 - 110
3-Nitroaniline	<36		1490	600	J	ug/Kg	☼	40	10 - 110
4,6-Dinitro-2-methylphenol	<21		2970	1030		ug/Kg	☼	35	10 - 110
4-Bromophenyl phenyl ether	<29		1490	1180		ug/Kg	☼	79	33 - 110
4-Chloro-3-methylphenol	<47		1490	1220		ug/Kg	☼	82	25 - 110
4-Chloroaniline	<38		1490	937		ug/Kg	☼	63	10 - 110
4-Chlorophenyl phenyl ether	<29		1490	1230		ug/Kg	☼	83	32 - 110
4-Nitroaniline	<58		1490	961		ug/Kg	☼	65	10 - 110
4-Nitrophenol	<38		2970	2340		ug/Kg	☼	79	10 - 113
Acetophenone	<21		1490	1220		ug/Kg	☼	82	31 - 110
Atrazine	<20		2970	2540		ug/Kg	☼	85	45 - 118
Benzaldehyde	<27		2970	2240		ug/Kg	☼	75	23 - 110
Bis(2-chloroethoxy)methane	<49		1490	1230		ug/Kg	☼	83	26 - 110
Bis(2-chloroethyl)ether	<4.5		1490	1340		ug/Kg	☼	90	21 - 110
Bis(2-ethylhexyl) phthalate	<42		1490	1210	B	ug/Kg	☼	81	40 - 110
Butyl benzyl phthalate	38	J F1	1490	1480		ug/Kg	☼	97	44 - 110
Caprolactam	<83		2970	1520		ug/Kg	☼	51	10 - 134
Carbazole	<60		1490	1250		ug/Kg	☼	84	34 - 110
Dibenzofuran	<1.5		1490	1240		ug/Kg	☼	83	29 - 110
Diethyl phthalate	<36		1490	1190		ug/Kg	☼	80	42 - 110
Dimethyl phthalate	<38		1490	969		ug/Kg	☼	65	41 - 110
Di-n-butyl phthalate	<33		1490	1330		ug/Kg	☼	90	43 - 110
Di-n-octyl phthalate	<18		1490	962		ug/Kg	☼	65	24 - 119
Hexachlorobenzene	<4.7		1490	954		ug/Kg	☼	64	34 - 110
Hexachlorobutadiene	<13		1490	761		ug/Kg	☼	51	25 - 110

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-13 MS
Matrix: Solid
Analysis Batch: 221929

Client Sample ID: SE-031016-JN-023
Prep Type: Total/NA
Prep Batch: 221358

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorocyclopentadiene	<18	F1	1490	<36	F1	ug/Kg	☼	0	10 - 110
Hexachloroethane	<20	F1	1490	149	J F1	ug/Kg	☼	10	12 - 110
Isophorone	<29		1490	1250		ug/Kg	☼	84	29 - 110
Nitrobenzene	<4.9		1490	1170		ug/Kg	☼	79	23 - 110
N-Nitrosodi-n-propylamine	<14		1490	1280		ug/Kg	☼	86	26 - 110
N-Nitrosodiphenylamine	<47		1490	1270		ug/Kg	☼	85	22 - 110
Pentachlorophenol	<20		2970	1760		ug/Kg	☼	59	10 - 110
Phenol	<16		1490	1350		ug/Kg	☼	91	17 - 110
3 & 4 Methylphenol	<45		1490	1220	J	ug/Kg	☼	82	25 - 110
Fluorene	14	J	1490	1280		ug/Kg	☼	85	23 - 110
Acenaphthylene	11	J	1490	1290		ug/Kg	☼	86	24 - 110
Benzo[g,h,i]perylene	60		1490	1290		ug/Kg	☼	83	10 - 117
Phenanthrene	110		1490	1390		ug/Kg	☼	87	10 - 166
Benzo[k]fluoranthene	33		1490	1230		ug/Kg	☼	80	10 - 121
Benzo[a]pyrene	82		1490	1240		ug/Kg	☼	78	10 - 110
Anthracene	25		1490	1280		ug/Kg	☼	84	20 - 110
Pyrene	190		1490	1700		ug/Kg	☼	102	10 - 147
Dibenz(a,h)anthracene	<1.5		1490	1230		ug/Kg	☼	83	14 - 113
Naphthalene	12	J	1490	1140		ug/Kg	☼	76	10 - 111
Fluoranthene	190		1490	1540		ug/Kg	☼	91	10 - 110
Benzo[a]anthracene	86		1490	1300		ug/Kg	☼	82	10 - 122
Indeno[1,2,3-cd]pyrene	52		1490	1260		ug/Kg	☼	81	10 - 114
Chrysene	100		1490	1380		ug/Kg	☼	86	10 - 125
Acenaphthene	<1.7		1490	1230		ug/Kg	☼	83	22 - 110
Benzo[b]fluoranthene	100		1490	1230		ug/Kg	☼	76	12 - 118

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*81*		*24 - 110*
2-Fluorophenol (Surr)	*84*		*24 - 110*
2,4,6-Tribromophenol (Surr)	*68*		*10 - 110*
Nitrobenzene-d5 (Surr)	*72*		*20 - 110*
Phenol-d5 (Surr)	*87*		*26 - 110*
Terphenyl-d14 (Surr)	*86*		*36 - 110*

Lab Sample ID: 240-62022-13 MSD
Matrix: Solid
Analysis Batch: 221929

Client Sample ID: SE-031016-JN-023
Prep Type: Total/NA
Prep Batch: 221358

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl	<7.8		1490	1190		ug/Kg	☼	80	32 - 110	3	32
bis (2-chloroisopropyl) ether	<21		1490	1130		ug/Kg	☼	76	11 - 110	2	42
2,4,5-Trichlorophenol	<56		1490	1240		ug/Kg	☼	83	10 - 117	4	99
2,4,6-Trichlorophenol	<20		1490	1100		ug/Kg	☼	74	10 - 110	15	38
2,4-Dichlorophenol	<45		1490	1280		ug/Kg	☼	86	10 - 110	2	34
2,4-Dimethylphenol	<45		1490	1220		ug/Kg	☼	82	10 - 110	1	31
2,4-Dinitrophenol	<47		2970	483	J	ug/Kg	☼	16	10 - 110	46	99
2,4-Dinitrotoluene	<38		1490	1200		ug/Kg	☼	81	32 - 110	11	30
2,6-Dinitrotoluene	<47		1490	1250		ug/Kg	☼	84	35 - 110	6	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-13 MSD
Matrix: Solid
Analysis Batch: 221929

Client Sample ID: SE-031016-JN-023
Prep Type: Total/NA
Prep Batch: 221358

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Chloronaphthalene	<1.0		1490	1170		ug/Kg	☼	78	28 - 110	6	30
2-Chlorophenol	<18		1490	1270		ug/Kg	☼	86	10 - 110	3	47
2-Methylnaphthalene	8.7	J	1490	1150		ug/Kg	☼	77	10 - 133	4	42
2-Methylphenol	<25		1490	1270		ug/Kg	☼	86	24 - 110	4	51
2-Nitroaniline	<20		1490	890		ug/Kg	☼	60	39 - 110	22	31
2-Nitrophenol	<19		1490	1100		ug/Kg	☼	74	10 - 110	1	49
3,3'-Dichlorobenzidine	<40		2970	1770		ug/Kg	☼	59	10 - 110	15	56
3-Nitroaniline	<36		1490	720		ug/Kg	☼	48	10 - 110	18	30
4,6-Dinitro-2-methylphenol	<21		2970	698		ug/Kg	☼	23	10 - 110	38	55
4-Bromophenyl phenyl ether	<29		1490	1210		ug/Kg	☼	81	33 - 110	2	30
4-Chloro-3-methylphenol	<47		1490	1270		ug/Kg	☼	85	25 - 110	4	54
4-Chloroaniline	<38		1490	1110		ug/Kg	☼	75	10 - 110	17	36
4-Chlorophenyl phenyl ether	<29		1490	1210		ug/Kg	☼	81	32 - 110	2	30
4-Nitroaniline	<58		1490	1070		ug/Kg	☼	72	10 - 110	11	48
4-Nitrophenol	<38		2970	2600		ug/Kg	☼	87	10 - 113	10	49
Acetophenone	<21		1490	1160		ug/Kg	☼	78	31 - 110	5	43
Atrazine	<20		2970	2670		ug/Kg	☼	90	45 - 118	5	30
Benzaldehyde	<27		2970	2220		ug/Kg	☼	75	23 - 110	1	42
Bis(2-chloroethoxy)methane	<49		1490	1260		ug/Kg	☼	85	26 - 110	2	37
Bis(2-chloroethyl)ether	<4.5		1490	1350		ug/Kg	☼	91	21 - 110	1	55
Bis(2-ethylhexyl) phthalate	<42		1490	1300	B	ug/Kg	☼	88	40 - 110	8	30
Butyl benzyl phthalate	38	J F1	1490	2580	F1 F2	ug/Kg	☼	171	44 - 110	54	30
Caprolactam	<83		2970	1960		ug/Kg	☼	66	10 - 134	25	32
Carbazole	<60		1490	1350		ug/Kg	☼	91	34 - 110	8	30
Dibenzofuran	<1.5		1490	1210		ug/Kg	☼	81	29 - 110	2	30
Diethyl phthalate	<36		1490	1270		ug/Kg	☼	86	42 - 110	7	30
Dimethyl phthalate	<38		1490	1080		ug/Kg	☼	72	41 - 110	11	30
Di-n-butyl phthalate	<33		1490	1370		ug/Kg	☼	92	43 - 110	3	30
Di-n-octyl phthalate	<18		1490	969		ug/Kg	☼	65	24 - 119	1	30
Hexachlorobenzene	<4.7		1490	869		ug/Kg	☼	58	34 - 110	9	30
Hexachlorobutadiene	<13		1490	695		ug/Kg	☼	47	25 - 110	9	34
Hexachlorocyclopentadiene	<18	F1	1490	<27	F1	ug/Kg	☼	0	10 - 110	NC	79
Hexachloroethane	<20	F1	1490	219		ug/Kg	☼	15	12 - 110	38	50
Isophorone	<29		1490	1240		ug/Kg	☼	83	29 - 110	1	38
Nitrobenzene	<4.9		1490	1140		ug/Kg	☼	77	23 - 110	2	41
N-Nitrosodi-n-propylamine	<14		1490	1270		ug/Kg	☼	85	26 - 110	1	42
N-Nitrosodiphenylamine	<47		1490	1290		ug/Kg	☼	87	22 - 110	2	30
Pentachlorophenol	<20		2970	1620		ug/Kg	☼	55	10 - 110	8	50
Phenol	<16		1490	1290		ug/Kg	☼	86	17 - 110	5	53
3 & 4 Methylphenol	<45		1490	1240	J	ug/Kg	☼	84	25 - 110	2	50
Fluorene	14	J	1490	1210		ug/Kg	☼	80	23 - 110	6	99
Acenaphthylene	11	J	1490	1230		ug/Kg	☼	82	24 - 110	5	99
Benzo[g,h,i]perylene	60		1490	1140		ug/Kg	☼	73	10 - 117	12	99
Phenanthrene	110		1490	1450		ug/Kg	☼	91	10 - 166	4	99
Benzo[k]fluoranthene	33		1490	1250		ug/Kg	☼	82	10 - 121	2	99
Benzo[a]pyrene	82		1490	1220		ug/Kg	☼	76	10 - 110	2	99
Anthracene	25		1490	1270		ug/Kg	☼	84	20 - 110	0	99
Pyrene	190		1490	1660		ug/Kg	☼	99	10 - 147	3	99

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-62022-13 MSD
Matrix: Solid
Analysis Batch: 221929

Client Sample ID: SE-031016-JN-023
Prep Type: Total/NA
Prep Batch: 221358

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dibenz(a,h)anthracene	<1.5		1490	1130		ug/Kg	☼	76	14 - 113	9	99
Naphthalene	12	J	1490	1080		ug/Kg	☼	72	10 - 111	5	99
Fluoranthene	190		1490	1670		ug/Kg	☼	99	10 - 110	8	99
Benzo[a]anthracene	86		1490	1330		ug/Kg	☼	83	10 - 122	2	99
Indeno[1,2,3-cd]pyrene	52		1490	1150		ug/Kg	☼	74	10 - 114	9	99
Chrysene	100		1490	1390		ug/Kg	☼	86	10 - 125	1	99
Acenaphthene	<1.7		1490	1180		ug/Kg	☼	79	22 - 110	4	99
Benzo[b]fluoranthene	100		1490	1310		ug/Kg	☼	81	12 - 118	6	99

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*77*		*24 - 110*
2-Fluorophenol (Surr)	*81*		*24 - 110*
2,4,6-Tribromophenol (Surr)	*72*		*10 - 110*
Nitrobenzene-d5 (Surr)	*70*		*20 - 110*
Phenol-d5 (Surr)	*76*		*26 - 110*
Terphenyl-d14 (Surr)	*81*		*36 - 110*

Lab Sample ID: MB 240-221375/23-A
Matrix: Solid
Analysis Batch: 221760

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221375

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	<3.5		50	3.5	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
bis (2-chloroisopropyl) ether	<9.5		100	9.5	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
2,4,5-Trichlorophenol	<25		150	25	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
2,4,6-Trichlorophenol	<8.9		150	8.9	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
2,4-Dichlorophenol	<20		150	20	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
2,4-Dimethylphenol	<20		150	20	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
2,4-Dinitrophenol	<21		330	21	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
2,4-Dinitrotoluene	<17		200	17	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
2,6-Dinitrotoluene	<21		200	21	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
2-Chloronaphthalene	<0.45		50	0.45	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
2-Chlorophenol	<8.2		50	8.2	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
2-Methylnaphthalene	<0.50		6.7	0.50	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
2-Methylphenol	<11		200	11	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
2-Nitroaniline	<9.1		200	9.1	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
2-Nitrophenol	<8.3		50	8.3	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
3,3'-Dichlorobenzidine	<18		100	18	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
3-Nitroaniline	<16		200	16	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
4,6-Dinitro-2-methylphenol	<9.2		150	9.2	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
4-Bromophenyl phenyl ether	<13		50	13	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
4-Chloro-3-methylphenol	<21		150	21	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
4-Chloroaniline	<17		150	17	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
4-Chlorophenyl phenyl ether	<13		50	13	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
4-Nitroaniline	<26		200	26	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
4-Nitrophenol	<17		330	17	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Acetophenone	<9.2		100	9.2	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Atrazine	<9.1		200	9.1	ug/Kg		03/14/16 07:57	03/16/16 10:05	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-221375/23-A
Matrix: Solid
Analysis Batch: 221760

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221375

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Benzaldehyde	<12		100	12	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Bis(2-chloroethoxy)methane	<22		100	22	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Bis(2-chloroethyl)ether	<2.0		100	2.0	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Bis(2-ethylhexyl) phthalate	28.5	J	70	19	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Butyl benzyl phthalate	<10		70	10	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Caprolactam	<37		330	37	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Carbazole	<27		50	27	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Dibenzofuran	<0.66		50	0.66	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Diethyl phthalate	<16		70	16	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Dimethyl phthalate	<17		70	17	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Di-n-butyl phthalate	62.4	J	70	15	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Di-n-octyl phthalate	<7.9		70	7.9	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Hexachlorobenzene	<2.1		6.7	2.1	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Hexachlorobutadiene	<5.6		50	5.6	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Hexachlorocyclopentadiene	<8.1		330	8.1	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Hexachloroethane	<9.0		50	9.0	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Isophorone	<13		50	13	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Nitrobenzene	<2.2		100	2.2	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
N-Nitrosodi-n-propylamine	<6.3		50	6.3	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
N-Nitrosodiphenylamine	<21		50	21	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Pentachlorophenol	<9.1		150	9.1	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Phenol	<7.3		50	7.3	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
3 & 4 Methylphenol	<20		400	20	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Fluorene	<0.53		6.7	0.53	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Acenaphthylene	<0.35		6.7	0.35	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Benzo[g,h,i]perylene	<0.35		6.7	0.35	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Phenanthrene	<0.73		6.7	0.73	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Benzo[k]fluoranthene	<0.68		6.7	0.68	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Benzo[a]pyrene	<0.64		6.7	0.64	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Anthracene	<0.78		6.7	0.78	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Pyrene	<0.44		6.7	0.44	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Dibenz(a,h)anthracene	<0.66		6.7	0.66	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Naphthalene	<0.82		6.7	0.82	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Fluoranthene	<0.55		6.7	0.55	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Benzo[a]anthracene	<0.63		6.7	0.63	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Indeno[1,2,3-cd]pyrene	<0.35		6.7	0.35	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Chrysene	<1.1		6.7	1.1	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Acenaphthene	<0.76		6.7	0.76	ug/Kg		03/14/16 07:57	03/16/16 10:05	1
Benzo[b]fluoranthene	<0.59		6.7	0.59	ug/Kg		03/14/16 07:57	03/16/16 10:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*61*		*24 - 110*	*03/14/16 07:57*	*03/16/16 10:05*	*1*
2-Fluorophenol (Surr)	*57*		*24 - 110*	*03/14/16 07:57*	*03/16/16 10:05*	*1*
2,4,6-Tribromophenol (Surr)	*40*		*10 - 110*	*03/14/16 07:57*	*03/16/16 10:05*	*1*
Nitrobenzene-d5 (Surr)	*56*		*20 - 110*	*03/14/16 07:57*	*03/16/16 10:05*	*1*
Phenol-d5 (Surr)	*60*		*26 - 110*	*03/14/16 07:57*	*03/16/16 10:05*	*1*
Terphenyl-d14 (Surr)	*68*		*36 - 110*	*03/14/16 07:57*	*03/16/16 10:05*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221375/24-A
Matrix: Solid
Analysis Batch: 221760

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221375

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	667	414		ug/Kg		62	35 - 110
bis (2-chloroisopropyl) ether	667	398		ug/Kg		60	29 - 110
2,4,5-Trichlorophenol	667	248		ug/Kg		37	25 - 110
2,4,6-Trichlorophenol	667	257		ug/Kg		38	12 - 110
2,4-Dichlorophenol	667	417		ug/Kg		63	39 - 110
2,4-Dimethylphenol	667	375		ug/Kg		56	29 - 110
2,4-Dinitrophenol	1330	487		ug/Kg		37	10 - 110
2,4-Dinitrotoluene	667	457		ug/Kg		69	48 - 110
2,6-Dinitrotoluene	667	407		ug/Kg		61	45 - 110
2-Chloronaphthalene	667	407		ug/Kg		61	32 - 110
2-Chlorophenol	667	408		ug/Kg		61	37 - 110
2-Methylnaphthalene	667	405		ug/Kg		61	36 - 110
2-Methylphenol	667	419		ug/Kg		63	41 - 110
2-Nitroaniline	667	399		ug/Kg		60	45 - 110
2-Nitrophenol	667	404		ug/Kg		61	34 - 110
3,3'-Dichlorobenzidine	1330	803		ug/Kg		60	28 - 110
3-Nitroaniline	667	414		ug/Kg		62	44 - 110
4,6-Dinitro-2-methylphenol	1330	630		ug/Kg		47	10 - 110
4-Bromophenyl phenyl ether	667	368		ug/Kg		55	39 - 110
4-Chloro-3-methylphenol	667	368		ug/Kg		55	48 - 110
4-Chloroaniline	667	320		ug/Kg		48	30 - 110
4-Chlorophenyl phenyl ether	667	406		ug/Kg		61	40 - 110
4-Nitroaniline	667	439		ug/Kg		66	48 - 110
4-Nitrophenol	1330	735		ug/Kg		55	28 - 110
Acetophenone	667	383		ug/Kg		58	40 - 110
Atrazine	1330	977		ug/Kg		73	54 - 120
Benzaldehyde	1330	811		ug/Kg		61	32 - 110
Bis(2-chloroethoxy)methane	667	409		ug/Kg		61	32 - 110
Bis(2-chloroethyl)ether	667	428		ug/Kg		64	34 - 110
Bis(2-ethylhexyl) phthalate	667	466		ug/Kg		70	50 - 110
Butyl benzyl phthalate	667	482		ug/Kg		72	51 - 110
Caprolactam	1330	1030		ug/Kg		78	44 - 114
Carbazole	667	447		ug/Kg		67	50 - 110
Dibenzofuran	667	405		ug/Kg		61	43 - 110
Diethyl phthalate	667	413		ug/Kg		62	52 - 110
Dimethyl phthalate	667	419		ug/Kg		63	50 - 110
Di-n-butyl phthalate	667	450		ug/Kg		67	51 - 110
Di-n-octyl phthalate	667	445		ug/Kg		67	48 - 110
Hexachlorobenzene	667	351		ug/Kg		53	43 - 110
Hexachlorobutadiene	667	396		ug/Kg		59	29 - 110
Hexachlorocyclopentadiene	667	258	J	ug/Kg		39	12 - 110
Hexachloroethane	667	353		ug/Kg		53	30 - 110
Isophorone	667	409		ug/Kg		61	36 - 110
Nitrobenzene	667	378		ug/Kg		57	32 - 110
N-Nitrosodi-n-propylamine	667	395		ug/Kg		59	38 - 110
N-Nitrosodiphenylamine	667	407		ug/Kg		61	46 - 110
Pentachlorophenol	1330	703		ug/Kg		53	10 - 110
Phenol	667	404		ug/Kg		61	38 - 110

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-221375/24-A
Matrix: Solid
Analysis Batch: 221760

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221375

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3 & 4 Methylphenol	667	434		ug/Kg		65	40 - 110
Fluorene	667	401		ug/Kg		60	46 - 110
Acenaphthylene	667	403		ug/Kg		60	40 - 110
Benzo[g,h,i]perylene	667	524		ug/Kg		79	51 - 110
Phenanthrene	667	443		ug/Kg		66	49 - 110
Benzo[k]fluoranthene	667	458		ug/Kg		69	38 - 105
Benzo[a]pyrene	667	475		ug/Kg		71	44 - 110
Anthracene	667	464		ug/Kg		70	48 - 110
Pyrene	667	520		ug/Kg		78	49 - 110
Dibenz(a,h)anthracene	667	524		ug/Kg		79	51 - 110
Naphthalene	667	404		ug/Kg		61	36 - 110
Fluoranthene	667	462		ug/Kg		69	51 - 110
Benzo[a]anthracene	667	474		ug/Kg		71	50 - 110
Indeno[1,2,3-cd]pyrene	667	519		ug/Kg		78	50 - 110
Chrysene	667	493		ug/Kg		74	50 - 110
Acenaphthene	667	387		ug/Kg		58	38 - 110
Benzo[b]fluoranthene	667	481		ug/Kg		72	43 - 110

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*66*		*24 - 110*
2-Fluorophenol (Surr)	*62*		*24 - 110*
2,4,6-Tribromophenol (Surr)	*40*		*10 - 110*
Nitrobenzene-d5 (Surr)	*59*		*20 - 110*
Phenol-d5 (Surr)	*67*		*26 - 110*
Terphenyl-d14 (Surr)	*74*		*36 - 110*

Method: 1630 - Methyl Mercury (GC)

Lab Sample ID: MB 240-221445/1-A
Matrix: Solid
Analysis Batch: 222277

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221445

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.030		0.10	0.030	ug/Kg		03/14/16 11:58	03/18/16 19:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Propyl Mercury Chloride	*22*		*10 - 149*	*03/14/16 11:58*	*03/18/16 19:59*	*1*

Lab Sample ID: LCS 240-221445/2-A
Matrix: Solid
Analysis Batch: 222277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221445

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl Mercury	1.00	0.694		ug/Kg		69	41 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Propyl Mercury Chloride	*19*		*10 - 149*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-221356/23-A
Matrix: Solid
Analysis Batch: 221858

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221356

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<12		33	12	ug/Kg		03/14/16 06:37	03/17/16 01:24	1
Aroclor-1221	<16		33	16	ug/Kg		03/14/16 06:37	03/17/16 01:24	1
Aroclor-1232	<20		33	20	ug/Kg		03/14/16 06:37	03/17/16 01:24	1
Aroclor-1242	<11		33	11	ug/Kg		03/14/16 06:37	03/17/16 01:24	1
Aroclor-1248	<8.0		33	8.0	ug/Kg		03/14/16 06:37	03/17/16 01:24	1
Aroclor-1254	<14		33	14	ug/Kg		03/14/16 06:37	03/17/16 01:24	1
Aroclor-1260	14.7	J	33	9.0	ug/Kg		03/14/16 06:37	03/17/16 01:24	1
Aroclor-1262	<10		33	10	ug/Kg		03/14/16 06:37	03/17/16 01:24	1
Aroclor-1268	<13		33	13	ug/Kg		03/14/16 06:37	03/17/16 01:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*55*		*13 - 134*	*03/14/16 06:37*	*03/17/16 01:24*	*1*
DCB Decachlorobiphenyl	*53*		*10 - 155*	*03/14/16 06:37*	*03/17/16 01:24*	*1*

Lab Sample ID: LCS 240-221356/24-A
Matrix: Solid
Analysis Batch: 221858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221356

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	333	253		ug/Kg		76	51 - 120
Aroclor-1260	333	227		ug/Kg		68	48 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*77*		*13 - 134*
DCB Decachlorobiphenyl	*64*		*10 - 155*

Lab Sample ID: MB 240-222138/19-A
Matrix: Solid
Analysis Batch: 222863

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 222138

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	<12		33	12	ug/Kg		03/18/16 08:15	03/24/16 01:14	1
Aroclor-1221	<16		33	16	ug/Kg		03/18/16 08:15	03/24/16 01:14	1
Aroclor-1232	<20		33	20	ug/Kg		03/18/16 08:15	03/24/16 01:14	1
Aroclor-1242	<11		33	11	ug/Kg		03/18/16 08:15	03/24/16 01:14	1
Aroclor-1248	<8.0		33	8.0	ug/Kg		03/18/16 08:15	03/24/16 01:14	1
Aroclor-1254	<14		33	14	ug/Kg		03/18/16 08:15	03/24/16 01:14	1
Aroclor-1260	<9.0		33	9.0	ug/Kg		03/18/16 08:15	03/24/16 01:14	1
Aroclor-1262	<10		33	10	ug/Kg		03/18/16 08:15	03/24/16 01:14	1
Aroclor-1268	<13		33	13	ug/Kg		03/18/16 08:15	03/24/16 01:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*45*		*13 - 134*	*03/18/16 08:15*	*03/24/16 01:14*	*1*
DCB Decachlorobiphenyl	*56*		*10 - 155*	*03/18/16 08:15*	*03/24/16 01:14*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 240-222138/20-A
Matrix: Solid
Analysis Batch: 222863

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 222138

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	333	179		ug/Kg		54	51 - 120
Aroclor-1260	333	194		ug/Kg		58	48 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*54*		*13 - 134*
DCB Decachlorobiphenyl	*60*		*10 - 155*

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 222863

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 222138

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	<150	F1	825	466		ug/Kg	☼	56	17 - 141
Aroclor-1260	<110	F1	825	536		ug/Kg	☼	65	19 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*67*		*13 - 134*
DCB Decachlorobiphenyl	*1330*	*X*	*10 - 155*

Lab Sample ID: 240-62022-3 MSD
Matrix: Solid
Analysis Batch: 222863

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 222138

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor-1016	<150	F1	821	<150	F1	ug/Kg	☼	0	17 - 141	NC	56
Aroclor-1260	<110		821	164	J F2	ug/Kg	☼	20	19 - 137	90	55

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*20*		*13 - 134*
DCB Decachlorobiphenyl	*335*	*X*	*10 - 155*

Lab Sample ID: 240-62022-13 MS
Matrix: Solid
Analysis Batch: 222863

Client Sample ID: SE-031016-JN-023
Prep Type: Total/NA
Prep Batch: 222138

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	<140		745	<130	F1	ug/Kg	☼	0	17 - 141
Aroclor-1260	<100	F1	745	132	J F1	ug/Kg	☼	18	19 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*23*		*13 - 134*
DCB Decachlorobiphenyl	*25*		*10 - 155*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 240-62022-13 MSD
Matrix: Solid
Analysis Batch: 222863

Client Sample ID: SE-031016-JN-023
Prep Type: Total/NA
Prep Batch: 222138

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor-1016	<140	F1	751	211	J	ug/Kg	☼	28	17 - 141	26	56
Aroclor-1260	<100	F1	751	<100	F1	ug/Kg	☼	0	19 - 137	NC	55

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*32*		*13 - 134*
DCB Decachlorobiphenyl	*14*		*10 - 155*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-221797/2-A
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221797

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0029		0.50	0.0029	mg/L		03/16/16 11:10	03/17/16 20:36	1
Barium	<0.0010		10.0	0.0010	mg/L		03/16/16 11:10	03/17/16 20:36	1
Cadmium	<0.00014		0.10	0.00014	mg/L		03/16/16 11:10	03/17/16 20:36	1
Chromium	<0.00055		0.50	0.00055	mg/L		03/16/16 11:10	03/17/16 20:36	1
Lead	<0.0019		0.50	0.0019	mg/L		03/16/16 11:10	03/17/16 20:36	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:10	03/17/16 20:36	1
Silver	<0.00092		0.50	0.00092	mg/L		03/16/16 11:10	03/17/16 20:36	1

Lab Sample ID: LCS 240-221797/3-A
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221797

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.00	2.07		mg/L		104	50 - 150
Barium	2.00	1.94	J	mg/L		97	50 - 150
Cadmium	0.0500	0.0504	J	mg/L		101	50 - 150
Chromium	0.200	0.200	J	mg/L		100	50 - 150
Lead	0.500	0.483	J	mg/L		97	50 - 150
Selenium	2.00	2.17		mg/L		108	50 - 150
Silver	0.0500	0.0384	J	mg/L		77	50 - 150

Lab Sample ID: MB 240-221808/2-A
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221808

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0029		0.50	0.0029	mg/L		03/16/16 11:41	03/17/16 19:33	1
Barium	0.00160	J	10.0	0.0010	mg/L		03/16/16 11:41	03/17/16 19:33	1
Cadmium	<0.00014		0.10	0.00014	mg/L		03/16/16 11:41	03/17/16 19:33	1
Chromium	0.000591	J	0.50	0.00055	mg/L		03/16/16 11:41	03/17/16 19:33	1
Lead	<0.0019		0.50	0.0019	mg/L		03/16/16 11:41	03/17/16 19:33	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:41	03/17/16 19:33	1
Silver	<0.00092		0.50	0.00092	mg/L		03/16/16 11:41	03/17/16 19:33	1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-221808/3-A
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221808

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.00	2.09		mg/L		105	50 - 150
Barium	2.00	1.88	J	mg/L		94	50 - 150
Cadmium	0.0500	0.0502	J	mg/L		100	50 - 150
Chromium	0.200	0.203	J	mg/L		101	50 - 150
Lead	0.500	0.447	J	mg/L		89	50 - 150
Selenium	2.00	2.16		mg/L		108	50 - 150
Silver	0.0500	0.0535	J	mg/L		107	50 - 150

Lab Sample ID: LB 240-221748/1-B
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 221797

Analyte	LB Result	LB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0029		0.50	0.0029	mg/L		03/16/16 11:10	03/17/16 20:24	1
Barium	0.00199	J	10.0	0.0010	mg/L		03/16/16 11:10	03/17/16 20:24	1
Cadmium	<0.00014		0.10	0.00014	mg/L		03/16/16 11:10	03/17/16 20:24	1
Chromium	0.00121	J	0.50	0.00055	mg/L		03/16/16 11:10	03/17/16 20:24	1
Lead	<0.0019		0.50	0.0019	mg/L		03/16/16 11:10	03/17/16 20:24	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:10	03/17/16 20:24	1
Silver	<0.00092		0.50	0.00092	mg/L		03/16/16 11:10	03/17/16 20:24	1

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: SE-031016-JN-013
Prep Type: TCLP
Prep Batch: 221797

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.027	J	5.00	5.28		mg/L		105	75 - 125
Barium	0.17	J B	50.0	49.41	J	mg/L		98	75 - 125
Cadmium	0.0016	J	1.00	1.04		mg/L		103	75 - 125
Chromium	0.013	J B	5.00	5.04		mg/L		100	75 - 125
Lead	0.19	J	5.00	5.18		mg/L		100	75 - 125
Selenium	<0.0040		1.00	1.06	J	mg/L		106	75 - 125
Silver	0.0013	J	1.00	1.03	J	mg/L		103	75 - 125

Lab Sample ID: 240-62022-3 MSD
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: SE-031016-JN-013
Prep Type: TCLP
Prep Batch: 221797

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.027	J	5.00	5.24		mg/L		104	75 - 125	1	20
Barium	0.17	J B	50.0	49.41	J	mg/L		98	75 - 125	0	20
Cadmium	0.0016	J	1.00	1.03		mg/L		103	75 - 125	0	20
Chromium	0.013	J B	5.00	5.00		mg/L		100	75 - 125	1	20
Lead	0.19	J	5.00	5.15		mg/L		99	75 - 125	1	20
Selenium	<0.0040		1.00	1.05	J	mg/L		105	75 - 125	2	20
Silver	0.0013	J	1.00	1.03	J	mg/L		103	75 - 125	0	20

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LB 240-221744/1-B
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 221808

Analyte	LB Result	LB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00410	J	0.50	0.0029	mg/L		03/16/16 11:41	03/17/16 19:29	1
Barium	0.00363	J	10.0	0.0010	mg/L		03/16/16 11:41	03/17/16 19:29	1
Cadmium	<0.00014		0.10	0.00014	mg/L		03/16/16 11:41	03/17/16 19:29	1
Chromium	0.00193	J	0.50	0.00055	mg/L		03/16/16 11:41	03/17/16 19:29	1
Lead	<0.0019		0.50	0.0019	mg/L		03/16/16 11:41	03/17/16 19:29	1
Selenium	<0.0040		0.25	0.0040	mg/L		03/16/16 11:41	03/17/16 19:29	1
Silver	<0.00092		0.50	0.00092	mg/L		03/16/16 11:41	03/17/16 19:29	1

Lab Sample ID: 240-62022-13 MS
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: SE-031016-JN-023
Prep Type: TCLP
Prep Batch: 221808

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0076	J B	5.00	5.36		mg/L		107	75 - 125
Barium	0.75	J B	50.0	50.67		mg/L		100	75 - 125
Cadmium	0.00061	J	1.00	1.05		mg/L		105	75 - 125
Chromium	0.0035	J B	5.00	5.12		mg/L		102	75 - 125
Lead	<0.0019		5.00	4.93		mg/L		99	75 - 125
Selenium	<0.0040		1.00	1.08	J	mg/L		108	75 - 125
Silver	<0.00092		1.00	1.07	J	mg/L		107	75 - 125

Lab Sample ID: 240-62022-13 MSD
Matrix: Solid
Analysis Batch: 222033

Client Sample ID: SE-031016-JN-023
Prep Type: TCLP
Prep Batch: 221808

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0076	J B	5.00	5.18		mg/L		104	75 - 125	3	20
Barium	0.75	J B	50.0	48.84	J	mg/L		96	75 - 125	4	20
Cadmium	0.00061	J	1.00	1.01		mg/L		101	75 - 125	4	20
Chromium	0.0035	J B	5.00	4.98		mg/L		100	75 - 125	3	20
Lead	<0.0019		5.00	4.79		mg/L		96	75 - 125	3	20
Selenium	<0.0040		1.00	1.04	J	mg/L		104	75 - 125	4	20
Silver	<0.00092		1.00	1.04	J	mg/L		104	75 - 125	3	20

Lab Sample ID: MB 180-170984/1-A
Matrix: Sediment
Analysis Batch: 171287

Client Sample ID: Method Blank
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium SEM	<0.0064		0.13	0.0064	mg/Kg		03/16/16 14:00	03/18/16 17:15	1
Silver SEM	<0.017		0.13	0.017	mg/Kg		03/16/16 14:00	03/18/16 17:15	1
Copper SEM	<0.024		0.63	0.024	mg/Kg		03/16/16 14:00	03/18/16 17:15	1
Lead SEM	<0.053		0.25	0.053	mg/Kg		03/16/16 14:00	03/18/16 17:15	1
Nickel SEM	0.0935	J	1.0	0.022	mg/Kg		03/16/16 14:00	03/18/16 17:15	1
Zinc SEM	0.123	J	2.5	0.073	mg/Kg		03/16/16 14:00	03/18/16 17:15	1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 180-170984/2-A
Matrix: Sediment
Analysis Batch: 171287

Client Sample ID: Lab Control Sample
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium SEM	1.25	1.21		mg/Kg		96	80 - 120
Silver SEM	1.25	1.19		mg/Kg		95	80 - 120
Copper SEM	6.25	6.05		mg/Kg		97	80 - 120
Lead SEM	12.5	11.69		mg/Kg		93	80 - 120
Nickel SEM	12.5	11.69		mg/Kg		94	80 - 120
Zinc SEM	12.5	12.31		mg/Kg		99	80 - 120

Lab Sample ID: 240-62022-23 MS
Matrix: Sediment
Analysis Batch: 171287

Client Sample ID: SE-031016-JN-024
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium SEM	12.5		2.36	6.48	4	mg/Kg	☼	-255	75 - 125
Silver SEM	<0.033	F1	2.36	0.611	F1	mg/Kg	☼	26	75 - 125
Copper SEM	46.9	F1	11.8	70.37	F1	mg/Kg	☼	199	75 - 125
Nickel SEM	5.7	B	23.6	28.72		mg/Kg	☼	97	75 - 125
Zinc SEM	1060	B	23.6	1020	4	mg/Kg	☼	-185	75 - 125

Lab Sample ID: 240-62022-23 MS
Matrix: Sediment
Analysis Batch: 171363

Client Sample ID: SE-031016-JN-024
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead SEM	1230		23.6	1147	4	mg/Kg	☼	-346	75 - 125

Lab Sample ID: 240-62022-23 MSD
Matrix: Sediment
Analysis Batch: 171287

Client Sample ID: SE-031016-JN-024
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium SEM	12.5		2.37	6.48	4	mg/Kg	☼	-254	75 - 125	0	20
Silver SEM	<0.033	F1	2.37	0.430	F1 F2	mg/Kg	☼	18	75 - 125	35	20
Copper SEM	46.9	F1	11.8	55.63	F1 F2	mg/Kg	☼	74	75 - 125	23	20
Nickel SEM	5.7	B	23.7	28.95		mg/Kg	☼	98	75 - 125	1	20
Zinc SEM	1060	B	23.7	1126	4	mg/Kg	☼	266	75 - 125	10	20

Lab Sample ID: 240-62022-23 MSD
Matrix: Sediment
Analysis Batch: 171363

Client Sample ID: SE-031016-JN-024
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead SEM	1230		23.7	1225	4	mg/Kg	☼	-14	75 - 125	7	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-221427/1-A ^2
Matrix: Solid
Analysis Batch: 222513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221427

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.0014		0.20	0.0014	mg/Kg		03/14/16 10:54	03/21/16 20:07	2
Cadmium	<0.0037		0.20	0.0037	mg/Kg		03/14/16 10:54	03/21/16 20:07	2
Cobalt	0.00200	J	0.20	0.0017	mg/Kg		03/14/16 10:54	03/21/16 20:07	2
Chromium	0.118	J	0.40	0.060	mg/Kg		03/14/16 10:54	03/21/16 20:07	2
Copper	0.274	J	0.40	0.097	mg/Kg		03/14/16 10:54	03/21/16 20:07	2
Manganese	<0.12		1.0	0.12	mg/Kg		03/14/16 10:54	03/21/16 20:07	2
Nickel	0.0404	J	0.40	0.039	mg/Kg		03/14/16 10:54	03/21/16 20:07	2
Selenium	<0.040		1.0	0.040	mg/Kg		03/14/16 10:54	03/21/16 20:07	2
Thallium	<0.019		0.40	0.019	mg/Kg		03/14/16 10:54	03/21/16 20:07	2
Vanadium	<0.037		1.0	0.037	mg/Kg		03/14/16 10:54	03/21/16 20:07	2

Lab Sample ID: MB 240-221427/1-A ^2
Matrix: Solid
Analysis Batch: 222788

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221427

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.026		1.0	0.026	mg/Kg		03/14/16 10:54	03/22/16 23:34	2
Beryllium	<0.011		0.20	0.011	mg/Kg		03/14/16 10:54	03/22/16 23:34	2
Antimony	<0.014		0.40	0.014	mg/Kg		03/14/16 10:54	03/22/16 23:34	2
Zinc	<0.50		4.0	0.50	mg/Kg		03/14/16 10:54	03/22/16 23:34	2
Barium	0.224	J	1.0	0.22	mg/Kg		03/14/16 10:54	03/22/16 23:34	2

Lab Sample ID: MB 240-221427/1-A ^2
Matrix: Solid
Analysis Batch: 222891

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221427

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.147	J	0.20	0.045	mg/Kg		03/14/16 10:54	03/23/16 12:39	2

Lab Sample ID: LCS 240-221427/3-A ^2
Matrix: Solid
Analysis Batch: 222513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221427

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	10.0	9.63		mg/Kg		96	60 - 114
Cadmium	100	93.35		mg/Kg		93	74 - 110
Cobalt	100	97.79		mg/Kg		98	74 - 110
Chromium	100	93.82		mg/Kg		94	70 - 110
Copper	100	98.09		mg/Kg		98	73 - 110
Manganese	100	99.62		mg/Kg		100	80 - 120
Nickel	100	97.56		mg/Kg		98	75 - 110
Selenium	100	81.32		mg/Kg		81	65 - 110
Thallium	25.0	23.73		mg/Kg		95	71 - 110
Vanadium	100	94.68		mg/Kg		95	72 - 110

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-221427/3-A ^2
Matrix: Solid
Analysis Batch: 222788

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221427

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	93.15		mg/Kg		93	73 - 110
Beryllium	100	93.75		mg/Kg		94	79 - 110
Antimony	10.0	9.54		mg/Kg		95	68 - 113
Zinc	100	93.49		mg/Kg		93	72 - 113
Barium	100	96.92		mg/Kg		97	70 - 110

Lab Sample ID: LCS 240-221427/3-A ^2
Matrix: Solid
Analysis Batch: 222891

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221427

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	100	94.56		mg/Kg		95	75 - 110

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 222513

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221427

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	1.3		19.6	19.83		mg/Kg	☼	94	75 - 125
Cadmium	31.9		196	216.6		mg/Kg	☼	94	75 - 125
Cobalt	9.3	B	196	195.4		mg/Kg	☼	95	75 - 125
Chromium	746	B F1	196	927.9		mg/Kg	☼	93	75 - 125
Copper	159	B	196	358.4		mg/Kg	☼	102	75 - 125
Manganese	678	F1	196	941.0	F1	mg/Kg	☼	134	75 - 125
Nickel	103	B	196	309.9		mg/Kg	☼	106	75 - 125
Selenium	5.4		196	167.2		mg/Kg	☼	83	75 - 125
Thallium	0.24	J	49.0	44.76		mg/Kg	☼	91	75 - 125
Vanadium	11.3		196	211.1		mg/Kg	☼	102	75 - 125

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 222788

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221427

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	40.4		196	222.9		mg/Kg	☼	93	75 - 125
Beryllium	0.38	J	196	191.7		mg/Kg	☼	98	75 - 125

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 222788

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221427

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	511		19.6	451.2	4	mg/Kg	☼	-305	75 - 125
Zinc	5590		196	5731	4	mg/Kg	☼	70	75 - 125
Barium	3740	B	196	3942	4	mg/Kg	☼	105	75 - 125

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 222891

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221427

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	8570	B	196	10050	4	mg/Kg	☼	753	75 - 125

Lab Sample ID: 240-62022-3 MSD
Matrix: Solid
Analysis Batch: 222513

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221427

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	1.3		19.6	21.32		mg/Kg	☼	102	75 - 125	7	20
Cadmium	31.9		196	225.8		mg/Kg	☼	99	75 - 125	4	20
Cobalt	9.3	B	196	196.8		mg/Kg	☼	96	75 - 125	1	20
Chromium	746	B F1	196	836.7	F1	mg/Kg	☼	46	75 - 125	10	20
Copper	159	B	196	349.0		mg/Kg	☼	97	75 - 125	3	20
Manganese	678	F1	196	895.0		mg/Kg	☼	111	75 - 125	5	20
Nickel	103	B	196	256.2		mg/Kg	☼	78	75 - 125	19	20
Selenium	5.4		196	172.5		mg/Kg	☼	85	75 - 125	3	20
Thallium	0.24	J	49.0	45.80		mg/Kg	☼	93	75 - 125	2	20
Vanadium	11.3		196	215.1		mg/Kg	☼	104	75 - 125	2	20

Lab Sample ID: 240-62022-3 MSD
Matrix: Solid
Analysis Batch: 222788

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221427

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	40.4		196	218.9		mg/Kg	☼	91	75 - 125	2	20
Beryllium	0.38	J	196	186.6		mg/Kg	☼	95	75 - 125	3	20

Lab Sample ID: 240-62022-3 MSD
Matrix: Solid
Analysis Batch: 222788

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221427

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	511		19.6	383.6	4	mg/Kg	☼	-650	75 - 125	16	20
Zinc	5590		196	6488	4	mg/Kg	☼	457	75 - 125	12	20
Barium	3740	B	196	4207	4	mg/Kg	☼	240	75 - 125	6	20

Lab Sample ID: 240-62022-3 MSD
Matrix: Solid
Analysis Batch: 222891

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221427

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	8570	B	196	9976	4	mg/Kg	☼	717	75 - 125	1	20

Lab Sample ID: MB 240-221602/1-A ^2
Matrix: Solid
Analysis Batch: 222405

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221602

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.00180	J	0.20	0.0014	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Arsenic	0.0262	J	1.0	0.026	mg/Kg		03/15/16 11:27	03/19/16 22:27	2

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 240-221602/1-A ^2
Matrix: Solid
Analysis Batch: 222405

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221602

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.011		0.20	0.011	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Cadmium	<0.0037		0.20	0.0037	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Cobalt	0.00240	J	0.20	0.0017	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Chromium	0.170	J	0.40	0.060	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Copper	0.116	J	0.40	0.097	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Manganese	0.315	J	1.0	0.12	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Nickel	<0.039		0.40	0.039	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Lead	0.0768	J	0.20	0.045	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Antimony	<0.014		0.40	0.014	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Selenium	0.0806	J	1.0	0.040	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Thallium	<0.019		0.40	0.019	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Vanadium	<0.037		1.0	0.037	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Zinc	0.934	J	4.0	0.50	mg/Kg		03/15/16 11:27	03/19/16 22:27	2
Barium	<0.22		1.0	0.22	mg/Kg		03/15/16 11:27	03/19/16 22:27	2

Lab Sample ID: LCS 240-221602/3-A ^2
Matrix: Solid
Analysis Batch: 222405

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221602

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	10.0	9.34		mg/Kg		93	60 - 114
Arsenic	100	93.80		mg/Kg		94	73 - 110
Beryllium	100	96.10		mg/Kg		96	79 - 110
Cadmium	100	94.02		mg/Kg		94	74 - 110
Cobalt	100	103.9		mg/Kg		104	74 - 110
Chromium	100	93.21		mg/Kg		93	70 - 110
Copper	100	93.86		mg/Kg		94	73 - 110
Manganese	100	93.45		mg/Kg		93	80 - 120
Nickel	100	93.29		mg/Kg		93	75 - 110
Lead	100	99.29		mg/Kg		99	75 - 110
Antimony	10.0	9.61		mg/Kg		96	68 - 113
Selenium	100	92.08		mg/Kg		92	65 - 110
Thallium	25.0	22.93		mg/Kg		92	71 - 110
Vanadium	100	92.34		mg/Kg		92	72 - 110
Zinc	100	92.60		mg/Kg		93	72 - 113
Barium	100	93.60		mg/Kg		94	70 - 110

Lab Sample ID: 240-62022-13 MS
Matrix: Solid
Analysis Batch: 222405

Client Sample ID: SE-031016-JN-023
Prep Type: Total/NA
Prep Batch: 221602

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	0.11	J B	19.0	17.17		mg/Kg	☼	90	75 - 125
Arsenic	3.5	B	190	178.6		mg/Kg	☼	92	75 - 125
Beryllium	0.64	F1	190	111.5	F1	mg/Kg	☼	58	75 - 125
Cadmium	0.42		190	171.5		mg/Kg	☼	90	75 - 125
Cobalt	5.4	B	190	185.7		mg/Kg	☼	95	75 - 125
Chromium	16.3	B	190	194.8		mg/Kg	☼	94	75 - 125
Copper	13.7	B	190	173.1		mg/Kg	☼	84	75 - 125

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-62022-13 MS — **Client Sample ID: SE-031016-JN-023**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 222405 — **Prep Batch: 221602**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	242	B F1	190	478.3		mg/Kg	☼	125	75 - 125
Nickel	11.8		190	171.4		mg/Kg	☼	84	75 - 125
Lead	26.1	B	190	208.8		mg/Kg	☼	96	75 - 125
Antimony	0.12	J F1	19.0	8.90	F1	mg/Kg	☼	46	75 - 125
Selenium	1.7	J B	190	173.1		mg/Kg	☼	90	75 - 125
Thallium	0.20	J	47.5	42.60		mg/Kg	☼	89	75 - 125
Vanadium	20.2		190	189.5		mg/Kg	☼	89	75 - 125
Zinc	61.9	B	190	223.9		mg/Kg	☼	85	75 - 125
Barium	101		190	277.1		mg/Kg	☼	93	75 - 125

Lab Sample ID: 240-62022-13 MSD — **Client Sample ID: SE-031016-JN-023**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 222405 — **Prep Batch: 221602**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	0.11	J B	19.0	16.94		mg/Kg	☼	89	75 - 125	1	20
Arsenic	3.5	B	190	181.0		mg/Kg	☼	93	75 - 125	1	20
Beryllium	0.64	F1	190	182.9	F2	mg/Kg	☼	96	75 - 125	49	20
Cadmium	0.42		190	171.8		mg/Kg	☼	90	75 - 125	0	20
Cobalt	5.4	B	190	183.3		mg/Kg	☼	94	75 - 125	1	20
Chromium	16.3	B	190	201.4		mg/Kg	☼	98	75 - 125	3	20
Copper	13.7	B	190	174.8		mg/Kg	☼	85	75 - 125	1	20
Manganese	242	B F1	190	480.4	F1	mg/Kg	☼	126	75 - 125	0	20
Nickel	11.8		190	173.7		mg/Kg	☼	85	75 - 125	1	20
Lead	26.1	B	190	209.2		mg/Kg	☼	96	75 - 125	0	20
Antimony	0.12	J F1	19.0	8.47	F1	mg/Kg	☼	44	75 - 125	5	20
Selenium	1.7	J B	190	172.7		mg/Kg	☼	90	75 - 125	0	20
Thallium	0.20	J	47.5	42.61		mg/Kg	☼	89	75 - 125	0	20
Vanadium	20.2		190	202.2		mg/Kg	☼	96	75 - 125	6	20
Zinc	61.9	B	190	228.0		mg/Kg	☼	88	75 - 125	2	20
Barium	101		190	285.2		mg/Kg	☼	97	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-221801/2-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 222045 — **Prep Batch: 221801**

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 11:42	1

Lab Sample ID: LCS 240-221801/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 222045 — **Prep Batch: 221801**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00491		mg/L		98	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: MB 240-221812/2-A
Matrix: Solid
Analysis Batch: 222045

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221812

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 12:28	1

Lab Sample ID: LCS 240-221812/3-A
Matrix: Solid
Analysis Batch: 222045

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221812

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00499		mg/L		100	80 - 120

Lab Sample ID: LB 240-221748/1-C
Matrix: Solid
Analysis Batch: 222045

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 221801

Analyte	LB Result	LB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 11:40	1

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 222045

Client Sample ID: SE-031016-JN-013
Prep Type: TCLP
Prep Batch: 221801

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000090		0.00500	0.00516		mg/L		103	80 - 120

Lab Sample ID: 240-62022-3 MSD
Matrix: Solid
Analysis Batch: 222045

Client Sample ID: SE-031016-JN-013
Prep Type: TCLP
Prep Batch: 221801

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000090		0.00500	0.00506		mg/L		101	80 - 120	2	20

Lab Sample ID: LB 240-221744/1-C
Matrix: Solid
Analysis Batch: 222045

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 221812

Analyte	LB Result	LB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		03/16/16 14:00	03/17/16 12:26	1

Lab Sample ID: 240-62022-13 MS
Matrix: Solid
Analysis Batch: 222045

Client Sample ID: SE-031016-JN-023
Prep Type: TCLP
Prep Batch: 221812

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000090		0.00500	0.00506		mg/L		101	80 - 120

Lab Sample ID: 240-62022-13 MSD
Matrix: Solid
Analysis Batch: 222045

Client Sample ID: SE-031016-JN-023
Prep Type: TCLP
Prep Batch: 221812

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000090		0.00500	0.00507		mg/L		101	80 - 120	0	20

Lab Sample ID: MB 180-170984/1-B
Matrix: Sediment
Analysis Batch: 171226

Client Sample ID: Method Blank
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury SEM	<0.0013		0.0050	0.0013	mg/Kg		03/16/16 14:00	03/18/16 11:49	1

Lab Sample ID: LCS 180-170984/2-B
Matrix: Sediment
Analysis Batch: 171226

Client Sample ID: Lab Control Sample
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury SEM	0.0625	0.0632		mg/Kg		101	80 - 120

Lab Sample ID: 240-62022-23 MS
Matrix: Sediment
Analysis Batch: 171226

Client Sample ID: SE-031016-JN-024
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury SEM	<0.0025		0.0472	0.0516		mg/Kg	☼	109	75 - 125

Lab Sample ID: 240-62022-23 MSD
Matrix: Sediment
Analysis Batch: 171226

Client Sample ID: SE-031016-JN-024
Prep Type: SEM/AVS
Prep Batch: 170984

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury SEM	<0.0025		0.0474	0.0466		mg/Kg	☼	98	75 - 125	10	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 240-221444/1-A
Matrix: Solid
Analysis Batch: 221647

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221444

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0247	J	0.10	0.014	mg/Kg		03/14/16 15:00	03/15/16 08:46	1

Lab Sample ID: LCS 240-221444/2-A
Matrix: Solid
Analysis Batch: 221647

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221444

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.833	0.823		mg/Kg		99	80 - 120

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 221647

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA
Prep Batch: 221444

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	1.7	B	0.395	3.53	4	mg/Kg	☼	467	80 - 120

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-62022-3 MSD — **Client Sample ID: SE-031016-JN-013**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 221647 — **Prep Batch: 221444**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	1.7	B	0.395	1.77	4 F2	mg/Kg	☼	23	80 - 120	66	20

Lab Sample ID: MB 240-221625/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 222044 — **Prep Batch: 221625**

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.014		0.10	0.014	mg/Kg		03/15/16 15:00	03/17/16 11:25	1

Lab Sample ID: LCS 240-221625/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 222044 — **Prep Batch: 221625**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.833	0.818		mg/Kg		98	80 - 120

Lab Sample ID: 240-62022-13 MS — **Client Sample ID: SE-031016-JN-023**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 222044 — **Prep Batch: 221625**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	3.1		0.380	5.62	4	mg/Kg	☼	677	80 - 120

Lab Sample ID: 240-62022-13 MSD — **Client Sample ID: SE-031016-JN-023**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 222044 — **Prep Batch: 221625**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	3.1		0.380	0.532	J 4 F2	mg/Kg	☼	-664	80 - 120	165	20

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 180-171004/1-A — **Client Sample ID: Method Blank**
Matrix: Sediment — **Prep Type: SEM/AVS**
Analysis Batch: 171036 — **Prep Batch: 171004**

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acid Volatile Sulfides (AVS)	<3.0		15.0	3.0	mg/Kg		03/16/16 14:00	03/16/16 17:45	1

Lab Sample ID: LCS 180-171004/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Sediment — **Prep Type: SEM/AVS**
Analysis Batch: 171036 — **Prep Batch: 171004**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acid Volatile Sulfides (AVS)	96.1	88.58		mg/Kg		92	85 - 115

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: 240-62022-23 MS
Matrix: Sediment
Analysis Batch: 171036

Client Sample ID: SE-031016-JN-024
Prep Type: SEM/AVS
Prep Batch: 171004

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acid Volatile Sulfides (AVS)	237		182	405.3		mg/Kg	☼	93	75 - 125

Lab Sample ID: 240-62022-23 MSD
Matrix: Sediment
Analysis Batch: 171036

Client Sample ID: SE-031016-JN-024
Prep Type: SEM/AVS
Prep Batch: 171004

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acid Volatile Sulfides (AVS)	237		182	378.3		mg/Kg	☼	78	75 - 125	7	20

Method: Lloyd Kahn - Organic Carbon, Total (TOC)

Lab Sample ID: MB 180-171546/3
Matrix: Solid
Analysis Batch: 171546

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<500		1000	500	mg/Kg			03/22/16 09:03	1

Lab Sample ID: LCS 180-171546/4
Matrix: Solid
Analysis Batch: 171546

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	35000	31550		mg/Kg		90	75 - 125

Lab Sample ID: 240-62022-3 MS
Matrix: Solid
Analysis Batch: 171546

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	176000	F1	82300	259400		mg/Kg	☼	101	75 - 125

Lab Sample ID: 240-62022-3 MSD
Matrix: Solid
Analysis Batch: 171546

Client Sample ID: SE-031016-JN-013
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	176000	F1	93800	242700	F1	mg/Kg	☼	71	75 - 125	7	20

Lab Sample ID: 240-62022-13 MS
Matrix: Solid
Analysis Batch: 171546

Client Sample ID: SE-031016-JN-023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	66800		177000	232500		mg/Kg	☼	93	75 - 125

Method: Lloyd Kahn - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: 240-62022-13 MSD — **Client Sample ID: SE-031016-JN-023**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 171546

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	66800		188000	231500		mg/Kg	☼	87	75 - 125	0	20

Lab Sample ID: 240-62022-3 DU — **Client Sample ID: SE-031016-JN-013**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 171546

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	176000	F1	172400		mg/Kg	☼	2	20

Lab Sample ID: 240-62022-13 DU — **Client Sample ID: SE-031016-JN-023**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 171546

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	66800		74950		mg/Kg	☼	11	20

Method: Moisture - Percent Moisture

Lab Sample ID: 240-62022-1 DU — **Client Sample ID: SE-031016-JN-011**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 221485

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	79.9		83.4		%		4	20
Percent Moisture	20.1		16.6		%		19	20

Lab Sample ID: 240-62022-3 DU — **Client Sample ID: SE-031016-JN-013**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 221485

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	40.2		41.2		%		2	20
Percent Moisture	59.8		58.8		%		2	20

Lab Sample ID: 240-62022-13 DU — **Client Sample ID: SE-031016-JN-023**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 221485

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	44.6		46.4		%		4	20
Percent Moisture	55.4		53.6		%		3	20

GC/MS VOA

Analysis Batch: 221434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-4	SE-031016-JN-014	Total/NA	Solid	8260B	221461
240-62022-5	SE-031016-JN-015	Total/NA	Solid	8260B	221461
240-62022-6	SE-031016-JN-016	Total/NA	Solid	8260B	221461
240-62022-7	SE-031016-JN-017	Total/NA	Solid	8260B	221461
240-62022-7 MS	SE-031016-JN-017	Total/NA	Solid	8260B	221461
240-62022-7 MSD	SE-031016-JN-017	Total/NA	Solid	8260B	221461
240-62022-8	SE-031016-JN-018	Total/NA	Solid	8260B	221461
240-62022-9	SE-031016-JN-019	Total/NA	Solid	8260B	221461
240-62022-10	SE-031016-JN-020	Total/NA	Solid	8260B	221461
240-62022-11	SE-031016-JN-021	Total/NA	Solid	8260B	221461
240-62022-12	SE-031016-JN-022	Total/NA	Solid	8260B	221461
240-62022-14	SE-031016-JN-024	Total/NA	Solid	8260B	221461
LCS 240-221434/4	Lab Control Sample	Total/NA	Solid	8260B	
MB 240-221434/5	Method Blank	Total/NA	Solid	8260B	

Prep Batch: 221461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-4	SE-031016-JN-014	Total/NA	Solid	5030A	
240-62022-5	SE-031016-JN-015	Total/NA	Solid	5030A	
240-62022-6	SE-031016-JN-016	Total/NA	Solid	5030A	
240-62022-7	SE-031016-JN-017	Total/NA	Solid	5030A	
240-62022-7 MS	SE-031016-JN-017	Total/NA	Solid	5030A	
240-62022-7 MSD	SE-031016-JN-017	Total/NA	Solid	5030A	
240-62022-8	SE-031016-JN-018	Total/NA	Solid	5030A	
240-62022-9	SE-031016-JN-019	Total/NA	Solid	5030A	
240-62022-10	SE-031016-JN-020	Total/NA	Solid	5030A	
240-62022-11	SE-031016-JN-021	Total/NA	Solid	5030A	
240-62022-12	SE-031016-JN-022	Total/NA	Solid	5030A	
240-62022-14	SE-031016-JN-024	Total/NA	Solid	5030A	

Prep Batch: 221497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-2	SE-031016-JN-012	Total/NA	Solid	5030B	
240-62022-3	SE-031016-JN-013	Total/NA	Solid	5030B	
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	5030B	
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	5030B	
LCS 240-221497/2-A	Lab Control Sample	Total/NA	Solid	5030B	
MB 240-221497/1-A	Method Blank	Total/NA	Solid	5030B	

Analysis Batch: 221688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	8260B	221689
240-62022-13	SE-031016-JN-023	Total/NA	Solid	8260B	221689
240-62022-13 MS	SE-031016-JN-023	Total/NA	Solid	8260B	221689
240-62022-13 MSD	SE-031016-JN-023	Total/NA	Solid	8260B	221689
LCS 240-221688/6	Lab Control Sample	Total/NA	Solid	8260B	
MB 240-221688/8	Method Blank	Total/NA	Solid	8260B	

Prep Batch: 221689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	5030A	

GC/MS VOA (Continued)

Prep Batch: 221689 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-13	SE-031016-JN-023	Total/NA	Solid	5030A	
240-62022-13 MS	SE-031016-JN-023	Total/NA	Solid	5030A	
240-62022-13 MSD	SE-031016-JN-023	Total/NA	Solid	5030A	

Analysis Batch: 221763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-15	SE-031016-JN-025	Total/NA	Solid	8260B	221853
240-62022-16	SE-031016-JN-026	Total/NA	Solid	8260B	221853
240-62022-17	SE-031016-JN-027	Total/NA	Solid	8260B	221853
240-62022-17 MS	SE-031016-JN-027	Total/NA	Solid	8260B	221853
240-62022-17 MSD	SE-031016-JN-027	Total/NA	Solid	8260B	221853
LCS 240-221763/4	Lab Control Sample	Total/NA	Solid	8260B	
MB 240-221763/5	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 221767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-2	SE-031016-JN-012	Total/NA	Solid	8260B	221497
240-62022-3	SE-031016-JN-013	Total/NA	Solid	8260B	221497
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	8260B	221497
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	8260B	221497
LCS 240-221497/2-A	Lab Control Sample	Total/NA	Solid	8260B	221497
MB 240-221497/1-A	Method Blank	Total/NA	Solid	8260B	221497

Analysis Batch: 221822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-18	TB-031016-JN-001	Total/NA	Water	8260B	
LCS 240-221822/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-221822/6	Method Blank	Total/NA	Water	8260B	

Prep Batch: 221853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-15	SE-031016-JN-025	Total/NA	Solid	5030A	
240-62022-16	SE-031016-JN-026	Total/NA	Solid	5030A	
240-62022-17	SE-031016-JN-027	Total/NA	Solid	5030A	
240-62022-17 MS	SE-031016-JN-027	Total/NA	Solid	5030A	
240-62022-17 MSD	SE-031016-JN-027	Total/NA	Solid	5030A	

GC/MS Semi VOA

Prep Batch: 221358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	3540C	
240-62022-2	SE-031016-JN-012	Total/NA	Solid	3540C	
240-62022-3	SE-031016-JN-013	Total/NA	Solid	3540C	
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	3540C	
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	3540C	
240-62022-4	SE-031016-JN-014	Total/NA	Solid	3540C	
240-62022-5	SE-031016-JN-015	Total/NA	Solid	3540C	
240-62022-6	SE-031016-JN-016	Total/NA	Solid	3540C	
240-62022-7	SE-031016-JN-017	Total/NA	Solid	3540C	

GC/MS Semi VOA (Continued)

Prep Batch: 221358 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-8	SE-031016-JN-018	Total/NA	Solid	3540C	
240-62022-9	SE-031016-JN-019	Total/NA	Solid	3540C	
240-62022-10	SE-031016-JN-020	Total/NA	Solid	3540C	
240-62022-11	SE-031016-JN-021	Total/NA	Solid	3540C	
240-62022-12	SE-031016-JN-022	Total/NA	Solid	3540C	
240-62022-13	SE-031016-JN-023	Total/NA	Solid	3540C	
240-62022-13 MS	SE-031016-JN-023	Total/NA	Solid	3540C	
240-62022-13 MSD	SE-031016-JN-023	Total/NA	Solid	3540C	
240-62022-14	SE-031016-JN-024	Total/NA	Solid	3540C	
240-62022-15	SE-031016-JN-025	Total/NA	Solid	3540C	
240-62022-16	SE-031016-JN-026	Total/NA	Solid	3540C	
LCS 240-221358/24-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-221358/23-A	Method Blank	Total/NA	Solid	3540C	

Prep Batch: 221375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-17	SE-031016-JN-027	Total/NA	Solid	3540C	
LCS 240-221375/24-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-221375/23-A	Method Blank	Total/NA	Solid	3540C	

Analysis Batch: 221725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-221358/24-A	Lab Control Sample	Total/NA	Solid	8270C	221358
MB 240-221358/23-A	Method Blank	Total/NA	Solid	8270C	221358

Analysis Batch: 221760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-17	SE-031016-JN-027	Total/NA	Solid	8270C	221375
LCS 240-221375/24-A	Lab Control Sample	Total/NA	Solid	8270C	221375
MB 240-221375/23-A	Method Blank	Total/NA	Solid	8270C	221375

Analysis Batch: 221929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	8270C	221358
240-62022-2	SE-031016-JN-012	Total/NA	Solid	8270C	221358
240-62022-5	SE-031016-JN-015	Total/NA	Solid	8270C	221358
240-62022-7	SE-031016-JN-017	Total/NA	Solid	8270C	221358
240-62022-9	SE-031016-JN-019	Total/NA	Solid	8270C	221358
240-62022-11	SE-031016-JN-021	Total/NA	Solid	8270C	221358
240-62022-12	SE-031016-JN-022	Total/NA	Solid	8270C	221358
240-62022-13	SE-031016-JN-023	Total/NA	Solid	8270C	221358
240-62022-13 MS	SE-031016-JN-023	Total/NA	Solid	8270C	221358
240-62022-13 MSD	SE-031016-JN-023	Total/NA	Solid	8270C	221358

Analysis Batch: 222298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-3	SE-031016-JN-013	Total/NA	Solid	8270C	221358
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	8270C	221358
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	8270C	221358
240-62022-4	SE-031016-JN-014	Total/NA	Solid	8270C	221358
240-62022-6	SE-031016-JN-016	Total/NA	Solid	8270C	221358

GC/MS Semi VOA (Continued)

Analysis Batch: 222298 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-8	SE-031016-JN-018	Total/NA	Solid	8270C	221358
240-62022-10	SE-031016-JN-020	Total/NA	Solid	8270C	221358
240-62022-14	SE-031016-JN-024	Total/NA	Solid	8270C	221358
240-62022-15	SE-031016-JN-025	Total/NA	Solid	8270C	221358
240-62022-16	SE-031016-JN-026	Total/NA	Solid	8270C	221358

GC Semi VOA

Prep Batch: 221356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-6	SE-031016-JN-016	Total/NA	Solid	3540C	
240-62022-10	SE-031016-JN-020	Total/NA	Solid	3540C	
240-62022-12	SE-031016-JN-022	Total/NA	Solid	3540C	
240-62022-15	SE-031016-JN-025	Total/NA	Solid	3540C	
LCS 240-221356/24-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-221356/23-A	Method Blank	Total/NA	Solid	3540C	

Prep Batch: 221445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	1630	
240-62022-4	SE-031016-JN-014	Total/NA	Solid	1630	
240-62022-8	SE-031016-JN-018	Total/NA	Solid	1630	
240-62022-11	SE-031016-JN-021	Total/NA	Solid	1630	
240-62022-14	SE-031016-JN-024	Total/NA	Solid	1630	
LCS 240-221445/2-A	Lab Control Sample	Total/NA	Solid	1630	
MB 240-221445/1-A	Method Blank	Total/NA	Solid	1630	

Analysis Batch: 221858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-6	SE-031016-JN-016	Total/NA	Solid	8082	221356
240-62022-10	SE-031016-JN-020	Total/NA	Solid	8082	221356
240-62022-12	SE-031016-JN-022	Total/NA	Solid	8082	221356
240-62022-15	SE-031016-JN-025	Total/NA	Solid	8082	221356
LCS 240-221356/24-A	Lab Control Sample	Total/NA	Solid	8082	221356
MB 240-221356/23-A	Method Blank	Total/NA	Solid	8082	221356

Prep Batch: 222138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	3540C	
240-62022-2	SE-031016-JN-012	Total/NA	Solid	3540C	
240-62022-3	SE-031016-JN-013	Total/NA	Solid	3540C	
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	3540C	
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	3540C	
240-62022-4	SE-031016-JN-014	Total/NA	Solid	3540C	
240-62022-5	SE-031016-JN-015	Total/NA	Solid	3540C	
240-62022-7	SE-031016-JN-017	Total/NA	Solid	3540C	
240-62022-8	SE-031016-JN-018	Total/NA	Solid	3540C	
240-62022-9	SE-031016-JN-019	Total/NA	Solid	3540C	
240-62022-11	SE-031016-JN-021	Total/NA	Solid	3540C	
240-62022-13	SE-031016-JN-023	Total/NA	Solid	3540C	

GC Semi VOA (Continued)

Prep Batch: 222138 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-13 MS	SE-031016-JN-023	Total/NA	Solid	3540C	
240-62022-13 MSD	SE-031016-JN-023	Total/NA	Solid	3540C	
240-62022-14	SE-031016-JN-024	Total/NA	Solid	3540C	
240-62022-16	SE-031016-JN-026	Total/NA	Solid	3540C	
240-62022-17	SE-031016-JN-027	Total/NA	Solid	3540C	
LCS 240-222138/20-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-222138/19-A	Method Blank	Total/NA	Solid	3540C	

Analysis Batch: 222277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	1630	221445
240-62022-4	SE-031016-JN-014	Total/NA	Solid	1630	221445
240-62022-8	SE-031016-JN-018	Total/NA	Solid	1630	221445
240-62022-11	SE-031016-JN-021	Total/NA	Solid	1630	221445
240-62022-14	SE-031016-JN-024	Total/NA	Solid	1630	221445
LCS 240-221445/2-A	Lab Control Sample	Total/NA	Solid	1630	221445
MB 240-221445/1-A	Method Blank	Total/NA	Solid	1630	221445

Analysis Batch: 222863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	8082	222138
240-62022-2	SE-031016-JN-012	Total/NA	Solid	8082	222138
240-62022-3	SE-031016-JN-013	Total/NA	Solid	8082	222138
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	8082	222138
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	8082	222138
240-62022-4	SE-031016-JN-014	Total/NA	Solid	8082	222138
240-62022-5	SE-031016-JN-015	Total/NA	Solid	8082	222138
240-62022-7	SE-031016-JN-017	Total/NA	Solid	8082	222138
240-62022-8	SE-031016-JN-018	Total/NA	Solid	8082	222138
240-62022-9	SE-031016-JN-019	Total/NA	Solid	8082	222138
240-62022-11	SE-031016-JN-021	Total/NA	Solid	8082	222138
240-62022-13	SE-031016-JN-023	Total/NA	Solid	8082	222138
240-62022-13 MS	SE-031016-JN-023	Total/NA	Solid	8082	222138
240-62022-13 MSD	SE-031016-JN-023	Total/NA	Solid	8082	222138
240-62022-14	SE-031016-JN-024	Total/NA	Solid	8082	222138
240-62022-16	SE-031016-JN-026	Total/NA	Solid	8082	222138
240-62022-17	SE-031016-JN-027	Total/NA	Solid	8082	222138
LCS 240-222138/20-A	Lab Control Sample	Total/NA	Solid	8082	222138
MB 240-222138/19-A	Method Blank	Total/NA	Solid	8082	222138

Metals

Prep Batch: 170984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-19	SE-031016-JN-011	SEM/AVS	Sediment	AVSSEM	
240-62022-20	SE-031016-JN-014	SEM/AVS	Sediment	AVSSEM	
240-62022-21	SE-031016-JN-018	SEM/AVS	Sediment	AVSSEM	
240-62022-22	SE-031016-JN-021	SEM/AVS	Sediment	AVSSEM	
240-62022-23	SE-031016-JN-024	SEM/AVS	Sediment	AVSSEM	
240-62022-23 MS	SE-031016-JN-024	SEM/AVS	Sediment	AVSSEM	

Metals (Continued)

Prep Batch: 170984 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-23 MSD	SE-031016-JN-024	SEM/AVS	Sediment	AVSSEM	
LCS 180-170984/2-A	Lab Control Sample	SEM/AVS	Sediment	AVSSEM	
LCS 180-170984/2-B	Lab Control Sample	SEM/AVS	Sediment	AVSSEM	
MB 180-170984/1-A	Method Blank	SEM/AVS	Sediment	AVSSEM	
MB 180-170984/1-B	Method Blank	SEM/AVS	Sediment	AVSSEM	

Prep Batch: 171122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-19	SE-031016-JN-011	SEM/AVS	Sediment	7470A	170984
240-62022-20	SE-031016-JN-014	SEM/AVS	Sediment	7470A	170984
240-62022-21	SE-031016-JN-018	SEM/AVS	Sediment	7470A	170984
240-62022-22	SE-031016-JN-021	SEM/AVS	Sediment	7470A	170984
240-62022-23	SE-031016-JN-024	SEM/AVS	Sediment	7470A	170984
240-62022-23 MS	SE-031016-JN-024	SEM/AVS	Sediment	7470A	170984
240-62022-23 MSD	SE-031016-JN-024	SEM/AVS	Sediment	7470A	170984
LCS 180-170984/2-B	Lab Control Sample	SEM/AVS	Sediment	7470A	170984
MB 180-170984/1-B	Method Blank	SEM/AVS	Sediment	7470A	170984

Analysis Batch: 171226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-19	SE-031016-JN-011	SEM/AVS	Sediment	7470A	171122
240-62022-20	SE-031016-JN-014	SEM/AVS	Sediment	7470A	171122
240-62022-21	SE-031016-JN-018	SEM/AVS	Sediment	7470A	171122
240-62022-22	SE-031016-JN-021	SEM/AVS	Sediment	7470A	171122
240-62022-23	SE-031016-JN-024	SEM/AVS	Sediment	7470A	171122
240-62022-23 MS	SE-031016-JN-024	SEM/AVS	Sediment	7470A	171122
240-62022-23 MSD	SE-031016-JN-024	SEM/AVS	Sediment	7470A	171122
LCS 180-170984/2-B	Lab Control Sample	SEM/AVS	Sediment	7470A	171122
MB 180-170984/1-B	Method Blank	SEM/AVS	Sediment	7470A	171122

Analysis Batch: 171287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-19	SE-031016-JN-011	SEM/AVS	Sediment	6010B	170984
240-62022-20	SE-031016-JN-014	SEM/AVS	Sediment	6010B	170984
240-62022-21	SE-031016-JN-018	SEM/AVS	Sediment	6010B	170984
240-62022-22	SE-031016-JN-021	SEM/AVS	Sediment	6010B	170984
240-62022-23	SE-031016-JN-024	SEM/AVS	Sediment	6010B	170984
240-62022-23 MS	SE-031016-JN-024	SEM/AVS	Sediment	6010B	170984
240-62022-23 MSD	SE-031016-JN-024	SEM/AVS	Sediment	6010B	170984
LCS 180-170984/2-A	Lab Control Sample	SEM/AVS	Sediment	6010B	170984
MB 180-170984/1-A	Method Blank	SEM/AVS	Sediment	6010B	170984

Analysis Batch: 171363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-19	SE-031016-JN-011	SEM/AVS	Sediment	6010B	170984
240-62022-19	SE-031016-JN-011	SEM/AVS	Sediment	6010B	170984
240-62022-21	SE-031016-JN-018	SEM/AVS	Sediment	6010B	170984
240-62022-23	SE-031016-JN-024	SEM/AVS	Sediment	6010B	170984
240-62022-23 MS	SE-031016-JN-024	SEM/AVS	Sediment	6010B	170984
240-62022-23 MSD	SE-031016-JN-024	SEM/AVS	Sediment	6010B	170984

Metals (Continued)

Analysis Batch: 171444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-19	SE-031016-JN-011	SEM/AVS	Sediment	SEM	
240-62022-20	SE-031016-JN-014	SEM/AVS	Sediment	SEM	
240-62022-21	SE-031016-JN-018	SEM/AVS	Sediment	SEM	
240-62022-22	SE-031016-JN-021	SEM/AVS	Sediment	SEM	
240-62022-23	SE-031016-JN-024	SEM/AVS	Sediment	SEM	

Prep Batch: 221427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	3050B	
240-62022-2	SE-031016-JN-012	Total/NA	Solid	3050B	
240-62022-3	SE-031016-JN-013	Total/NA	Solid	3050B	
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	3050B	
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	3050B	
240-62022-4	SE-031016-JN-014	Total/NA	Solid	3050B	
240-62022-5	SE-031016-JN-015	Total/NA	Solid	3050B	
240-62022-6	SE-031016-JN-016	Total/NA	Solid	3050B	
240-62022-7	SE-031016-JN-017	Total/NA	Solid	3050B	
240-62022-8	SE-031016-JN-018	Total/NA	Solid	3050B	
240-62022-9	SE-031016-JN-019	Total/NA	Solid	3050B	
LCS 240-221427/3-A ^2	Lab Control Sample	Total/NA	Solid	3050B	
MB 240-221427/1-A ^2	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 221444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	7471A	
240-62022-2	SE-031016-JN-012	Total/NA	Solid	7471A	
240-62022-3	SE-031016-JN-013	Total/NA	Solid	7471A	
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	7471A	
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	7471A	
240-62022-4	SE-031016-JN-014	Total/NA	Solid	7471A	
240-62022-5	SE-031016-JN-015	Total/NA	Solid	7471A	
240-62022-6	SE-031016-JN-016	Total/NA	Solid	7471A	
240-62022-7	SE-031016-JN-017	Total/NA	Solid	7471A	
240-62022-8	SE-031016-JN-018	Total/NA	Solid	7471A	
240-62022-9	SE-031016-JN-019	Total/NA	Solid	7471A	
LCS 240-221444/2-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 240-221444/1-A	Method Blank	Total/NA	Solid	7471A	

Prep Batch: 221602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-10	SE-031016-JN-020	Total/NA	Solid	3050B	
240-62022-11	SE-031016-JN-021	Total/NA	Solid	3050B	
240-62022-12	SE-031016-JN-022	Total/NA	Solid	3050B	
240-62022-13	SE-031016-JN-023	Total/NA	Solid	3050B	
240-62022-13 MS	SE-031016-JN-023	Total/NA	Solid	3050B	
240-62022-13 MSD	SE-031016-JN-023	Total/NA	Solid	3050B	
240-62022-14	SE-031016-JN-024	Total/NA	Solid	3050B	
240-62022-15	SE-031016-JN-025	Total/NA	Solid	3050B	
240-62022-16	SE-031016-JN-026	Total/NA	Solid	3050B	
240-62022-17	SE-031016-JN-027	Total/NA	Solid	3050B	
LCS 240-221602/3-A ^2	Lab Control Sample	Total/NA	Solid	3050B	

Metals (Continued)

Prep Batch: 221602 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-221602/1-A ^2	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 221625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-10	SE-031016-JN-020	Total/NA	Solid	7471A	
240-62022-11	SE-031016-JN-021	Total/NA	Solid	7471A	
240-62022-12	SE-031016-JN-022	Total/NA	Solid	7471A	
240-62022-13	SE-031016-JN-023	Total/NA	Solid	7471A	
240-62022-13 MS	SE-031016-JN-023	Total/NA	Solid	7471A	
240-62022-13 MSD	SE-031016-JN-023	Total/NA	Solid	7471A	
240-62022-14	SE-031016-JN-024	Total/NA	Solid	7471A	
240-62022-15	SE-031016-JN-025	Total/NA	Solid	7471A	
240-62022-16	SE-031016-JN-026	Total/NA	Solid	7471A	
240-62022-17	SE-031016-JN-027	Total/NA	Solid	7471A	
LCS 240-221625/2-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 240-221625/1-A	Method Blank	Total/NA	Solid	7471A	

Analysis Batch: 221647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	7471A	221444
240-62022-2	SE-031016-JN-012	Total/NA	Solid	7471A	221444
240-62022-3	SE-031016-JN-013	Total/NA	Solid	7471A	221444
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	7471A	221444
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	7471A	221444
240-62022-4	SE-031016-JN-014	Total/NA	Solid	7471A	221444
240-62022-5	SE-031016-JN-015	Total/NA	Solid	7471A	221444
240-62022-6	SE-031016-JN-016	Total/NA	Solid	7471A	221444
240-62022-7	SE-031016-JN-017	Total/NA	Solid	7471A	221444
240-62022-8	SE-031016-JN-018	Total/NA	Solid	7471A	221444
240-62022-9	SE-031016-JN-019	Total/NA	Solid	7471A	221444
LCS 240-221444/2-A	Lab Control Sample	Total/NA	Solid	7471A	221444
MB 240-221444/1-A	Method Blank	Total/NA	Solid	7471A	221444

Leach Batch: 221744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-13	SE-031016-JN-023	TCLP	Solid	1311	
240-62022-13 MS	SE-031016-JN-023	TCLP	Solid	1311	
240-62022-13 MSD	SE-031016-JN-023	TCLP	Solid	1311	
240-62022-17	SE-031016-JN-027	TCLP	Solid	1311	
LB 240-221744/1-B	Method Blank	TCLP	Solid	1311	
LB 240-221744/1-C	Method Blank	TCLP	Solid	1311	

Leach Batch: 221748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-3	SE-031016-JN-013	TCLP	Solid	1311	
240-62022-3 MS	SE-031016-JN-013	TCLP	Solid	1311	
240-62022-3 MSD	SE-031016-JN-013	TCLP	Solid	1311	
240-62022-6	SE-031016-JN-016	TCLP	Solid	1311	
240-62022-7	SE-031016-JN-017	TCLP	Solid	1311	
240-62022-10	SE-031016-JN-020	TCLP	Solid	1311	
LB 240-221748/1-B	Method Blank	TCLP	Solid	1311	

Metals (Continued)

Leach Batch: 221748 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 240-221748/1-C	Method Blank	TCLP	Solid	1311	

Prep Batch: 221797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-3	SE-031016-JN-013	TCLP	Solid	3010A	221748
240-62022-3 MS	SE-031016-JN-013	TCLP	Solid	3010A	221748
240-62022-3 MSD	SE-031016-JN-013	TCLP	Solid	3010A	221748
240-62022-6	SE-031016-JN-016	TCLP	Solid	3010A	221748
240-62022-7	SE-031016-JN-017	TCLP	Solid	3010A	221748
240-62022-10	SE-031016-JN-020	TCLP	Solid	3010A	221748
LB 240-221748/1-B	Method Blank	TCLP	Solid	3010A	221748
LCS 240-221797/3-A	Lab Control Sample	Total/NA	Solid	3010A	
MB 240-221797/2-A	Method Blank	Total/NA	Solid	3010A	

Prep Batch: 221801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-3	SE-031016-JN-013	TCLP	Solid	7470A	221748
240-62022-3 MS	SE-031016-JN-013	TCLP	Solid	7470A	221748
240-62022-3 MSD	SE-031016-JN-013	TCLP	Solid	7470A	221748
240-62022-6	SE-031016-JN-016	TCLP	Solid	7470A	221748
240-62022-7	SE-031016-JN-017	TCLP	Solid	7470A	221748
240-62022-10	SE-031016-JN-020	TCLP	Solid	7470A	221748
LB 240-221748/1-C	Method Blank	TCLP	Solid	7470A	221748
LCS 240-221801/3-A	Lab Control Sample	Total/NA	Solid	7470A	
MB 240-221801/2-A	Method Blank	Total/NA	Solid	7470A	

Prep Batch: 221808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-13	SE-031016-JN-023	TCLP	Solid	3010A	221744
240-62022-13 MS	SE-031016-JN-023	TCLP	Solid	3010A	221744
240-62022-13 MSD	SE-031016-JN-023	TCLP	Solid	3010A	221744
240-62022-17	SE-031016-JN-027	TCLP	Solid	3010A	221744
LB 240-221744/1-B	Method Blank	TCLP	Solid	3010A	221744
LCS 240-221808/3-A	Lab Control Sample	Total/NA	Solid	3010A	
MB 240-221808/2-A	Method Blank	Total/NA	Solid	3010A	

Prep Batch: 221812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-13	SE-031016-JN-023	TCLP	Solid	7470A	221744
240-62022-13 MS	SE-031016-JN-023	TCLP	Solid	7470A	221744
240-62022-13 MSD	SE-031016-JN-023	TCLP	Solid	7470A	221744
240-62022-17	SE-031016-JN-027	TCLP	Solid	7470A	221744
LB 240-221744/1-C	Method Blank	TCLP	Solid	7470A	221744
LCS 240-221812/3-A	Lab Control Sample	Total/NA	Solid	7470A	
MB 240-221812/2-A	Method Blank	Total/NA	Solid	7470A	

Analysis Batch: 222033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-3	SE-031016-JN-013	TCLP	Solid	6010B	221797
240-62022-3 MS	SE-031016-JN-013	TCLP	Solid	6010B	221797
240-62022-3 MSD	SE-031016-JN-013	TCLP	Solid	6010B	221797

Metals (Continued)

Analysis Batch: 222033 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-6	SE-031016-JN-016	TCLP	Solid	6010B	221797
240-62022-7	SE-031016-JN-017	TCLP	Solid	6010B	221797
240-62022-10	SE-031016-JN-020	TCLP	Solid	6010B	221797
240-62022-13	SE-031016-JN-023	TCLP	Solid	6010B	221808
240-62022-13 MS	SE-031016-JN-023	TCLP	Solid	6010B	221808
240-62022-13 MSD	SE-031016-JN-023	TCLP	Solid	6010B	221808
240-62022-17	SE-031016-JN-027	TCLP	Solid	6010B	221808
LB 240-221744/1-B	Method Blank	TCLP	Solid	6010B	221808
LB 240-221748/1-B	Method Blank	TCLP	Solid	6010B	221797
LCS 240-221797/3-A	Lab Control Sample	Total/NA	Solid	6010B	221797
LCS 240-221808/3-A	Lab Control Sample	Total/NA	Solid	6010B	221808
MB 240-221797/2-A	Method Blank	Total/NA	Solid	6010B	221797
MB 240-221808/2-A	Method Blank	Total/NA	Solid	6010B	221808

Analysis Batch: 222044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-10	SE-031016-JN-020	Total/NA	Solid	7471A	221625
240-62022-11	SE-031016-JN-021	Total/NA	Solid	7471A	221625
240-62022-12	SE-031016-JN-022	Total/NA	Solid	7471A	221625
240-62022-13	SE-031016-JN-023	Total/NA	Solid	7471A	221625
240-62022-13 MS	SE-031016-JN-023	Total/NA	Solid	7471A	221625
240-62022-13 MSD	SE-031016-JN-023	Total/NA	Solid	7471A	221625
240-62022-14	SE-031016-JN-024	Total/NA	Solid	7471A	221625
240-62022-15	SE-031016-JN-025	Total/NA	Solid	7471A	221625
240-62022-16	SE-031016-JN-026	Total/NA	Solid	7471A	221625
240-62022-17	SE-031016-JN-027	Total/NA	Solid	7471A	221625
LCS 240-221625/2-A	Lab Control Sample	Total/NA	Solid	7471A	221625
MB 240-221625/1-A	Method Blank	Total/NA	Solid	7471A	221625

Analysis Batch: 222045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-3	SE-031016-JN-013	TCLP	Solid	7470A	221801
240-62022-3 MS	SE-031016-JN-013	TCLP	Solid	7470A	221801
240-62022-3 MSD	SE-031016-JN-013	TCLP	Solid	7470A	221801
240-62022-6	SE-031016-JN-016	TCLP	Solid	7470A	221801
240-62022-7	SE-031016-JN-017	TCLP	Solid	7470A	221801
240-62022-10	SE-031016-JN-020	TCLP	Solid	7470A	221801
240-62022-13	SE-031016-JN-023	TCLP	Solid	7470A	221812
240-62022-13 MS	SE-031016-JN-023	TCLP	Solid	7470A	221812
240-62022-13 MSD	SE-031016-JN-023	TCLP	Solid	7470A	221812
240-62022-17	SE-031016-JN-027	TCLP	Solid	7470A	221812
LB 240-221744/1-C	Method Blank	TCLP	Solid	7470A	221812
LB 240-221748/1-C	Method Blank	TCLP	Solid	7470A	221801
LCS 240-221801/3-A	Lab Control Sample	Total/NA	Solid	7470A	221801
LCS 240-221812/3-A	Lab Control Sample	Total/NA	Solid	7470A	221812
MB 240-221801/2-A	Method Blank	Total/NA	Solid	7470A	221801
MB 240-221812/2-A	Method Blank	Total/NA	Solid	7470A	221812

Analysis Batch: 222405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-10	SE-031016-JN-020	Total/NA	Solid	6020	221602

Metals (Continued)

Analysis Batch: 222405 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-11	SE-031016-JN-021	Total/NA	Solid	6020	221602
240-62022-12	SE-031016-JN-022	Total/NA	Solid	6020	221602
240-62022-13	SE-031016-JN-023	Total/NA	Solid	6020	221602
240-62022-13 MS	SE-031016-JN-023	Total/NA	Solid	6020	221602
240-62022-13 MSD	SE-031016-JN-023	Total/NA	Solid	6020	221602
240-62022-14	SE-031016-JN-024	Total/NA	Solid	6020	221602
240-62022-15	SE-031016-JN-025	Total/NA	Solid	6020	221602
240-62022-16	SE-031016-JN-026	Total/NA	Solid	6020	221602
240-62022-17	SE-031016-JN-027	Total/NA	Solid	6020	221602
LCS 240-221602/3-A ^2	Lab Control Sample	Total/NA	Solid	6020	221602
MB 240-221602/1-A ^2	Method Blank	Total/NA	Solid	6020	221602

Analysis Batch: 222513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	6020	221427
240-62022-2	SE-031016-JN-012	Total/NA	Solid	6020	221427
240-62022-3	SE-031016-JN-013	Total/NA	Solid	6020	221427
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	6020	221427
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	6020	221427
240-62022-4	SE-031016-JN-014	Total/NA	Solid	6020	221427
240-62022-5	SE-031016-JN-015	Total/NA	Solid	6020	221427
240-62022-6	SE-031016-JN-016	Total/NA	Solid	6020	221427
240-62022-7	SE-031016-JN-017	Total/NA	Solid	6020	221427
240-62022-8	SE-031016-JN-018	Total/NA	Solid	6020	221427
240-62022-9	SE-031016-JN-019	Total/NA	Solid	6020	221427
LCS 240-221427/3-A ^2	Lab Control Sample	Total/NA	Solid	6020	221427
MB 240-221427/1-A ^2	Method Blank	Total/NA	Solid	6020	221427

Analysis Batch: 222788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	6020	221427
240-62022-2	SE-031016-JN-012	Total/NA	Solid	6020	221427
240-62022-3	SE-031016-JN-013	Total/NA	Solid	6020	221427
240-62022-3	SE-031016-JN-013	Total/NA	Solid	6020	221427
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	6020	221427
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	6020	221427
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	6020	221427
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	6020	221427
240-62022-4	SE-031016-JN-014	Total/NA	Solid	6020	221427
240-62022-5	SE-031016-JN-015	Total/NA	Solid	6020	221427
240-62022-6	SE-031016-JN-016	Total/NA	Solid	6020	221427
240-62022-7	SE-031016-JN-017	Total/NA	Solid	6020	221427
240-62022-8	SE-031016-JN-018	Total/NA	Solid	6020	221427
240-62022-9	SE-031016-JN-019	Total/NA	Solid	6020	221427
LCS 240-221427/3-A ^2	Lab Control Sample	Total/NA	Solid	6020	221427
MB 240-221427/1-A ^2	Method Blank	Total/NA	Solid	6020	221427

Analysis Batch: 222891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	6020	221427
240-62022-2	SE-031016-JN-012	Total/NA	Solid	6020	221427

Metals (Continued)

Analysis Batch: 222891 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-3	SE-031016-JN-013	Total/NA	Solid	6020	221427
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	6020	221427
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	6020	221427
240-62022-4	SE-031016-JN-014	Total/NA	Solid	6020	221427
240-62022-5	SE-031016-JN-015	Total/NA	Solid	6020	221427
240-62022-6	SE-031016-JN-016	Total/NA	Solid	6020	221427
240-62022-7	SE-031016-JN-017	Total/NA	Solid	6020	221427
240-62022-8	SE-031016-JN-018	Total/NA	Solid	6020	221427
240-62022-9	SE-031016-JN-019	Total/NA	Solid	6020	221427
LCS 240-221427/3-A ^2	Lab Control Sample	Total/NA	Solid	6020	221427
MB 240-221427/1-A ^2	Method Blank	Total/NA	Solid	6020	221427

General Chemistry

Analysis Batch: 171000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-19	SE-031016-JN-011	Total/NA	Sediment	2540G	
240-62022-20	SE-031016-JN-014	Total/NA	Sediment	2540G	
240-62022-21	SE-031016-JN-018	Total/NA	Sediment	2540G	
240-62022-22	SE-031016-JN-021	Total/NA	Sediment	2540G	
240-62022-23	SE-031016-JN-024	Total/NA	Sediment	2540G	

Prep Batch: 171004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-19	SE-031016-JN-011	SEM/AVS	Sediment	AVSSEM	
240-62022-20	SE-031016-JN-014	SEM/AVS	Sediment	AVSSEM	
240-62022-21	SE-031016-JN-018	SEM/AVS	Sediment	AVSSEM	
240-62022-22	SE-031016-JN-021	SEM/AVS	Sediment	AVSSEM	
240-62022-23	SE-031016-JN-024	SEM/AVS	Sediment	AVSSEM	
240-62022-23 MS	SE-031016-JN-024	SEM/AVS	Sediment	AVSSEM	
240-62022-23 MSD	SE-031016-JN-024	SEM/AVS	Sediment	AVSSEM	
LCS 180-171004/2-A	Lab Control Sample	SEM/AVS	Sediment	AVSSEM	
MB 180-171004/1-A	Method Blank	SEM/AVS	Sediment	AVSSEM	

Analysis Batch: 171036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-19	SE-031016-JN-011	SEM/AVS	Sediment	9034	171004
240-62022-20	SE-031016-JN-014	SEM/AVS	Sediment	9034	171004
240-62022-21	SE-031016-JN-018	SEM/AVS	Sediment	9034	171004
240-62022-22	SE-031016-JN-021	SEM/AVS	Sediment	9034	171004
240-62022-23	SE-031016-JN-024	SEM/AVS	Sediment	9034	171004
240-62022-23 MS	SE-031016-JN-024	SEM/AVS	Sediment	9034	171004
240-62022-23 MSD	SE-031016-JN-024	SEM/AVS	Sediment	9034	171004
LCS 180-171004/2-A	Lab Control Sample	SEM/AVS	Sediment	9034	171004
MB 180-171004/1-A	Method Blank	SEM/AVS	Sediment	9034	171004

Analysis Batch: 171546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	Lloyd Kahn	
240-62022-2	SE-031016-JN-012	Total/NA	Solid	Lloyd Kahn	

General Chemistry (Continued)

Analysis Batch: 171546 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-3	SE-031016-JN-013	Total/NA	Solid	Lloyd Kahn	
240-62022-3 DU	SE-031016-JN-013	Total/NA	Solid	Lloyd Kahn	
240-62022-3 MS	SE-031016-JN-013	Total/NA	Solid	Lloyd Kahn	
240-62022-3 MSD	SE-031016-JN-013	Total/NA	Solid	Lloyd Kahn	
240-62022-4	SE-031016-JN-014	Total/NA	Solid	Lloyd Kahn	
240-62022-5	SE-031016-JN-015	Total/NA	Solid	Lloyd Kahn	
240-62022-6	SE-031016-JN-016	Total/NA	Solid	Lloyd Kahn	
240-62022-7	SE-031016-JN-017	Total/NA	Solid	Lloyd Kahn	
240-62022-8	SE-031016-JN-018	Total/NA	Solid	Lloyd Kahn	
240-62022-9	SE-031016-JN-019	Total/NA	Solid	Lloyd Kahn	
240-62022-10	SE-031016-JN-020	Total/NA	Solid	Lloyd Kahn	
240-62022-11	SE-031016-JN-021	Total/NA	Solid	Lloyd Kahn	
240-62022-12	SE-031016-JN-022	Total/NA	Solid	Lloyd Kahn	
240-62022-13	SE-031016-JN-023	Total/NA	Solid	Lloyd Kahn	
240-62022-13 DU	SE-031016-JN-023	Total/NA	Solid	Lloyd Kahn	
240-62022-13 MS	SE-031016-JN-023	Total/NA	Solid	Lloyd Kahn	
240-62022-13 MSD	SE-031016-JN-023	Total/NA	Solid	Lloyd Kahn	
240-62022-14	SE-031016-JN-024	Total/NA	Solid	Lloyd Kahn	
240-62022-15	SE-031016-JN-025	Total/NA	Solid	Lloyd Kahn	
240-62022-16	SE-031016-JN-026	Total/NA	Solid	Lloyd Kahn	
240-62022-17	SE-031016-JN-027	Total/NA	Solid	Lloyd Kahn	
LCS 180-171546/4	Lab Control Sample	Total/NA	Solid	Lloyd Kahn	
MB 180-171546/3	Method Blank	Total/NA	Solid	Lloyd Kahn	

Analysis Batch: 221485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-62022-1	SE-031016-JN-011	Total/NA	Solid	Moisture	
240-62022-1 DU	SE-031016-JN-011	Total/NA	Solid	Moisture	
240-62022-2	SE-031016-JN-012	Total/NA	Solid	Moisture	
240-62022-3	SE-031016-JN-013	Total/NA	Solid	Moisture	
240-62022-3 DU	SE-031016-JN-013	Total/NA	Solid	Moisture	
240-62022-4	SE-031016-JN-014	Total/NA	Solid	Moisture	
240-62022-5	SE-031016-JN-015	Total/NA	Solid	Moisture	
240-62022-6	SE-031016-JN-016	Total/NA	Solid	Moisture	
240-62022-7	SE-031016-JN-017	Total/NA	Solid	Moisture	
240-62022-8	SE-031016-JN-018	Total/NA	Solid	Moisture	
240-62022-9	SE-031016-JN-019	Total/NA	Solid	Moisture	
240-62022-10	SE-031016-JN-020	Total/NA	Solid	Moisture	
240-62022-11	SE-031016-JN-021	Total/NA	Solid	Moisture	
240-62022-12	SE-031016-JN-022	Total/NA	Solid	Moisture	
240-62022-13	SE-031016-JN-023	Total/NA	Solid	Moisture	
240-62022-13 DU	SE-031016-JN-023	Total/NA	Solid	Moisture	
240-62022-14	SE-031016-JN-024	Total/NA	Solid	Moisture	
240-62022-15	SE-031016-JN-025	Total/NA	Solid	Moisture	
240-62022-16	SE-031016-JN-026	Total/NA	Solid	Moisture	
240-62022-17	SE-031016-JN-027	Total/NA	Solid	Moisture	

Client Sample ID: SE-031016-JN-011
Lab Sample ID: 240-62022-1
Date Collected: 03/10/16 09:35
Matrix: Solid
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-011
Lab Sample ID: 240-62022-1
Date Collected: 03/10/16 09:35
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 79.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221689	03/16/16 02:01	TJL2	TAL CAN
Total/NA	Analysis	8260B		1	221688	03/16/16 11:55	TJL2	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		200	221929	03/17/16 18:28	MRU	TAL CAN
Total/NA	Prep	1630			221445	03/14/16 11:58	SEM	TAL CAN
Total/NA	Analysis	1630		1	222277	03/18/16 22:29	RES	TAL CAN
Total/NA	Prep	3540C			222138	03/18/16 08:15	YDN	TAL CAN
Total/NA	Analysis	8082		5	222863	03/23/16 19:56	KMG	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222513	03/21/16 20:44	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222788	03/23/16 00:31	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		20	222891	03/23/16 13:08	AS1	TAL CAN
Total/NA	Prep	7471A			221444	03/14/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	221647	03/15/16 08:52	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 09:14	JDD	TAL PIT

Client Sample ID: SE-031016-JN-012
Lab Sample ID: 240-62022-2
Date Collected: 03/10/16 09:40
Matrix: Solid
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-012
Lab Sample ID: 240-62022-2
Date Collected: 03/10/16 09:40
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 48.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			221497	03/14/16 18:21	LAM	TAL CAN
Total/NA	Analysis	8260B		1	221767	03/16/16 16:21	SAM	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		50	221929	03/17/16 18:53	MRU	TAL CAN
Total/NA	Prep	3540C			222138	03/18/16 08:15	YDN	TAL CAN
Total/NA	Analysis	8082		1	222863	03/23/16 20:13	KMG	TAL CAN

Lab Chronicle

Client: GHD Services Inc. TestAmerica Job ID: 240-62022-1
Project/Site: 58505, Janesville WI, SSOW 108014

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222513	03/21/16 20:49	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222788	03/23/16 00:39	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		20	222891	03/23/16 13:20	AS1	TAL CAN
Total/NA	Prep	7471A			221444	03/14/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	221647	03/15/16 08:53	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 09:40	JDD	TAL PIT

Client Sample ID: SE-031016-JN-013 **Lab Sample ID: 240-62022-3**
Date Collected: 03/10/16 09:45 **Matrix: Solid**
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			221748	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	3010A			221797	03/16/16 11:10	WKD	TAL CAN
TCLP	Analysis	6010B		1	222033	03/17/16 20:44	RKT	TAL CAN
TCLP	Leach	1311			221748	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	7470A			221801	03/16/16 14:00	WKD	TAL CAN
TCLP	Analysis	7470A		1	222045	03/17/16 11:47	DSH	TAL CAN
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-013 **Lab Sample ID: 240-62022-3**
Date Collected: 03/10/16 09:45 **Matrix: Solid**
Date Received: 03/11/16 10:40 **Percent Solids: 40.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			221497	03/14/16 18:21	LAM	TAL CAN
Total/NA	Analysis	8260B		1	221767	03/16/16 16:43	SAM	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		20	222298	03/19/16 16:42	MRU	TAL CAN
Total/NA	Prep	3540C			222138	03/18/16 08:15	YDN	TAL CAN
Total/NA	Analysis	8082		5	222863	03/23/16 20:49	KMG	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222513	03/21/16 20:16	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222788	03/22/16 23:42	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		20	222788	03/22/16 23:46	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		20	222891	03/23/16 12:47	AS1	TAL CAN
Total/NA	Prep	7471A			221444	03/14/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	221647	03/15/16 08:48	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 09:51	JDD	TAL PIT

Client Sample ID: SE-031016-JN-014
Lab Sample ID: 240-62022-4
Date Collected: 03/10/16 10:35
Matrix: Solid
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-014
Lab Sample ID: 240-62022-4
Date Collected: 03/10/16 10:35
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 49.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221461	03/14/16 13:31	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221434	03/14/16 16:24	SAM	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		10	222298	03/19/16 19:14	MRU	TAL CAN
Total/NA	Prep	1630			221445	03/14/16 11:58	SEM	TAL CAN
Total/NA	Analysis	1630		1	222277	03/18/16 22:50	RES	TAL CAN
Total/NA	Prep	3540C			222138	03/18/16 08:15	YDN	TAL CAN
Total/NA	Analysis	8082		1	222863	03/23/16 21:59	KMG	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222513	03/21/16 20:53	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222788	03/23/16 00:47	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222891	03/23/16 13:24	AS1	TAL CAN
Total/NA	Prep	7471A			221444	03/14/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		10	221647	03/15/16 09:10	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 10:54	JDD	TAL PIT

Client Sample ID: SE-031016-JN-015
Lab Sample ID: 240-62022-5
Date Collected: 03/10/16 10:40
Matrix: Solid
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-015
Lab Sample ID: 240-62022-5
Date Collected: 03/10/16 10:40
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 49.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221461	03/14/16 13:31	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221434	03/14/16 16:50	SAM	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		1	221929	03/17/16 16:46	MRU	TAL CAN
Total/NA	Prep	3540C			222138	03/18/16 08:15	YDN	TAL CAN
Total/NA	Analysis	8082		1	222863	03/23/16 22:17	KMG	TAL CAN

Client Sample ID: SE-031016-JN-015

Lab Sample ID: 240-62022-5
Date Collected: 03/10/16 10:40
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 49.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222513	03/21/16 20:57	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222788	03/23/16 00:51	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222891	03/23/16 13:28	AS1	TAL CAN
Total/NA	Prep	7471A			221444	03/14/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	221647	03/15/16 08:58	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 11:04	JDD	TAL PIT

Client Sample ID: SE-031016-JN-016

Lab Sample ID: 240-62022-6
Date Collected: 03/10/16 10:45
Matrix: Solid
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			221748	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	3010A			221797	03/16/16 11:10	WKD	TAL CAN
TCLP	Analysis	6010B		1	222033	03/17/16 21:05	RKT	TAL CAN
TCLP	Leach	1311			221748	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	7470A			221801	03/16/16 14:00	WKD	TAL CAN
TCLP	Analysis	7470A		1	222045	03/17/16 11:53	DSH	TAL CAN
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-016

Lab Sample ID: 240-62022-6
Date Collected: 03/10/16 10:45
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 45.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221461	03/14/16 13:31	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221434	03/14/16 17:16	SAM	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		4	222298	03/19/16 20:30	MRU	TAL CAN
Total/NA	Prep	3540C			221356	03/14/16 06:37	SDE	TAL CAN
Total/NA	Analysis	8082		1	221858	03/16/16 23:16	KMG	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222513	03/21/16 21:01	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222788	03/23/16 01:04	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222891	03/23/16 13:33	AS1	TAL CAN
Total/NA	Prep	7471A			221444	03/14/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	221647	03/15/16 08:59	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 11:15	JDD	TAL PIT

Client Sample ID: SE-031016-JN-017

Lab Sample ID: 240-62022-7
Date Collected: 03/10/16 10:50
Matrix: Solid
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			221748	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	3010A			221797	03/16/16 11:10	WKD	TAL CAN
TCLP	Analysis	6010B		1	222033	03/17/16 21:09	RKT	TAL CAN
TCLP	Leach	1311			221748	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	7470A			221801	03/16/16 14:00	WKD	TAL CAN
TCLP	Analysis	7470A		1	222045	03/17/16 11:55	DSH	TAL CAN
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-017

Lab Sample ID: 240-62022-7
Date Collected: 03/10/16 10:50
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 45.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221461	03/14/16 13:31	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221434	03/14/16 17:42	SAM	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		1	221929	03/17/16 17:11	MRU	TAL CAN
Total/NA	Prep	3540C			222138	03/18/16 08:15	YDN	TAL CAN
Total/NA	Analysis	8082		1	222863	03/23/16 22:35	KMG	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222513	03/21/16 21:05	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222788	03/23/16 01:08	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222891	03/23/16 13:37	AS1	TAL CAN
Total/NA	Prep	7471A			221444	03/14/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		10	221647	03/15/16 09:11	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 11:25	JDD	TAL PIT

Client Sample ID: SE-031016-JN-018

Lab Sample ID: 240-62022-8
Date Collected: 03/10/16 11:40
Matrix: Solid
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-018

Lab Sample ID: 240-62022-8
Date Collected: 03/10/16 11:40
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 49.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221461	03/14/16 13:31	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221434	03/14/16 19:25	SAM	TAL CAN

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: SE-031016-JN-018

Lab Sample ID: 240-62022-8
Date Collected: 03/10/16 11:40
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 49.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		4	222298	03/19/16 20:05	MRU	TAL CAN
Total/NA	Prep	1630			221445	03/14/16 11:58	SEM	TAL CAN
Total/NA	Analysis	1630		1	222277	03/18/16 23:11	RES	TAL CAN
Total/NA	Prep	3540C			222138	03/18/16 08:15	YDN	TAL CAN
Total/NA	Analysis	8082		1	222863	03/23/16 22:52	KMG	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222513	03/21/16 21:18	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222788	03/23/16 01:12	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222891	03/23/16 13:41	AS1	TAL CAN
Total/NA	Prep	7471A			221444	03/14/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	221647	03/15/16 09:02	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 11:36	JDD	TAL PIT

Client Sample ID: SE-031016-JN-019

Lab Sample ID: 240-62022-9
Date Collected: 03/10/16 11:45
Matrix: Solid
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-019

Lab Sample ID: 240-62022-9
Date Collected: 03/10/16 11:45
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 48.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221461	03/14/16 13:31	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221434	03/14/16 19:51	SAM	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		1	221929	03/17/16 17:37	MRU	TAL CAN
Total/NA	Prep	3540C			222138	03/18/16 08:15	YDN	TAL CAN
Total/NA	Analysis	8082		1	222863	03/23/16 23:10	KMG	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222513	03/21/16 21:22	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222788	03/23/16 01:17	AS1	TAL CAN
Total/NA	Prep	3050B			221427	03/14/16 10:54	DEE	TAL CAN
Total/NA	Analysis	6020		2	222891	03/23/16 13:45	AS1	TAL CAN
Total/NA	Prep	7471A			221444	03/14/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	221647	03/15/16 09:03	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 11:46	JDD	TAL PIT

Client Sample ID: SE-031016-JN-020

Lab Sample ID: 240-62022-10

Date Collected: 03/10/16 11:50

Matrix: Solid

Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			221748	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	3010A			221797	03/16/16 11:10	WKD	TAL CAN
TCLP	Analysis	6010B		1	222033	03/17/16 21:14	RKT	TAL CAN
TCLP	Leach	1311			221748	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	7470A			221801	03/16/16 14:00	WKD	TAL CAN
TCLP	Analysis	7470A		1	222045	03/17/16 12:01	DSH	TAL CAN
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-020

Lab Sample ID: 240-62022-10

Date Collected: 03/10/16 11:50

Matrix: Solid

Date Received: 03/11/16 10:40

Percent Solids: 52.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221461	03/14/16 13:31	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221434	03/14/16 20:16	SAM	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		5	222298	03/19/16 19:40	MRU	TAL CAN
Total/NA	Prep	3540C			221356	03/14/16 06:37	SDE	TAL CAN
Total/NA	Analysis	8082		1	221858	03/17/16 00:29	KMG	TAL CAN
Total/NA	Prep	3050B			221602	03/15/16 11:27	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 23:04	AS1	TAL CAN
Total/NA	Prep	7471A			221625	03/15/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		3	222044	03/17/16 14:22	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 11:57	JDD	TAL PIT

Client Sample ID: SE-031016-JN-021

Lab Sample ID: 240-62022-11

Date Collected: 03/10/16 12:50

Matrix: Solid

Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-021

Lab Sample ID: 240-62022-11

Date Collected: 03/10/16 12:50

Matrix: Solid

Date Received: 03/11/16 10:40

Percent Solids: 47.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221461	03/14/16 13:31	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221434	03/14/16 20:42	SAM	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		2	221929	03/17/16 19:19	MRU	TAL CAN
Total/NA	Prep	1630			221445	03/14/16 11:58	SEM	TAL CAN
Total/NA	Analysis	1630		1	222277	03/18/16 23:33	RES	TAL CAN

Client Sample ID: SE-031016-JN-021

Lab Sample ID: 240-62022-11
Date Collected: 03/10/16 12:50
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 47.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			222138	03/18/16 08:15	YDN	TAL CAN
Total/NA	Analysis	8082		1	222863	03/23/16 23:28	KMG	TAL CAN
Total/NA	Prep	3050B			221602	03/15/16 11:27	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 23:08	AS1	TAL CAN
Total/NA	Prep	7471A			221625	03/15/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		5	222044	03/17/16 14:23	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 12:07	JDD	TAL PIT

Client Sample ID: SE-031016-JN-022

Lab Sample ID: 240-62022-12
Date Collected: 03/10/16 12:55
Matrix: Solid
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-022

Lab Sample ID: 240-62022-12
Date Collected: 03/10/16 12:55
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 44.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221461	03/14/16 13:31	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221434	03/14/16 21:08	SAM	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		1	221929	03/17/16 18:02	MRU	TAL CAN
Total/NA	Prep	3540C			221356	03/14/16 06:37	SDE	TAL CAN
Total/NA	Analysis	8082		1	221858	03/17/16 01:06	KMG	TAL CAN
Total/NA	Prep	3050B			221602	03/15/16 11:27	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 23:12	AS1	TAL CAN
Total/NA	Prep	7471A			221625	03/15/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		10	222044	03/17/16 14:25	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 12:18	JDD	TAL PIT

Client Sample ID: SE-031016-JN-023

Lab Sample ID: 240-62022-13
Date Collected: 03/10/16 13:00
Matrix: Solid
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			221744	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	3010A			221808	03/16/16 11:41	WKD	TAL CAN
TCLP	Analysis	6010B		1	222033	03/17/16 19:50	RKT	TAL CAN
TCLP	Leach	1311			221744	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	7470A			221812	03/16/16 14:00	WKD	TAL CAN
TCLP	Analysis	7470A		1	222045	03/17/16 12:33	DSH	TAL CAN

Client Sample ID: SE-031016-JN-023
Date Collected: 03/10/16 13:00
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-023
Date Collected: 03/10/16 13:00
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-13
Matrix: Solid
Percent Solids: 44.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221689	03/16/16 02:01	TJL2	TAL CAN
Total/NA	Analysis	8260B		1	221688	03/16/16 03:54	TJL2	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		1	221929	03/17/16 15:29	MRU	TAL CAN
Total/NA	Prep	3540C			222138	03/18/16 08:15	YDN	TAL CAN
Total/NA	Analysis	8082		5	222863	03/23/16 23:46	KMG	TAL CAN
Total/NA	Prep	3050B			221602	03/15/16 11:27	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 22:35	AS1	TAL CAN
Total/NA	Prep	7471A			221625	03/15/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		5	222044	03/17/16 14:17	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 12:49	JDD	TAL PIT

Client Sample ID: SE-031016-JN-024
Date Collected: 03/10/16 14:05
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-024
Date Collected: 03/10/16 14:05
Date Received: 03/11/16 10:40

Lab Sample ID: 240-62022-14
Matrix: Solid
Percent Solids: 47.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221461	03/14/16 13:31	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221434	03/14/16 22:25	SAM	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		20	222298	03/19/16 17:58	MRU	TAL CAN
Total/NA	Prep	1630			221445	03/14/16 11:58	SEM	TAL CAN
Total/NA	Analysis	1630		1	222277	03/18/16 23:54	RES	TAL CAN
Total/NA	Prep	3540C			222138	03/18/16 08:15	YDN	TAL CAN
Total/NA	Analysis	8082		1	222863	03/24/16 00:39	KMG	TAL CAN
Total/NA	Prep	3050B			221602	03/15/16 11:27	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 23:16	AS1	TAL CAN
Total/NA	Prep	7471A			221625	03/15/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	222044	03/17/16 11:53	DSH	TAL CAN

Client Sample ID: SE-031016-JN-024
Lab Sample ID: 240-62022-14
Date Collected: 03/10/16 14:05
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 47.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 12:28	JDD	TAL PIT

Client Sample ID: SE-031016-JN-025
Lab Sample ID: 240-62022-15
Date Collected: 03/10/16 14:10
Matrix: Solid
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-025
Lab Sample ID: 240-62022-15
Date Collected: 03/10/16 14:10
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 44.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221853	03/16/16 13:22	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221763	03/16/16 22:23	SAM	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		20	222298	03/19/16 18:23	MRU	TAL CAN
Total/NA	Prep	3540C			221356	03/14/16 06:37	SDE	TAL CAN
Total/NA	Analysis	8082		1	221858	03/17/16 03:32	KMG	TAL CAN
Total/NA	Prep	3050B			221602	03/15/16 11:27	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 23:20	AS1	TAL CAN
Total/NA	Prep	7471A			221625	03/15/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	222044	03/17/16 11:55	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 13:31	JDD	TAL PIT

Client Sample ID: SE-031016-JN-026
Lab Sample ID: 240-62022-16
Date Collected: 03/10/16 14:15
Matrix: Solid
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-026
Lab Sample ID: 240-62022-16
Date Collected: 03/10/16 14:15
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 45.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221853	03/16/16 13:22	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221763	03/16/16 20:41	SAM	TAL CAN
Total/NA	Prep	3540C			221358	03/14/16 07:06	YDN	TAL CAN
Total/NA	Analysis	8270C		20	222298	03/19/16 18:49	MRU	TAL CAN

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: SE-031016-JN-026

Lab Sample ID: 240-62022-16
Date Collected: 03/10/16 14:15
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 45.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			222138	03/18/16 08:15	YDN	TAL CAN
Total/NA	Analysis	8082		1	222863	03/24/16 02:07	KMG	TAL CAN
Total/NA	Prep	3050B			221602	03/15/16 11:27	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 23:25	AS1	TAL CAN
Total/NA	Prep	7471A			221625	03/15/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	222044	03/17/16 11:56	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 13:41	JDD	TAL PIT

Client Sample ID: SE-031016-JN-027

Lab Sample ID: 240-62022-17
Date Collected: 03/10/16 14:20
Matrix: Solid
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			221744	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	3010A			221808	03/16/16 11:41	WKD	TAL CAN
TCLP	Analysis	6010B		1	222033	03/17/16 20:11	RKT	TAL CAN
TCLP	Leach	1311			221744	03/15/16 17:05	DRJ	TAL CAN
TCLP	Prep	7470A			221812	03/16/16 14:00	WKD	TAL CAN
TCLP	Analysis	7470A		1	222045	03/17/16 12:39	DSH	TAL CAN
Total/NA	Analysis	Moisture		1	221485	03/14/16 16:52	DTN	TAL CAN

Client Sample ID: SE-031016-JN-027

Lab Sample ID: 240-62022-17
Date Collected: 03/10/16 14:20
Matrix: Solid
Date Received: 03/11/16 10:40
Percent Solids: 47.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			221853	03/16/16 13:22	SAM	TAL CAN
Total/NA	Analysis	8260B		1	221763	03/16/16 21:06	SAM	TAL CAN
Total/NA	Prep	3540C			221375	03/14/16 07:57	YDN	TAL CAN
Total/NA	Analysis	8270C		25	221760	03/16/16 19:40	JMG	TAL CAN
Total/NA	Prep	3540C			222138	03/18/16 08:15	YDN	TAL CAN
Total/NA	Analysis	8082		1	222863	03/24/16 02:25	KMG	TAL CAN
Total/NA	Prep	3050B			221602	03/15/16 11:27	DEE	TAL CAN
Total/NA	Analysis	6020		2	222405	03/19/16 23:29	AS1	TAL CAN
Total/NA	Prep	7471A			221625	03/15/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		5	222044	03/17/16 14:26	DSH	TAL CAN
Total/NA	Analysis	Lloyd Kahn		1	171546	03/22/16 13:52	JDD	TAL PIT

Client Sample ID: TB-031016-JN-001

Lab Sample ID: 240-62022-18

Date Collected: 03/10/16 08:00

Matrix: Water

Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	221822	03/16/16 15:23	LRW	TAL CAN

Client Sample ID: SE-031016-JN-011

Lab Sample ID: 240-62022-19

Date Collected: 03/10/16 09:35

Matrix: Sediment

Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Analysis	SEM		1	171444	03/22/16 10:39	MM1	TAL PIT
Total/NA	Analysis	2540G		1	171000	03/16/16 12:42	CLL	TAL PIT

Client Sample ID: SE-031016-JN-011

Lab Sample ID: 240-62022-19

Date Collected: 03/10/16 09:35

Matrix: Sediment

Date Received: 03/11/16 10:40

Percent Solids: 63.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		1	171287	03/18/16 18:18	RJR	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		5	171363	03/21/16 11:33	RJG	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		10	171363	03/21/16 11:38	RJG	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Prep	7470A			171122	03/17/16 13:39	EVR	TAL PIT
SEM/AVS	Analysis	7470A		1	171226	03/18/16 12:03	EVR	TAL PIT
SEM/AVS	Prep	AVSSEM			171004	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	9034		1	171036	03/16/16 17:59	JLR	TAL PIT

Client Sample ID: SE-031016-JN-014

Lab Sample ID: 240-62022-20

Date Collected: 03/10/16 10:35

Matrix: Sediment

Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Analysis	SEM		1	171444	03/22/16 10:39	MM1	TAL PIT
Total/NA	Analysis	2540G		1	171000	03/16/16 12:42	CLL	TAL PIT

Client Sample ID: SE-031016-JN-014

Lab Sample ID: 240-62022-20

Date Collected: 03/10/16 10:35

Matrix: Sediment

Date Received: 03/11/16 10:40

Percent Solids: 45.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		1	171287	03/18/16 18:02	RJR	TAL PIT

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: SE-031016-JN-014
Lab Sample ID: 240-62022-20
Date Collected: 03/10/16 10:35
Matrix: Sediment
Date Received: 03/11/16 10:40
Percent Solids: 45.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Prep	7470A			171122	03/17/16 13:39	EVR	TAL PIT
SEM/AVS	Analysis	7470A		1	171226	03/18/16 12:05	EVR	TAL PIT
SEM/AVS	Prep	AVSSEM			171004	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	9034		1	171036	03/16/16 18:02	JLR	TAL PIT

Client Sample ID: SE-031016-JN-018
Lab Sample ID: 240-62022-21
Date Collected: 03/10/16 11:40
Matrix: Sediment
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Analysis	SEM		1	171444	03/22/16 10:39	MM1	TAL PIT
Total/NA	Analysis	2540G		1	171000	03/16/16 12:42	CLL	TAL PIT

Client Sample ID: SE-031016-JN-018
Lab Sample ID: 240-62022-21
Date Collected: 03/10/16 11:40
Matrix: Sediment
Date Received: 03/11/16 10:40
Percent Solids: 56.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		1	171287	03/18/16 17:57	RJR	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		2	171363	03/21/16 11:43	RJG	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Prep	7470A			171122	03/17/16 13:39	EVR	TAL PIT
SEM/AVS	Analysis	7470A		1	171226	03/18/16 12:07	EVR	TAL PIT
SEM/AVS	Prep	AVSSEM			171004	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	9034		1	171036	03/16/16 18:04	JLR	TAL PIT

Client Sample ID: SE-031016-JN-021
Lab Sample ID: 240-62022-22
Date Collected: 03/10/16 12:50
Matrix: Sediment
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Analysis	SEM		1	171444	03/22/16 10:39	MM1	TAL PIT
Total/NA	Analysis	2540G		1	171000	03/16/16 12:42	CLL	TAL PIT

Client Sample ID: SE-031016-JN-021
Lab Sample ID: 240-62022-22
Date Collected: 03/10/16 12:50
Matrix: Sediment
Date Received: 03/11/16 10:40
Percent Solids: 42.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Client Sample ID: SE-031016-JN-021

Lab Sample ID: 240-62022-22
Date Collected: 03/10/16 12:50
Matrix: Sediment
Date Received: 03/11/16 10:40
Percent Solids: 42.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Analysis	6010B		1	171287	03/18/16 17:52	RJR	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Prep	7470A			171122	03/17/16 13:39	EVR	TAL PIT
SEM/AVS	Analysis	7470A		1	171226	03/18/16 12:09	EVR	TAL PIT
SEM/AVS	Prep	AVSSEM			171004	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	9034		1	171036	03/16/16 18:07	JLR	TAL PIT

Client Sample ID: SE-031016-JN-024

Lab Sample ID: 240-62022-23
Date Collected: 03/10/16 14:05
Matrix: Sediment
Date Received: 03/11/16 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Analysis	SEM		1	171444	03/22/16 10:39	MM1	TAL PIT
Total/NA	Analysis	2540G		1	171000	03/16/16 12:42	CLL	TAL PIT

Client Sample ID: SE-031016-JN-024

Lab Sample ID: 240-62022-23
Date Collected: 03/10/16 14:05
Matrix: Sediment
Date Received: 03/11/16 10:40
Percent Solids: 52.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		1	171287	03/18/16 17:25	RJR	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	6010B		5	171363	03/21/16 11:48	RJG	TAL PIT
SEM/AVS	Prep	AVSSEM			170984	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Prep	7470A			171122	03/17/16 13:39	EVR	TAL PIT
SEM/AVS	Analysis	7470A		1	171226	03/18/16 12:11	EVR	TAL PIT
SEM/AVS	Prep	AVSSEM			171004	03/16/16 14:00	JLR	TAL PIT
SEM/AVS	Analysis	9034		1	171036	03/16/16 18:10	JLR	TAL PIT

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Certification Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-62022-1

Laboratory: TestAmerica Canton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999518190	08-31-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
1630	1630	Solid	Methyl Mercury
7470A	7470A	Solid	Mercury
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	Cyclohexane
8260B		Water	Methyl acetate
8260B		Water	Methylcyclohexane
8260B	5030A	Solid	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B	5030A	Solid	Cyclohexane
8260B	5030A	Solid	Methyl acetate
8260B	5030A	Solid	Methylcyclohexane
8260B	5030B	Solid	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B	5030B	Solid	Cyclohexane
8260B	5030B	Solid	Methyl acetate
8260B	5030B	Solid	Methylcyclohexane
8270C	3540C	Solid	4-Nitroaniline
8270C	3540C	Solid	Atrazine
8270C	3540C	Solid	Benzaldehyde
8270C	3540C	Solid	Caprolactam
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: TestAmerica Pittsburgh

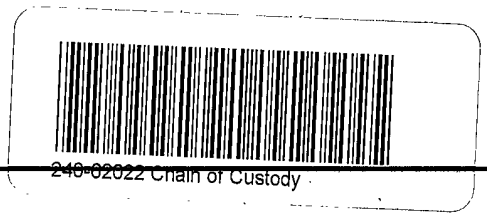
All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-16
California	State Program	9	2891	03-31-18
Connecticut	State Program	1	PH-0688	09-30-16
Florida	NELAP	4	E871008	06-30-16
Illinois	NELAP	5	200005	06-30-16
Kansas	NELAP	7	E-10350	05-31-16
Louisiana	NELAP	6	04041	06-30-16
New Hampshire	NELAP	1	2030	04-04-17
New Jersey	NELAP	2	PA005	06-30-16
New York	NELAP	2	11182	03-31-17
North Carolina (WW/SW)	State Program	4	434	12-31-16
Pennsylvania	NELAP	3	02-00416	04-30-16
South Carolina	State Program	4	89014	04-30-16 *
Texas	NELAP	6	T104704528-15-2	03-31-17
US Fish & Wildlife	Federal		LE94312A-1	10-31-16
USDA	Federal		P-Soil-01	05-23-16 *
Utah	NELAP	8	PA001462015-4	05-31-16
Virginia	NELAP	3	460189	09-14-16
West Virginia DEP	State Program	3	142	01-31-17
Wisconsin	State Program	5	998027800	08-31-16

* Certification renewal pending - certification considered valid.

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



4101 Shuffel Street N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

2.6/C7.1
3.4/C2.9
1.4/C0.9

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 1 OF 1

☐ eCOC in Use

ID: # C#03092016_002

SSOW Ref. Code: 058507-108014

Required Client Information:

GHD	Report To:
6400 Shafer Court	Copy To:
Suite 400	Invoice To:
Rosemont, IL 60018	P.O.:
Phone: (773) 380-9723	Project Name: GM - Janesville
Fax: (773) 380-6421	Project Number: 058505 - 01 - 20404
E-mail: jeffrey.nichols@GHD.com	

Laboratory: Test America	
Laboratory Location: 4101 Shuffel Drive NW, North Canton, OH	
Laboratory Contact: Denise Heckler	
Requested Due Date:	TAT: STD DAY
QA/QC Requirements:	

Valid Matrix Codes:
WG Groundwater
WB Borehole Water
WS Surface Water
SO Soil
SE Sediment
See Back for Additional Codes

Analysis and Method

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: HCl	TCL VOC (1)	TCL SVOC	TAL Metals (2)	PCBs	Alkylated PAHs	AVS	SEM Metals (3)	Methyl Hg	TOC	TCLP Metals	MS/MSD	Remarks/Lab ID
1	SB-031016-JN-011	SO	3/10/16	0935	5		X	X	X	X	X	X	X	X	X			
2	-012	SO	3/10/16	0940	4		X	X	X	X					X			
3	-013	SO	3/10/16	0945	9		X	X	X	X					X	X	X	
4	-014	SO	3/10/16	1035	5		X	X	X	X	X	X	X	X	X			
5	-015	SO	3/10/16	1040	4		X	X	X	X					X			
6	-016	SO	3/10/16	1045	4		X	X	X	X					X	X		
7	-017	SO	3/10/16	1050	4		X	X	X	X					X	X		
8	-018	SO	3/10/16	1140	5		X	X	X	X	X	X	X	X	X			
9	-019	SO	3/10/16	1145	4		X	X	X	X					X			
10	-020	SO	3/10/16	1150	4		X	X	X	X					X	X		
11	-021	SO	3/10/16	1250	5		X	X	X	X	X	X	X	X	X			
12	-022	SO	3/10/16	1255	4		X	X	X	X					X			
13	-023	SO	3/10/16	1300	9		X	X	X	X					X	X	X	
14	-024	SO	3/10/16	1405	5		X	X	X	X	X	X	X	X	X			
15	-025	SO	3/10/16	1410	4		X	X	X	X					X			
16	-026	SO	3/10/16	1415	4		X	X	X	X					X			
17	-027	SO	3/10/16	1420	4		X	X	X	X					X	X		
18	TB-031016-JN-001	SEQ	3/10/16	0800	2	X	X											
	TOTAL NUMBER OF CONTAINERS				85													

(1) Includes reporting 1,2,4-TMB and 1,3,5-TMB.
(2) Earth metals include: aluminum, calcium, iron, magnesium, potassium, & sodium.
(3) Metals include: cadmium, copper, lead, nickel, mercury, silver, & zinc.

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
FedEx	3	Jeffrey M. Nichols / GHD	3/10/16	1600		3-11-16	1040
AIRBILL NO: 8772 2219 3758 3764 3770							

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name: Jeffrey M. Nichols

Sampler Signature: Date: 3/10/16

REV. 0 (9/04)

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4/19/2016

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 62022
Canton Facility

Client GHD Site Name _____ Cooler unpacked by:

Cooler Received on 3-11-16 Opened on 3-11-16

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box (Other) _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☑ See Multiple Cooler Form
   IR GUN# 48 (CF **-1.9** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# 36 (CF **-1.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# I8 (CF **-0.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity_____ Yes (No)
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No (NA)
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. ~~Sufficient quantity received to perform indicated analyses?~~ (Yes) No
11. Are these work share samples? Yes (No)
   If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were sample(s) at the correct pH upon receipt? Yes No (NA) pH Strip Lot# **HC559158**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ (Yes) No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # :** 62022
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	8	2.6	2.1	ICE
1	1	3.4	2.9	1
1	1	1.4	0.9	1

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-62022-1

Login Number: 62022
List Number: 2
Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh
List Creation: 03/14/16 06:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-62022-1

Login Number: 62022
List Number: 3
Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh
List Creation: 03/14/16 06:32 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

Janesville Assembly Plant, Site 108, Janesville, WI

58505 SSOW Ref. 058507-108014-001

SGS Accutest Job Number: MC44792A

Sampling Dates: 03/09/16 - 03/10/16

Report to:

GHD Services Inc.
45 Farmington Valley Dr.
Plainville, CT 06062
kathleen.shaw@ghd.com; GM-EDDs@ghd.com;
julie.charlton@ghd.com
ATTN: Kathy Shaw

Total number of pages in report: **66**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

H. (Brad) Madadian
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

Sections: 1 2 3 4 5 6 7 8 9

Table of Contents

Sample Summary

GHD Services Inc.

Job No: MC44792A

Janesville Assembly Plant, Site 108, Janesville, WI
Project No: 58505 SSOW Ref. 058507-108014-001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC44792-1A	03/09/16	12:45	JN	03/11/16	SO	Sediment	SE-030916-JN-001
MC44792-2A	03/09/16	14:25	JN	03/11/16	SO	Sediment	SE-030916-JN-004
MC44792-3A	03/09/16	15:45	JN	03/11/16	SO	Sediment	SE-030916-JN-007
MC44792-4A	03/10/16	09:35	JN	03/11/16	SO	Sediment	SE-031016-JN-011
MC44792-5A	03/10/16	10:35	JN	03/11/16	SO	Sediment	SE-031016-JN-014
MC44792-6A	03/10/16	11:40	JN	03/11/16	SO	Sediment	SE-031016-JN-018
MC44792-7A	03/10/16	12:50	JN	03/11/16	SO	Sediment	SE-031016-JN-021
MC44792-8A	03/10/16	14:05	JN	03/11/16	SO	Sediment	SE-031016-JN-024

The reported LOD and LOQ values have been adjusted for dry weight unless otherwise indicated on the results page. The reported LOD and LOQ values have been adjusted for the same dilution factor as that used for the sample result unless otherwise indicated on the results page. LOD = MDL and LOQ = RL.

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: GHD Services Inc. **Job No** MC44792A

Site: Janesville Assembly Plant, Site 108, Janesville, WI **Report Date** 4/4/2016 4:21:57 PM

8 Sample(s) were collected on between 03/09/2016 and 03/10/2016 and were received at SGS Accutest New England on 03/11/2016 properly preserved, at 0.5 Deg. C and intact. These Samples received a job number of MC44792A. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Wet Chemistry By Method GUSTAFSSON 2001 MOD

Matrix: SO **Batch ID:** N:GP96615

- Black Carbon: Analysis performed at Accutest Laboratories, Dayton, NJ.

SGS Accutest New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Laboratory Director for SGS Accutest New England or assignee as verified by the signature on the cover page has authorized the release of this report(MC44792A).

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Accutest Labs of New England, Inc.	**Job No**	MC44792A
Site:	CRACT: Janesville Assembly Plant, Site 108, Janesville, WI	**Report Date**	4/4/2016 11:10:47 AM

On 03/16/2016, 8 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a maximum corrected temperature of 2.3 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of MC44792A was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Please refer to certification exceptions summary for additional certification information.

Wet Chemistry By Method GUSTAFSSON 2001 MOD

Matrix: SO **Batch ID:** GP96615

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC44792-5ADUP were used as the QC samples for Black Carbon.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: MC44792A
Account: GHD Services Inc.
Project: Janesville Assembly Plant, Site 108, Janesville, WI
Collected: 03/09/16 thru 03/10/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC44792-1A	**SE-030916-JN-001**					
Black Carbon [a]		12100	4800		mg/kg	GUSTAFSSON 2001 MOD
MC44792-2A	**SE-030916-JN-004**					
Black Carbon [a]		16100	4100		mg/kg	GUSTAFSSON 2001 MOD
MC44792-3A	**SE-030916-JN-007**					
Black Carbon [a]		27900	3900		mg/kg	GUSTAFSSON 2001 MOD
MC44792-4A	**SE-031016-JN-011**					
Black Carbon [a]		9240	2600		mg/kg	GUSTAFSSON 2001 MOD
MC44792-5A	**SE-031016-JN-014**					
Black Carbon [a]		13600	4700		mg/kg	GUSTAFSSON 2001 MOD
MC44792-6A	**SE-031016-JN-018**					
Black Carbon [a]		11400	3800		mg/kg	GUSTAFSSON 2001 MOD
MC44792-7A	**SE-031016-JN-021**					
Black Carbon [a]		21000	5200		mg/kg	GUSTAFSSON 2001 MOD
MC44792-8A	**SE-031016-JN-024**					
Black Carbon [a]		9200	4300		mg/kg	GUSTAFSSON 2001 MOD

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SE-030916-JN-001		
Lab Sample ID:	MC44792-1A	**Date Sampled:**	03/09/16
Matrix:	SO - Sediment	**Date Received:**	03/11/16
		Percent Solids:	41.8
Project:	Janesville Assembly Plant, Site 108, Janesville, WI		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Black Carbon [a]	12100	4800	mg/kg	1	03/31/16 14:44	ANJ	GUSTAFSSON 2001 MOD

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SE-030916-JN-004		
Lab Sample ID:	MC44792-2A	**Date Sampled:**	03/09/16
Matrix:	SO - Sediment	**Date Received:**	03/11/16
		Percent Solids:	48.8
Project:	Janesville Assembly Plant, Site 108, Janesville, WI		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Black Carbon [a]	16100	4100	mg/kg	1	03/31/16 15:49	ANJ	GUSTAFSSON 2001 MOD

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SE-030916-JN-007		
Lab Sample ID:	MC44792-3A	**Date Sampled:**	03/09/16
Matrix:	SO - Sediment	**Date Received:**	03/11/16
		Percent Solids:	51.3
Project:	Janesville Assembly Plant, Site 108, Janesville, WI		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Black Carbon [a]	27900	3900	mg/kg	1	03/31/16 16:11	ANJ	GUSTAFSSON 2001 MOD

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SE-031016-JN-011		
Lab Sample ID:	MC44792-4A	**Date Sampled:**	03/10/16
Matrix:	SO - Sediment	**Date Received:**	03/11/16
		Percent Solids:	76.5
Project:	Janesville Assembly Plant, Site 108, Janesville, WI		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Black Carbon [a]	9240	2600	mg/kg	1	03/31/16 16:31	ANJ	GUSTAFSSON 2001 MOD

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SE-031016-JN-014		
Lab Sample ID:	MC44792-5A	**Date Sampled:**	03/10/16
Matrix:	SO - Sediment	**Date Received:**	03/11/16
		Percent Solids:	42.8
Project:	Janesville Assembly Plant, Site 108, Janesville, WI		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Black Carbon [a]	13600	4700	mg/kg	1	03/31/16 16:44	ANJ	GUSTAFSSON 2001 MOD

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SE-031016-JN-018		
Lab Sample ID:	MC44792-6A	**Date Sampled:**	03/10/16
Matrix:	SO - Sediment	**Date Received:**	03/11/16
		Percent Solids:	52.6
Project:	Janesville Assembly Plant, Site 108, Janesville, WI		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Black Carbon [a]	11400	3800	mg/kg	1	03/31/16 18:30	ANJ	GUSTAFSSON 2001 MOD

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SE-031016-JN-021		
Lab Sample ID:	MC44792-7A	**Date Sampled:**	03/10/16
Matrix:	SO - Sediment	**Date Received:**	03/11/16
		Percent Solids:	38.8
Project:	Janesville Assembly Plant, Site 108, Janesville, WI		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Black Carbon [a]	21000	5200	mg/kg	1	03/31/16 20:52	ANJ	GUSTAFSSON 2001 MOD

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SE-031016-JN-024		
Lab Sample ID:	MC44792-8A	**Date Sampled:**	03/10/16
Matrix:	SO - Sediment	**Date Received:**	03/11/16
		Percent Solids:	46.8
Project:	Janesville Assembly Plant, Site 108, Janesville, WI		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Black Carbon [a]	9200	4300	mg/kg	1	03/31/16 21:17	ANJ	GUSTAFSSON 2001 MOD

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

SSOW 108014-001

GHD 6400 Shafer Court - Suite 400
Rosemont, Illinois, 60018
773 380 9933 phone
WWW.GHD.COM

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): SGS Accutest

REFERENCE NUMBER: 58507-108014-001

PROJECT NAME: GM-Janesville MC44792A

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Jeff Nichols

PARAMETERS: NX/PAH; Black Carbon

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	NX/PAH	Black Carbon	REMARKS
1	3/9/16	1245	SE-030916-JN-001	SE	2	X	X	-1
2	3/9/16	1425	SE-030916-JN-004	SE	2	X	X	-2
3	3/9/16	1545	SE-030916-JN-007	SE	2	X	X	-3
4	3/10/16	0935	SE-031016-JN-011	SE	2	X	X	-4
5	3/10/16	1035	SE-031016-JN-014	SE	2	X	X	-5
6	3/10/16	1140	SE-031016-JN-018	SE	2	X	X	-6
7	3/10/16	1250	SE-031016-JN-021	SE	2	X	X	-7
8	3/10/16	1405	SE-031016-JN-024	SE	2	X	X	-8 9D

INITIAL ASESSMENT
LABEL VERIFICATION

TOTAL NUMBER OF CONTAINERS: 16

RELINQUISHED BY: ① [signature]	DATE: 3/10/16 TIME: 1600	RECEIVED BY: ② DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③ DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④ DATE: TIME:

INITIAL ASESSMENT wh
LABEL VERIFICATION wh

METHOD OF SHIPMENT: FedEx TRACKING No. 8066 2952 6580

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Duwa; Nichols

RECEIVED FOR LABORATORY BY:
DATE: 3-11-16 TIME: 1000
8020
0.5C

11034001-00(PRES001)GN-CO001

FEDX - [signature]

MC44792A: Chain of Custody
Page 1 of 1

Internal Sample Tracking Chronicle

GHD Services Inc.

Job No: MC44792A

Janesville Assembly Plant, Site 108, Janesville, WI
Project No: 58505 SSOW Ref. 058507-108014-001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC44792-1A	Collected: 09-MAR-16 12:45 By: JN SE-030916-JN-001			Received: 11-MAR-16	By: NT	
MC44792-1A	GUSTAFSSON 2001 MOD	31-MAR-16 14:44	ANJ	31-MAR-16		BCAR
MC44792-2A	Collected: 09-MAR-16 14:25 By: JN SE-030916-JN-004			Received: 11-MAR-16	By: NT	
MC44792-2A	GUSTAFSSON 2001 MOD	31-MAR-16 15:49	ANJ	31-MAR-16		BCAR
MC44792-3A	Collected: 09-MAR-16 15:45 By: JN SE-030916-JN-007			Received: 11-MAR-16	By: NT	
MC44792-3A	GUSTAFSSON 2001 MOD	31-MAR-16 16:11	ANJ	31-MAR-16		BCAR
MC44792-4A	Collected: 10-MAR-16 09:35 By: JN SE-031016-JN-011			Received: 11-MAR-16	By: NT	
MC44792-4A	GUSTAFSSON 2001 MOD	31-MAR-16 16:31	ANJ	31-MAR-16		BCAR
MC44792-5A	Collected: 10-MAR-16 10:35 By: JN SE-031016-JN-014			Received: 11-MAR-16	By: NT	
MC44792-5A	GUSTAFSSON 2001 MOD	31-MAR-16 16:44	ANJ	31-MAR-16		BCAR
MC44792-6A	Collected: 10-MAR-16 11:40 By: JN SE-031016-JN-018			Received: 11-MAR-16	By: NT	
MC44792-6A	GUSTAFSSON 2001 MOD	31-MAR-16 18:30	ANJ	31-MAR-16		BCAR
MC44792-7A	Collected: 10-MAR-16 12:50 By: JN SE-031016-JN-021			Received: 11-MAR-16	By: NT	
MC44792-7A	GUSTAFSSON 2001 MOD	31-MAR-16 20:52	ANJ	31-MAR-16		BCAR
MC44792-8A	Collected: 10-MAR-16 14:05 By: JN SE-031016-JN-024			Received: 11-MAR-16	By: NT	
MC44792-8A	GUSTAFSSON 2001 MOD	31-MAR-16 21:17	ANJ	31-MAR-16		BCAR

SGS Accutest Internal Chain of Custody

Job Number: MC44792A
Account: CRACT GHD Services Inc.
Project: Janesville Assembly Plant, Site 108, Janesville, WI
Received: 03/11/16

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC44792-1.1	Walk In Ref #22	Michael Widuta	03/15/16 13:44	Retrieve from Storage
MC44792-1.1	Michael Widuta	Walk In Ref #22	03/15/16 15:44	Return to Storage
MC44792-1.1	Walk In Ref #22	Eriola Londo	03/23/16 11:01	Retrieve from Storage
MC44792-1.1	Eriola Londo	Walk In Ref #22	03/24/16 06:23	Return to Storage
MC44792-2.1	Walk In Ref #22	Eriola Londo	03/23/16 11:01	Retrieve from Storage
MC44792-2.1	Eriola Londo	Walk In Ref #22	03/24/16 06:23	Return to Storage
MC44792-2.2	Walk In Ref #22	Michael Widuta	03/15/16 13:44	Retrieve from Storage
MC44792-2.2	Michael Widuta	Walk In Ref #22	03/15/16 15:44	Return to Storage
MC44792-3.1	Walk In Ref #22	Michael Widuta	03/15/16 13:44	Retrieve from Storage
MC44792-3.1	Michael Widuta	Walk In Ref #22	03/15/16 15:44	Return to Storage
MC44792-3.1	Walk In Ref #22	Eriola Londo	03/23/16 11:01	Retrieve from Storage
MC44792-3.1	Eriola Londo	Walk In Ref #22	03/24/16 06:23	Return to Storage
MC44792-4.1	Walk In Ref #22	Eriola Londo	03/23/16 11:01	Retrieve from Storage
MC44792-4.1	Eriola Londo	Walk In Ref #22	03/24/16 06:23	Return to Storage
MC44792-4.2	Walk In Ref #22	Michael Widuta	03/15/16 13:44	Retrieve from Storage
MC44792-4.2	Michael Widuta	Walk In Ref #22	03/15/16 15:44	Return to Storage
MC44792-5.1	Walk In Ref #22	Eriola Londo	03/23/16 11:01	Retrieve from Storage
MC44792-5.1	Eriola Londo	Walk In Ref #22	03/24/16 06:23	Return to Storage
MC44792-5.2	Walk In Ref #22	Michael Widuta	03/15/16 13:44	Retrieve from Storage
MC44792-5.2	Michael Widuta	Walk In Ref #22	03/15/16 15:44	Return to Storage
MC44792-6.1	Walk In Ref #22	Michael Widuta	03/15/16 13:44	Retrieve from Storage
MC44792-6.1	Michael Widuta	Walk In Ref #22	03/15/16 15:44	Return to Storage
MC44792-6.1	Walk In Ref #22	Eriola Londo	03/23/16 11:01	Retrieve from Storage
MC44792-6.1	Eriola Londo	Walk In Ref #22	03/24/16 06:23	Return to Storage
MC44792-7.1	Walk In Ref #22	Eriola Londo	03/23/16 11:01	Retrieve from Storage
MC44792-7.1	Eriola Londo	Walk In Ref #22	03/24/16 06:23	Return to Storage
MC44792-7.2	Walk In Ref #22	Michael Widuta	03/15/16 13:44	Retrieve from Storage
MC44792-7.2	Michael Widuta	Walk In Ref #22	03/15/16 15:44	Return to Storage
MC44792-8.1	Walk In Ref #22	Michael Widuta	03/15/16 13:44	Retrieve from Storage
MC44792-8.1	Michael Widuta	Walk In Ref #22	03/15/16 15:44	Return to Storage
MC44792-8.1	Walk In Ref #22	Eriola Londo	03/23/16 11:01	Retrieve from Storage
MC44792-8.1	Eriola Londo	Walk In Ref #22	03/24/16 06:23	Return to Storage

Misc. Forms

Custody Documents and Other Forms

(Accutest New Jersey)

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

SGS ACCUTEST — CHAIN OF CUSTODY

50 D'Angelo Drive, 495 Technology Center West, Bldg One, Marlborough, MA 01752
TEL. 508-481-6200 FAX: 508-481-7753
www.sgs.com

FED-EX Tracking # 6313 2492 4468 | Bottle Order Control # | SGS Accutest Quote # | SGS Accutest Job # MC44792

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 50 D'Angelo Drive, 495 Technolgy Center West, BLDG One
City: Marlbourough, State: MA, Zip: 0175?
Project Contact: jeremyv, E-mail: jeremyv@accutest.com
Phone #: 508-481-6200, Fax #:
Sampler(s) Name(s): JN, Phone:

Project Information

Project Name: Janesville Assembly Plant, Site 108, Janesville, WI
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	BCAR,	LAB USE ONLY
1A	SE-030916-JN-001		3/9/16	12:45:00 PM	JN	SO	1					x				X	MA
2A	SE-030916-JN-004		3/9/16	2:25:00 PM	JN	SO	1					x				X	
3A	SE-030916-JN-007		3/9/16	3:45:00 PM	JN	SO	1					x				X	
4A	SE-031016-JN-011		3/10/16	9:35:00 AM	JN	SO	1					x				X	
5A	SE-031016-JN-014		3/10/16	10:35:00 AM	JN	SO	1					x				X	
6A	SE-031016-JN-018		3/10/16	11:40:00 AM	JN	SO	1					x				X	
7A	SE-031016-JN-021		3/10/16	12:50:00 PM	JN	SO	1					x				X	
8A	SE-031016-JN-024		3/10/16	2:05:00 PM	JN	SO	1					x				X	

Turnaround Time (Business days)

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other 21

Emergency & Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other COMMBN+

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Ship to ALNJ - Aliquot Needed
INITIAL ASESSMENT 3A/02
LABEL VERIFICATION JN

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1	Date Time: 3/15/16	Received By: 1 FedEx	Relinquished By: 2	Date Time: 3/16/16 0930	Received By: 2		
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4		
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	[ ] Intact [ ] Not intact	Preserved where applicable [ ]	On Ice ✓	Cooler Temp. 1.9°C

SGS Accutest Sample Receipt Summary

Job Number: MC44792 **Client:** _____ **Project:** _____

Date / Time Received: 3/16/2016 9:30:00 AM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (1.9);

Cooler Temps (Corrected) °C: Cooler 1: (2.3);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Job Change Order: MC44792

Requested Date:	4/4/2016	**Received Date:**	3/11/2016
Account Name:	GHD Services Inc.	**Due Date:**	4/1/2016
Project Description:	Janesville Assembly Plant, Site 108, Janesville, WI	**Deliverable:**	FULT1
CSR:	jeremyv	**TAT (Days):**	1

==========

Sample #: MC44792-1 through 8

Dept:

Change:
Upgrade to FULT1

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Above Changes Per: Jeremy Vienneau **Date/Time:** 4/4/2016 10:36:57 AM

To Client: This Change Order is confirmation of the revisions, previously discussed with the SGS Accutest Client Service Representative.

MC44792A: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Accutest Labs of New England, Inc.

Job No: MC44792A

CRACT: Janesville Assembly Plant, Site 108, Janesville, WI
Project No: 58505 SSOW Ref. 058507-108014-001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC44792-1A	Collected: 09-MAR-16 12:45 By: JN SE-030916-JN-001			Received: 11-MAR-16	By: AS	
MC44792-1A	GUSTAFSSON 2001 MOD	31-MAR-16 14:44	KP	31-MAR-16	KP	BCAR
MC44792-2A	Collected: 09-MAR-16 14:25 By: JN SE-030916-JN-004			Received: 11-MAR-16	By: AS	
MC44792-2A	GUSTAFSSON 2001 MOD	31-MAR-16 15:49	KP	31-MAR-16	KP	BCAR
MC44792-3A	Collected: 09-MAR-16 15:45 By: JN SE-030916-JN-007			Received: 11-MAR-16	By: AS	
MC44792-3A	GUSTAFSSON 2001 MOD	31-MAR-16 16:11	KP	31-MAR-16	KP	BCAR
MC44792-4A	Collected: 10-MAR-16 09:35 By: JN SE-031016-JN-011			Received: 11-MAR-16	By: AS	
MC44792-4A	GUSTAFSSON 2001 MOD	31-MAR-16 16:31	KP	31-MAR-16	KP	BCAR
MC44792-5A	Collected: 10-MAR-16 10:35 By: JN SE-031016-JN-014			Received: 11-MAR-16	By: AS	
MC44792-5A	GUSTAFSSON 2001 MOD	31-MAR-16 16:44	KP	31-MAR-16	KP	BCAR
MC44792-6A	Collected: 10-MAR-16 11:40 By: JN SE-031016-JN-018			Received: 11-MAR-16	By: AS	
MC44792-6A	GUSTAFSSON 2001 MOD	31-MAR-16 18:30	KP	31-MAR-16	KP	BCAR
MC44792-7A	Collected: 10-MAR-16 12:50 By: JN SE-031016-JN-021			Received: 11-MAR-16	By: AS	
MC44792-7A	GUSTAFSSON 2001 MOD	31-MAR-16 20:52	KP	31-MAR-16	KP	BCAR
MC44792-8A	Collected: 10-MAR-16 14:05 By: JN SE-031016-JN-024			Received: 11-MAR-16	By: AS	
MC44792-8A	GUSTAFSSON 2001 MOD	31-MAR-16 21:17	KP	31-MAR-16	KP	BCAR

SGS Accutest Internal Chain of Custody

Job Number: MC44792A
Account: ALNE Accutest Labs of New England, Inc.
Project: CRACT: Janesville Assembly Plant, Site 108, Janesville, WI
Received: 03/11/16

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC44792-1.1	Secured Storage	Alfredo Crespo	03/21/16 07:29	Retrieve from Storage
MC44792-1.1	Alfredo Crespo	Secured Staging Area	03/21/16 07:29	Return to Storage
MC44792-1.1	Secured Staging Area	Courtney Dringus	03/21/16 07:59	Retrieve from Storage
MC44792-1.1	Courtney Dringus	Secured Storage	03/21/16 10:09	Return to Storage
MC44792-2.1	Secured Storage	Alfredo Crespo	03/21/16 07:29	Retrieve from Storage
MC44792-2.1	Alfredo Crespo	Secured Staging Area	03/21/16 07:29	Return to Storage
MC44792-2.1	Secured Staging Area	Courtney Dringus	03/21/16 07:59	Retrieve from Storage
MC44792-2.1	Courtney Dringus	Secured Storage	03/21/16 10:09	Return to Storage
MC44792-3.1	Secured Storage	Alfredo Crespo	03/21/16 07:29	Retrieve from Storage
MC44792-3.1	Alfredo Crespo	Secured Staging Area	03/21/16 07:29	Return to Storage
MC44792-3.1	Secured Staging Area	Courtney Dringus	03/21/16 07:59	Retrieve from Storage
MC44792-3.1	Courtney Dringus	Secured Storage	03/21/16 10:09	Return to Storage
MC44792-4.1	Secured Storage	Alfredo Crespo	03/21/16 07:29	Retrieve from Storage
MC44792-4.1	Alfredo Crespo	Secured Staging Area	03/21/16 07:29	Return to Storage
MC44792-4.1	Secured Staging Area	Courtney Dringus	03/21/16 07:59	Retrieve from Storage
MC44792-4.1	Courtney Dringus	Secured Storage	03/21/16 10:09	Return to Storage
MC44792-5.1	Secured Storage	Alfredo Crespo	03/21/16 07:29	Retrieve from Storage
MC44792-5.1	Alfredo Crespo	Secured Staging Area	03/21/16 07:29	Return to Storage
MC44792-5.1	Secured Staging Area	Courtney Dringus	03/21/16 07:59	Retrieve from Storage
MC44792-5.1	Courtney Dringus	Secured Storage	03/21/16 10:09	Return to Storage
MC44792-6.1	Secured Storage	Alfredo Crespo	03/21/16 07:29	Retrieve from Storage
MC44792-6.1	Alfredo Crespo	Secured Staging Area	03/21/16 07:29	Return to Storage
MC44792-6.1	Secured Staging Area	Courtney Dringus	03/21/16 07:59	Retrieve from Storage
MC44792-6.1	Courtney Dringus	Secured Storage	03/21/16 10:09	Return to Storage
MC44792-7.1	Secured Storage	Alfredo Crespo	03/21/16 07:29	Retrieve from Storage
MC44792-7.1	Alfredo Crespo	Secured Staging Area	03/21/16 07:29	Return to Storage
MC44792-7.1	Secured Staging Area	Courtney Dringus	03/21/16 07:59	Retrieve from Storage
MC44792-7.1	Courtney Dringus	Secured Storage	03/21/16 10:09	Return to Storage
MC44792-8.1	Secured Storage	Alfredo Crespo	03/21/16 07:29	Retrieve from Storage
MC44792-8.1	Alfredo Crespo	Secured Staging Area	03/21/16 07:29	Return to Storage
MC44792-8.1	Secured Staging Area	Courtney Dringus	03/21/16 07:59	Retrieve from Storage
MC44792-8.1	Courtney Dringus	Secured Storage	03/21/16 10:09	Return to Storage
MC44792-8.1	Secured Storage	Sahara Feliciano	04/03/16 07:51	Retrieve from Storage
MC44792-8.1	Sahara Feliciano	Secured Staging Area	04/03/16 07:51	Return to Storage
MC44792-8.1	Secured Staging Area	Krimesh Patel	04/03/16 13:01	Retrieve from Storage
MC44792-8.1	Krimesh Patel	Secured Storage	04/03/16 15:20	Return to Storage

General Chemistry

QC Data Summaries

(Accutest New Jersey)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC44792A
Account: ALNE - Accutest Labs of New England, Inc.
Project: CRACT: Janesville Assembly Plant, Site 108, Janesville, WI

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Black Carbon	GP96615/GN43400	2000	0.0	mg/kg	40000	41100	102.7	80-120%

Associated Samples:
Batch GP96615: MC44792-1A, MC44792-2A, MC44792-3A, MC44792-4A, MC44792-5A, MC44792-6A, MC44792-7A, MC44792-8A
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC44792A
Account: ALNE - Accutest Labs of New England, Inc.
Project: CRACT: Janesville Assembly Plant, Site 108, Janesville, WI

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Black Carbon	GP96615/GN43466	MC44792-5A	mg/kg	13600	14500	6.4	0-20%

Associated Samples:
Batch GP96615: MC44792-1A, MC44792-2A, MC44792-3A, MC44792-4A, MC44792-5A, MC44792-6A, MC44792-7A, MC44792-8A
(*) Outside of QC limits

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: MC44792A
Account: ALNE - Accutest Labs of New England, Inc.
Project: CRACT: Janesville Assembly Plant, Site 108, Janesville, WI

File ID: D60331S2A.TXT Date Analyzed: 03/31/16 Methods: GUSTAFSSON 2001 MOD
Analyst: KP Run ID: GN43400
Parameters: Black Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:47	GN43400-STD1	1		STDA
09:11	GN43400-STD2	1		STDB
09:48	GN43400-STD3	1		STDC
10:10	GN43400-STD4	1		STDD
10:30	GN43400-STD5	1		STDE
10:51	GN43400-STD6	1		STDF
11:15	GN43400-STD7	1		STDG
11:14	GN43400-CRI1	1		
11:24	GN43400-HSTD1	1		
11:35	GN43400-ICV1	1		
11:50	GN43400-CCV1	1		
13:42	GP96615-MB1	1		
13:49	GP96615-B1	1		
14:44	MC44792-1A	1		
15:49	MC44792-2A	1		
16:11	MC44792-3A	1		
16:31	MC44792-4A	1		
16:44	MC44792-5A	1		
18:30	MC44792-6A	1		
20:52	MC44792-7A	1		
21:17	MC44792-8A	1		
23:11	GN43400-CCV2	1		WRONG VOLUME AND WEIGHT ENTERED :MANUALLY CORRECTED RESULTS

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: MC44792A
Account: ALNE - Accutest Labs of New England, Inc.
Project: CRACT: Janesville Assembly Plant, Site 108, Janesville, WI

File ID: D60331S2A.TXT Date Analyzed: 03/31/16 Methods: GUSTAFSSON 2001 MOD
Run ID: GN43400 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN43400-CRI1	Black Carbon	1200	2000	980	1000	120.0	70-130
GN43400-HSTD1	Black Carbon	51600	2000	980	50000	103.2	90-110
GN43400-ICV1	Black Carbon	20400	2000	980	20000	102.0	90-110
GN43400-CCV1	Black Carbon	26000	2000	980	25000	104.0	90-110
GN43400-CCV2	Black Carbon	25900	2000	980	25000	103.6	90-110

(!) Outside of QC limits

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: MC44792A
Account: ALNE - Accutest Labs of New England, Inc.
Project: CRACT: Janesville Assembly Plant, Site 108, Janesville, WI

File ID: D60401S2.TXT Date Analyzed: 04/01/16 Methods: GUSTAFSSON 2001 MOD
Analyst: KP Run ID: GN43466
Parameters: Black Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:47	GN43466-STD1	1		STDA
09:11	GN43466-STD2	1		STDB
09:48	GN43466-STD3	1		STDC
10:10	GN43466-STD4	1		STDD
10:30	GN43466-STD5	1		STDE
10:51	GN43466-STD6	1		STDF
11:15	GN43466-STD7	1		STDG
09:51	GN43466-CRI1	1		
10:27	GN43466-HSTD1	1		
10:41	GN43466-ICV1	1		
10:54	GN43466-CCV1	1		
15:52	GP96615-MB2	1		
16:01	GP96615-B2	1		
16:23	GP96615-D1	1		
16:32	GN43466-CCV2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: MC44792A
Account: ALNE - Accutest Labs of New England, Inc.
Project: CRACT: Janesville Assembly Plant, Site 108, Janesville, WI

File ID: D60401S2.TXT Date Analyzed: 04/01/16 Methods: GUSTAFSSON 2001 MOD
Run ID: GN43466 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN43466-CRI1	Black Carbon	1090	2000	980	1000	109.0	70-130
GN43466-HSTD1	Black Carbon	51800	2000	980	50000	103.6	90-110
GN43466-ICV1	Black Carbon	20700	2000	980	20000	103.5	90-110
GN43466-CCV1	Black Carbon	25200	2000	980	25000	100.8	90-110
GN43466-CCV2	Black Carbon	25600	2000	980	25000	102.4	90-110

(!) Outside of QC limits

General Chemistry

Raw Data

(Accutest New Jersey)

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: D60331S2A.TXT Date Analyzed: 03/31/16 Methods: GUSTAFSSON 2001 MOD
Analyst: KP Run ID: GN43400

The following analyst(s) have reviewd this run and attest that, to the best of their knowledge, this documentation is complete and correct:

Analyst: K.P Date 04/01/16

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

The following supervisor or their designee has reviewed this run and attests that, to the best of their knowledge, this documentation is complete and correct:

Supervisor (or designee): _____ Date 07 APR 16

8.1

C:\TOC-L\Data\d60331s2a.toc.tlx

	Type	Sample Nam	Sample ID	Origin	Manual	Result	Status
1	Unknown	CRI		TOCSSMCAL.met	1.000	SSM-TC:0.1203mg	Completed
2	Unknown	HSTD		TOCSSMCAL.met	1.000	SSM-TC:5.162mg/	Completed
3	Unknown	ICV		TOCSSMCAL.met	1.000	SSM-TC:2.043mg/	Completed
4	Unknown	CCV		TOCSSMCAL.met	1.000	SSM-TC:2.603mg/	Completed
5	Unknown	GP96615-M	BCAR	TOCSSM.met	1.000	SSM-TC:-0.00079	Completed
6	Unknown	GP96615-B1		TOCSSM.met	1.000	SSM-TC:2.054mg/	Completed
7	Unknown	MC44792-1		TOCSSM.met	1.000	SSM-TC:0.5048mg	Completed
8	Unknown	MC44792-2		TOCSSM.met	1.000	SSM-TC:0.7843mg	Completed
9	Unknown	MC44792-3		TOCSSM.met	1.000	SSM-TC:1.429mg/	Completed
10	Unknown	MC44792-4		TOCSSM.met	1.000	SSM-TC:0.7068mg	Completed
11	Unknown	MC44792-5		TOCSSM.met	1.000	SSM-TC:0.5813mg	Completed
12	Unknown	MC44792-6		TOCSSM.met	1.000	SSM-TC:0.5991mg	Completed
13	Unknown	MC44792-7		TOCSSM.met	1.000	SSM-TC:0.8136mg	Completed
14	Unknown	MC44792-8		TOCSSM.met	1.000	SSM-TC:0.4305mg	Completed
15	Unknown	CCV		TOCSSM.met	1.000	SSM-TC~~:1054~~mg/	Completed

(A)

*4. K.P 4/1/16
2.54 mg/L
wrong volum/ Entered, manual correct

8.1

GN43400

d60331s2A.TOC
BCAR
K.P
4/1/16

(1)

ACCUTEST. BCAR

Test: **Total Organic Carbon** Units = mg/kg GN Batch ID KN43400
Product: **TOC** Balance ID: B-34 Date 03/22/16
Method: **Corp. Eng. 81 M/SW846 9060 M or EPA Region 2 Lloyd Kahn** (circle one) Analyst K.P
RDL = 1000 mg/kg or 100 mg/kg (circle one)

Sample ID	Sample Weight	Bottle #	Sample Description & comments
CRI			
HSTD			
ICV			
CCV			
KP96615-MB	0.0500		
	0.0500		
KP96615-B1	0.0500		
	0.0500		
MC44792-1A	0.0504	1	
	0.0502		
	0.0503		
	0.0508		
MC44792-2A	0.0527	1	
	0.0504		
	0.0517		
	0.0508		
MC44792-3A	0.0527	1	
	0.0508		
	0.0504		
	0.0530		
MC44792-4A	0.0548	1	
	0.0504		
	0.0582		
	0.0572		

Analyst: K.P Date: 3/31/16 QCReviewer: _____ Date: _____
Manager Review: _____ Date: _____
Comments:
B1: 100 µl of 20,000 mg/kg cyl → 0.05 gm of silica sand
TV: 20,000 mg/kg

Form: GN058-01
Rev. Date: 11/11/08

(2)

ACCUTEST

Test: **Total Organic Carbon** BCAR
Product: **TOC**
Method: **Corp. Eng. 81 M/SW846 9060 M or EPA Region 2 Lloyd Kahn** (circle one)
RDL = 1000 mg/kg or 100 mg/kg (circle one)

Units = mg/kg
Balance ID: B-34

GN Batch ID GN43400
Date 3/31/16
Analyst K.P

Sample ID	Sample Weight	Bottle #	Sample Description & comments
MC44792-5A	0.0548	1	
	0.0542		
	0.0564		
	0.0574		
MC44792-6A	0.0540	1	
	0.0524		
	0.0573		
	0.0540		
MC44792-7A	0.0548	1	
	0.0538		
	0.0566		
	0.0550		
MC44792-8A	0.0553	1	
	0.0584		
	0.0548		
	0.0508		
ccv			

Analyst: K.P Date: 3/31/16 QCReviewer: _____ Date: _____
Manager Review: _____ Date: _____
Comments:

Form: GN058-01
Rev. Date: 11/11/08

8.1
8

ACCUTEST

Balance: B-39
Glass Piper: Class A

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: TOC
GN or GP Number: GN43400

Intermediate Standard Description	Stock used to prepare standard	Stock concentration	Stock volume used in ml	Diluent	Final Volume	Final Conc. of Intermediate (mg/l)	Expiration Date	Analyst	Date
GNE3-46864-TOC	Fisher 146279 07-03-16-120	Sucrose	47.5g	DI H_2O	100 mL	200,000	04/22/16	K.P	03/25/16
GNE3-46865-TOC	Fisher # 135002 05-20-20	Glucose	12.5g	↓	↓	50,000	↓	↓	↓

Standard Description	Intermediate or Stock used to prepare standard	Intermediate or Stock concentration	Intermediate or Stock volume used in ml	Diluent	Final Volume	Final Conc. of Standard (mg/l)	Expiration Date	Analyst	Date
Sucrose STDs									
GNE3-46866-TOC	GNE3-46864-TOC	200,000	0.5	DI H_2O	100 mL	1000	04/22/16	K.P	03/25/16
GNE3-46867-TOC			2.5			5000			
GNE3-46868-TOC *K.P 03/25/16			5.0			10000			
GNE3-46869-TOC			12.5			25000			
GNE3-46870-TOC			20.0			40000			
GNE3-46871-TOC	↓	↓	25.0	↓	↓	50000	↓	↓	↓
Glucose STDs									
GNE3-46872-TOC	GNE3-46865-TOC	50000	40.0	DI H_2O	100 mL	20,000	04/22/16	K.P	03/25/16
GNE3-46873-TOC	↓	↓	50.0	↓	↓	25,000	↓	↓	↓

ACCUTEST.

GN43400

Reagent Information Log - TOC - Soil

Reagent	Reagent # or Manufacturer/Lot	EXP:
Sucrose Stock Solution, 200000 mg/L	GNE3-46864-TOC	04/22/16
Glucose Stock Solution, 50000 ug/L	GNE3-46865-TOC	04/22/16
Glucose Check Solution, 25000 ug/L	GNE3-46873-TOC	04/22/16
Nitric Acid, Reagent Grade	Fisher #4115080-TOC	09/10/18
Glucose Check Stock Solution, 20000 ug/L	GNE3-46872-TOC	04/22/16

All standards and stocks were made as described in the SOP for this method (circle one): (Y) or N
If no (N), see attached page for standards prep.

Form: GN-087 1-66
Rev. Date:4/26/01

TOC-Control L Report

d60328s1.toc.tlx

Instr.Information

Instrument Options	TOC/SSM/Sparge Kit/
Catalyst	Regular Sensitivity

Cal. Curve

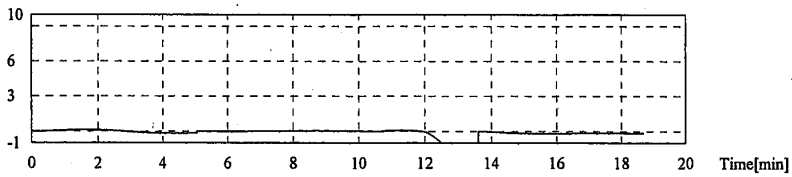
Sample Name:	Untitled
Sample ID:	Untitled
Cal. Curve:	d60328s1.2016_03_28_08_38_43.cal
Status	Completed

Type	Analyt
Standard	SSM-TC

AbsC: 0.000ug

No.	Area	CNV	AbsC	Weight	Rem.	Ex.	Date / Time
1	0.000	0.000	0.000ug	100.0mg	*******		3/28/2016 8:47:29 AM
2	0.000	0.000	0.000ug	100.0mg	*******		3/28/2016 8:54:14 AM
3	0.000	0.000	0.000ug	100.0mg	*******		3/28/2016 8:59:23 AM
4	0.000	0.000	0.000ug	100.0mg	*******		3/28/2016 9:05:42 AM

Mean Area 0.000
Mean CNV 0.000

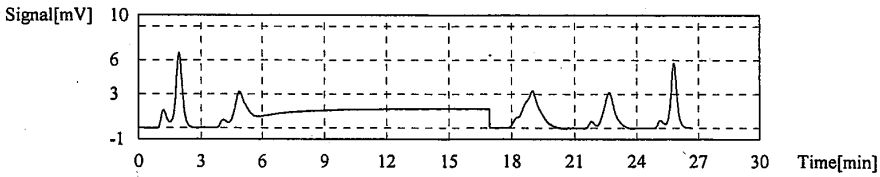


AbsC: 0.01000ug

No.	Area	CNV	AbsC	Weight	Rem.	Ex.	Date / Time
1	18.07	18.07	0.01000ug	100.0mg	*******		3/28/2016 9:11:24 AM
2	54.60	54.60	0.01000ug	100.0mg	T******	E	3/28/2016 9:28:26 AM
3	18.54	18.54	0.01000ug	100.0mg	*******		3/28/2016 9:33:26 AM
4	12.61	12.61	0.01000ug	100.0mg	*******		3/28/2016 9:39:15 AM
5	12.85	12.85	0.01000ug	100.0mg	*******		3/28/2016 9:43:59 AM

excluded: O-ring not in proper place CAD 3/28/16

Mean Area 15.52
Mean CNV 15.52



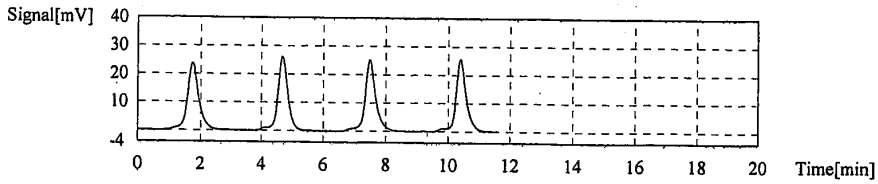
AbsC: 0.05000ug

No.	Area	CNV	AbsC	Weight	Rem.	Ex.	Date / Time
1	58.04	58.04	0.05000ug	100.0mg	*******		3/28/2016 9:48:40 AM
2	58.33	58.33	0.05000ug	100.0mg	*******		3/28/2016 9:54:39 AM
3	59.15	59.15	0.05000ug	100.0mg	*******		3/28/2016 10:00:01 AM
4	59.40	59.40	0.05000ug	100.0mg	*******		3/28/2016 10:04:29 AM

TOC-Control L Report

d60328s1.toc.tlx

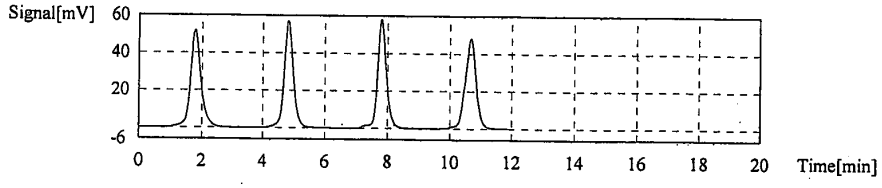
Mean Area 58.73
Mean CNV 58.73



AbsC: 0.1000ug

No.	Area	CNV	AbsC	Weight	Rem.	Ex.	Date/Time
1	117.3	117.3	0.1000ug	100.0mg	*******		3/28/2016 10:10:16 AM
2	116.4	116.4	0.1000ug	100.0mg	*******		3/28/2016 10:14:31 AM
3	115.3	115.3	0.1000ug	100.0mg	*******		3/28/2016 10:20:27 AM
4	116.5	116.5	0.1000ug	100.0mg	*******		3/28/2016 10:25:18 AM

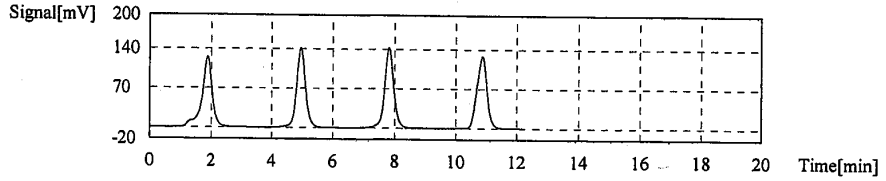
Mean Area 116.4
Mean CNV 116.4



AbsC: 0.2500ug

No.	Area	CNV	AbsC	Weight	Rem.	Ex.	Date/Time
1	294.2	294.2	0.2500ug	100.0mg	*******		3/28/2016 10:30:16 AM
2	296.7	296.7	0.2500ug	100.0mg	*******		3/28/2016 10:35:24 AM
3	293.9	293.9	0.2500ug	100.0mg	*******		3/28/2016 10:40:29 AM
4	292.9	292.9	0.2500ug	100.0mg	*******		3/28/2016 10:45:32 AM

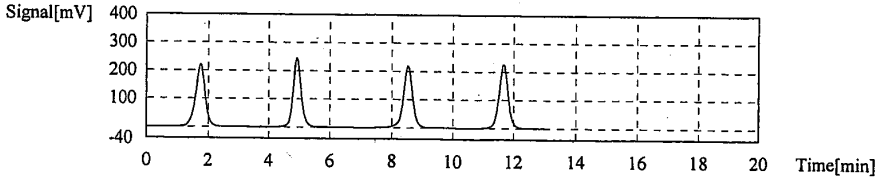
Mean Area 294.4
Mean CNV 294.4



AbsC: 0.4000ug

No.	Area	CNV	AbsC	Weight	Rem.	Ex.	Date/Time
1	469.2	469.2	0.4000ug	100.0mg	*******		3/28/2016 10:51:47 AM
2	465.1	465.1	0.4000ug	100.0mg	*******		3/28/2016 10:56:35 AM
3	469.2	469.2	0.4000ug	100.0mg	*******		3/28/2016 11:01:03 AM
4	465.5	465.5	0.4000ug	100.0mg	*******		3/28/2016 11:11:04 AM

Mean Area 467.3
Mean CNV 467.3



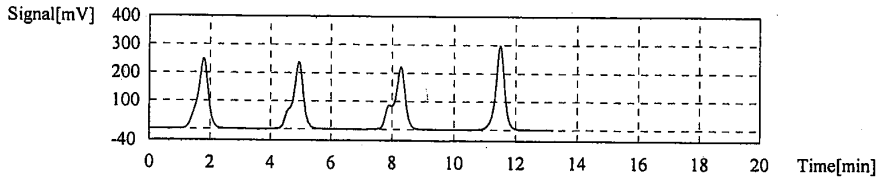
AbsC: 0.5000ug

TOC-Control L Report

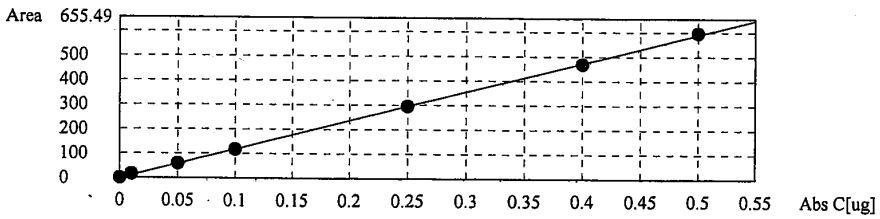
d60328s1.toc.tlx

NO.	AREA	CNV	Abs C	Weight	Equ	ES%	Date / Time
1	595.1	595.1	0.5000ug	100.0mg	*******		3/28/2016 11:15:58 AM
2	589.9	589.9	0.5000ug	100.0mg	*******		3/28/2016 11:21:03 AM
3	592.0	592.0	0.5000ug	100.0mg	*******		3/28/2016 11:25:34 AM
4	606.6	606.6	0.5000ug	100.0mg	*******		3/28/2016 11:30:19 AM

Mean Area 595.9
Mean CNV 595.9



Slope: 1181
Intercept 0.09389
r^2 0.9998
r 0.9999
Zero Shift No



$y = 1181(x) + 0.09389$

TOC-Control L Report

d60331s2a.toc.tlx

Instr.Information

Instrument Options: TOC/SSM/Sparge Kit/
Catalyst: Regular Sensitivity

Sample

Sample Name: CRI
Sample ID:
Origin: TOCSSMCAL.met
Status: Completed
Chk. Result

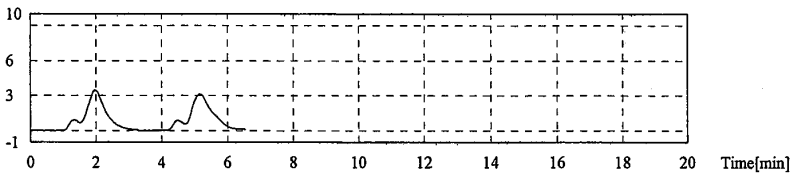
Type	Vial	Method Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:0.1203mg/L

1. Det

Anal.: SSM-TC

No.	Area	Corr.	Conc.	Weight	Volume	Dil.	Cal. Curve	Date/Time
1	14.42	14.42	0.1213mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 11:14:50 AM
2	14.18	14.18	0.1192mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 11:19:14 AM

Mean Conc. 0.1203mg/L
CV Conc 1.19%



Sample

Sample Name: HSTD
Sample ID:
Origin: TOCSSMCAL.met
Status: Completed
Chk. Result

Type	Vial	Method Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:5.162mg/L

1. Det

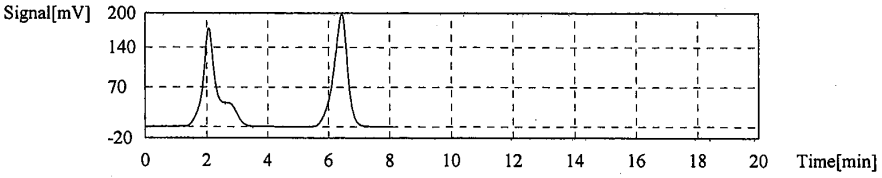
Anal.: SSM-TC

No.	Area	Corr.	Conc.	Weight	Volume	Dil.	Cal. Curve	Date/Time
1	598.6	598.6	5.066mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 11:24:22 AM
2	621.2	621.2	5.258mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 11:30:05 AM

TOC-Control L Report

d60331s2a.toc.tlx

Mean Conc. 5.162mg/L
CV Conc 2.62%



Sample

Sample Name: ICV
Sample ID:
Origin: TOCSSMCAL.met
Status Completed
Chk. Result

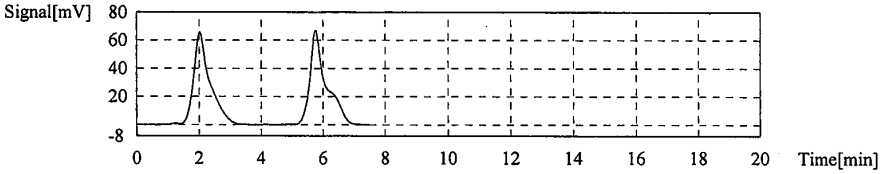
Type	Det	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:2.043mg/L

1. Det

Anal.: SSM-TC

No.	Area	Det	Conc	Weight	Volume	Dil	Cal Curve	Date Time
1	238.9	238.9	2.022mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 11:35:42 AM
2	243.9	243.9	2.064mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 11:40:56 AM

Mean Conc. 2.043mg/L
CV Conc 1.47%



Sample

Sample Name: CCV
Sample ID:
Origin: TOCSSMCAL.met
Status Completed
Chk. Result

Type	Det	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:2.603mg/L

1. Det

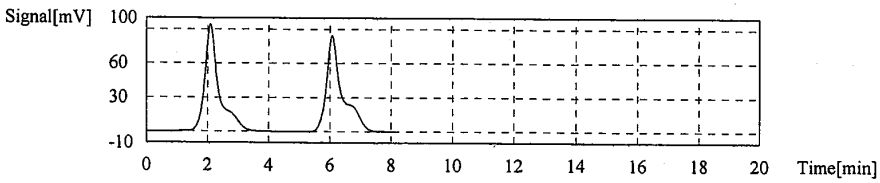
Anal.: SSM-TC

No.	Area	Det	Conc	Weight	Volume	Dil	Cal Curve	Date Time
1	307.1	307.1	2.599mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 11:50:22 AM
2	308.0	308.0	2.606mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 11:57:43 AM

TOC-Control L Report

d60331s2a.toc.tlx

Mean Conc. 2.603mg/L
CV Conc 0.21%



Sample

Sample Name: GP96615-MB1
Sample ID: BCAR
Origin: TOCSSM.met
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:-0.00079mg/L

-0.00158mg/L

1. Det

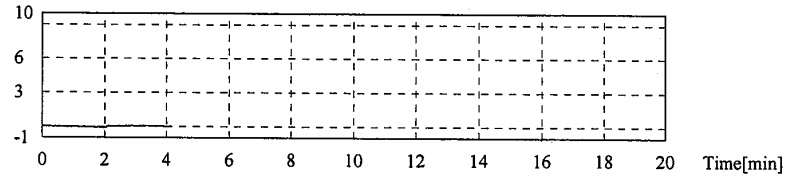
Anal.: SSM-TC

0.00158

No.	Area	Corr.	Conc.	Weight	Volume	Ex.	Cal. Curve	Date/Time
1	0.000	0.000	-0.00079mg/L	100.0mg	50	100uL	d60328s1.2016_03_28_08_38_43.cal	3/31/2016 1:42:18 PM
2	0.000	0.000	-0.00079mg/L	100.0mg	50	100uL	d60328s1.2016_03_28_08_38_43.cal	3/31/2016 1:45:32 PM

-0.00158

Mean Conc. -0.00079mg/L
CV Conc 0.00%



Sample

Sample Name: GP96615-B1
Sample ID:
Origin: TOCSSM.met
Status Completed
Chk. Result

*4.K.P

4.1058mg/L

Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:2.054mg/L

1. Det

Anal.: SSM-TC

4.128mg/L

No.	Area	Corr.	Conc.	Weight	Volume	Ex.	Cal. Curve	Date/Time
1	243.8	243.8	2.063mg/L	100.0mg	50	100uL	d60328s1.2016_03_28_08_38_43.cal	3/31/2016 1:49:16 PM
2	241.7	241.7	2.045mg/L	100.0mg	50	100uL	d60328s1.2016_03_28_08_38_43.cal	3/31/2016 2:28:46 PM

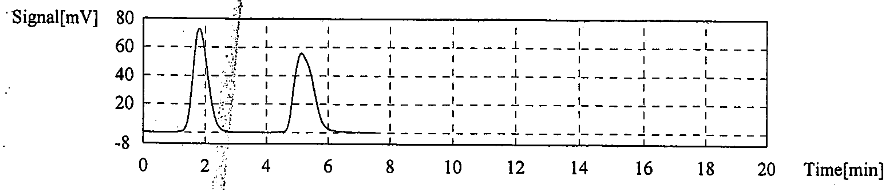
4.09mg/L

*4.K.P

TOC-Control L Report

d60331s2a.toc.tlx

Mean Conc. 2.054mg/L
CV Conc 0.61%



Sample

Sample Name: MC44792-1A
Sample ID:
Origin: TOCSSM.met
Status Completed
Chk. Result

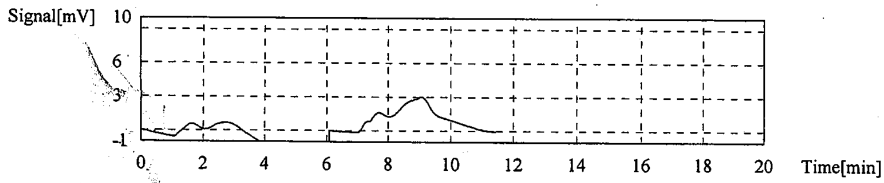
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:0.5048mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	24.94	24.94	0.4173mg/L	50.40mg	50uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 2:44:11 PM
2	35.22	35.36	0.5923mg/L	50.20mg	50uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 2:50:31 PM

Mean Conc. 0.5048mg/L
CV Conc 24.51%



Sample

Sample Name: MC44792-2A
Sample ID:
Origin: TOCSSM.met
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:0.7843mg/L

1. Det

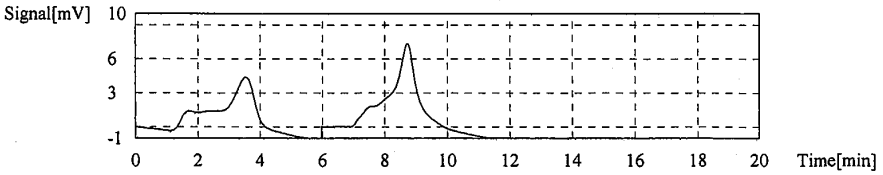
Anal.: SSM-TC

No.	Area	CNV	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	43.06	43.06	0.6902mg/L	52.70mg	52uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 3:49:57 PM
2	52.39	54.78	0.8784mg/L	50.40mg	50uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 4:01:03 PM

TOC-Control L Report

d60331s2a.toc.tlx

Mean Conc. 0.7843mg/L
CV Conc 16.97%



Sample

Sample Name: MC44792-3A
Sample ID:
Origin: TOCSSM.met
Status Completed
Chk. Result

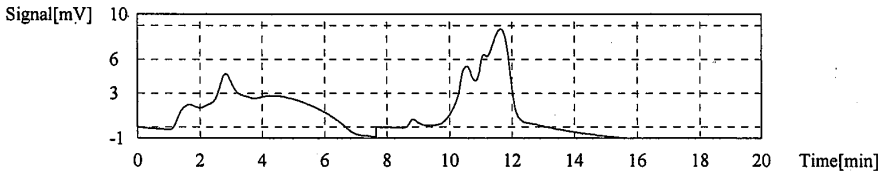
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:1.429mg/L

1. Det

Anal.: SSM-TC

No.	Area	S/N	Conc.	Weight	Volume	Fix	Cal. Curve	Date / Time
1	90.60	90.60	1.454mg/L	52.70mg	52uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 4:11:30 PM
2	84.37	87.53	1.404mg/L	50.80mg	50uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 4:22:20 PM

Mean Conc. 1.429mg/L
CV Conc 2.45%



Sample

Sample Name: MC44792-4A
Sample ID:
Origin: TOCSSM.met
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:0.7068mg/L

1. Det

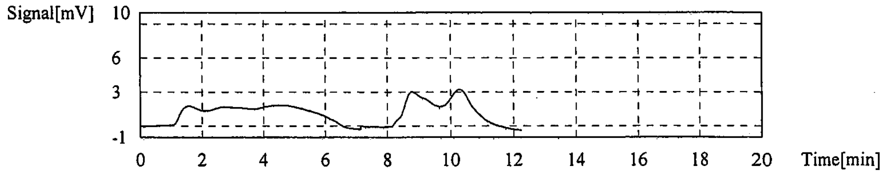
Anal.: SSM-TC

No.	Area	S/N	Conc.	Weight	Volume	Fix	Cal. Curve	Date / Time
1	48.19	48.19	0.7429mg/L	54.80mg	54uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 4:31:10 PM
2	40.02	43.51	0.6706mg/L	50.40mg	50uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 4:37:42 PM

TOC-Control L Report

d60331s2a.toc.tlx

Mean Conc. 0.7068mg/L
CV Conc 7.24%



Sample

Sample Name: MC44792-5A
Sample ID:
Origin: TOCSSM.met
Status Completed
Chk. Result

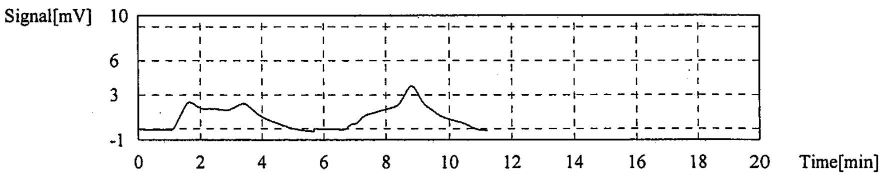
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:0.5813mg/L

1. Det

Anal.: SSM-TC

No.	Area	[illegible]	Conc.	Weight	Volume	[illegible]	Cal Curve	Date/Time
1	36.30	36.30	0.5593mg/L	54.80mg	54uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 4:44:13 PM
2	38.72	39.15	0.6033mg/L	54.20mg	54uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 4:57:43 PM

Mean Conc. 0.5813mg/L
CV Conc 5.35%



Sample

Sample Name: MC447921-6A
Sample ID:
Origin: TOCSSM.met
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:0.5991mg/L

1. Det

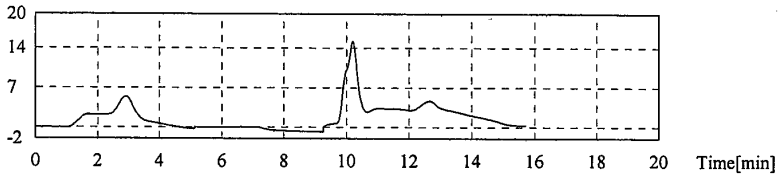
Anal.: SSM-TC

TOC-Control L Report

d60331s2a.toc.tlx

No.	Area	NV	Conc.	Weight	Volume	Det.	Cal. Curve	Date/Time
1	43.84	43.84	0.6858mg/L	54.00mg	54uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 6:30:02 PM
2	0.000	0.000	-0.00152mg/L	52.40mg	52uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 6:33:31 PM
3	0.000	0.000	-0.00139mg/L	57.30mg	57uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 7:54:34 PM
4	109.4	109.4	1.713mg/L	54.00mg	54uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 8:02:41 PM

Mean Conc. 0.5991mg/L
CV Conc 135.29%



Sample

Sample Name: MC44792-7A
Sample ID:
Origin: TOCSSM.met
Status Completed
Chk. Result

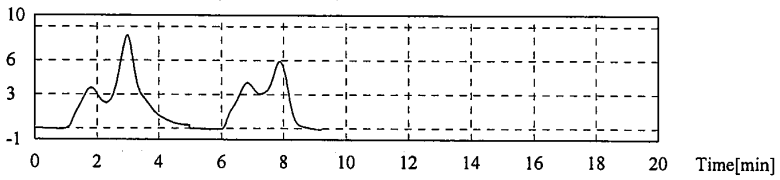
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:0.8136mg/L

1. Det

Anal.: SSM-TC

No.	Area	NV	Conc.	Weight	Volume	Det.	Cal. Curve	Date/Time
1	57.64	57.64	0.8889mg/L	54.80mg	54uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 8:52:30 PM
2	47.02	47.89	0.7383mg/L	53.80mg	53uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 9:09:12 PM

Mean Conc. 0.8136mg/L
CV Conc 13.09%



Sample

Sample Name: MC44792-8A
Sample ID:
Origin: TOCSSM.met
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:0.4305mg/L

1. Det

TOC-Control L Report

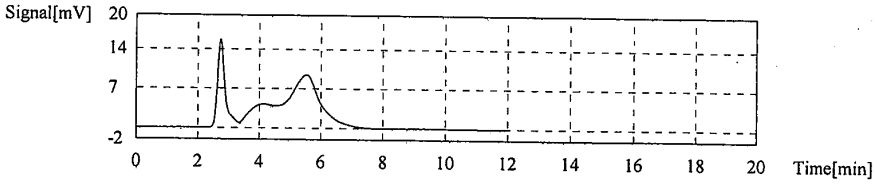
d60331s2.toc.tlx

Anal.: SSM-TC

No.	Area	CNV	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-0.00144mg/L	55.30mg	55uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 9:17:23 PM
2	119.2	112.9	1.726mg/L	58.40mg	58uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 9:53:46 PM
3	0.000	0.000	-0.00145mg/L	54.80mg	54uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 9:57:21 PM
4	0.000	0.000	-0.00156mg/L	50.80mg	50uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 10:46:58 PM

Mean Conc. 0.4305mg/L
CV Conc 200.69%

(2)



Sample

Sample Name: CCV
Sample ID:
Origin:
Status TOCSSM.met
Chk. Result Completed

Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:103.4mg/L

1. Det

2.59 mg/L

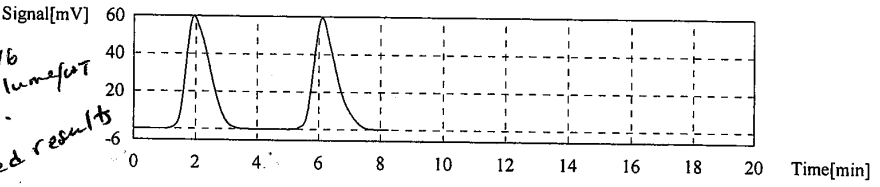
Anal.: SSM-TC

No.	Area	CNV	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	311.9	311.9	2.64 105.6mg/L	2.500mg	100 2uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 11:11:47 PM
2	299.0	299.0	2.53 101.2mg/L	2.500mg	100 2uL		d60328s1.2016_03_28_08_38_43.cal	3/31/2016 11:17:03 PM

Mean Conc. 103.4mg/L
CV Conc 2.99%

2.59 OK 61-Attach

(2) 4/1/16 wrong volume/wt entered. Manually corrected results



Sample

Sample Name:
Sample ID:
Origin:
Status TOCSSM.met
Chk. Result Defined

Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:0.000mg/L

8.1 8

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: D60401S2.TXT Date Analyzed: 04/01/16 Methods: GUSTAFSSON 2001 MOD
Analyst: KP Run ID: GN43466

The following analyst(s) have reviewd this run and attest that, to the best of their knowledge, this documentation is complete and correct:

Analyst: KP Date 4/07/16

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

The following supervisor or their designee has reviewed this run and attests that, to the best of their knowledge, this documentation is complete and correct:

Supervisor (or designee): _____ Date 01 APR 16

8.2
8

C:\TOC-L\Data\d60401s2.toc.tlx

	Type	Sample Nam	Sample ID	Origin	Manual	Result	Status
1	Unknown	CRI		TOCSSMCAL.met	1.000	SSM-TC:0.1094mg	Completed
2	Unknown	HSTD		TOCSSMCAL.met	1.000	SSM-TC:5.179mg/	Completed
3	Unknown	ICV		TOCSSMCAL.met	1.000	SSM-TC:2.068mg/	Completed
4	Unknown	CCV		TOCSSMCAL.met	1.000	SSM-TC:2.515mg/	Completed
5	Unknown	GP96615-M	BCAR	TOCSSM.met	1.000	SSM-TC:0.00238m	Completed
6	Unknown	GP96615-B2		TOCSSM.met	1.000	SSM-TC:4.118mg/	Completed
7	Unknown	GP96615-D1	MC44792-5	TOCSSM.met	1.000	SSM-TC:0.6207mg	Completed
8	Unknown	CCV		TOCSSMCAL.met	1.000	SSM-TC:2.555mg/	Completed

KP

GN43466

on 11/16

8.2

8

ACCUTEST

GN43466

Test: **Total Organic Carbon** Bcarr
Product: **TOC**
Method: **Corp. Eng. 81 M/SW846 9060** ~~M or EPA Region 2 Lloyd Kahn~~ (circle one)
RDL = 1000 mg/kg or 100 mg/kg (circle one)

Units = mg/kg
Balance ID: B-39

GN Batch ID GP96615
Date 4/1/16
Analyst KP

Sample ID	Sample Weight	Bottle #	Sample Description & comments
CRI			
HSM			
ICC			
CCV			
GP96615-MB2	0.0500		
	0.0500		
GP96615-B2	0.0500		
	0.0500		
GP96615-D1	0.0515		MC44792-5A
	0.0508		
	0.0504		
	0.0514		
CCV			

Analyst: K.P Date: 4/1/16 QCReviewer:______ Date:______
Manager Review:______ Date:______
Comments:
B1: 100 ul of 20,000 mg/kg C/L → .005 gm of silica sand
TV: 20000 mg/kg

Form: GN058-01
Rev. Date: 11/11/08

8.2

8

QC Reports:

GN43466

ACCUTEST

Balance: B-39

Glass Piper: Class A

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: TOC

GN or GP Number: ~~GP~~ GN 43466

Intermediate Standard Description	Stock used to prepare standard	Stock concentration	Stock volume used in ml	Diluent	Final Volume	Final Conc. of Intermediate (mg/l)	Expiration Date	Analyst	Date
GNE3-46864-TOC	Fisher# 146279 ~~07-10~~ 03/16/20	Sucrose	42.5g	DI H_2O	100mL	200,000	04/22/16	K.P	03/25/16
GNE3-46865-TOC	Fisher # 136002 05-20-20	Glucose	12.5g	↓	↓	50,000	↓	↓	↓

Standard Description	Intermediate or Stock used to prepare standard	Intermediate or Stock concentration	Intermediate or Stock volume used in ml	Diluent	Final Volume	Final Conc. of Standard (mg/l)	Expiration Date	Analyst	Date
Sucrose STDs									
GNE3-46866-TOC	GNE3-46864-TOC	200,000	0.5	DI H_2O	100 mL	1000	04/22/16	K.P	03/25/16
GNE-3-46867-TOC			2.5			5000			
GNE-3-46868-TOC *K.P 03/25/16			5.0			10000			
GNE-3-46869-TOC			12.5			25000			
GNE-3-46870-TOC			20.0			40000			
GNE-3-46871-TOC	↓	↓	25.0	↓	↓	50000	↓	↓	↓
Glucose STDs									
GNE3-46872-TOC	GNE-3-46865-TOC	50000	40.0	DI H_2O	100 mL	20,000	04/22/16	K.P	03/25/16
GNE3-46873-TOC	↓	↓	50.0	↓	↓	25,000	↓	↓	↓

ACCUTEST.

GN43466

Reagent Information Log - TOC - Soil

Reagent	Reagent # or Manufacturer/Lot	EXP:
Sucrose Stock Solution, 200000 mg/L	GNE3-46864-TOC	04/22/16
Glucose Stock Solution, 50000 ug/L	GNE3-46865-TOC	04/22/16
Glucose Check Solution, 25000 ug/L	GNE3-46873-TOC	04/22/16
Nitric Acid, Reagent Grade	Fisher #A115080-TOC	09/10/18
Glucose ~~Stock~~ Check Solution, 20000 ug/L	GNE3-46872-TOC	04/22/16

All standards and stocks were made as described in the SOP for this method (circle one): (Y) or N
If no (N), see attached page for standards prep.

Form: GN-087 1-66
Rev. Date:4/26/01

TOC-Control L Report

d60328s1.toc.tlx

Instr.Information

Instrument Options	TOC/SSM/Sparge Kit/
Catalyst	Regular Sensitivity

Cal. Curve

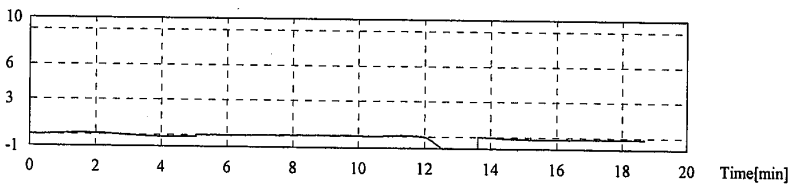
Sample Name:	Untitled
Sample ID:	Untitled
Cal. Curve:	d60328s1.2016_03_28_08_38_43.cal
Status	Completed

Type	Anal
Standard	SSM-TC

AbsC: 0.000ug

No	Area	CNV	AbsC	Weight	Rem	Ex	Date/Time
1	0.000	0.000	0.000ug	100.0mg	*******		3/28/2016 8:47:29 AM
2	0.000	0.000	0.000ug	100.0mg	*******		3/28/2016 8:54:14 AM
3	0.000	0.000	0.000ug	100.0mg	*******		3/28/2016 8:59:23 AM
4	0.000	0.000	0.000ug	100.0mg	*******		3/28/2016 9:05:42 AM

Mean Area 0.000
Mean CNV 0.000

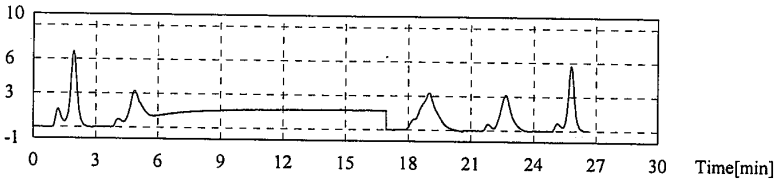


AbsC: 0.01000ug

No	Area	CNV	AbsC	Weight	Rem	Ex	Date/Time
1	18.07	18.07	0.01000ug	100.0mg	*******		3/28/2016 9:11:24 AM
2	54.60	54.60	0.01000ug	100.0mg	T*******	E	3/28/2016 9:28:26 AM
3	18.54	18.54	0.01000ug	100.0mg	*******		3/28/2016 9:33:26 AM
4	12.61	12.61	0.01000ug	100.0mg	*******		3/28/2016 9:39:15 AM
5	12.85	12.85	0.01000ug	100.0mg	*******		3/28/2016 9:43:59 AM

excluded: O-ring not in proper place cxo 3/28/16

Mean Area 15.52
Mean CNV 15.52



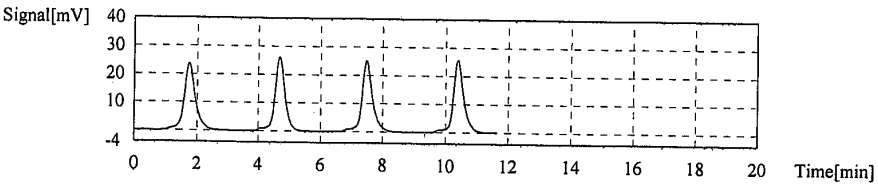
AbsC: 0.05000ug

No	Area	CNV	AbsC	Weight	Rem	Ex	Date/Time
1	58.04	58.04	0.05000ug	100.0mg	*******		3/28/2016 9:48:40 AM
2	58.33	58.33	0.05000ug	100.0mg	*******		3/28/2016 9:54:39 AM
3	59.15	59.15	0.05000ug	100.0mg	*******		3/28/2016 10:00:01 AM
4	59.40	59.40	0.05000ug	100.0mg	*******		3/28/2016 10:04:29 AM

TOC-Control L Report

d60328s1.toc.tlx

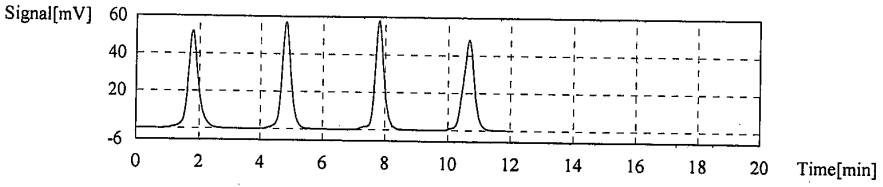
Mean Area 58.73
Mean CNV 58.73



AbsC: 0.1000ug

No.	Area	CNV	AbsC	Weight	Rem.	Ex.	Date / Time
1	117.3	117.3	0.1000ug	100.0mg	*******		3/28/2016 10:10:16 AM
2	116.4	116.4	0.1000ug	100.0mg	*******		3/28/2016 10:14:31 AM
3	115.3	115.3	0.1000ug	100.0mg	*******		3/28/2016 10:20:27 AM
4	116.5	116.5	0.1000ug	100.0mg	*******		3/28/2016 10:25:18 AM

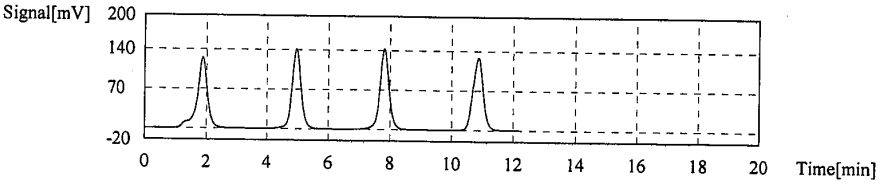
Mean Area 116.4
Mean CNV 116.4



AbsC: 0.2500ug

No.	Area	CNV	AbsC	Weight	Rem.	Ex.	Date / Time
1	294.2	294.2	0.2500ug	100.0mg	*******		3/28/2016 10:30:16 AM
2	296.7	296.7	0.2500ug	100.0mg	*******		3/28/2016 10:35:24 AM
3	293.9	293.9	0.2500ug	100.0mg	*******		3/28/2016 10:40:29 AM
4	292.9	292.9	0.2500ug	100.0mg	*******		3/28/2016 10:45:32 AM

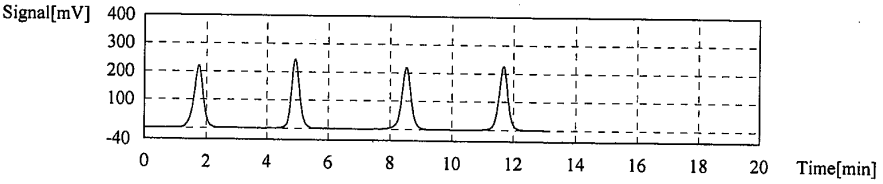
Mean Area 294.4
Mean CNV 294.4



AbsC: 0.4000ug

No.	Area	CNV	AbsC	Weight	Rem.	Ex.	Date / Time
1	469.2	469.2	0.4000ug	100.0mg	*******		3/28/2016 10:51:47 AM
2	465.1	465.1	0.4000ug	100.0mg	*******		3/28/2016 10:56:35 AM
3	469.2	469.2	0.4000ug	100.0mg	*******		3/28/2016 11:01:03 AM
4	465.5	465.5	0.4000ug	100.0mg	*******		3/28/2016 11:11:04 AM

Mean Area 467.3
Mean CNV 467.3



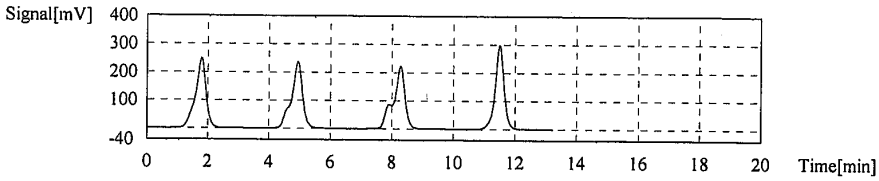
AbsC: 0.5000ug

TOC-Control L Report

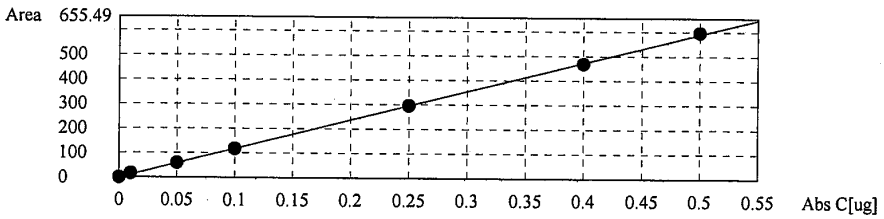
d60328s1.toc.tlx

No.	Area	CNV	Abs C	Weight	Rem	Ex	Date/Time
1	595.1	595.1	0.5000ug	100.0mg	*******		3/28/2016 11:15:58 AM
2	589.9	589.9	0.5000ug	100.0mg	*******		3/28/2016 11:21:03 AM
3	592.0	592.0	0.5000ug	100.0mg	*******		3/28/2016 11:25:34 AM
4	606.6	606.6	0.5000ug	100.0mg	*******		3/28/2016 11:30:19 AM

Mean Area 595.9
Mean CNV 595.9



Slope: 1181
Intercept 0.09389
r^2 0.9998
r 0.9999
Zero Shift No



8.2 8

TOC-Control L Report

d60401s2.toc.tlx

Instr.Information

Instrument Options: TOC/SSM/Sparge Kit/
Catalyst: Regular Sensitivity

Sample

Sample Name: CRI
Sample ID:
Origin: TOCSSMCAL.met
Status: Completed
Chk. Result

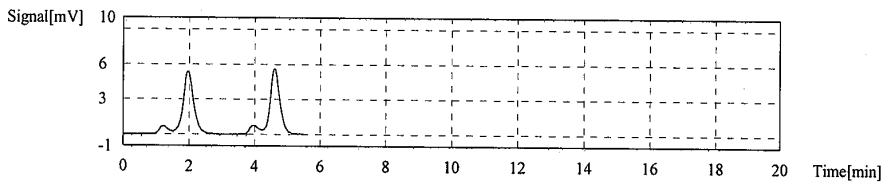
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:0.1094mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Conc.	Weight	Volume	Ex.	Cal. Curve	Date/Time
1	13.01	13.01	0.1093mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 9:51:28 AM
2	13.03	13.03	0.1095mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 9:59:11 AM

Mean Conc. 0.1094mg/L
CV Conc 0.11%



Sample

Sample Name: HSTD
Sample ID:
Origin: TOCSSMCAL.met
Status: Completed
Chk. Result

Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:5.179mg/L

1. Det

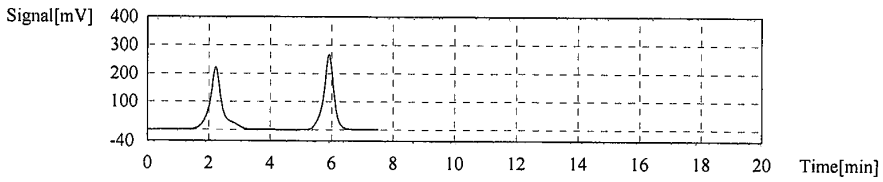
Anal.: SSM-TC

No.	Area	CNV	Conc.	Weight	Volume	Ex.	Cal. Curve	Date/Time
1	613.4	613.4	5.192mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 10:27:42 AM
2	610.4	610.4	5.166mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 10:35:26 AM

TOC-Control L Report

d60401s2.toc.tlx

Mean Conc. 5.179mg/L
CV Conc 0.35%



Sample

Sample Name: ICV
Sample ID:
Origin: TOCSSMCAL.met
Status Completed
Chk. Result

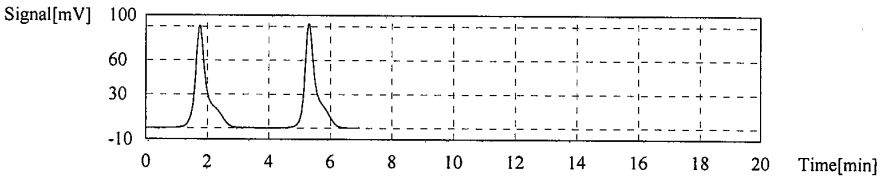
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:2.068mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	246.3	246.3	2.084mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 10:41:31 AM
2	242.4	242.4	2.051mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 10:47:43 AM

Mean Conc. 2.068mg/L
CV Conc 1.13%



Sample

Sample Name: CCV
Sample ID:
Origin: TOCSSMCAL.met
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:2.515mg/L

1. Det

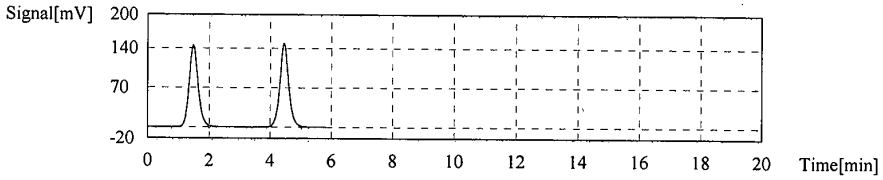
Anal.: SSM-TC

No.	Area	CNV	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	293.3	293.3	2.482mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 10:54:03 AM
2	301.1	301.1	2.548mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 11:00:39 AM

TOC-Control L Report

d60401s2.toc.tlx

Mean Conc. 2.515mg/L
CV Conc 1.86%



Sample

Sample Name: GP96615-MB2
Sample ID: BCAR
Origin: TOCSSM.met
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:0.00238mg/L

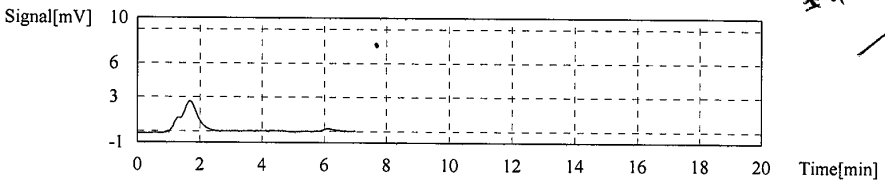
1. Det

Anal.: SSM-TC

No.	Area	CNV	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	10.24	10.24	0.1718mg/L	50.00mg	50uL	E	d60328s1.2016_03_28_08_38_43.cal	4/1/2016 3:49:19 PM
2	0.000	0.000	-0.00159mg/L	50.00mg	50uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 3:52:05 PM
3	0.4687	0.4687	0.00635mg/L	50.00mg	50uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 3:56:34 PM

Wrong boat we pushed
H.K.P

Mean Conc. 0.00238mg/L
CV Conc 235.96%



Sample

Sample Name: GP96615-B2
Sample ID:
Origin: TOCSSM.met
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:4.118mg/L

1. Det

Anal.: SSM-TC

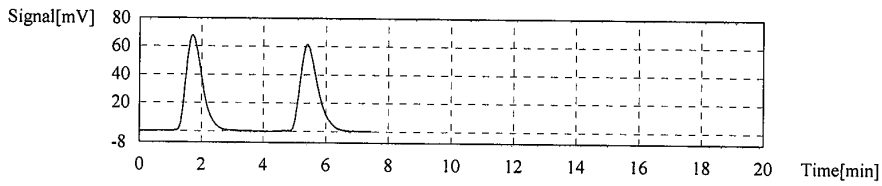
No.	Area	CNV	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	246.6	246.6	4.173mg/L	50.00mg	50uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 4:01:12 PM
2	240.1	240.1	4.063mg/L	50.00mg	50uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 4:06:01 PM

8.2
8

TOC-Control L Report

d60401s2.toc.tlx

Mean Conc. 4.118mg/L
CV Conc 1.89%



Sample

Sample Name: GP96615-D1
Sample ID: MC44792-5A
Origin: TOCSSM.met
Status Completed
Chk. Result

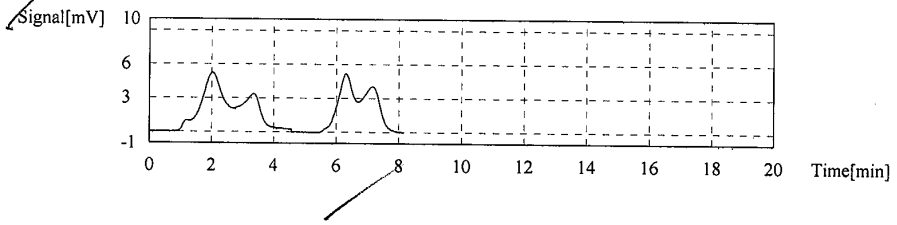
Type	Anal	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:0.6207mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Conc.	Weight	Volume	EX	Cal. Curve	Date / Time
1	40.60	40.60	0.6658mg/L	51.50mg	51uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 4:23:34 PM
2	34.64	35.12	0.5757mg/L	50.80mg	50uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 4:27:38 PM

Mean Conc. 0.6207mg/L
CV Conc 10.27%



Sample

Sample Name: CCV
Sample ID:
Origin: TOCSSMCAL.met
Status Completed
Chk. Result

Type	Anal	Manual Dilution	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:2.555mg/L

1. Det

Anal.: SSM-TC

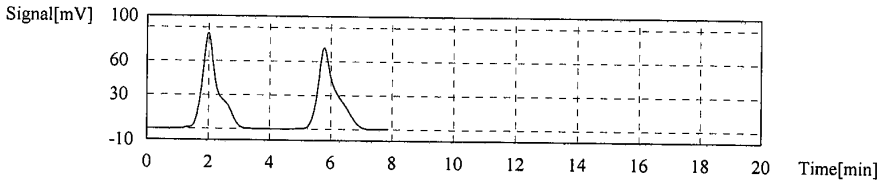
No.	Area	CNV	Conc.	Weight	Volume	EX	Cal. Curve	Date / Time
1	302.2	302.2	2.557mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 4:32:06 PM
2	301.7	301.7	2.553mg/L	100.0mg	100uL		d60328s1.2016_03_28_08_38_43.cal	4/1/2016 4:37:02 PM

8.2 8

TOC-Control L Report

d60401s2.toc.tlx

Mean Conc.	2.555mg/L
CV Conc	0.12%



General Chemistry

QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

Percent Solids Raw Data Summary

Job Number: MC44792A
Account: CRACT GHD Services Inc.
Project: Janesville Assembly Plant, Site 108, Janesville, WI

Sample: MC44792-1 **Analyzed:** 23-MAR-16 by EL **Method:** SM 2540G-97 MOD
ClientID: SE-030916-JN-001

Wet Weight (Total)	26.229	g
Tare Weight	20.398	g
Dry Weight (Total)	22.836	g
Solids, Percent	41.8	%

Sample: MC44792-2 **Analyzed:** 23-MAR-16 by EL **Method:** SM 2540G-97 MOD
ClientID: SE-030916-JN-004

Wet Weight (Total)	29.011	g
Tare Weight	21.885	g
Dry Weight (Total)	25.363	g
Solids, Percent	48.8	%

Sample: MC44792-3 **Analyzed:** 23-MAR-16 by EL **Method:** SM 2540G-97 MOD
ClientID: SE-030916-JN-007

Wet Weight (Total)	26.101	g
Tare Weight	20.031	g
Dry Weight (Total)	23.146	g
Solids, Percent	51.3	%

Sample: MC44792-4 **Analyzed:** 23-MAR-16 by EL **Method:** SM 2540G-97 MOD
ClientID: SE-031016-JN-011

Wet Weight (Total)	37.729	g
Tare Weight	26.07	g
Dry Weight (Total)	34.989	g
Solids, Percent	76.5	%

Sample: MC44792-5 **Analyzed:** 23-MAR-16 by EL **Method:** SM 2540G-97 MOD
ClientID: SE-031016-JN-014

Wet Weight (Total)	25.345	g
Tare Weight	17.069	g
Dry Weight (Total)	20.611	g
Solids, Percent	42.8	%

Sample: MC44792-6 **Analyzed:** 23-MAR-16 by EL **Method:** SM 2540G-97 MOD
ClientID: SE-031016-JN-018

Wet Weight (Total)	33.762	g
Tare Weight	25.877	g
Dry Weight (Total)	30.025	g
Solids, Percent	52.6	%

Percent Solids Raw Data Summary

Job Number: MC44792A
Account: CRACT GHD Services Inc.
Project: Janesville Assembly Plant, Site 108, Janesville, WI

Sample: MC44792-7 **Analyzed:** 23-MAR-16 by EL **Method:** SM 2540G-97 MOD
ClientID: SE-031016-JN-021

Wet Weight (Total)	28.717	g
Tare Weight	18.822	g
Dry Weight (Total)	22.663	g
Solids, Percent	38.8	%

Sample: MC44792-8 **Analyzed:** 23-MAR-16 by EL **Method:** SM 2540G-97 MOD
ClientID: SE-031016-JN-024

Wet Weight (Total)	28.845	g
Tare Weight	18.9	g
Dry Weight (Total)	23.556	g
Solids, Percent	46.8	%

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-61959-2
Client Project/Site: 58505, Janesville WI, SSOW 108014

For:
GHD Services Inc.
45 Farmington Valley Drive
Plainville, Connecticut 06062

Attn: Ms. Kathy Shaw

Denise D Heckler

Authorized for release by:
5/13/2016 3:12:30 PM

Denise Heckler, Project Manager II
(330)966-9477
denise.heckler@testamericainc.com

Table of Contents

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-2

Qualifiers

Metals

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
J	Reported value was between the limit of detection and the limit of quantitation.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 240-61959-2

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-61959-2

Comments
No additional comments.

Receipt
The samples were received on 3/10/2016 11:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.1º C and 2.7º C.

Metals
Method(s) 7470A: Due to login oversight, the following sample(s) were requested outside of preparation holding time: SE-030916-JN-010 (240-61959-10).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-2

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-61959-10	SE-030916-JN-010	Solid	03/09/16 16:00	03/10/16 11:30

Detection Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-2

Client Sample ID: SE-030916-JN-010 — Lab Sample ID: 240-61959-10

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.067	J	0.50	0.0029	mg/L	1		6010B	TCLP
Barium	1.2	J B	10.0	0.0010	mg/L	1		6010B	TCLP
Cadmium	0.011	J	0.10	0.00014	mg/L	1		6010B	TCLP
Chromium	0.0054	J B	0.50	0.00055	mg/L	1		6010B	TCLP
Lead	1.2		0.50	0.0019	mg/L	1		6010B	TCLP
Mercury	0.00013	J H	0.0020	0.000090	mg/L	1		7470A	TCLP

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-2

Client Sample ID: SE-030916-JN-010
Date Collected: 03/09/16 16:00
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-10
Matrix: Solid

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.067**	**J**	0.50	0.0029	mg/L		05/11/16 11:18	05/12/16 16:24	1
Barium	**1.2**	**J B**	10.0	0.0010	mg/L		05/11/16 11:18	05/12/16 16:24	1
Cadmium	**0.011**	**J**	0.10	0.00014	mg/L		05/11/16 11:18	05/12/16 16:24	1
Chromium	**0.0054**	**J B**	0.50	0.00055	mg/L		05/11/16 11:18	05/12/16 16:24	1
Lead	**1.2**		0.50	0.0019	mg/L		05/11/16 11:18	05/12/16 16:24	1
Selenium	<0.0040		0.25	0.0040	mg/L		05/11/16 11:18	05/12/16 16:24	1
Silver	<0.00092		0.50	0.00092	mg/L		05/11/16 11:18	05/12/16 16:24	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00013**	**J H**	0.0020	0.000090	mg/L		05/11/16 12:00	05/12/16 11:29	1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-229849/2-A
Matrix: Solid
Analysis Batch: 230193

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 229849

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0029		0.50	0.0029	mg/L		05/11/16 11:18	05/12/16 16:16	1
Barium	<0.0010		10.0	0.0010	mg/L		05/11/16 11:18	05/12/16 16:16	1
Cadmium	<0.00014		0.10	0.00014	mg/L		05/11/16 11:18	05/12/16 16:16	1
Chromium	<0.00055		0.50	0.00055	mg/L		05/11/16 11:18	05/12/16 16:16	1
Lead	<0.0019		0.50	0.0019	mg/L		05/11/16 11:18	05/12/16 16:16	1
Selenium	<0.0040		0.25	0.0040	mg/L		05/11/16 11:18	05/12/16 16:16	1
Silver	<0.00092		0.50	0.00092	mg/L		05/11/16 11:18	05/12/16 16:16	1

Lab Sample ID: LCS 240-229849/3-A
Matrix: Solid
Analysis Batch: 230193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 229849

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.00	2.03		mg/L		102	50 - 150
Barium	2.00	1.98	J	mg/L		99	50 - 150
Cadmium	0.0500	0.0500	J	mg/L		100	50 - 150
Chromium	0.200	0.204	J	mg/L		102	50 - 150
Lead	0.500	0.480	J	mg/L		96	50 - 150
Selenium	2.00	2.09		mg/L		105	50 - 150
Silver	0.0500	0.0504	J	mg/L		101	50 - 150

Lab Sample ID: LB 240-229814/1-B
Matrix: Solid
Analysis Batch: 230193

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 229849

Analyte	LB Result	LB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0029		0.50	0.0029	mg/L		05/11/16 11:18	05/12/16 16:12	1
Barium	0.00169	J	10.0	0.0010	mg/L		05/11/16 11:18	05/12/16 16:12	1
Cadmium	<0.00014		0.10	0.00014	mg/L		05/11/16 11:18	05/12/16 16:12	1
Chromium	0.00141	J	0.50	0.00055	mg/L		05/11/16 11:18	05/12/16 16:12	1
Lead	<0.0019		0.50	0.0019	mg/L		05/11/16 11:18	05/12/16 16:12	1
Selenium	0.00425	J	0.25	0.0040	mg/L		05/11/16 11:18	05/12/16 16:12	1
Silver	<0.00092		0.50	0.00092	mg/L		05/11/16 11:18	05/12/16 16:12	1

Lab Sample ID: 240-61959-10 MS
Matrix: Solid
Analysis Batch: 230193

Client Sample ID: SE-030916-JN-010
Prep Type: TCLP
Prep Batch: 229849

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.067	J	5.00	5.27		mg/L		104	75 - 125
Barium	1.2	J B	50.0	51.50		mg/L		101	75 - 125
Cadmium	0.011	J	1.00	1.06		mg/L		105	75 - 125
Chromium	0.0054	J B	5.00	5.08		mg/L		102	75 - 125
Lead	1.2		5.00	6.18		mg/L		100	75 - 125
Selenium	<0.0040		1.00	1.07	J	mg/L		107	75 - 125
Silver	<0.00092		1.00	1.04	J	mg/L		104	75 - 125

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 240-61959-10 MSD — **Client Sample ID: SE-030916-JN-010**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 230193 — **Prep Batch: 229849**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.067	J	5.00	5.08		mg/L		100	75 - 125	4	20
Barium	1.2	J B	50.0	49.35	J	mg/L		96	75 - 125	4	20
Cadmium	0.011	J	1.00	1.03		mg/L		102	75 - 125	3	20
Chromium	0.0054	J B	5.00	4.93		mg/L		98	75 - 125	3	20
Lead	1.2		5.00	5.99		mg/L		96	75 - 125	3	20
Selenium	<0.0040		1.00	1.02	J	mg/L		102	75 - 125	5	20
Silver	<0.00092		1.00	1.01	J	mg/L		101	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-229850/2-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 230177 — **Prep Batch: 229850**

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		05/11/16 12:00	05/12/16 11:21	1

Lab Sample ID: LCS 240-229850/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 230177 — **Prep Batch: 229850**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00488		mg/L		98	80 - 120

Lab Sample ID: LB 240-229814/1-C — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 230177 — **Prep Batch: 229850**

Analyte	LB Result	LB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000090		0.0020	0.000090	mg/L		05/11/16 12:00	05/12/16 11:18	1

Lab Sample ID: 240-61959-10 MS — **Client Sample ID: SE-030916-JN-010**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 230177 — **Prep Batch: 229850**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00013	J H	0.00500	0.00505		mg/L		98	80 - 120

Lab Sample ID: 240-61959-10 MSD — **Client Sample ID: SE-030916-JN-010**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 230177 — **Prep Batch: 229850**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00013	J H	0.00500	0.00515		mg/L		100	80 - 120	2	20

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-2

Metals

Leach Batch: 229814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-10	SE-030916-JN-010	TCLP	Solid	1311	
240-61959-10 MS	SE-030916-JN-010	TCLP	Solid	1311	
240-61959-10 MSD	SE-030916-JN-010	TCLP	Solid	1311	
LB 240-229814/1-B	Method Blank	TCLP	Solid	1311	
LB 240-229814/1-C	Method Blank	TCLP	Solid	1311	

Prep Batch: 229849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-10	SE-030916-JN-010	TCLP	Solid	3010A	229814
240-61959-10 MS	SE-030916-JN-010	TCLP	Solid	3010A	229814
240-61959-10 MSD	SE-030916-JN-010	TCLP	Solid	3010A	229814
LB 240-229814/1-B	Method Blank	TCLP	Solid	3010A	229814
LCS 240-229849/3-A	Lab Control Sample	Total/NA	Solid	3010A	
MB 240-229849/2-A	Method Blank	Total/NA	Solid	3010A	

Prep Batch: 229850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-10	SE-030916-JN-010	TCLP	Solid	7470A	229814
240-61959-10 MS	SE-030916-JN-010	TCLP	Solid	7470A	229814
240-61959-10 MSD	SE-030916-JN-010	TCLP	Solid	7470A	229814
LB 240-229814/1-C	Method Blank	TCLP	Solid	7470A	229814
LCS 240-229850/3-A	Lab Control Sample	Total/NA	Solid	7470A	
MB 240-229850/2-A	Method Blank	Total/NA	Solid	7470A	

Analysis Batch: 230177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-10	SE-030916-JN-010	TCLP	Solid	7470A	229850
240-61959-10 MS	SE-030916-JN-010	TCLP	Solid	7470A	229850
240-61959-10 MSD	SE-030916-JN-010	TCLP	Solid	7470A	229850
LB 240-229814/1-C	Method Blank	TCLP	Solid	7470A	229850
LCS 240-229850/3-A	Lab Control Sample	Total/NA	Solid	7470A	229850
MB 240-229850/2-A	Method Blank	Total/NA	Solid	7470A	229850

Analysis Batch: 230193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-61959-10	SE-030916-JN-010	TCLP	Solid	6010B	229849
240-61959-10 MS	SE-030916-JN-010	TCLP	Solid	6010B	229849
240-61959-10 MSD	SE-030916-JN-010	TCLP	Solid	6010B	229849
LB 240-229814/1-B	Method Blank	TCLP	Solid	6010B	229849
LCS 240-229849/3-A	Lab Control Sample	Total/NA	Solid	6010B	229849
MB 240-229849/2-A	Method Blank	Total/NA	Solid	6010B	229849

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-2

Client Sample ID: SE-030916-JN-010

Date Collected: 03/09/16 16:00
Date Received: 03/10/16 11:30

Lab Sample ID: 240-61959-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			229814	05/10/16 17:15	DRJ	TAL CAN
TCLP	Prep	3010A			229849	05/11/16 11:18	AJC	TAL CAN
TCLP	Analysis	6010B		1	230193	05/12/16 16:24	RKT	TAL CAN
TCLP	Leach	1311			229814	05/10/16 17:15	DRJ	TAL CAN
TCLP	Prep	7470A			229850	05/11/16 12:00	AJC	TAL CAN
TCLP	Analysis	7470A		1	230177	05/12/16 11:29	DSH	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108014

TestAmerica Job ID: 240-61959-2

Laboratory: TestAmerica Canton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

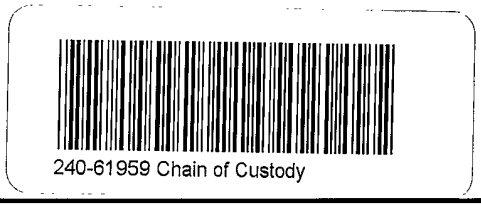
Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999518190	08-31-16 *

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
7470A	7470A	Solid	Mercury

* Certification renewal pending - certification considered valid.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

2,6/42,1
3,2/C2,7

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 1 OF

☐ eCOC in Use

ID: # C#03092016_001

SSOW Ref. Code: 058507-108014

Required Client Information:

GHD	Report To:
6400 Shafer Court	Copy To:
Suite 400	Invoice To:
Rosemont, IL 60018	P.O.:
Phone: (773) 380-9723	Project Name: GM - Janesville
Fax: (773) 380-6421	Project Number: 058505 - 01 - 20404
E-mail: jeffrey.nichols@GHD.com	

Laboratory: Test America	
Laboratory Location: 4101 Shuffel Drive NW, North Canton, OH	
Laboratory Contact: Denise Heckler	
Requested Due Date:	TAT: STD DAY
QA/QC Requirements:	

Valid Matrix Codes:
WG Groundwater
WB Borehole Water
WS Surface Water
SO Soil
SE Sediment
See Back for Additional Codes

3/9/16

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: HCl	TCL VOC (1)	TCL SVOC	TAL Metals (2)	PCBs	Alkylated PAHs	AVS	SEM Metals (3)	Methyl Hg	TOC	TCLP Metals	MS/MSD	Remarks/Lab ID
1	SG-030916-JN-001	SG	3/9/16	1245	7/5		X	X	X	X	X	X	X	X	X			(1) Includes reporting 1,2,4-TMB and 1,3,5-TMB.
2	-002	SG	3/9/16	1255	4		X	X	X	X					X			(2) Earth metals include: aluminum, calcium, iron, magnesium, potassium, & sodium.
3	-003	SG	3/9/16	1310	4		X	X	X	X					X	X		(3) Metals include: cadmium, copper, lead, nickel, mercury, silver, & zinc.
4	-004	SG	3/9/16	1425	7/5		X	X	X	X	X	X	X	X	X			
5	-005	SG	3/9/16	1435	4		X	X	X	X					X			
6	-006	SG	3/9/16	1445	4		X	X	X	X					X	X		
7	-007	SG	3/9/16	1545	5		X	X	X	X	X	X	X	X	X			
8	-008	SG	3/9/16	1550	4		X	X	X	X					X			
9	-009	SG	3/9/16	1555	4		X	X	X	X					X			
10	-010	SG	3/9/16	1600	4		X	X	X	X					X	X		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18	TB-030916-JN-001	SG	3/9/16	0800	2	X	X											

Analysis and Method

TOTAL NUMBER OF CONTAINERS 45 95 3/9/16

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
FedEx	2	Jeffrey M. Nichols / GHD	3/9/16	1700		3-10-16	1170
AIRBILL NO: 8742 2219 3736/3747							

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name: Jeffrey M. Nichols

Sampler Signature: Date: 3/9/16

REV. 0 (9/04)

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5/13/2016

TestAmerica Canton Sample Receipt Form/Narrative Login # : 61959
Canton Facility

Client GHD Site Name

Cooler Received on 3-10-16 Opened on 3-10-16

Cooler unpacked by:

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☑ See Multiple Cooler Form

IR GUN# 48 (CF **-1.9** °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

IR GUN# 36 (CF **-1.5** °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

IR GUN# I8 (CF **-0.5** °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity	Yes	No
-Were custody seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Are these work share samples?	Yes	No
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC559158
13. Were VOAs on the COC?	Yes	No
14. Were air bubbles >6 mm in any VOA vials?	Yes	No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No
16. Was a LL Hg or Me Hg trip blank present?	Yes	No

Contacted PM Date by via Verbal Voice Mail Other

Concerning

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

18. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

Ref: SOP NC-SC-0005, Sample Receiving
L:\QAQC\QA Department\QA TARDIS\Document Control\Work Instructions\WI-NC-099X-011816 Cooler Receipt Form.doc djl

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # :** 61959
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	8	2.6	2.1	ice
1	1	3.2	2.7	1

Appendix E
Human Health Risk-Based Screening Levels (provided by Ramboll-Environ)

Appendix E

Human Health Risk-Based Screening Levels Supporting Information and Calculations

Contents

List of Attachments

E1 Introduction

This appendix provides information and calculations that support derivation of the risk-based screening levels (RBSLs) presented in the *Draft Sediment Investigation and Data Evaluation Report* for the former GM Janesville Assembly Site located in Janesville, Wisconsin. The methods and assumptions used in derivation of the RBSLs are based on guidance from the Wisconsin Department of Natural Resources (WDNR) and United States Environmental Protection Agency (U.S. EPA). The RBSLs are intended to facilitate a review of the Rock River sediment data to identify constituents that may warrant further characterization versus those that do not. Specifically, constituents with no concentrations exceeding RBSLs do not warrant further characterization. Exceedances of the RBSLs are not necessarily indicative of an unacceptable risk, rather they indicate the need for further evaluation.

Generally, derivation of the RBSLs is based on the following regulations and guidance:

- ch. NR 720, Wis. Adm. Code, Soil Cleanup Standards (where applicable);
- U.S. EPA risk assessment guidance (e.g., 1989, 2004b, 2009a); and
- U.S. EPA and General Motors LLC (GM) agreements on approaches for streamlining risk assessments at GM sites (ENVIRON 2010).

The discussion in this appendix is organized as follows:

- Exposure assumptions: This section provides the dose equations and exposure factors used to calculate the RBSLs
- Toxicity Values: This section discusses the selection of the toxicity values used to calculate the RBSLs
- Risk-Based Screening Level Calculation: This section discusses the methodology used to calculate RBSLs

Five attachments following the text provide the inputs used in calculation of the RBSLs (i.e., toxicity values, physical/chemical parameters, and exposure factors) and the data screening results.

E2 Exposure Assumptions

The receptors and exposure pathways for which RBSLs were calculated are discussed in Section 4.1.1 of the *Draft Sediment Investigation and Data Evaluation Report*. The methods and assumptions used in estimating potential exposures in these scenarios are discussed in this section.

For potential exposures via ingestion and dermal contact, exposure is quantified in terms of a dose, as follows:

$$Dose = Concentration \cdot Intake$$

The dose for evaluating cancer risk is averaged over a lifetime and is called the lifetime average daily dose (LADD). For evaluating noncancer risk, the dose is averaged over the duration of potential exposure and is called the average daily dose (ADD). The methods used in estimating LADD and ADD are discussed in Section E2.1.

The concentration term in the dose equation refers to the average chemical concentration in an environmental medium to which a population is exposed over a specified duration. In the derivation of RBSLs, the concentration term becomes the RBSL, and is factored out of the dose equation, as shown in Section E2.1. The intake term refers to the intake rate of a contaminated environmental medium, which is a function of the magnitude, frequency, and duration of exposure. After factoring out the concentration term, the intake term becomes a normalized dose in derivation of the RBSLs, as discussed further in Section E2.1.

For potential exposures via inhalation, exposure is quantified in terms of time-weighted average air concentrations (U.S. EPA 2009a). The methods used in estimating chemicals concentrations in air due to emissions from soil are discussed in Section E2.2.

The exposure factors that are used to quantify the magnitude, frequency, and duration of potential exposures are discussed in Section E2.3.

E2.1 Estimation of LADD/ADD

E2.1.1 Sediment or Soil Ingestion and Dermal Contact

The LADDs normalized by concentration for sediment or soil ingestion ($LADD^*_{ing}$) and dermal contact ($LADD^*_{derm}$) are calculated as follows:

$$LADD^*_{ing} = \cdot \frac{IR \cdot FC \cdot EF \cdot ED}{BW \cdot AT_c}$$

$$LADD^*_{derm} = \cdot \frac{SA \cdot AF \cdot ABS_{derm} \cdot FC \cdot EF \cdot ED}{BW \cdot AT_c}$$

where *IR* is the ingestion rate, *FC* is the fraction of the sediment or soil that is contaminated, *EF* is exposure frequency, *ED* is exposure duration, *BW* is body weight, AT_c is the averaging time for calculating cancer risk, *SA* is the exposed skin surface area, *AF* is the soil-to-skin or sediment-to-skin adherence factor, and ABS_{derm} is the chemical-specific dermal absorption factor.

The normalized ADDs for sediment ingestion (ADD^*_{ing}) and sediment dermal contact (ADD^*_{derm}) are calculated as follows:

$$ADD^*_{ing} = \frac{IR \cdot FC \cdot EF \cdot ED}{BW \cdot AT_{nc}}$$

$$ADD^*_{derm} = \frac{SA \cdot AF \cdot ABS_{derm} \cdot FC \cdot EF \cdot ED}{BW \cdot AT_{nc}}$$

where AT_{nc} is the averaging time for calculating noncancer risk.

E2.2 Estimation of Air Concentrations

E2.2.1 Soil Vapors in Outdoor Air

The normalized constituent concentrations in air due to vapor emissions from soil are calculated as follows:

$$C^*_{air} = J \cdot C / Q$$

where J is the average vapor flux (J_v) normalized by soil concentration and C/Q is the air concentration normalized by flux (i.e., C/Q is an air dispersion factor).

The flux J_v from unsaturated soil is estimated using an unsteady-state model derived by Jury et al. (1983). This model assumes that volatile constituents are present in the soil to a finite depth. In derivation of the RBSLs, the depth is conservatively assumed to be the depth of the water table. The equation for J_v is given by:

$$J_v = \frac{1}{T}\left(2\left(\exp\left(\frac{-Z_1^{\,2}}{4D_E T}\right) - \exp\left(\frac{-Z_2^{\,2}}{4D_E T}\right)\right)\sqrt{\frac{D_E T}{\pi}} - Z_1 erfc\left(\frac{Z_1}{2\sqrt{D_E T}}\right) + Z_2 erfc\left(\frac{Z_2}{2\sqrt{D_E T}}\right)\right)$$

where

$$D_E = \frac{D_G H + D_L}{\rho_b K_d + \theta_w + \theta_a H}$$

$$D_G = D_{air} \cdot \frac{\theta_a^{10/3}}{n^2}$$

$$D_L = D_{water} \cdot \frac{\theta_w^{10/3}}{n^2}$$

Derivation of this equation and definition of the equation parameters can be found in Jury et al. (1983), and therefore, are not repeated here. A simplified version of this model, which assumes contamination to an infinite depth, is discussed in Section 2.4.1 of the U.S. EPA's *Soil Screening Guidance* (U.S. EPA 1996) for calculating the volatilization factor (VF). In derivation of the RBSLs, J_v is calculated using default parameters for sand, as recommended in the U.S. EPA guidance (2004a). The calculation of J_v is shown in Attachment E-2.3 and E-2.4 (for recreators, cancer and noncancer averaging times respectively) and E-4.1 (for landscapers). Physical-chemical parameters used are shown in Attachment E-1.2.

The C/Q term was estimated using the empirical correlation in U.S. EPA's Supplemental Soil Screening Guidance (2002), assuming a source area of 1 acre, which is the area over which GM collected samples near the site, and using the correlation coefficients for Chicago, Illinois, which is the city nearest to the Site among the cities with available correlation coefficients. Derivation of the empirical correlation for C/Q can be found in Appendix D of the Supplemental Soil Screening Guidance (U.S. EPA 2002), and therefore, is not repeated here.

E2.2.2 Soil Particulates in Outdoor Air

Emission of respirable soil particulates (PM_{10}) for exposure to outdoor soil are calculated using the particulate emission factor (PEF) of 1.43×10^9 m^3/kg given in Chapter 720 of WDNR's guidance on soil cleanup standards (WDNR 2013). The PM_{10} concentration in air is the inverse of the PEF, or 6.99×10^{-10} kg/m^3. The PEF is based on PM_{10} emissions due to wind erosion.

For landscapers, the PM_{10} air concentration is conservatively set at 50 ug/m^3, based on a time-weighted average assuming landscapers spend 1/3 of the exposure period excavating into the subsurface and 2/3 of the exposure period in work not involving excavation. Specifically, the time-weighted average is based on the 24-hour average National Ambient Air Quality Standard (NAAQS) of 150 ug/m^3 during excavations since it is reasonable to expect excavation activities to include dust controls to avoid violation of this ambient air quality standard and 1 ug/m^3 during non-excavation activities. The latter concentration of 1 ug/m^3 is higher than that estimated with the wind erosion model recommended by U.S. EPA (1996) or WDNR's PEF.

E2.3 Exposure Factors

The exposure factors for evaluating the receptors and potential exposure pathways are discussed in this section. A table of these exposure factors is presented as Attachment E-1.3. The exposure factors are consistent with those from Ch. NR720 of the Wis. Adm. Code where relevant for industrial workers (e.g., body weight, skin surface area) and nonindustrial receptors (i.e., body weight, exposure duration). Where standard default exposure factors are not available or appropriate for an exposure scenario, the evaluation is conducted using similarly conservative exposure factors that are based on site-specific considerations and professional judgment.

E2.3.1 Recreators

The exposure factors used to calculate the RBSLs for recreator exposure to sediment in the river, and to soil originating as sediment under the potential future scenario that the Monterey Dam (Dam) is removed and the sediment becomes surface soil are listed below. Since residents live along the Rock River, recreators are assumed to have similar exposure factors to the nonindustrial receptor discussed in WDNR guidance (NR720), except for exposure frequency as discussed below. Noncancer RBSLs are calculated for an exposure duration of 6 years per WDNR guidance, which does not account for the lower ingestion and dermal exposures during the remainder of the 30 year exposure duration.

Soil Ingestion Rate

The soil ingestion rates of 200 mg/day for a child and 100 mg/day for an adult are WDNR's default values for evaluating exposure in nonindustrial settings (WDNR 2013).

Sediment Ingestion Rate

The sediment ingestion rates of 100 mg/day for a child and 50 mg/day for an adult are 50% of the soil ingestion rates (WDNR 2013). They are based on professional judgment considering that simultaneous contact with surface water and sediment in this scenario would tend to wash sediment off hands and thereby reduce incidental sediment ingestion during hand-to-mouth contact.

Soil and Sediment Dermal Contact Rate and Absorption

The dermal contact rate is the product of the exposed skin surface area and the soil-to-skin adherence factor. The exposed skin surface area of 2,800 cm^2/day and the soil-to-skin adherence factor of 0.2 mg/cm^2 for a child and 5,700 cm^2/day and the soil-to-skin adherence factor of 0.07 mg/cm^2 for an adult are WDNR's recommended values for evaluating Reasonable Maximum Exposure (RME) in nonindustrial settings (WDNR 2013). Since information on sediment-to-skin adherence factors is not available, U.S. EPA recommends using soil-to-skin adherence factors for sediment (U.S. EPA 2004b).

Soil PM_{10}/Vapor Exposure Time

Recreators are assumed to be present and inhaling soil vapors and particulates for 2 hours per day.

Exposure Frequency

Recreators are assumed to be exposed to sediment for 40 days per year: 2 days per week and 4 weeks per month during the 5 months when the mean ambient temperature of the Rock River is above 60 °F (WDNR 2010). If the sediment becomes dry soil, recreators are assumed to be present for 72 days per year: 2 days per week and 4 weeks per month during the 9 months of spring, summer, and autumn (i.e, when the average temperature is above freezing).

Exposure Duration

Recreators are assumed to be exposed to sediment or soil for 30 years (6 years as children and 24 years as adults) for cancer risk calculations and 6 years as children for noncancer risk calculations (WDNR 2013).

Body Weight

The body weight (BW) of 15 kg for a child and 70 kg for an adult is WDNR's standard value for assessing exposure of children and adults (WDNR 2013).

Averaging Time

The averaging time for evaluating cancer risk is equal to a lifetime of 70 years, and the averaging time for evaluating noncancer risk is equal to the exposure duration (WDNR 2013, U.S. EPA 1989).

E2.3.2 Maintenance Workers

The exposure factors used to calculate the RBSLs for maintenance worker exposure to sediment in the Rock River are as follows:

Sediment Ingestion Rate

The ingestion rate of 50 mg/day is 50% of WDNR's default value for evaluating exposure in commercial/industrial settings (WDNR 2013), based on professional judgment that simultaneous contact with surface water in this scenario would tend to wash sediment off hands and thereby reduce incidental sediment ingestion during hand-to-mouth contact.

Sediment Dermal Contact Rate and Absorption

The dermal contact rate is the product of the exposed skin surface area and sediment-to-skin adherence factor. The exposed skin surface area of 3,300 cm^2/day and the soil-to-skin adherence factor of 0.2 mg/cm^2 are WDNR's recommended values for evaluating RME in commercial/industrial settings (WDNR 2013). Since information on sediment-to-skin adherence factors is not available, U.S. EPA recommends using soil-to-skin adherence factors for sediment (U.S. EPA 2004b).

Exposure Frequency

An exposure frequency of 5 days per year is assumed for worker contact with sediment during occasional maintenance work on the outfall. This exposure frequency is expected to be conservative for the amount of time that workers are actually in the river performing work on the outfall.

Exposure Duration

An exposure duration of 10 years is used for maintenance worker exposures. The exposure duration of 10 years is supported by the analysis of Burmaster (2000), using data from the Bureau of Labor Statistics through February 1996, which indicated that 95th and 90th percentile job tenure of workers in construction is approximately 12.48 years and 7.7 years, respectively.

Body Weight

The BW of 70 kg is WNDR's standard value for assessing exposure of adults (WDNR 2013).

Averaging Time

The averaging time for evaluating cancer risk is equal to a lifetime of 70 years, and the averaging time for evaluating noncancer risk is equal to the exposure duration (U.S. EPA 1989, WDNR 2013).

E2.3.3 Landscapers

The exposure factors used to calculate the RBSLs for landscaper exposure to soil originating from sediment under the potential future scenario that the Dam is removed and the sediment becomes surface soil are as follows:

Soil Ingestion Rate

The soil ingestion rate of 100 mg/day U.S. EPA recommended value for evaluating high-end outdoor worker exposures to soil (U.S. EPA 2002).

Soil Dermal Contact Rate and Absorption

The dermal contact rate is the product of the exposed skin surface area and soil-to-skin adherence factor. The exposed skin surface area of 3,300 cm^2/day and the soil-to-skin adherence factor of 0.2 mg/cm^2 are WDNR's recommended values for evaluating RME in commercial/industrial settings (WDNR 2013).

Exposure Frequency

An exposure frequency of 30 days per year is used for workers performing landscaping activities that involve contact with soil, based on professional judgment.

Soil PM_{10}/Vapor Inhalation Exposure Time

Landscapers are assumed to be inhaling vapors and particulates from soil for 8 hours per day, the WDNR and U.S. EPA recommended value for full-time workers (WDNR 2013, U.S. EPA 2009a).

Exposure Duration

An exposure duration of 10 years is used for landscaper exposures, based on professional judgement.

Body Weight

The BW of 70 kg is WDNR's standard value for assessing exposure of adults (WDNR 2013).

Averaging Time

The averaging time for evaluating cancer risk is equal to a lifetime of 70 years, and the averaging time for evaluating noncancer risk is equal to the exposure duration (WDNR 2013, U.S. EPA 1989).

E3 Toxicity Values

Toxicity values are derived from toxicity assessments which identify potential adverse health effects associated with exposure to chemicals, and determine the dose response relationship between exposure and the occurrence of adverse effects. The toxicity values used in derivation of the RBSLs were compiled from U.S. EPA's hierarchy of sources (U.S. EPA 2003b), as follows:

1. Integrated Risk Information System (IRIS);
2. Provisional Peer Reviewed Toxicity Values (PPRTV); and
3. Other Toxicity Values.

When a toxicity value was not available from the first two tiers of the hierarchy, other U.S. EPA and non-U.S. EPA sources (e.g., Agency for Toxic Substances and Disease Registry (ATSDR)) of toxicity values were consulted. The toxicity values used in derivation of the RBSLs and their sources are summarized in Attachment E-1.1 and are discussed below. The toxicity values used are current as of March 2016.

E3.1 Cancer Toxicity Values

For chemicals that U.S. EPA assessed prior to the 2005 *Guidelines for Carcinogen Risk Assessment* (U.S. EPA 2005), U.S. EPA considers chemicals belonging to the following cancer weight of evidence groups as human carcinogens:

- Group A - Known Human Carcinogen: Sufficient evidence of carcinogenicity in humans;
- Group B1 - Probable Human Carcinogen: Limited evidence of carcinogenicity in humans;
- Group B2 - Probable Human Carcinogen: Sufficient evidence of carcinogenicity in animals with inadequate or lack of evidence in humans; and
- Group C - Possible Human Carcinogen: Limited evidence of carcinogenicity in animals and inadequate or lack of evidence in humans.

For chemicals that U.S. EPA assessed after the 2005 *Guidelines for Carcinogen Risk Assessment* (U.S. EPA 2005), U.S. EPA uses the following cancer weight of evidence groups:

- Carcinogenic to Humans
- Likely to be Carcinogenic to Humans
- Suggestive Evidence of Carcinogenic Potential
- Inadequate Information to Assess Carcinogenic Potential

As shown in Attachment E-1.1, some of the constituents detected in the sediment are not designated as Group A or as being “Carcinogenic to Humans”, which means U.S. EPA acknowledges that there is either inadequate evidence or a lack of evidence that these constituents cause cancer in humans. Therefore, evaluating these constituents as human carcinogens in derivation of the RBSLs is highly conservative and overstates actual cancer risk.

Cancer slope factors (SFs) and unit risk factors (URFs) for these constituents and their sources are shown in Attachment E-1.1. The oral SFs and inhalation URFs represent 95% upper confidence bounds on the probability of getting cancer over a lifetime per unit dose. As recognized by U.S. EPA, there is significant scientific evidence that some of the SFs and URFs may be overly conservative in that they ignore the potential existence of threshold doses. Nonetheless, they are used here as conservative assessment tools.

E3.2 Noncancer Toxicity Values

Constituents designated by U.S. EPA as belonging to the cancer weight-of-evidence Group D (Not Classifiable as to Human Carcinogenicity) are considered noncarcinogens. Constituents not designated as belonging to any cancer group are also treated as noncarcinogens. Chronic reference doses (RfDs) and chronic inhalation reference concentrations (RfCs) and their

sources are shown in Attachment E-1.1. The exposure duration for the noncancer RBSLs for the recreators (6 years) is less than the threshold between subchronic and chronic exposures (1/10 of the lifetime or 7 years) according to U.S. EPA (1991). Nonetheless, chronic RfDs and RfCs are conservatively used in derivation of the recreational RBSLs, for consistency with WDNR guidance (2016).

The oral RfDs and inhalation RfCs represent conservative estimates of the daily exposure to the human population, including sensitive subpopulations (e.g., children), which are likely to be without an appreciable risk of deleterious effects during a lifetime. These RfDs and RfCs typically incorporate several safety factors to account for uncertainties in their derivation, which in combination often result in overall uncertainty factors of 1,000 or more. Furthermore, for many constituents, there is significant scientific debate about the validity of these RfDs and RfCs, and the association of these doses and concentrations to potential adverse health consequences. Nonetheless, the RfDs and RfCs are used here as conservative assessment tools.

E3.3 Extrapolation of Toxicity Values

The U.S. EPA sources of toxicity values listed above do not provide dermal toxicity values for any of the constituents. Therefore, oral toxicity values (i.e., oral SFs and RfDs) are used as dermal toxicity values in derivation of the RBSLs. Adjustments to the oral toxicity values, where appropriate, are made in this route-to-route extrapolation following U.S. EPA guidance (U.S. EPA 2004b).

The U.S. EPA sources of toxicity values listed above do not provide inhalation toxicity values (URFs and RfCs) for all of the constituents. Route-to-route extrapolation from oral toxicity values was not performed to obtain inhalation toxicity values for these constituents, consistent with U.S. EPA guidance on performing inhalation risk assessments (U.S. EPA 2009a).

E3.4 Lead

For recreator exposure to lead in river sediment and in soil originating as sediment, a screening level of 4,300 mg/kg is used. This screening level is calculated following U.S. EPA guidance on Assessing Intermittent or Variable Exposures at Lead Sites (U.S. EPA 2003c). Using Equation 7 of this guidance, a conservative risk-based target site concentration can be back-calculated from Office of Solid Waste and Emergency Response (OSWER) residential soil lead screening concentration of 400 ppm (associated with a 5% individual risk of elevated blood lead concentration). The residential lead screening level is used since the recreator is assumed to include children under 6 years old. The lead screening level is calculated by solving for PbS_{site} in Equation 7 (listed below). The “site” in the equation below is the area near the site where the sediment samples were collected in the Rock River.

$$PbS_W = EF_{site} \times \left[(f_{site} \times PbS_{site}) + \left(f_{yard} \times PbS_{yard}\right)\right] + (EF_{yard} \times PbS_{yard})$$

PbS_{site} = Average soil or sediment lead concentration at an exposure unit on the site (ppm) = screening level

PbS_W = Weighted soil lead concentration (ppm) = 400 ppm

PbS_{yard} = Average soil lead concentration near home (ppm) = 100 ppm

f_{site} = Fraction of daily outdoor time spent at the secondary location on days when the site is visited (dimensionless) = 2 hours at site/16 hours outdoors

f_{yard} = Fraction of daily outdoor time at local background soil lead concentration (usually near home) = 1-f_{site} (dimensionless) = 14 hours home/16 hours outdoors

EF_{site} = Exposure frequency expressed as fraction of the days/week child visits the secondary location during the exposure period = 4 days per week

EF_{yard} = Exposure frequency expressed as fraction of the days/week child does not visit the secondary location during the exposure period = 1-EF_{site} = 3 days per week.

The yard soil lead concentration is assumed to be 100 mg/kg, which is conservative compared to the average and maximum lead concentrations in background Wisconsin soils (12 mg/kg and 30 mg/kg, respectively, Dragun 2005).

Since the recreator lead screening level is calculated for one week of exposure per U.S. EPA guidance, an exposure frequency of 4 days per week (i.e., more than half a week) was conservatively assumed as a worst case week during the 5 or 9 month exposure period. This is twice the exposure frequency of 2 days per week that was used to calculate RBSLs for all other chemicals, which is an average of the weekly exposure over several months (5 or 9 months). This screening level is used for recreator exposure to river sediment and soil that originated from river sediment, since the exposure frequency over the week the screening level is calculated is the same for both media.

For maintenance worker exposure to lead in river sediment, a screening level is not necessary and was not calculated, because the expected exposure frequency is well below the level at which U.S. EPA guidance (2003c) recommends derivation of a lead screening level (i.e., at least 90 consecutive days of exposure).

For landscape exposure to lead in soil originating from sediment, a screening level based on U.S. EPA's blood lead modeling approach designed to be protective of potential exposures to soil lead in industrial settings (U.S. EPA 2003a, 2009b) of 2,240 mg/kg is used to conservatively assess landscaper exposure to lead in soil. The calculation of this screening level is presented in Attachment E-4.4.

E4 Risk-Based Screening Level Calculations

RBSLs for the ingestion and dermal contact routes are calculated as follows:

$$Cancer\ RBSL = \frac{TR}{LADD^{*} \cdot SF}$$

$$Noncancer\ RBSL = \frac{THQ \cdot RfD}{ADD^{*}}$$

where *TR* is the target cancer risk (conservatively set at 10% of WDNR's cumulative cancer risk limit, or 10^{-6}) and *THQ* is the target hazard quotient (conservatively set at 10% of WDNR's HI limit, or 0.1).

Similarly for the inhalation route, RBSLs were calculated as follows:

$$Cancer\ RBSL = \frac{TR \cdot AT_c}{URF \cdot ET \cdot EF \cdot ED} \frac{1}{C^*_{air}}$$

$$Noncancer\ RBSL = \frac{THQ \cdot RfC \cdot AT_{nc}}{ET \cdot EF \cdot ED} \frac{1}{C^*_{air}}$$

The RBSL for all routes is calculated by combining the cancer RBSLs for each route (ingestion, dermal contact, inhalation of vapors, and inhalation of particulates, if applicable) and the noncancer RBSLs for each route as follows:

$$RBSL = \left(\sum_i RBSL_i^{-1} \right)^{-1}$$

over all routes i. For chemicals with both cancer and noncancer RBSLs, the lower of the two values is used.

For carcinogens with a mutagenic mode of action for which U.S. EPA guidance (U.S. EPA 2005) recommends the use of age-dependent adjustment factors (ADAFs), cancer risk for exposures from 0 to 2 years of age and from 2 to 16 years of age are multiplied by the U.S. EPA-recommended ADAFs of 10 and 3, respectively, and RBSLs are calculated as follows:

$$RBSL_{Ing} = \frac{TR \cdot AT_c}{FC \cdot EF} \cdot \frac{1}{SF} \cdot \left(\begin{array}{l} \frac{IR_{0-6} \cdot ED_{0-2}}{BW_{0-6}} \cdot ADAF_{0-2} + \frac{IR_{0-6} \cdot ED_{2-6}}{BW_{0-6}} \cdot ADAF_{2-16} \\ + \frac{IR_{6-30} \cdot ED_{6-16}}{BW_{6-30}} \cdot ADAF_{2-16} + \frac{IR_{6-30} \cdot ED_{16-30}}{BW_{6-30}} \end{array} \right)^{-1}$$

$$RBSL_{derm} = \frac{TR \cdot AT_c}{ABS_{derm} \cdot FC \cdot EF} \cdot \frac{1}{SF} \cdot \left(\begin{array}{l} \frac{SA_{0-6} \cdot AF_{0-6} \cdot ED_{0-2}}{BW_{0-6}} \cdot ADAF_{0-2} + \frac{SA_{0-6} \cdot AF_{0-6} \cdot ED_{2-6}}{BW_{0-6}} \cdot ADAF_{2-16} \\ + \frac{SA_{6-30} \cdot AF_{6-30} \cdot ED_{6-16}}{BW_{6-30}} \cdot ADAF_{2-16} + \frac{SA_{6-30} \cdot AF_{6-30} \cdot ED_{16-30}}{BW_{6-30}} \end{array} \right)^{-1}$$

$$RBSL_{inh} = \frac{TR \cdot AT_c}{C^*_{air} \cdot ET \cdot EF} \cdot \frac{1}{URF} \cdot \left(ED_{0-2} \cdot ADAF_{0-2} + ED_{2-16} \cdot ADAF_{2-16} + ED_{16-30} \right)^{-1}$$

where *IR, ED, BW, SA* and *AF* are the values for the identified age-groups (Attachment E-1.3); $ADAF_{0\text{-}2}$ is 10; and $ADAF_{2\text{-}16}$ is 3 (U.S. EPA 2005).

Cancer and noncancer RBSL calculations, respectively, are shown in Attachments E-2.1 and E-2.2 (recreator sediment), E-2.5 and E-2.6 (recreator soil), E-3.1 and E-3.2 (maintenance worker), and E-4.2 and E-4.3 (landscaper). For chemicals with both cancer and noncancer RBSLs, the lower of the two values is used. A comparison of the sediment data to RBSLs is presented in Attachment E5.

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Attachment E-1
Toxicity Values, Physical and Chemical Properties and High-End Exposure Factors

Attachment E-1

Toxicity Values, Physical and Chemical Properties, and High-End Exposure Factors

Contents

Attachment E-1.1: Toxicity Values
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical	CASRN	Cancer Classification			ADAF			SF_{oral} (mg/kg/d)$^{-1}$			SF_{dermal} (mg/kg/d)$^{-1}$			URF (mg/m^3)$^{-1}$			RfD_{oral} (mg/kg/d)				RfD_{dermal} (mg/kg/d)				RfC (mg/m^3)			
			Group	Ref	Note	Y/N	f_{oral}	f_{inh}	Value	Ref	Notes	Value	Ref	Notes	Value	Ref	Notes	Value	UF	Ref	Notes	Value	UF	Ref	Notes	Value	UF	Ref	Notes
VOC	Acetone	67-64-1	ID	1		N												9.0E-01	1,000	1		9.0E-01	1,000	125	104	3.1E+01	100	129	111
VOC	2-Butanone	78-93-3	ID	1		N												6.0E-01	1,000	1		6.0E-01	1,000	125	104	5.0E+00	300	1	
VOC	Carbon Disulfide	75-15-0				N												1.0E-01	100	1		1.0E-01	100	125	104	7.0E-01	30	1	
VOC	Cumene	98-82-8	D	1		N												1.0E-01	1,000	1		1.0E-01	1,000	125	104	4.0E-01	1,000	1	
VOC	Cyclohexane	110-82-7	ID	1		N														126	90			125	104	6.0E+00	300	1	
VOC	Methyl Acetate	79-20-9	ID	126		N												1.0E+00	1,000	2		1.0E+00	1,000	125	104				
VOC	Methylcyclohexane	108-87-2	ID	126		N														126	90			125	104			126	90
VOC	Methylene Chloride	75-09-2	LC	1		Y	1	1	2.0E-03	1	159	2.0E-03	125	104	1.0E-05	1	159	6.0E-03	30	1		6.0E-03	30	125	104	6.0E-01	30	1	
VOC	1,2,4-Trichlorobenzene	120-82-1	LC	126		N			2.9E-02	126		2.9E-02	125	104				1.0E-02	1,000	1		1.0E-02	1,000	125	104	2.0E-03	3,000	126	
VOC	1,2,4-Trimethylbenzene	95-63-6	ID	126		N														126	90			125	104	7.0E-03	3,000	126	
VOC	1,3,5-Trimethylbenzene	108-67-8	ID	126		N														126	90, 181			125	104	1.0E-02	3,000	126	116
VOC	Xylenes (total)	1330-20-7	ID	1		N												2.0E-01	1,000	1		2.0E-01	1,000	125	104	1.0E-01	300	1	
SVOC	Acenaphthene	83-32-9	ID	126		N				126	90		125	104		126	90	6.0E-02	3,000	1		6.0E-02	3,000	125	104			126	90
SVOC	Acenaphthylene	208-96-8	D	1		N												3.0E-02	3,000	1	20	3.0E-02	3,000	125	104				
SVOC	Anthracene	120-12-7	ID	1		N												3.0E-01	3,000	1		3.0E-01	3,000	125	104			2	90
SVOC	Benzaldehyde	100-52-7				N												1.0E-01	1,000	1		1.0E-01	1,000	125	104				
SVOC	Benzo(a)anthracene	56-55-3	B2	1		Y	1	1	7.3E-01	10	5, 159	7.3E-01	125	104	8.8E-02	10	5, 159			126	90			125	104			126	90
SVOC	Benzo(a)pyrene	50-32-8	B2	1		Y	1	1	7.3E+00	1	159	7.3E+00	125	104	8.8E-01	132	159												
SVOC	Benzo(b)fluoranthene	205-99-2	B2	1		Y	1	1	7.3E-01	10	5, 159	7.3E-01	125	104	8.8E-02	10	5, 159												
SVOC	Benzo(g,h,i)perylene	191-24-2	D	1		N												3.0E-02	3,000	1	20	3.0E-02	3,000	125	104				
SVOC	Benzo(k)fluoranthene	207-08-9	B2	1		Y	1	1	7.3E-02	10	5, 159	7.3E-02	125	104	8.8E-03	10	5, 159												
SVOC	1,1-Biphenyl	92-52-4	SC	1		N			8.2E-03	1		8.2E-03	125	104				5.0E-01	30	1		5.0E-01	30	125	104			1	90
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1		N			1.4E-02	1		1.4E-02	125	104				2.0E-02	1,000	1		2.0E-02	1,000	125	104				
SVOC	Butylbenzylphthalate	85-68-7	C	1		N			1.9E-03	126		1.9E-03	125	104				2.0E-01	1,000	1		2.0E-01	1,000	125	104				
SVOC	Caprolactam	105-60-2				N												5.0E-01	100	1		5.0E-01	100	125	104	2.2E-03		131	
SVOC	Carbazole	86-74-8	B2	2		N			2.0E-02	2		2.0E-02	125	104															
SVOC	Chrysene	218-01-9	B2	1		Y	1	1	7.3E-03	10	5, 159	7.3E-03	125	104	8.8E-04	10	5, 159												
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1		Y	1	1	7.3E+00	10	5, 159	7.3E+00	125	104	8.8E-01	10	5, 159												
SVOC	Dibenzofuran	132-64-9	D	1		N												4.0E-03	3,000	126	116	4.0E-03	3,000	125	104			126	90
SVOC	Di-n-butylphthalate	84-74-2	D	1		N												1.0E-01	1,000	1	6	1.0E-01	1,000	125	104			1	90
SVOC	Fluoranthene	206-44-0	D	1		N												4.0E-02	3,000	1		4.0E-02	3,000	125	104				
SVOC	Fluorene	86-73-7	D	1		N												4.0E-02	3,000	1		4.0E-02	3,000	125	104				
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1		Y	1	1	7.3E-01	10	5, 159	7.3E-01	125	104	8.8E-02	10	5, 159												
SVOC	Isophorone	78-59-1	C	1		N			9.5E-04	1		9.5E-04	125	104				2.0E-01	1,000	1		2.0E-01	1,000	125	104	2.0E+00		131	
SVOC	2-Methylnaphthalene	91-57-6	ID	126		N												4.0E-03	1,000	1		4.0E-03	1,000	125	104			126	90
SVOC	3&4-Methylphenol	65794-96-4				N												5.0E-03	1,000	2	6, 130	5.0E-03	1,000	125	104			1	90, 130
SVOC	Naphthalene	91-20-3	C	1		N									3.4E-02	135		2.0E-02	3,000	1		2.0E-02	3,000	125	104	3.0E-03	3,000	1	
SVOC	Perylene	198-55-0				N																							
SVOC	Phenanthrene	85-01-8	D	1		N												3.0E-02	3,000	1	20	3.0E-02	3,000	125	104				
SVOC	Phenol	108-95-2	ID	1		N												3.0E-01	300	1		3.0E-01	300	125	104			1	90,98
SVOC	Pyrene	129-00-0	NC	126		N												3.0E-02	3,000	1		3.0E-02	3,000	125	104				
PCB	PCBs (total)	1336-36-3	B2	1		N			2.0E+00	1	30,32	2.0E+00	125	104	5.7E-01	1	30,32, 45	2.0E-05	300	1	72	2.0E-05	300	125	104				
INORG	Antimony	7440-36-0	ID	126		N												4.0E-04	1,000	1		6.0E-05	1,000	125	104			126	90
INORG	Arsenic	7440-38-2	A	1		N			1.5E+00	1		1.5E+00	125	104	4.3E+00	1		3.0E-04	3	1		3.0E-04	3	125	104	1.5E-05		131	
INORG	Barium	7440-39-3	NC	1		N												2.0E-01	300	1		1.4E-02	300	125	104			1	90
INORG	Beryllium	7440-41-7	B1	1		N									2.4E+00	1		2.0E-03	300	1		1.4E-05	300	125	104	2.0E-05	10	1	
INORG	Cadmium	7440-43-9	B1	1		N									1.8E+00	1		1.0E-03	10	1	95	2.5E-05	10	125	104	1.0E-05	9	129	111
INORG	Chromium (total)	7440-47-3				N			5.0E-01	141	8	2.0E+01	125	104	1.2E+01	1	8	3.0E-03	900	1	8	7.5E-05	900	125	104	1.0E-04	300	1	59, 8
INORG	Chromium III	16065-83-1	D	1		N												1.5E+00	1,000	1		2.0E-02	1,000	125	104	5.0E-03	90	129	111, 166, 116
INORG	Cobalt	7440-48-4	LC	126		N									9.0E+00	126	140	3.0E-04	3,000	126		3.0E-04	3,000	125	104	6.0E-06	300	126	
INORG	Copper	7440-50-8	D	1		N												4.0E-02	2	50	49	4.0E-02	2	125	104				
INORG	Lead	7439-92-1	B2	1		N																							
INORG	Manganese	7439-96-5	D	1		N												1.4E-01	1	1		8.4E-03	1	125	104	5.0E-05	1,000	1	
INORG	Mercury	7439-97-6	D	1		N												3.0E-04	1,000	1	51	2.1E-05	1,000	125	104	3.0E-04	30	1	
INORG	Methyl mercury	22967-92-6	C	1		N												1.0E-04	10	1		1.0E-04	10	125	104				
INORG	Nickel	7440-02-0	A	1		N									2.4E-01	1		2.0E-02	300	1		8.0E-04	300	125	104	9.0E-05	30	129	111
INORG	Selenium	7782-49-2	D	1		N												5.0E-03	3	1		5.0E-03	3	125	104	2.0E-02		131	
INORG	Silver	7440-22-4	D	1		N												5.0E-03	3	1		2.0E-04	3	125	104	1.0E-05	1,000	83	
INORG	Thallium	7440-28-0	ID	126		N														1	90			125	104			126	90
INORG	Vanadium	7440-62-2	ID	1		N												5.0E-03	100	1	154	1.3E-04	100	125	104	1.0E-04	30	129	111
INORG	Zinc	7440-66-6	ID	1		N												3.0E-01	3	1		3.0E-01	3	125	104				

Attachment E-1.1: Toxicity Values
Janesville Assembly Plant, Janesville, Wisconsin

References:

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10	USEPA. 1993. Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons. EPA/600/2-93/089. July.
50	USEPA. 56 FR 26460, June 7, 1991. Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper. Final Rule.
83	USEPA. NCEA. 1994. Risk Assessment Issue Paper for: Derivation of a Provisional RfC for Silver [CASRN 7440-22-4]. June 30.
125	USEPA. 2004. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. July.
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129	ATSDR. 2015. Minimal Risk Levels. September.
131	CalEPA. ARB. 2014. Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values. July 3.
132	USEPA. NCEA, Superfund Technical Support Center. 1994. Risk Assessment Issue Paper: Status of Inhalation Cancer Unit Risk for Benzo[a]pyrene. December.
135	CalEPA. OEHHA. 2009. Technical Support Document for Cancer Potency Factors. Appendix H. May.
141	NJDEP. 2009. Derivation of Ingestion-Based Soil Remediation Criteria for Cr+6 Based on the NTP Chronic Bioassay Data for Sodium Dichromate Dihydrate. April.
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Attachment E-1.1: Toxicity Values
Janesville Assembly Plant, Janesville, Wisconsin

Notes:

5	Based on potency relative to Benzo(a)pyrene [CASRN 50-32-8], as described in the indicated reference.
6	Under review, according to IRIS.
8	ENVIRON used Chromium VI [CASRN 18540-29-9] value from the indicated reference as a surrogate.
20	ENVIRON used Pyrene [CASRN 129-00-0] value from the indicated reference as a surrogate.
30	Upper-bound slope factor.
32	High risk & persistence tier for: food chain exposure; sediment/soil ingestion; dust/aerosol inhalation; dermal exposure, if an absorption factor is applied; presence of dioxin-like, tumor-promoting/persistent congeners; and all early life exposures.
45	ENVIRON derived inhalation URF from Inhalation Slope Factor value presented in the indicated reference, using standard USEPA methodology presented in HEAST.
49	ENVIRON derived oral RfD from adverse health effect level value presented in the indicated reference.
51	ENVIRON used Mercuric Chloride [CASRN 7487-94-7] value from the indicated reference as a surrogate.
59	This RfC is for particulates. The RfC for chromic acid mists and dissolved Chromium VI aerosols is 0.000008 mg/m3.
72	ENVIRON used Aroclor 1254 [CASRN 11097-69-1] value from the indicated reference as a surrogate for PCBs [CASRN 1336-36-3].
90	Inadequate data exist to derive a toxicity value, according to the indicated reference.
95	This RfD is used to evaluate dietary exposures. A RfD of 0.0005 mg/kg/day is used to evaluate water ingestion exposures.
98	Route-to-route extrapolation is not appropriate, according to the indicated reference.
111	Value as published is an MRL in the indicated reference.
116	ENVIRON used subchronic value as a surrogate for the chronic value.
130	ENVIRON used 4-Methylphenol [CASRN 106-44-5] values from the indicated reference as a surrogate.
140	Value based on cobalt sulfate (soluble).
154	The oral RfD for vanadium is derived from the IRIS oral RfD for vanadium pentoxide by factoring out the molecular weight of the oxide ion.
159	Because the chemical has a mutagenic mode of action according to USEPA, the SF and URF are adjusted by the following age-dependent adjustment factors (ADAFs) before use: 10 for ages 0 to 2; 3 for ages 2 to 16; and 1 for ages 16 and older (USEPA 2005).
166	This MRL is for insoluble particulates.
181	ENVIRON used 1,2,4-trimethylbenzene [CASRN 95-63-6] value from the indicated reference as a surrogate.

Attachment E-1.2: Physical and Chemical Properties
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical	CASRN	K_{oc} (L/kg)			K_d (L/kg)			H (unitless)				D_{air} (m^2/d)			D_{water} (m^2/d)			K_p (cm/hr)			ABS_d (unitless)			FA (unitless)			$\Delta H_{v,b}$ (cal/mol)			T_C (Kelvin)			T_B (Kelvin)			HENRY Ref Temp (°C)
			Value	Ref	Notes	Value	Ref	Notes	Value	Adjust	Ref	Notes	Value	Ref	Notes	Value	Ref	Notes	Value	Ref	Notes	Value	Ref	Notes	Value	Ref	Notes	Value	Ref	Notes	Value	Ref	Notes	Value	Ref	Notes	Value
VOC	Acetone	67-64-1	5.8E-01	44	82				1.6E-03	8.5E-04	44		1.1E+00	44		9.8E-05	44		5.2E-04	44	115	0.0E+00	62		1.0E+00	62	114	6.96E+03	44	118	5.08E+02	44	118	3.29E+02	44	118	2.5E+01
VOC	2-Butanone	78-93-3	2.0E+00	69	111				2.3E-03	1.4E-03	50.3	123	7.0E-01	69		8.5E-05	69		9.6E-04	69	115	0.0E+00	62		1.0E+00	62		7.48E+03	70		5.37E+02	70		3.53E+02	70		2.0E+01
VOC	Carbon Disulfide	75-15-0	4.6E+01	44	111				1.2E+00	7.2E-01	44		9.0E-01	44		8.6E-05	44		1.2E-02	44	115	0.0E+00	62		1.0E+00	62		6.39E+03	44	118	5.52E+02	44	118	3.19E+02	44	118	2.5E+01
VOC	Cumene	98-82-8	7.1E+02	69	111				5.3E-01	1.8E-01	69		5.6E-01	69		6.1E-05	69		6.8E-02	69	115	0.0E+00	62		1.0E+00	62	114	1.03E+04	70		6.31E+02	70		4.26E+02	70		2.5E+01
VOC	Cyclohexane	110-82-7	6.3E+02	39	111				8.0E+00	4.9E+00	50.1	92, 123	7.2E-01	69		7.9E-05	69		1.0E-01	39	115	0.0E+00	62		1.0E+00	62	114										2.0E+01
VOC	Methyl Acetate	79-20-9	1.7E+00	39	111				3.7E-03	1.9E-03	69		8.3E-01	69		9.5E-05	69		8.0E-04	39	115	0.0E+00	62		1.0E+00	62	114	7.26E+03	70		5.07E+02	70		3.30E+02	70		2.5E+01
VOC	Methylcyclohexane	108-87-2	2.7E+02	69	111				1.8E+01	8.6E+00	69		6.4E-01	69		7.4E-05	69		4.0E-02	69	115	0.0E+00	62		1.0E+00	62	114	7.47E+03	70		5.72E+02	70		3.74E+02	70		2.5E+01
VOC	Methylene Chloride	75-09-2	1.2E+01	44	111				9.0E-02	5.0E-02	44		8.7E-01	44		1.0E-04	44		3.5E-03	44	115	0.0E+00	62		1.0E+00	62		6.71E+03	44	118	5.10E+02	44	118	3.13E+02	44	118	2.5E+01
VOC	1,2,4-Trichlorobenzene	120-82-1	1.8E+03	44	111				5.8E-02	1.9E-02	44		2.6E-01	44		7.1E-05	44		6.8E-02	44	115	0.0E+00	62		1.0E+00	62		1.05E+04	44	118	7.25E+02	44	118	4.86E+02	44	118	2.5E+01
VOC	1,2,4-Trimethylbenzene	95-63-6	1.2E+03	39	111				2.5E-01	9.3E-02	69		5.2E-01	69		6.8E-05	69		1.1E-01	39	115	0.0E+00	62		1.0E+00	62		9.37E+03	70		6.49E+02	70		4.42E+02	70		2.5E+01
VOC	1,3,5-Trimethylbenzene	108-67-8	1.8E+03	69	111				2.4E-01	8.9E-02	69		5.2E-01	69		7.5E-05	69		1.5E-01	69	115	0.0E+00	62		1.0E+00	62		9.32E+03	70		6.37E+02	70		4.38E+02	70		2.5E+01
VOC	Xylenes (total)	1330-20-7	3.9E+02	44	111				2.8E-01	1.7E-01	44		6.7E-01	44		7.6E-05	44		5.0E-02	44	115	0.0E+00	62		1.0E+00	62	114							4.14E+02	44	118	2.5E+01
SVOC	Acenaphthene	83-32-9	7.1E+03	44	82				6.4E-03	1.6E-03	44		3.6E-01	44		6.6E-05	44		8.4E-02	44	115	1.3E-01	62		1.0E+00	62	117	1.22E+04	44	118	8.03E+02	44	118	5.51E+02	44	118	2.5E+01
SVOC	Acenaphthylene	208-96-8	7.5E+03	69	82				4.7E-03	1.6E-03	50.3	123	3.9E-01	69		6.0E-05	69		8.9E-02	69	115	1.3E-01	62		1.0E+00	62	114										2.0E+01
SVOC	Anthracene	120-12-7	3.0E+04	44	82				2.7E-03	5.4E-04	44		2.8E-01	44		6.7E-05	44		1.6E-01	44	115	1.3E-01	62		1.0E+00	62	117	1.31E+04	44	118	8.73E+02	44	118	6.15E+02	44	118	2.5E+01
SVOC	Benzaldehyde	100-52-7	2.9E+01	39	82				9.7E-04	2.9E-04	69		6.2E-01	69		7.8E-05	69		3.8E-03	39	115	1.0E-01	62		1.0E+00	62	114	1.17E+04	70		6.95E+02	70		4.52E+02	70		2.5E+01
SVOC	Benzo(a)anthracene	56-55-3	4.0E+05	44	82				1.4E-04	1.9E-05	44		4.4E-01	44		7.8E-05	44		4.8E-01	44	115	1.3E-01	62		9.0E-01	62	117	1.60E+04	44	118	1.00E+03	44	118	7.08E+02	44	118	2.5E+01
SVOC	Benzo(a)pyrene	50-32-8	1.0E+06	44	82				4.6E-05	3.8E-06	44		3.7E-01	44		7.8E-05	44		6.6E-01	44	115	1.3E-01	62		8.0E-01	62	117	1.90E+04	44	118	9.69E+02	44	118	7.16E+02	44	118	2.5E+01
SVOC	Benzo(b)fluoranthene	205-99-2	1.2E+06	44	82				4.6E-03	4.9E-04	44		2.0E-01	44		4.8E-05	44		7.6E-01	44	115	1.3E-01	62		8.0E-01	62	117	1.70E+04	44	118	9.69E+02	44	118	7.16E+02	44	118	2.5E+01
SVOC	Benzo(g,h,i)perylene	191-24-2	1.3E+07	69	82				1.4E-05	4.6E-06	50.3	123	1.9E-01	69		4.5E-05	69		2.7E+00	69	115	1.3E-01	62		7.0E-01	62	117										2.0E+01
SVOC	Benzo(k)fluoranthene	207-08-9	1.2E+06	44	82				3.4E-05	3.1E-06	44		2.0E-01	44		4.8E-05	44		7.6E-01	44	115	1.3E-01	62		8.0E-01	62	117	1.80E+04	44	118	1.02E+03	44	118	7.53E+02	44	118	2.5E+01
SVOC	1,1-Biphenyl	92-52-4	1.0E+04	39	82				1.2E-02	5.4E-03	50.1	92, 123	3.5E-01	69		7.0E-05	69		1.1E-01	39	115	1.0E-01	62		1.0E+00	62	117	1.09E+04	70		7.89E+02	70		5.29E+02	70		2.0E+01
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	1.5E+07	44	82				4.2E-06	4.0E-07	44		3.0E-01	44		3.2E-05	44		6.8E-01	44	115	1.0E-01	62		4.0E-01	62	117	1.60E+04	44	118	8.06E+02	44	118	6.57E+02	44	118	2.5E+01
SVOC	Butylbenzylphthalate	85-68-7	5.7E+04	44	82				5.2E-05	7.4E-06	44		1.5E-01	44		4.2E-05	44		4.4E-02	44	115	1.0E-01	62		9.0E-01	62	117	1.40E+04	44	118	8.40E+02	44	118	6.61E+02	44	118	2.5E+01
SVOC	Caprolactam	105-60-2	6.5E-01	39	82				2.1E-07	7.0E-08	69		6.0E-01	69		7.8E-05	69		2.8E-04	39	115	1.0E-01	62		1.0E+00	62	114										2.5E+01
SVOC	Carbazole	86-74-8	3.4E+03	44	82				6.3E-07	1.2E-07	44		3.4E-01	44		6.1E-05	44		4.3E-02	44	115	1.0E-01	62		1.0E+00	62	117	1.40E+04	44	118	8.99E+02	44	118	6.28E+02	44	118	2.5E+01
SVOC	Chrysene	218-01-9	4.0E+05	44	82				3.9E-03	4.6E-04	44		2.1E-01	44		5.4E-05	44		4.8E-01	44	115	1.3E-01	62		9.0E-01	62	117	1.65E+04	44	118	9.79E+02	44	118	7.14E+02	44	118	2.5E+01
SVOC	Dibenz(a,h)anthracene	53-70-3	3.8E+06	44	82				6.0E-07	1.0E-08	44		1.7E-01	44		4.5E-05	44		1.1E+00	44	115	1.3E-01	62		7.0E-01	62	117	3.00E+04	44	118	9.90E+02	44	118	7.43E+02	44	118	2.5E+01
SVOC	Dibenzofuran	132-64-9	2.1E+04	69	82				8.7E-03	4.4E-05	50.3	123	2.1E-01	69		5.2E-05	69		1.4E-01	69	115	1.0E-01	62		1.0E+00	62	117	6.64E+04	70		8.24E+02	70		5.60E+02	70		2.0E+01
SVOC	Di-n-butylphthalate	84-74-2	3.4E+04	44	82				3.9E-08	5.5E-09	44		3.8E-01	44		6.8E-05	44		4.8E-02	44	115	1.0E-01	62		9.0E-01	62		1.48E+04	44	118	7.99E+02	44	118	6.13E+02	44	118	2.5E+01
SVOC	Fluoranthene	206-44-0	1.1E+05	44	82				6.6E-04	1.2E-04	44		2.6E-01	44		5.5E-05	44		2.8E-01	44	115	1.3E-01	62		1.0E+00	62	117	1.38E+04	44	118	9.05E+02	44	118	6.56E+02	44	118	2.5E+01
SVOC	Fluorene	86-73-7	1.4E+04	44	82				2.6E-03	6.4E-04	44		3.1E-01	44		6.8E-05	44		1.1E-01	44	115	1.3E-01	62		1.0E+00	62	117	1.27E+04	44	118	8.70E+02	44	118	5.70E+02	44	118	2.5E+01
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	3.4E+06	44	82				6.6E-05	4.9E-06	44		1.6E-01	44		4.9E-05	44		1.1E+00	44	115	1.3E-01	62		7.0E-01	62	117	1.90E+04	44	118	1.08E+03	44	118	8.09E+02	44	118	2.5E+01
SVOC	Isophorone	78-59-1	4.7E+01	44	82				2.7E-04	8.8E-05	44		5.4E-01	44		5.8E-05	44		3.5E-03	44	115	1.0E-01	62		1.0E+00	62		1.03E+04	44	118	7.15E+02	44	118	4.88E+02	44	118	2.5E+01
SVOC	2-Methylnaphthalene	91-57-6	6.2E+03	39	82				2.1E-02	8.2E-03	50.3	123	4.5E-01	69		6.7E-05	69		8.9E-02	39	115	1.0E-01	62		1.0E+00	62	117	1.26E+04	70		7.61E+02	70		5.14E+02	70		2.0E+01
SVOC	3&4-Methylphenol	65794-96-4	7.7E+01	1	130, 82				4.1E-05	1.4E-05	50.3	130, 123	6.4E-01	40	130	8.6E-05	40	130	7.3E-03	1	130, 115	1.0E-01	62		1.0E+00	62	114										2.0E+01
SVOC	Naphthalene	91-20-3	2.0E+03	44	82				2.0E-02	6.6E-03	44		5.1E-01	44		6.5E-05	44		5.0E-02	44	115	1.3E-01	62		1.0E+00	62		1.04E+04	44	118	7.48E+02	44	118	4.91E+02	44	118	2.5E+01
SVOC	Perylene	198-55-0																																			
SVOC	Phenanthrene	85-01-8	2.4E+04	69	82				1.7E-03	5.9E-04	50.3	123	3.2E-01	69		6.5E-05	69		1.4E-01	69	115	1.3E-01	62		1.0E+00	62	117										2.0E+01
SVOC	Phenol	108-95-2	2.9E+01	44					1.6E-05	5.2E-06	44		7.1E-01	44		7.9E-05	44		4.5E-03	44	115	1.0E-01	62		1.0E+00	62		1.09E+04	44	118	6.94E+02	44	118	4.55E+02	44	118	2.5E+01
SVOC	Pyrene	129-00-0	1.1E+05	44	82				4.5E-04	7.5E-05	44		2.4E-01	44		6.3E-05	44		2.8E-01	44	115	1.3E-01	62		1.0E+00	62	117	1.44E+04	44	118	9.36E+02	44	118	6.68E+02	44	118	2.5E+01
PHYS	Organic Carbon (total)	C-012																																			
PCB	PCBs (total)	1336-36-3	2.5E+06	64	116, 82				8.2E-02	2.8E-02	64	116	1.7E-01	69	116	4.3E-05	69	116	4.5E-01	64	116, 115	1.4E-01	62		7.0E-01	62	117, 110										2.5E+01
INORG	Antimony	7440-36-0				4.5E+01	44							40	48		40	48	1.0E-03	62		0.0E+00	62													
INORG	Arsenic	7440-38-2				2.9E+01	44	43						40	48		40	48	1.0E-03	62		3.0E-02	62													
INORG	Barium	7440-39-3				4.1E+01	44	43						40	48		40	48	1.0E-03	62		0.0E+00	62													
INORG	Beryllium	7440-41-7				7.9E+02	44	43						40	48		40	48	1.0E-03	62		0.0E+00	62													
INORG	Cadmium	7440-43-9				7.5E+01	44	43						40	48		40	48	1.0E-03	62		1.0E-03	62													
INORG	Chromium (total)	7440-47-3				1.9E+01	44	43, 45						40	48		40	48	2.0E-03	62	45	0.0E+00	62													
INORG	Chromium III	16065-83-1				1.8E+06	44	43											1.0E-03	62		0.0E+00	62													
INORG	Cobalt	7440-48-4				4.5E+01	35												4.0E-04	62		0.0E+00	62													
INORG	Copper	7440-50-8				3.5E+01	35							40	48		40	48	1.0E-03	62		0.0E+00	62													
INORG	Lead	7439-92-1				9.0E+02	35							40	48		40	48	1.0E-04	62		0.0E+00	62													
INORG	Manganese	7439-96-5				6.5E+01	35												1.0E-03	62		0.0E+00	62													
INORG	Mercury	7439-97-6				1.0E+03	67		2.9E-01	1.2E-01	67	123	2.7E-01	44		5.4E-05	44		1.0E-03	62		0.0E+00	62					1.41E+04	44	118	1.75E+03	44	118	6.30E+02	44	118	2.0E+01
INORG	Methyl mercury	22967-92-6				7.0E+03	67												1.0E-03	62																
INORG	Nickel	7440-02-0				6.5E+01	44	43						40	48		40	48	2.0E-04	62		0.0E+00	62													
INORG	Selenium	7782-49-2				5.0E+00	44	43						40	48		40	48	1.0E-03	62		0.0E+00	62													
INORG	Silver	7440-22-4				8.3E+00	44	43						40	48		40	48	6.0E-04	62		0.0E+00	62													
INORG	Thallium	7440-28-0				7.1E+01	44	43						40	48		40	48	1.0E-03	62		0.0E+00	62													
INORG	Vanadium	7440-62-2				1.0E+03	44							40	48		40	48	1.0E-03	62		0.0E+00	62													
INORG	Zinc	7440-66-6				6.2E+01	44	43						40	48		40	48	6.0E-04	62		0.0E+00	62													

Attachment E-1.2: Physical and Chemical Properties
Janesville Assembly Plant, Janesville, Wisconsin

References:

1	USEPA. 1992. Handbook of RCRA Ground-Water Monitoring Constituents. Chemical and Physical Properties (40 CFR Part 264, Appendix IX). EPA-530-R-92-022. September.
35	Baes III, C.F., R.D. Sharp, A.L. Sjoreen, and R.W. Shor. 1984. A Review and Analysis of Parameters for Assessing Transport of Released Radionuclides through Agriculture (AD-89-T-2-A-106) (formerly EPA078-D-X0304), Oak Ridge National Laboratory, ORNL-5786.
39	CHEMFATE data base. Syracuse Research Corporation.
40	Research Triangle Institute, Center for Environmental Analysis. 1995. Supplemental Technical Support Document for Hazardous Waste Identification Rule: Risk Assessment for Human and Ecological Receptors--Volume 1, TABLE A-1. November 1995.
44	USEPA. 1996. Soil Screening Guidance: Technical Background Document and User Guide. Office of Emergency and Remedial Response. EPA/540/R-95/128. May.
50.1	USEPA. 1997. Superfund Chemical Data Matrix (SCDM). Office of Emergency and Remedial Response. September 12.
50.3	USEPA. 20014. Superfund Chemical Data Matrix (SCDM). Office of Superfund Remediation and Technology Innovation. June 20, 2014.
62	USEPA. 2004. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. July.
64	Agency for Toxic Substances and Disease Registry (ATSDR). November 2000. Toxicological Profile for Polychlorinated Biphenyls (PCBs).
67	USEPA. 1997. Mercury Study Report to Congress. EPA's Office of Air Quality Planning and Standards and Office of Research and Development. December.
69	USEPA. 2004. WATER9. Version 2.0.0. Office of Air Quality Planning and Standards. July.
70	USEPA. 2003. User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings. June 19.

Attachment E-1.2: Physical and Chemical Properties Janesville Assembly Plant, Janesville, Wisconsin	
Notes:	
43	The value is associated with pH 6.8.
45	ENVIRON used the value for Chromium VI [CASRN 18540-29-9] presented in indicated reference as a surrogate.
48	Not Available or Not Applicable
82	ENVIRON used Equation (70) from Reference 44 to calculate Koc value using Log Kow value from indicated reference.
92	Indicated source cites CHEMFATE.
110	ENVIRON used the value for 4-Chlorobiphenyl [CASRN 2051-62-9] from the indicated reference as a surrogate.
111	ENVIRON used Equation (71) from Reference 44 to calculate Koc value using Log Kow value from indicated reference.
114	A value of 1 is conservatively used because EPA guidance does not provide a default value.
115	ENVIRON calculated Kp value using equation 3.8 (p.3-7) in reference 62 with log Kow from the indicated reference and the MW presented in table.
116	ENVIRON used the value for Aroclor-1254 [CASRN 11097-69-1] from the indicated reference as a surrogate.
117	ENVIRON derived the FA based on Exhibit A-4 in the indicated reference.
118	From the 2001 Fact Sheet, "Correcting the Henry's Law Constant for Soil Temperature".
123	Value has been assigned a default reference temperature.
130	ENVIRON used 4-Methylphenol [CASRN 106-44-5] values from the indicated reference as a surrogate.

Attachment E-1.3: High-End Exposure Factors
Janesville Assembly Plant, Janesville, Wisconsin

			Maintenance Worker		Recreator (0-2)	Recreator (2-6)	Recreator (6-16)	Recreator (16-30)		Maintenance Worker (Outfalls)		Landscaper	
Soil Ingestion													
Ingestion Rate (mg/d)	IR		100	f	200	200	100	100	f			100	f
Conversion Factor (kg/mg)	CF		1E-06		1E-06	1E-06	1E-06	1E-06				1E-06	
Fraction Contacted (unitless)	FC		1.0		1.0	1.0	1.0	1.0				1.0	
Exposure Frequency (d/yr)	EF		30	f	72	72	72	72	f			30	f
Exposure Duration (yr)	ED		10	e	2	4	10	14	f			10	e
Body Weight (kg-bw)	BW		70	a	15	15	70	70	b			70	a
Averaging Time, carc (d)	ATc		25,550	a	25,550	25,550	25,550	25,550	a			25,550	a
Averaging Time, noncarc (d)	ATnc		3,650	a	2,190	2,190			a			3,650	a
Soil Dermal Contact													
Adherence Factor (mg/cm2)	AD		0.2	c	0.2	0.2	0.07	0.07	c			0.2	c
Skin Surface Area (cm2/d)	SA		3,300	c	2,800	2,800	5,700	5,700	c			3,300	c
Conversion Factor (kg/mg)	CF		1E-06		1E-06	1E-06	1E-06	1E-06				1E-06	
Fraction Contacted (unitless)	FC		1.0		1.0	1.0	1.0	1.0				1.0	
Exposure Frequency (d/yr)	EF		30	f	72	72	72	72	f			30	f
Exposure Duration (yr)	ED		10	e	2	4	10	14	f			10	e
Body Weight (kg-bw)	BW		70	b	15	15	70	70	b			70	b
Averaging Time, carc (d)	ATc		25,550	a	25,550	25,550	25,550	25,550	a			25,550	a
Averaging Time, noncarc (d)	ATnc		3,650	a	2,190	2,190			a			3,650	a
Outdoor Air Inhalation of Soil Vapor and/or Particulates													
Exposure Time (h/d)	ET		8	d	2	2	2	2	f			8	d
Exposure Frequency (d/yr)	EF		30	f	72	72	72	72	f			30	f
Exposure Duration (yr)	ED		10	e	2	4	10	14	f			10	e
Averaging Time, carc (h)	ATc		613,200	a	613,200	613,200	613,200	613,200	a			613,200	a
Averaging Time, noncarc (h)	ATnc		87,600	a	52,560	52,560			a			87,600	a
Sediment Ingestion													
Ingestion Rate (mg/d)	IR		100	f	100	100	50	50	f	50	f		
Conversion Factor (kg/mg)	CF		1E-06		1E-06	1E-06	1E-06	1E-06		1E-06			
Fraction Contacted (unitless)	FC		1.0		1.0	1.0	1.0	1.0		1.0			
Exposure Frequency (d/yr)	EF		5	f	40	40	40	40	f	5	f		
Exposure Duration (yr)	ED		10	e	2	4	10	14	f	10	e		
Body Weight (kg-bw)	BW		70	b	15	15	70	70	b	70	b		
Averaging Time, carc (d)	ATc		25,550	a	25,550	25,550	25,550	25,550	a	25,550	a		
Averaging Time, noncarc (d)	ATnc		3,650	a	2,190	2,190			a	3,650	a		
Sediment Dermal Contact													
Adherence Factor (mg/cm2)	AD		0.2	c	0.2	0.2	0.2	0.2	c	0.2	c		
Skin Surface Area (cm2/d)	SA		3,300	c	2,152	2,152	6,650	6,650	k	3,300	c		
Conversion Factor (kg/mg)	CF		1E-06		1E-06	1E-06	1E-06	1E-06		1E-06			
Fraction Contacted (unitless)	FC		1.0		1.0	1.0	1.0	1.0		1.0			
Exposure Frequency (d/yr)	EF		5	f	40	40	40	40	f	5	f		
Exposure Duration (yr)	ED		10	e	2	4	10	14	f	10	e		
Body Weight (kg-bw)	BW		70	b	15	15	70	70	b	70	b		
Averaging Time, carc (d)	ATc		25,550	a	25,550	25,550	25,550	25,550	a	25,550	a		
Averaging Time, noncarc (d)	ATnc		3,650	a	2,190	2,190			a	3,650	a		

References:

a. Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part A) Interim Final (EPA 1989).
b. Standard default exposure factors. OSWER Directive 9285.6-03 (EPA 1991).
c. Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual: Part E, Supplemental Guidance for Dermal Risk Assessment (EPA 2004).
d. Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual: Part F, Supplemental Guidance for Inhalation Risk Assessment (EPA 2009).
e. The 90th to 95th percentile job tenure for workers in construction (Burmaster 2000).
f. Based on professional judgment and site-specific considerations discussed in the text.
k. Exposure Factors Handbook (EPA 2011).

Attachment E-2
Recreator Calculations

Attachment E-2

Recreator Calculations

Contents

Attachment E-2.1: Cancer RBSL Calculations for Exposure of Recreators to Sediment
Janesville Assembly Plant, Janesville, Wisconsin

				Sediment Ingestion				Sediment Dermal Contact					All Routes
Chem Group	**Chemical**	**CASRN**	**Cancer Class**	**LADD*** (kgSed/ kgBW/d)	**SF_{oral}** $(mg/kg/d)^{-1}$	**f_{oral}**	**RBSL** (mg/kg)	**ABS_{derm}**	**LADD*** (kgSed/ kgBW/d)	**SF_{derm}** $(mg/kg/d)^{-1}$	**f_{oral}**	**RBSL** (mg/kg)	**RBSL** (mg/kg)
VOC	Acetone	67-64-1	ID	8.95E-08									
VOC	2-Butanone	78-93-3	ID	8.95E-08									
VOC	Carbon Disulfide	75-15-0		8.95E-08									
VOC	Cumene	98-82-8	D	8.95E-08									
VOC	Cyclohexane	110-82-7	ID	8.95E-08									
VOC	Methyl Acetate	79-20-9	ID	8.95E-08									
VOC	Methylcyclohexane	108-87-2	ID	8.95E-08									
VOC	Methylene Chloride	75-09-2	LC	8.95E-08	2.0E-03	1	1.3E+03			2.0E-03	1		1.3E+03
VOC	1,2,4-Trichlorobenzene	120-82-1	LC	8.95E-08	2.9E-02		3.9E+02			2.9E-02			3.9E+02
VOC	1,2,4-Trimethylbenzene	95-63-6	ID	8.95E-08									
VOC	1,3,5-Trimethylbenzene	108-67-8	ID	8.95E-08									
VOC	Xylenes (total)	1330-20-7	ID	8.95E-08									
SVOC	Acenaphthene	83-32-9	ID	8.95E-08				1.30E-01	1.28E-07				
SVOC	Acenaphthylene	208-96-8	D	8.95E-08				1.30E-01	1.28E-07				
SVOC	Anthracene	120-12-7	ID	8.95E-08				1.30E-01	1.28E-07				
SVOC	Benzaldehyde	100-52-7		8.95E-08				1.00E-01	9.83E-08				
SVOC	Benzo(a)anthracene	56-55-3	B2	8.95E-08	7.3E-01	1	3.6E+00	1.30E-01	1.28E-07	7.3E-01	1	3.8E+00	1.9E+00
SVOC	Benzo(a)pyrene	50-32-8	B2	8.95E-08	7.3E+00	1	3.6E-01	1.30E-01	1.28E-07	7.3E+00	1	3.8E-01	1.9E-01
SVOC	Benzo(b)fluoranthene	205-99-2	B2	8.95E-08	7.3E-01	1	3.6E+00	1.30E-01	1.28E-07	7.3E-01	1	3.8E+00	1.9E+00
SVOC	Benzo(g,h,i)perylene	191-24-2	D	8.95E-08				1.30E-01	1.28E-07				
SVOC	Benzo(k)fluoranthene	207-08-9	B2	8.95E-08	7.3E-02	1	3.6E+01	1.30E-01	1.28E-07	7.3E-02	1	3.8E+01	1.9E+01
SVOC	1,1-Biphenyl	92-52-4	SC	8.95E-08	8.2E-03		1.4E+03	1.00E-01	9.83E-08	8.2E-03		1.2E+03	6.5E+02
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	8.95E-08	1.4E-02		8.0E+02	1.00E-01	9.83E-08	1.4E-02		7.3E+02	3.8E+02
SVOC	Butylbenzylphthalate	85-68-7	C	8.95E-08	1.9E-03		5.9E+03	1.00E-01	9.83E-08	1.9E-03		5.4E+03	2.8E+03
SVOC	Caprolactam	105-60-2		8.95E-08				1.00E-01	9.83E-08				
SVOC	Carbazole	86-74-8	B2	8.95E-08	2.0E-02		5.6E+02	1.00E-01	9.83E-08	2.0E-02		5.1E+02	2.7E+02
SVOC	Chrysene	218-01-9	B2	8.95E-08	7.3E-03	1	3.6E+02	1.30E-01	1.28E-07	7.3E-03	1	3.8E+02	1.9E+02
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	8.95E-08	7.3E+00	1	3.6E-01	1.30E-01	1.28E-07	7.3E+00	1	3.8E-01	1.9E-01
SVOC	Dibenzofuran	132-64-9	D	8.95E-08				1.00E-01	9.83E-08				
SVOC	Di-n-butylphthalate	84-74-2	D	8.95E-08				1.00E-01	9.83E-08				
SVOC	Fluoranthene	206-44-0	D	8.95E-08				1.30E-01	1.28E-07				
SVOC	Fluorene	86-73-7	D	8.95E-08				1.30E-01	1.28E-07				
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	8.95E-08	7.3E-01	1	3.6E+00	1.30E-01	1.28E-07	7.3E-01	1	3.8E+00	1.9E+00
SVOC	Isophorone	78-59-1	C	8.95E-08	9.5E-04		1.2E+04	1.00E-01	9.83E-08	9.5E-04		1.1E+04	5.6E+03
SVOC	2-Methylnaphthalene	91-57-6	ID	8.95E-08				1.00E-01	9.83E-08				
SVOC	3&4-Methylphenol	65794-96-4		8.95E-08				1.00E-01	9.83E-08				
SVOC	Naphthalene	91-20-3	C	8.95E-08				1.30E-01	1.28E-07				
SVOC	Perylene	198-55-0		8.95E-08									
SVOC	Phenanthrene	85-01-8	D	8.95E-08				1.30E-01	1.28E-07				
SVOC	Phenol	108-95-2	ID	8.95E-08				1.00E-01	9.83E-08				
SVOC	Pyrene	129-00-0	NC	8.95E-08				1.30E-01	1.28E-07				

Attachment E-2.1: Cancer RBSL Calculations for Exposure of Recreators to Sediment
Janesville Assembly Plant, Janesville, Wisconsin

				Sediment Ingestion				Sediment Dermal Contact					All Routes
Chem Group	**Chemical**	**CASRN**	**Cancer Class**	**LADD*** (kgSed/ kgBW/d)	**SF_{oral}** $(mg/kg/d)^{-1}$	**f_{oral}**	**RBSL** (mg/kg)	**ABS_{derm}**	**LADD*** (kgSed/ kgBW/d)	**SF_{derm}** $(mg/kg/d)^{-1}$	**f_{oral}**	**RBSL** (mg/kg)	**RBSL** (mg/kg)
PHYS	Organic Carbon (total)	C-012		8.95E-08									
PCB	PCBs (total)	1336-36-3	B2	8.95E-08	2.0E+00		5.6E+00	1.40E-01	1.38E-07	2.0E+00		3.6E+00	2.2E+00
INORG	Antimony	7440-36-0	ID	8.95E-08									
INORG	Arsenic	7440-38-2	A	8.95E-08	1.5E+00		7.5E+00	3.00E-02	2.95E-08	1.5E+00		2.3E+01	5.6E+00
INORG	Barium	7440-39-3	NC	8.95E-08									
INORG	Beryllium	7440-41-7	B1	8.95E-08									
INORG	Cadmium	7440-43-9	B1	8.95E-08				1.00E-03	9.83E-10				
INORG	Chromium (total)	7440-47-3		8.95E-08	5.0E-01		2.2E+01			2.0E+01			2.2E+01
INORG	Chromium III	16065-83-1	D	8.95E-08									
INORG	Cobalt	7440-48-4	LC	8.95E-08									
INORG	Copper	7440-50-8	D	8.95E-08									
INORG	Lead	7439-92-1	B2	8.95E-08									
INORG	Manganese	7439-96-5	D	8.95E-08									
INORG	Mercury	7439-97-6	D	8.95E-08									
INORG	Methyl mercury	22967-92-6	C	8.95E-08									
INORG	Nickel	7440-02-0	A	8.95E-08									
INORG	Selenium	7782-49-2	D	8.95E-08									
INORG	Silver	7440-22-4	D	8.95E-08									
INORG	Thallium	7440-28-0	ID	8.95E-08									
INORG	Vanadium	7440-62-2	ID	8.95E-08									
INORG	Zinc	7440-66-6	ID	8.95E-08									

Notes:

f_{oral} is the fraction of the oral toxicity value that USEPA identified as having a mutagenic mode of action.

Cancer RBSLs are calculated at a target cancer risk of 1E-06.

Attachment E-2.2: Noncancer RBSL Calculations for Exposure of Recreators to Sediment
Janesville Assembly Plant, Janesville, Wisconsin

			Sediment Ingestion			Sediment Dermal Contact				All Routes
Chem Group	**Chemical**	**CASRN**	**ADD*** (kgSed/ kgBW/d)	**RfD_{oral}** (mg/kg/d)	**RBSL** (mg/kg)	**ABS_{derm}**	**ADD*** (kgSed/ kgBW/d)	**RfD_{derm}** (mg/kg/d)	**RBSL** (mg/kg)	**RBSL** (mg/kg)
VOC	Acetone	67-64-1	7.31E-07	9.0E-01	1.23E+05			9.0E-01		1.2E+05
VOC	2-Butanone	78-93-3	7.31E-07	6.0E-01	8.21E+04			6.0E-01		8.2E+04
VOC	Carbon Disulfide	75-15-0	7.31E-07	1.0E-01	1.37E+04			1.0E-01		1.4E+04
VOC	Cumene	98-82-8	7.31E-07	1.0E-01	1.37E+04			1.0E-01		1.4E+04
VOC	Cyclohexane	110-82-7	7.31E-07							
VOC	Methyl Acetate	79-20-9	7.31E-07	1.0E+00	1.37E+05			1.0E+00		1.4E+05
VOC	Methylcyclohexane	108-87-2	7.31E-07							
VOC	Methylene Chloride	75-09-2	7.31E-07	6.0E-03	8.21E+02			6.0E-03		8.2E+02
VOC	1,2,4-Trichlorobenzene	120-82-1	7.31E-07	1.0E-02	1.37E+03			1.0E-02		1.4E+03
VOC	1,2,4-Trimethylbenzene	95-63-6	7.31E-07							
VOC	1,3,5-Trimethylbenzene	108-67-8	7.31E-07							
VOC	Xylenes (total)	1330-20-7	7.31E-07	2.0E-01	2.74E+04			2.0E-01		2.7E+04
SVOC	Acenaphthene	83-32-9	7.31E-07	6.0E-02	8.21E+03	1.30E-01	4.09E-07	6.0E-02	1.47E+04	5.3E+03
SVOC	Acenaphthylene	208-96-8	7.31E-07	3.0E-02	4.11E+03	1.30E-01	4.09E-07	3.0E-02	7.34E+03	2.6E+03
SVOC	Anthracene	120-12-7	7.31E-07	3.0E-01	4.11E+04	1.30E-01	4.09E-07	3.0E-01	7.34E+04	2.6E+04
SVOC	Benzaldehyde	100-52-7	7.31E-07	1.0E-01	1.37E+04	1.00E-01	3.14E-07	1.0E-01	3.18E+04	9.6E+03
SVOC	Benzo(a)anthracene	56-55-3	7.31E-07			1.30E-01	4.09E-07			
SVOC	Benzo(a)pyrene	50-32-8	7.31E-07			1.30E-01	4.09E-07			
SVOC	Benzo(b)fluoranthene	205-99-2	7.31E-07			1.30E-01	4.09E-07			
SVOC	Benzo(g,h,i)perylene	191-24-2	7.31E-07	3.0E-02	4.11E+03	1.30E-01	4.09E-07	3.0E-02	7.34E+03	2.6E+03
SVOC	Benzo(k)fluoranthene	207-08-9	7.31E-07			1.30E-01	4.09E-07			
SVOC	1,1-Biphenyl	92-52-4	7.31E-07	5.0E-01	6.84E+04	1.00E-01	3.14E-07	5.0E-01	1.59E+05	4.8E+04
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	7.31E-07	2.0E-02	2.74E+03	1.00E-01	3.14E-07	2.0E-02	6.36E+03	1.9E+03
SVOC	Butylbenzylphthalate	85-68-7	7.31E-07	2.0E-01	2.74E+04	1.00E-01	3.14E-07	2.0E-01	6.36E+04	1.9E+04
SVOC	Caprolactam	105-60-2	7.31E-07	5.0E-01	6.84E+04	1.00E-01	3.14E-07	5.0E-01	1.59E+05	4.8E+04
SVOC	Carbazole	86-74-8	7.31E-07			1.00E-01	3.14E-07			
SVOC	Chrysene	218-01-9	7.31E-07			1.30E-01	4.09E-07			
SVOC	Dibenz(a,h)anthracene	53-70-3	7.31E-07			1.30E-01	4.09E-07			
SVOC	Dibenzofuran	132-64-9	7.31E-07	4.0E-03	5.48E+02	1.00E-01	3.14E-07	4.0E-03	1.27E+03	3.8E+02
SVOC	Di-n-butylphthalate	84-74-2	7.31E-07	1.0E-01	1.37E+04	1.00E-01	3.14E-07	1.0E-01	3.18E+04	9.6E+03
SVOC	Fluoranthene	206-44-0	7.31E-07	4.0E-02	5.48E+03	1.30E-01	4.09E-07	4.0E-02	9.79E+03	3.5E+03
SVOC	Fluorene	86-73-7	7.31E-07	4.0E-02	5.48E+03	1.30E-01	4.09E-07	4.0E-02	9.79E+03	3.5E+03
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	7.31E-07			1.30E-01	4.09E-07			
SVOC	Isophorone	78-59-1	7.31E-07	2.0E-01	2.74E+04	1.00E-01	3.14E-07	2.0E-01	6.36E+04	1.9E+04
SVOC	2-Methylnaphthalene	91-57-6	7.31E-07	4.0E-03	5.48E+02	1.00E-01	3.14E-07	4.0E-03	1.27E+03	3.8E+02

Attachment E-2.2: Noncancer RBSL Calculations for Exposure of Recreators to Sediment
Janesville Assembly Plant, Janesville, Wisconsin

			Sediment Ingestion			Sediment Dermal Contact				All Routes
Chem Group	**Chemical**	**CASRN**	**ADD*** (kgSed/ kgBW/d)	**RfD_{oral}** (mg/kg/d)	**RBSL** (mg/kg)	**ABS_{derm}**	**ADD*** (kgSed/ kgBW/d)	**RfD_{derm}** (mg/kg/d)	**RBSL** (mg/kg)	**RBSL** (mg/kg)
SVOC	3&4-Methylphenol	65794-96-4	7.31E-07	5.0E-03	6.84E+02	1.00E-01	3.14E-07	5.0E-03	1.59E+03	4.8E+02
SVOC	Naphthalene	91-20-3	7.31E-07	2.0E-02	2.74E+03	1.30E-01	4.09E-07	2.0E-02	4.89E+03	1.8E+03
SVOC	Perylene	198-55-0	7.31E-07							
SVOC	Phenanthrene	85-01-8	7.31E-07	3.0E-02	4.11E+03	1.30E-01	4.09E-07	3.0E-02	7.34E+03	2.6E+03
SVOC	Phenol	108-95-2	7.31E-07	3.0E-01	4.11E+04	1.00E-01	3.14E-07	3.0E-01	9.54E+04	2.9E+04
SVOC	Pyrene	129-00-0	7.31E-07	3.0E-02	4.11E+03	1.30E-01	4.09E-07	3.0E-02	7.34E+03	2.6E+03
PHYS	Organic Carbon (total)	C-012	7.31E-07							
PCB	PCBs (total)	1336-36-3	7.31E-07	2.0E-05	2.74E+00	1.40E-01	4.40E-07	2.0E-05	4.54E+00	1.7E+00
INORG	Antimony	7440-36-0	7.31E-07	4.0E-04	5.48E+01			6.0E-05		5.5E+01
INORG	Arsenic	7440-38-2	7.31E-07	3.0E-04	4.11E+01	3.00E-02	9.43E-08	3.0E-04	3.18E+02	3.6E+01
INORG	Barium	7440-39-3	7.31E-07	2.0E-01	2.74E+04			1.4E-02		2.7E+04
INORG	Beryllium	7440-41-7	7.31E-07	2.0E-03	2.74E+02			1.4E-05		2.7E+02
INORG	Cadmium	7440-43-9	7.31E-07	1.0E-03	1.37E+02	1.00E-03	3.14E-09	2.5E-05	7.95E+02	1.2E+02
INORG	Chromium (total)	7440-47-3	7.31E-07	3.0E-03	4.11E+02			7.5E-05		4.1E+02
INORG	Chromium III	16065-83-1	7.31E-07	1.5E+00	2.05E+05			2.0E-02		2.1E+05
INORG	Cobalt	7440-48-4	7.31E-07	3.0E-04	4.11E+01			3.0E-04		4.1E+01
INORG	Copper	7440-50-8	7.31E-07	4.0E-02	5.48E+03			4.0E-02		5.5E+03
INORG	Lead	7439-92-1	7.31E-07							
INORG	Manganese	7439-96-5	7.31E-07	1.4E-01	1.92E+04			8.4E-03		1.9E+04
INORG	Mercury	7439-97-6	7.31E-07	3.0E-04	4.11E+01			2.1E-05		4.1E+01
INORG	Methyl mercury	22967-92-6	7.31E-07	1.0E-04	1.37E+01			1.0E-04		1.4E+01
INORG	Nickel	7440-02-0	7.31E-07	2.0E-02	2.74E+03			8.0E-04		2.7E+03
INORG	Selenium	7782-49-2	7.31E-07	5.0E-03	6.84E+02			5.0E-03		6.8E+02
INORG	Silver	7440-22-4	7.31E-07	5.0E-03	6.84E+02			2.0E-04		6.8E+02
INORG	Thallium	7440-28-0	7.31E-07							
INORG	Vanadium	7440-62-2	7.31E-07	5.0E-03	6.84E+02			1.3E-04		6.8E+02
INORG	Zinc	7440-66-6	7.31E-07	3.0E-01	4.11E+04			3.0E-01		4.1E+04

Notes:

Noncancer RBSLs are calculated at a target HQ of 0.1.

Attachment E-2.3: Vapor Flux from Soil to Outdoor Air - Cancer Averaging Period
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical	CASRN	K_{oc} (L/kg)	K_d (L/kg)	H (unitless)	D_{air} (m^2/d)	D_{water} (m^2/d)	R_L (unitless)	D_G (m^2/d)	D_L (m^2/d)	D_E (m^2/d)	Infinite J_v (kg/m^2-s)	Finite depth Z1 ERFC term	Finite depth Z2 ERFC term	J_v (kg/m^2-s)
VOC	Acetone	67-64-1	5.81E-01		8.52E-04	1.07E+00	9.85E-05	5.80E-02	1.69E-01	4.66E-08	2.49E-03	1.03E-05	0.00E+00	1.84E+00	3.80E-06
VOC	2-Butanone	78-93-3	2.00E+00		1.45E-03	6.98E-01	8.47E-05	6.29E-02	1.10E-01	4.00E-08	2.53E-03	1.04E-05	0.00E+00	1.84E+00	3.81E-06
VOC	Carbon Disulfide	75-15-0	4.59E+01		7.18E-01	8.99E-01	8.64E-05	4.38E-01	1.42E-01	4.08E-08	2.33E-01	1.00E-04	0.00E+00	2.43E+00	4.33E-06
VOC	Cumene	98-82-8	7.05E+02		1.81E-01	5.62E-01	6.13E-05	2.45E+00	8.87E-02	2.90E-08	6.54E-03	1.68E-05	0.00E+00	2.09E+00	4.03E-06
VOC	Cyclohexane	110-82-7	6.35E+02		4.92E+00	7.25E-01	7.86E-05	3.73E+00	1.15E-01	3.72E-08	1.51E-01	8.05E-05	0.00E+00	2.42E+00	4.31E-06
VOC	Methyl Acetate	79-20-9	1.66E+00		1.92E-03	8.27E-01	9.50E-05	6.20E-02	1.31E-01	4.49E-08	4.06E-03	1.32E-05	0.00E+00	1.98E+00	3.93E-06
VOC	Methylcyclohexane	108-87-2	2.66E+02		8.58E+00	6.35E-01	7.36E-05	3.68E+00	1.00E-01	3.48E-08	2.34E-01	1.00E-04	0.00E+00	2.43E+00	4.33E-06
VOC	Methylene Chloride	75-09-2	1.17E+01		5.04E-02	8.73E-01	1.01E-04	1.11E-01	1.38E-01	4.78E-08	6.28E-02	5.19E-05	0.00E+00	2.37E+00	4.27E-06
VOC	1,2,4-Trichlorobenzene	120-82-1	1.79E+03		1.88E-02	2.59E-01	7.11E-05	6.02E+00	4.10E-02	3.36E-08	1.28E-04	2.34E-06	0.00E+00	3.37E-01	2.17E-06
VOC	1,2,4-Trimethylbenzene	95-63-6	1.18E+03		9.32E-02	5.24E-01	6.84E-05	4.00E+00	8.27E-02	3.23E-08	1.93E-03	9.09E-06	0.00E+00	1.75E+00	3.72E-06
VOC	1,3,5-Trimethylbenzene	108-67-8	1.76E+03		8.91E-02	5.20E-01	7.49E-05	5.93E+00	8.22E-02	3.54E-08	1.23E-03	7.28E-06	0.00E+00	1.58E+00	3.56E-06
VOC	Xylenes (total)	1330-20-7	3.86E+02		1.70E-01	6.74E-01	7.56E-05	1.39E+00	1.06E-01	3.57E-08	1.30E-02	2.37E-05	0.00E+00	2.21E+00	4.13E-06
SVOC	Acenaphthene	83-32-9	7.14E+03		1.58E-03	3.64E-01	6.64E-05	2.38E+01	5.75E-02	3.14E-08	3.83E-06	4.06E-07	0.00E+00	0.00E+00	4.06E-07
SVOC	Acenaphthylene	208-96-8	7.47E+03		1.59E-03	3.88E-01	6.03E-05	2.49E+01	6.13E-02	2.85E-08	3.93E-06	4.11E-07	0.00E+00	0.00E+00	4.11E-07
SVOC	Anthracene	120-12-7	2.97E+04		5.45E-04	2.80E-01	6.69E-05	9.87E+01	4.42E-02	3.16E-08	2.45E-07	1.02E-07	0.00E+00	0.00E+00	1.02E-07
SVOC	Benzaldehyde	100-52-7	2.85E+01		2.89E-04	6.23E-01	7.84E-05	1.51E-01	9.84E-02	3.70E-08	1.89E-04	2.85E-06	0.00E+00	5.49E-01	2.47E-06
SVOC	Benzo(a)anthracene	56-55-3	4.01E+05		1.85E-05	4.41E-01	7.78E-05	1.33E+03	6.96E-02	3.68E-08	9.97E-10	6.54E-09	0.00E+00	0.00E+00	6.54E-09
SVOC	Benzo(a)pyrene	50-32-8	1.01E+06		3.78E-06	3.72E-01	7.78E-05	3.37E+03	5.87E-02	3.68E-08	7.68E-11	1.82E-09	0.00E+00	0.00E+00	1.82E-09
SVOC	Benzo(b)fluoranthene	205-99-2	1.24E+06		4.87E-04	1.95E-01	4.80E-05	4.13E+03	3.09E-02	2.27E-08	3.64E-09	1.25E-08	0.00E+00	0.00E+00	1.25E-08
SVOC	Benzo(g,h,i)perylene	191-24-2	1.28E+07		4.63E-06	1.88E-01	4.54E-05	4.25E+04	2.96E-02	2.15E-08	3.73E-12	4.00E-10	0.00E+00	0.00E+00	4.00E-10
SVOC	Benzo(k)fluoranthene	207-08-9	1.24E+06		3.12E-06	1.95E-01	4.80E-05	4.13E+03	3.09E-02	2.27E-08	2.88E-11	1.11E-09	0.00E+00	0.00E+00	1.11E-09
SVOC	1,1-Biphenyl	92-52-4	1.05E+04		5.42E-03	3.49E-01	7.04E-05	3.49E+01	5.52E-02	3.33E-08	8.58E-06	6.07E-07	0.00E+00	1.94E-08	6.07E-07
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	1.50E+07		4.02E-07	3.03E-01	3.16E-05	4.98E+04	4.79E-02	1.49E-08	6.86E-13	1.72E-10	0.00E+00	0.00E+00	1.72E-10
SVOC	Butylbenzylphthalate	85-68-7	5.73E+04		7.42E-06	1.50E-01	4.17E-05	1.90E+02	2.38E-02	1.97E-08	1.03E-09	6.65E-09	0.00E+00	0.00E+00	6.65E-09
SVOC	Caprolactam	105-60-2	6.51E-01		7.04E-08	5.98E-01	7.77E-05	5.80E-02	9.45E-02	3.67E-08	7.48E-07	1.79E-07	0.00E+00	0.00E+00	1.79E-07
SVOC	Carbazole	86-74-8	3.38E+03		1.16E-07	3.37E-01	6.07E-05	1.13E+01	5.32E-02	2.87E-08	3.09E-09	1.15E-08	0.00E+00	0.00E+00	1.15E-08
SVOC	Chrysene	218-01-9	4.01E+05		4.59E-04	2.14E-01	5.37E-05	1.33E+03	3.39E-02	2.54E-08	1.17E-08	2.24E-08	0.00E+00	0.00E+00	2.24E-08
SVOC	Dibenz(a,h)anthracene	53-70-3	3.77E+06		1.02E-08	1.75E-01	4.48E-05	1.25E+04	2.76E-02	2.12E-08	1.71E-12	2.71E-10	0.00E+00	0.00E+00	2.71E-10
SVOC	Dibenzofuran	132-64-9	2.07E+04		4.44E-05	2.06E-01	5.18E-05	6.87E+01	3.25E-02	2.45E-08	2.14E-08	3.03E-08	0.00E+00	0.00E+00	3.03E-08
SVOC	Di-n-butylphthalate	84-74-2	3.40E+04		5.46E-09	3.78E-01	6.79E-05	1.13E+02	5.98E-02	3.21E-08	2.87E-10	3.51E-09	0.00E+00	0.00E+00	3.51E-09
SVOC	Fluoranthene	206-44-0	1.08E+05		1.15E-04	2.61E-01	5.49E-05	3.58E+02	4.12E-02	2.59E-08	1.33E-08	2.39E-08	0.00E+00	0.00E+00	2.39E-08
SVOC	Fluorene	86-73-7	1.38E+04		6.44E-04	3.14E-01	6.81E-05	4.57E+01	4.96E-02	3.22E-08	6.98E-07	1.73E-07	0.00E+00	0.00E+00	1.73E-07
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	3.45E+06		4.89E-06	1.64E-01	4.89E-05	1.14E+04	2.59E-02	2.31E-08	1.31E-11	7.50E-10	0.00E+00	0.00E+00	7.50E-10
SVOC	Isophorone	78-59-1	4.69E+01		8.80E-05	5.38E-01	5.84E-05	2.12E-01	8.51E-02	2.76E-08	3.55E-05	1.23E-06	0.00E+00	1.13E-02	1.23E-06
SVOC	2-Methylnaphthalene	91-57-6	6.23E+03		8.19E-03	4.51E-01	6.70E-05	2.08E+01	7.13E-02	3.17E-08	2.81E-05	1.10E-06	0.00E+00	3.58E-03	1.10E-06
SVOC	3&4-Methylphenol	65794-96-4	7.72E+01		1.40E-05	6.39E-01	8.64E-05	3.12E-01	1.01E-01	4.08E-08	4.65E-06	4.47E-07	0.00E+00	1.15E-14	4.47E-07
SVOC	Naphthalene	91-20-3	2.01E+03		6.57E-03	5.10E-01	6.48E-05	6.73E+00	8.06E-02	3.06E-08	7.87E-05	1.84E-06	0.00E+00	1.42E-01	1.79E-06
SVOC	Perylene	198-55-0			0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
SVOC	Phenanthrene	85-01-8	2.42E+04		5.91E-04	3.24E-01	6.45E-05	8.05E+01	5.12E-02	3.05E-08	3.76E-07	1.27E-07	0.00E+00	0.00E+00	1.27E-07
SVOC	Phenol	108-95-2	2.88E+01		5.21E-06	7.08E-01	7.86E-05	1.51E-01	1.12E-01	3.72E-08	4.10E-06	4.19E-07	0.00E+00	1.64E-16	4.19E-07
SVOC	Pyrene	129-00-0	1.06E+05		7.46E-05	2.35E-01	6.26E-05	3.50E+02	3.71E-02	2.96E-08	7.99E-09	1.85E-08	0.00E+00	0.00E+00	1.85E-08
PHYS	Organic Carbon (total)	C-012			0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
PCB	PCBs (total)	1336-36-3	2.45E+06		2.80E-02	1.75E-01	4.32E-05	8.15E+03	2.76E-02	2.04E-08	9.46E-08	6.37E-08	0.00E+00	0.00E+00	6.37E-08
INORG	Antimony	7440-36-0		4.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Arsenic	7440-38-2		2.90E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Barium	7440-39-3		4.10E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Beryllium	7440-41-7		7.90E+02	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Cadmium	7440-43-9		7.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Chromium (total)	7440-47-3		1.90E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00

Attachment E-2.3: Vapor Flux from Soil to Outdoor Air - Cancer Averaging Period
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical	CASRN	K_{oc} (L/kg)	K_d (L/kg)	H (unitless)	D_{air} (m^2/d)	D_{water} (m^2/d)	R_L (unitless)	D_G (m^2/d)	D_L (m^2/d)	D_E (m^2/d)	Infinite J_v (kg/m^2-s)	Finite depth Z1 ERFC term	Finite depth Z2 ERFC term	J_v (kg/m^2-s)
INORG	Chromium III	16065-83-1		1.80E+06	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Cobalt	7440-48-4		4.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Copper	7440-50-8		3.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Lead	7439-92-1		9.00E+02	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Manganese	7439-96-5		6.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Mercury	7439-97-6		1.00E+03	1.19E-01	2.65E-01	5.44E-05	1.66E+03	4.19E-02	2.57E-08	3.00E-06	3.59E-07	0.00E+00	0.00E+00	3.59E-07
INORG	Methyl mercury	22967-92-6		7.00E+03	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Nickel	7440-02-0		6.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Selenium	7782-49-2		5.00E+00	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Silver	7440-22-4		8.30E+00	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Thallium	7440-28-0		7.10E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Vanadium	7440-62-2		1.00E+03	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Zinc	7440-66-6		6.20E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
Notes:	Soil bulk density	kg/L	ρ_b	1.66											
	Soil porosity	L/L-soil	θ	0.38											
	Soil water content	L/L-soil	θ_w	0.06											
	Soil air-filled porosity	L/L-soil	θ_a	0.32											
	Soil organic carbon fraction	unitless	f_{oc}	0.002											
	Averaging period (Exposure Duration)	year	T	30											
		days	T	10950											
		s	T	9.5E+08											
	Molar Gas Constant	L-mmHg/ mole-^oK	R	62.411											
	Temperature	^oC	Temp	10											
		K	Temp	283											
	Clean soil above source	m	Z_1	0.00											
	Bottom of source depth	m	Z_2	2.50											
	The Kd for organic compounds is the Koc times the foc.														

Attachment E-2.4: Vapor Flux from Soil to Outdoor Air - Noncancer Averaging Period
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical	CASRN	K_{oc} (L/kg)	K_d (L/kg)	H (unitless)	D_{air} (m^2/d)	D_{water} (m^2/d)	R_L (unitless)	D_G (m^2/d)	D_L (m^2/d)	D_E (m^2/d)	Infinite J_v (kg/m^2-s)	Finite depth Z1 ERFC term	Finite depth Z2 ERFC term	J_v (kg/m^2-s)
VOC	Acetone	67-64-1	5.81E-01		8.52E-04	1.07E+00	9.85E-05	5.80E-02	1.69E-01	4.66E-08	2.49E-03	2.31E-05	0.00E+00	1.12E+00	1.56E-05
VOC	2-Butanone	78-93-3	2.00E+00		1.45E-03	6.98E-01	8.47E-05	6.29E-02	1.10E-01	4.00E-08	2.53E-03	2.33E-05	0.00E+00	1.13E+00	1.57E-05
VOC	Carbon Disulfide	75-15-0	4.59E+01		7.18E-01	8.99E-01	8.64E-05	4.38E-01	1.42E-01	4.08E-08	2.33E-01	2.24E-04	0.00E+00	2.35E+00	2.13E-05
VOC	Cumene	98-82-8	7.05E+02		1.81E-01	5.62E-01	6.13E-05	2.45E+00	8.87E-02	2.90E-08	6.54E-03	3.75E-05	0.00E+00	1.60E+00	1.79E-05
VOC	Cyclohexane	110-82-7	6.35E+02		4.92E+00	7.25E-01	7.86E-05	3.73E+00	1.15E-01	3.72E-08	1.51E-01	1.80E-04	0.00E+00	2.31E+00	2.11E-05
VOC	Methyl Acetate	79-20-9	1.66E+00		1.92E-03	8.27E-01	9.50E-05	6.20E-02	1.31E-01	4.49E-08	4.06E-03	2.95E-05	0.00E+00	1.38E+00	1.69E-05
VOC	Methylcyclohexane	108-87-2	2.66E+02		8.58E+00	6.35E-01	7.36E-05	3.68E+00	1.00E-01	3.48E-08	2.34E-01	2.24E-04	0.00E+00	2.35E+00	2.13E-05
VOC	Methylene Chloride	75-09-2	1.17E+01		5.04E-02	8.73E-01	1.01E-04	1.11E-01	1.38E-01	4.78E-08	6.28E-02	1.16E-04	0.00E+00	2.20E+00	2.06E-05
VOC	1,2,4-Trichlorobenzene	120-82-1	1.79E+03		1.88E-02	2.59E-01	7.11E-05	6.02E+00	4.10E-02	3.36E-08	1.28E-04	5.24E-06	0.00E+00	2.06E-03	5.24E-06
VOC	1,2,4-Trimethylbenzene	95-63-6	1.18E+03		9.32E-02	5.24E-01	6.84E-05	4.00E+00	8.27E-02	3.23E-08	1.93E-03	2.03E-05	0.00E+00	9.73E-01	1.48E-05
VOC	1,3,5-Trimethylbenzene	108-67-8	1.76E+03		8.91E-02	5.20E-01	7.49E-05	5.93E+00	8.22E-02	3.54E-08	1.23E-03	1.63E-05	0.00E+00	7.05E-01	1.33E-05
VOC	Xylenes (total)	1330-20-7	3.86E+02		1.70E-01	6.74E-01	7.56E-05	1.39E+00	1.06E-01	3.57E-08	1.30E-02	5.29E-05	0.00E+00	1.85E+00	1.91E-05
SVOC	Acenaphthene	83-32-9	7.14E+03		1.58E-03	3.64E-01	6.64E-05	2.38E+01	5.75E-02	3.14E-08	3.83E-06	9.07E-07	0.00E+00	0.00E+00	9.07E-07
SVOC	Acenaphthylene	208-96-8	7.47E+03		1.59E-03	3.88E-01	6.03E-05	2.49E+01	6.13E-02	2.85E-08	3.93E-06	9.18E-07	0.00E+00	0.00E+00	9.18E-07
SVOC	Anthracene	120-12-7	2.97E+04		5.45E-04	2.80E-01	6.69E-05	9.87E+01	4.42E-02	3.16E-08	2.45E-07	2.29E-07	0.00E+00	0.00E+00	2.29E-07
SVOC	Benzaldehyde	100-52-7	2.85E+01		2.89E-04	6.23E-01	7.84E-05	1.51E-01	9.84E-02	3.70E-08	1.89E-04	6.38E-06	0.00E+00	1.50E-02	6.36E-06
SVOC	Benzo(a)anthracene	56-55-3	4.01E+05		1.85E-05	4.41E-01	7.78E-05	1.33E+03	6.96E-02	3.68E-08	9.97E-10	1.46E-08	0.00E+00	0.00E+00	1.46E-08
SVOC	Benzo(a)pyrene	50-32-8	1.01E+06		3.78E-06	3.72E-01	7.78E-05	3.37E+03	5.87E-02	3.68E-08	7.68E-11	4.06E-09	0.00E+00	0.00E+00	4.06E-09
SVOC	Benzo(b)fluoranthene	205-99-2	1.24E+06		4.87E-04	1.95E-01	4.80E-05	4.13E+03	3.09E-02	2.27E-08	3.64E-09	2.80E-08	0.00E+00	0.00E+00	2.80E-08
SVOC	Benzo(g,h,i)perylene	191-24-2	1.28E+07		4.63E-06	1.88E-01	4.54E-05	4.25E+04	2.96E-02	2.15E-08	3.73E-12	8.95E-10	0.00E+00	0.00E+00	8.95E-10
SVOC	Benzo(k)fluoranthene	207-08-9	1.24E+06		3.12E-06	1.95E-01	4.80E-05	4.13E+03	3.09E-02	2.27E-08	2.88E-11	2.48E-09	0.00E+00	0.00E+00	2.48E-09
SVOC	1,1-Biphenyl	92-52-4	1.05E+04		5.42E-03	3.49E-01	7.04E-05	3.49E+01	5.52E-02	3.33E-08	8.58E-06	1.36E-06	0.00E+00	0.00E+00	1.36E-06
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	1.50E+07		4.02E-07	3.03E-01	3.16E-05	4.98E+04	4.79E-02	1.49E-08	6.86E-13	3.84E-10	0.00E+00	0.00E+00	3.84E-10
SVOC	Butylbenzylphthalate	85-68-7	5.73E+04		7.42E-06	1.50E-01	4.17E-05	1.90E+02	2.38E-02	1.97E-08	1.03E-09	1.49E-08	0.00E+00	0.00E+00	1.49E-08
SVOC	Caprolactam	105-60-2	6.51E-01		7.04E-08	5.98E-01	7.77E-05	5.80E-02	9.45E-02	3.67E-08	7.48E-07	4.01E-07	0.00E+00	0.00E+00	4.01E-07
SVOC	Carbazole	86-74-8	3.38E+03		1.16E-07	3.37E-01	6.07E-05	1.13E+01	5.32E-02	2.87E-08	3.09E-09	2.58E-08	0.00E+00	0.00E+00	2.58E-08
SVOC	Chrysene	218-01-9	4.01E+05		4.59E-04	2.14E-01	5.37E-05	1.33E+03	3.39E-02	2.54E-08	1.17E-08	5.01E-08	0.00E+00	0.00E+00	5.01E-08
SVOC	Dibenz(a,h)anthracene	53-70-3	3.77E+06		1.02E-08	1.75E-01	4.48E-05	1.25E+04	2.76E-02	2.12E-08	1.71E-12	6.06E-10	0.00E+00	0.00E+00	6.06E-10
SVOC	Dibenzofuran	132-64-9	2.07E+04		4.44E-05	2.06E-01	5.18E-05	6.87E+01	3.25E-02	2.45E-08	2.14E-08	6.77E-08	0.00E+00	0.00E+00	6.77E-08
SVOC	Di-n-butylphthalate	84-74-2	3.40E+04		5.46E-09	3.78E-01	6.79E-05	1.13E+02	5.98E-02	3.21E-08	2.87E-10	7.85E-09	0.00E+00	0.00E+00	7.85E-09
SVOC	Fluoranthene	206-44-0	1.08E+05		1.15E-04	2.61E-01	5.49E-05	3.58E+02	4.12E-02	2.59E-08	1.33E-08	5.35E-08	0.00E+00	0.00E+00	5.35E-08
SVOC	Fluorene	86-73-7	1.38E+04		6.44E-04	3.14E-01	6.81E-05	4.57E+01	4.96E-02	3.22E-08	6.98E-07	3.87E-07	0.00E+00	0.00E+00	3.87E-07
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	3.45E+06		4.89E-06	1.64E-01	4.89E-05	1.14E+04	2.59E-02	2.31E-08	1.31E-11	1.68E-09	0.00E+00	0.00E+00	1.68E-09
SVOC	Isophorone	78-59-1	4.69E+01		8.80E-05	5.38E-01	5.84E-05	2.12E-01	8.51E-02	2.76E-08	3.55E-05	2.76E-06	0.00E+00	5.48E-10	2.76E-06
SVOC	2-Methylnaphthalene	91-57-6	6.23E+03		8.19E-03	4.51E-01	6.70E-05	2.08E+01	7.13E-02	3.17E-08	2.81E-05	2.46E-06	0.00E+00	2.52E-12	2.46E-06
SVOC	3&4-Methylphenol	65794-96-4	7.72E+01		1.40E-05	6.39E-01	8.64E-05	3.12E-01	1.01E-01	4.08E-08	4.65E-06	9.99E-07	0.00E+00	0.00E+00	9.99E-07
SVOC	Naphthalene	91-20-3	2.01E+03		6.57E-03	5.10E-01	6.48E-05	6.73E+00	8.06E-02	3.06E-08	7.87E-05	4.11E-06	0.00E+00	5.04E-05	4.11E-06
SVOC	Perylene	198-55-0			0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
SVOC	Phenanthrene	85-01-8	2.42E+04		5.91E-04	3.24E-01	6.45E-05	8.05E+01	5.12E-02	3.05E-08	3.76E-07	2.84E-07	0.00E+00	0.00E+00	2.84E-07
SVOC	Phenol	108-95-2	2.88E+01		5.21E-06	7.08E-01	7.86E-05	1.51E-01	1.12E-01	3.72E-08	4.10E-06	9.38E-07	0.00E+00	0.00E+00	9.38E-07
SVOC	Pyrene	129-00-0	1.06E+05		7.46E-05	2.35E-01	6.26E-05	3.50E+02	3.71E-02	2.96E-08	7.99E-09	4.14E-08	0.00E+00	0.00E+00	4.14E-08
PHYS	Organic Carbon (total)	C-012			0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
PCB	PCBs (total)	1336-36-3	2.45E+06		2.80E-02	1.75E-01	4.32E-05	8.15E+03	2.76E-02	2.04E-08	9.46E-08	1.43E-07	0.00E+00	0.00E+00	1.43E-07
INORG	Antimony	7440-36-0		4.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Arsenic	7440-38-2		2.90E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Barium	7440-39-3		4.10E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00

Attachment E-2.4: Vapor Flux from Soil to Outdoor Air - Noncancer Averaging Period
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical	CASRN	K_{oc} (L/kg)	K_d (L/kg)	H (unitless)	D_{air} (m^2/d)	D_{water} (m^2/d)	R_L (unitless)	D_G (m^2/d)	D_L (m^2/d)	D_E (m^2/d)	Infinite J_v (kg/m^2-s)	Finite depth Z1 ERFC term	Finite depth Z2 ERFC term	J_v (kg/m^2-s)
INORG	Beryllium	7440-41-7		7.90E+02	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Cadmium	7440-43-9		7.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Chromium (total)	7440-47-3		1.90E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Chromium III	16065-83-1		1.80E+06	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Cobalt	7440-48-4		4.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Copper	7440-50-8		3.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Lead	7439-92-1		9.00E+02	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Manganese	7439-96-5		6.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Mercury	7439-97-6		1.00E+03	1.19E-01	2.65E-01	5.44E-05	1.66E+03	4.19E-02	2.57E-08	3.00E-06	8.02E-07	0.00E+00	0.00E+00	8.02E-07
INORG	Methyl mercury	22967-92-6		7.00E+03	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Nickel	7440-02-0		6.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Selenium	7782-49-2		5.00E+00	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Silver	7440-22-4		8.30E+00	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Thallium	7440-28-0		7.10E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Vanadium	7440-62-2		1.00E+03	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Zinc	7440-66-6		6.20E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
Notes:	Soil bulk density	kg/L	ρ_b	1.66											
	Soil porosity	L/L-soil	θ	0.38											
	Soil water content	L/L-soil	θ_w	0.06											
	Soil air-filled porosity	L/L-soil	θ_a	0.32											
	Soil organic carbon fraction	unitless	f_{oc}	0.002											
	Averaging period (Exposure Duration)	year	T	6											
		days	T	2190											
		s	T	1.9E+08											
	Molar Gas Constant	L-mmHg/ mole-^oK	R	62.411											
	Temperature	^oC	Temp	10											
		K	Temp	283											
	Clean soil above source	m	Z_1	0.00											
	Bottom of source depth	m	Z_2	2.50											
	The Kd for organic compounds is the Koc times the foc.														

Attachment E-2.5: Cancer RBSL Calculations for Exposure of Recreators to Soil
Janesville Assembly Plant, Janesville, Wisconsin

				Soil Ingestion				Soil Dermal Contact					Soil Vapor Inhalation				Soil Particulate Inhalation				All Routes
Chem Group	Chemical	CASRN	Cancer Class	LADD* (kgSoil/ kgBW/d)	SF_{oral} (mg/kg/d)$^{-1}$	f_{oral}	RBSL (mg/kg)	ABS_{derm}	LADD* (kgSoil/ kgBW/d)	SF_{derm} (mg/kg/d)$^{-1}$	f_{oral}	RBSL (mg/kg)	C_{air*} (kg/m^3)	URF (m^3/mg)	f_{inh}	RBSL (mg/kg)	C_{air*} (kg/m^3)	URF (m^3/mg)	f_{inh}	RBSL (mg/kg)	RBSL (mg/kg)
VOC	Acetone	67-64-1	ID	3.22E-07									4.37E-05				6.99E-10				
VOC	2-Butanone	78-93-3	ID	3.22E-07									4.38E-05				6.99E-10				
VOC	Carbon Disulfide	75-15-0		3.22E-07									4.98E-05				6.99E-10				
VOC	Cumene	98-82-8	D	3.22E-07									4.63E-05				6.99E-10				
VOC	Cyclohexane	110-82-7	ID	3.22E-07									4.96E-05				6.99E-10				
VOC	Methyl Acetate	79-20-9	ID	3.22E-07									4.52E-05				6.99E-10				
VOC	Methylcyclohexane	108-87-2	ID	3.22E-07									4.98E-05				6.99E-10				
VOC	Methylene Chloride	75-09-2	LC	3.22E-07	2.0E-03	1	3.6E+02			2.0E-03	1		4.91E-05	1.0E-05	1	1.1E+05	6.99E-10	1.0E-05	1	8.0E+09	3.6E+02
VOC	1,2,4-Trichlorobenzene	120-82-1	LC	3.22E-07	2.9E-02		1.1E+02			2.9E-02			2.49E-05				6.99E-10				1.1E+02
VOC	1,2,4-Trimethylbenzene	95-63-6	ID	3.22E-07									4.28E-05				6.99E-10				
VOC	1,3,5-Trimethylbenzene	108-67-8	ID	3.22E-07									4.10E-05				6.99E-10				
VOC	Xylenes (total)	1330-20-7	ID	3.22E-07									4.75E-05				6.99E-10				
SVOC	Acenaphthene	83-32-9	ID	3.22E-07				1.30E-01	1.32E-07				4.66E-06				6.99E-10				
SVOC	Acenaphthylene	208-96-8	D	3.22E-07				1.30E-01	1.32E-07				4.72E-06				6.99E-10				
SVOC	Anthracene	120-12-7	ID	3.22E-07				1.30E-01	1.32E-07				1.18E-06				6.99E-10				
SVOC	Benzaldehyde	100-52-7		3.22E-07				1.00E-01	1.02E-07				2.84E-05				6.99E-10				
SVOC	Benzo(a)anthracene	56-55-3	B2	3.22E-07	7.3E-01	1	9.9E-01	1.30E-01	1.32E-07	7.3E-01	1	2.6E+00	7.52E-08	8.8E-02	1	8.5E+03	6.99E-10	8.8E-02	1	9.1E+05	7.2E-01
SVOC	Benzo(a)pyrene	50-32-8	B2	3.22E-07	7.3E+00	1	9.9E-02	1.30E-01	1.32E-07	7.3E+00	1	2.6E-01	2.09E-08	8.8E-01	1	3.1E+03	6.99E-10	8.8E-01	1	9.1E+04	7.2E-02
SVOC	Benzo(b)fluoranthene	205-99-2	B2	3.22E-07	7.3E-01	1	9.9E-01	1.30E-01	1.32E-07	7.3E-01	1	2.6E+00	1.44E-07	8.8E-02	1	4.4E+03	6.99E-10	8.8E-02	1	9.1E+05	7.2E-01
SVOC	Benzo(g,h,i)perylene	191-24-2	D	3.22E-07				1.30E-01	1.32E-07				4.60E-09				6.99E-10				
SVOC	Benzo(k)fluoranthene	207-08-9	B2	3.22E-07	7.3E-02	1	9.9E+00	1.30E-01	1.32E-07	7.3E-02	1	2.6E+01	1.28E-08	8.8E-03	1	5.0E+05	6.99E-10	8.8E-03	1	9.1E+06	7.2E+00
SVOC	1,1-Biphenyl	92-52-4	SC	3.22E-07	8.2E-03		3.8E+02	1.00E-01	1.02E-07	8.2E-03		1.2E+03	6.97E-06				6.99E-10				2.9E+02
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	3.22E-07	1.4E-02		2.2E+02	1.00E-01	1.02E-07	1.4E-02		7.0E+02	1.97E-09				6.99E-10				1.7E+02
SVOC	Butylbenzylphthalate	85-68-7	C	3.22E-07	1.9E-03		1.6E+03	1.00E-01	1.02E-07	1.9E-03		5.2E+03	7.64E-08				6.99E-10				1.2E+03
SVOC	Caprolactam	105-60-2		3.22E-07				1.00E-01	1.02E-07				2.06E-06				6.99E-10				
SVOC	Carbazole	86-74-8	B2	3.22E-07	2.0E-02		1.6E+02	1.00E-01	1.02E-07	2.0E-02		4.9E+02	1.32E-07				6.99E-10				1.2E+02
SVOC	Chrysene	218-01-9	B2	3.22E-07	7.3E-03	1	9.9E+01	1.30E-01	1.32E-07	7.3E-03	1	2.6E+02	2.57E-07	8.8E-04	1	2.5E+05	6.99E-10	8.8E-04	1	9.1E+07	7.2E+01
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	3.22E-07	7.3E+00	1	9.9E-02	1.30E-01	1.32E-07	7.3E+00	1	2.6E-01	3.12E-09	8.8E-01	1	2.0E+04	6.99E-10	8.8E-01	1	9.1E+04	7.2E-02
SVOC	Dibenzofuran	132-64-9	D	3.22E-07				1.00E-01	1.02E-07				3.48E-07				6.99E-10				
SVOC	Di-n-butylphthalate	84-74-2	D	3.22E-07				1.00E-01	1.02E-07				4.03E-08				6.99E-10				
SVOC	Fluoranthene	206-44-0	D	3.22E-07				1.30E-01	1.32E-07				2.75E-07				6.99E-10				
SVOC	Fluorene	86-73-7	D	3.22E-07				1.30E-01	1.32E-07				1.99E-06				6.99E-10				
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	3.22E-07	7.3E-01	1	9.9E-01	1.30E-01	1.32E-07	7.3E-01	1	2.6E+00	8.62E-09	8.8E-02	1	7.4E+04	6.99E-10	8.8E-02	1	9.1E+05	7.2E-01
SVOC	Isophorone	78-59-1	C	3.22E-07	9.5E-04		3.3E+03	1.00E-01	1.02E-07	9.5E-04		1.0E+04	1.42E-05				6.99E-10				2.5E+03
SVOC	2-Methylnaphthalene	91-57-6	ID	3.22E-07				1.00E-01	1.02E-07				1.26E-05				6.99E-10				
SVOC	3&4-Methylphenol	65794-96-4		3.22E-07				1.00E-01	1.02E-07				5.14E-06				6.99E-10				
SVOC	Naphthalene	91-20-3	C	3.22E-07				1.30E-01	1.32E-07				2.05E-05	3.4E-02		2.0E+02	6.99E-10	3.4E-02		6.0E+06	2.0E+02
SVOC	Perylene	198-55-0		3.22E-07													6.99E-10				
SVOC	Phenanthrene	85-01-8	D	3.22E-07				1.30E-01	1.32E-07				1.46E-06				6.99E-10				
SVOC	Phenol	108-95-2	ID	3.22E-07				1.00E-01	1.02E-07				4.82E-06				6.99E-10				
SVOC	Pyrene	129-00-0	NC	3.22E-07				1.30E-01	1.32E-07				2.13E-07				6.99E-10				
PHYS	Organic Carbon (total)	C-012		3.22E-07													6.99E-10				
PCB	PCBs (total)	1336-36-3	B2	3.22E-07	2.0E+00		1.6E+00	1.40E-01	1.42E-07	2.0E+00		3.5E+00	7.33E-07	5.7E-01		3.4E+02	6.99E-10	5.7E-01		3.6E+05	1.1E+00
INORG	Antimony	7440-36-0	ID	3.22E-07													6.99E-10				
INORG	Arsenic	7440-38-2	A	3.22E-07	1.5E+00		2.1E+00	3.00E-02	3.05E-08	1.5E+00		2.2E+01		4.3E+00			6.99E-10	4.3E+00		4.7E+04	1.9E+00
INORG	Barium	7440-39-3	NC	3.22E-07													6.99E-10				
INORG	Beryllium	7440-41-7	B1	3.22E-07										2.4E+00			6.99E-10	2.4E+00		8.5E+04	8.5E+04
INORG	Cadmium	7440-43-9	B1	3.22E-07				1.00E-03	1.02E-09					1.8E+00			6.99E-10	1.8E+00		1.1E+05	1.1E+05
INORG	Chromium (total)	7440-47-3		3.22E-07	5.0E-01		6.2E+00			2.0E+01				1.2E+01			6.99E-10	1.2E+01		1.7E+04	6.2E+00
INORG	Chromium III	16065-83-1	D	3.22E-07													6.99E-10				
INORG	Cobalt	7440-48-4	LC	3.22E-07										9.0E+00			6.99E-10	9.0E+00		2.3E+04	2.3E+04
INORG	Copper	7440-50-8	D	3.22E-07													6.99E-10				

Attachment E-2.5: Cancer RBSL Calculations for Exposure of Recreators to Soil
Janesville Assembly Plant, Janesville, Wisconsin

				Soil Ingestion				Soil Dermal Contact					Soil Vapor Inhalation				Soil Particulate Inhalation				All Routes
Chem Group	**Chemical**	**CASRN**	**Cancer Class**	**LADD*** (kgSoil/ kgBW/d)	**SF_{oral}** (mg/kg/d)$^{-1}$	**f_{oral}**	**RBSL** (mg/kg)	**ABS_{derm}**	**LADD*** (kgSoil/ kgBW/d)	**SF_{derm}** (mg/kg/d)$^{-1}$	**f_{oral}**	**RBSL** (mg/kg)	**C_{air*}** (kg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**RBSL** (mg/kg)	**C_{air*}** (kg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**RBSL** (mg/kg)	**RBSL** (mg/kg)
INORG	Lead	7439-92-1	B2	3.22E-07													6.99E-10				
INORG	Manganese	7439-96-5	D	3.22E-07													6.99E-10				
INORG	Mercury	7439-97-6	D	3.22E-07									4.12E-06				6.99E-10				
INORG	Methyl mercury	22967-92-6	C	3.22E-07													6.99E-10				
INORG	Nickel	7440-02-0	A	3.22E-07										2.4E-01			6.99E-10	2.4E-01		8.5E+05	8.5E+05
INORG	Selenium	7782-49-2	D	3.22E-07													6.99E-10				
INORG	Silver	7440-22-4	D	3.22E-07													6.99E-10				
INORG	Thallium	7440-28-0	ID	3.22E-07													6.99E-10				
INORG	Vanadium	7440-62-2	ID	3.22E-07													6.99E-10				
INORG	Zinc	7440-66-6	ID	3.22E-07													6.99E-10				
Notes:																					
f_{oral} and f_{inh} are the fraction of the oral and inhalation toxicity values, respectively, that USEPA identified as having a mutagenic mode of action.																					
Cancer RBSLs are calculated at a target cancer risk of 1E-06.																					

Attachment E-2.6: Noncancer RBSL Calculations for Exposure of Recreators to Soil
Janesville Assembly Plant, Janesville, Wisconsin

			Soil Ingestion			Soil Dermal Contact				Soil Vapor Inhalation			Soil Particulate Inhalation			All Routes
Chem Group	Chemical	CASRN	ADD* (kgSoil/ kgBW/d)	RfD_{oral} (mg/kg/d)	RBSL (mg/kg)	ABS_{derm}	ADD* (kgSoil/ kgBW/d)	RfD_{derm} (mg/kg/d)	RBSL (mg/kg)	C_{air*} (kg/m^3)	RfC (mg/m^3)	RBSL (mg/kg)	C_{air*} (kg/m^3)	RfC (mg/m^3)	RBSL (mg/kg)	RBSL (mg/kg)
VOC	Acetone	67-64-1	2.63E-06	9.0E-01	3.4E+04			9.0E-01		1.79E-04	3.1E+01	1.0E+06	6.99E-10	3.1E+01	2.7E+11	3.3E+04
VOC	2-Butanone	78-93-3	2.63E-06	6.0E-01	2.3E+04			6.0E-01		1.80E-04	5.0E+00	1.7E+05	6.99E-10	5.0E+00	4.3E+10	2.0E+04
VOC	Carbon Disulfide	75-15-0	2.63E-06	1.0E-01	3.8E+03			1.0E-01		2.44E-04	7.0E-01	1.7E+04	6.99E-10	7.0E-01	6.1E+09	3.1E+03
VOC	Cumene	98-82-8	2.63E-06	1.0E-01	3.8E+03			1.0E-01		2.06E-04	4.0E-01	1.2E+04	6.99E-10	4.0E-01	3.5E+09	2.9E+03
VOC	Cyclohexane	110-82-7	2.63E-06							2.43E-04	6.0E+00	1.5E+05	6.99E-10	6.0E+00	5.2E+10	1.5E+05
VOC	Methyl Acetate	79-20-9	2.63E-06	1.0E+00	3.8E+04			1.0E+00		1.94E-04			6.99E-10			3.8E+04
VOC	Methylcyclohexane	108-87-2	2.63E-06							2.44E-04			6.99E-10			
VOC	Methylene Chloride	75-09-2	2.63E-06	6.0E-03	2.3E+02			6.0E-03		2.37E-04	6.0E-01	1.5E+04	6.99E-10	6.0E-01	5.2E+09	2.2E+02
VOC	1,2,4-Trichlorobenzene	120-82-1	2.63E-06	1.0E-02	3.8E+02			1.0E-02		6.02E-05	2.0E-03	2.0E+02	6.99E-10	2.0E-03	1.7E+07	1.3E+02
VOC	1,2,4-Trimethylbenzene	95-63-6	2.63E-06							1.71E-04	7.0E-03	2.5E+02	6.99E-10	7.0E-03	6.1E+07	2.5E+02
VOC	1,3,5-Trimethylbenzene	108-67-8	2.63E-06							1.53E-04	1.0E-02	4.0E+02	6.99E-10	1.0E-02	8.7E+07	4.0E+02
VOC	Xylenes (total)	1330-20-7	2.63E-06	2.0E-01	7.6E+03			2.0E-01		2.19E-04	1.0E-01	2.8E+03	6.99E-10	1.0E-01	8.7E+08	2.0E+03
SVOC	Acenaphthene	83-32-9	2.63E-06	6.0E-02	2.3E+03	1.30E-01	9.57E-07	6.0E-02	6.3E+03	1.04E-05			6.99E-10			1.7E+03
SVOC	Acenaphthylene	208-96-8	2.63E-06	3.0E-02	1.1E+03	1.30E-01	9.57E-07	3.0E-02	3.1E+03	1.06E-05			6.99E-10			8.4E+02
SVOC	Anthracene	120-12-7	2.63E-06	3.0E-01	1.1E+04	1.30E-01	9.57E-07	3.0E-01	3.1E+04	2.63E-06			6.99E-10			8.4E+03
SVOC	Benzaldehyde	100-52-7	2.63E-06	1.0E-01	3.8E+03	1.00E-01	7.36E-07	1.0E-01	1.4E+04	7.31E-05			6.99E-10			3.0E+03
SVOC	Benzo(a)anthracene	56-55-3	2.63E-06			1.30E-01	9.57E-07			1.68E-07			6.99E-10			
SVOC	Benzo(a)pyrene	50-32-8	2.63E-06			1.30E-01	9.57E-07			4.67E-08			6.99E-10			
SVOC	Benzo(b)fluoranthene	205-99-2	2.63E-06			1.30E-01	9.57E-07			3.21E-07			6.99E-10			
SVOC	Benzo(g,h,i)perylene	191-24-2	2.63E-06	3.0E-02	1.1E+03	1.30E-01	9.57E-07	3.0E-02	3.1E+03	1.03E-08			6.99E-10			8.4E+02
SVOC	Benzo(k)fluoranthene	207-08-9	2.63E-06			1.30E-01	9.57E-07			2.86E-08			6.99E-10			
SVOC	1,1-Biphenyl	92-52-4	2.63E-06	5.0E-01	1.9E+04	1.00E-01	7.36E-07	5.0E-01	6.8E+04	1.56E-05			6.99E-10			1.5E+04
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	2.63E-06	2.0E-02	7.6E+02	1.00E-01	7.36E-07	2.0E-02	2.7E+03	4.41E-09			6.99E-10			5.9E+02
SVOC	Butylbenzylphthalate	85-68-7	2.63E-06	2.0E-01	7.6E+03	1.00E-01	7.36E-07	2.0E-01	2.7E+04	1.71E-07			6.99E-10			5.9E+03
SVOC	Caprolactam	105-60-2	2.63E-06	5.0E-01	1.9E+04	1.00E-01	7.36E-07	5.0E-01	6.8E+04	4.60E-06	2.2E-03	2.9E+03	6.99E-10	2.2E-03	1.9E+07	2.4E+03
SVOC	Carbazole	86-74-8	2.63E-06			1.00E-01	7.36E-07			2.96E-07			6.99E-10			
SVOC	Chrysene	218-01-9	2.63E-06			1.30E-01	9.57E-07			5.76E-07			6.99E-10			
SVOC	Dibenz(a,h)anthracene	53-70-3	2.63E-06			1.30E-01	9.57E-07			6.97E-09			6.99E-10			
SVOC	Dibenzofuran	132-64-9	2.63E-06	4.0E-03	1.5E+02	1.00E-01	7.36E-07	4.0E-03	5.4E+02	7.78E-07			6.99E-10			1.2E+02
SVOC	Di-n-butylphthalate	84-74-2	2.63E-06	1.0E-01	3.8E+03	1.00E-01	7.36E-07	1.0E-01	1.4E+04	9.02E-08			6.99E-10			3.0E+03
SVOC	Fluoranthene	206-44-0	2.63E-06	4.0E-02	1.5E+03	1.30E-01	9.57E-07	4.0E-02	4.2E+03	6.14E-07			6.99E-10			1.1E+03
SVOC	Fluorene	86-73-7	2.63E-06	4.0E-02	1.5E+03	1.30E-01	9.57E-07	4.0E-02	4.2E+03	4.45E-06			6.99E-10			1.1E+03
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	2.63E-06			1.30E-01	9.57E-07			1.93E-08			6.99E-10			
SVOC	Isophorone	78-59-1	2.63E-06	2.0E-01	7.6E+03	1.00E-01	7.36E-07	2.0E-01	2.7E+04	3.17E-05	2.0E+00	3.8E+05	6.99E-10	2.0E+00	1.7E+10	5.9E+03
SVOC	2-Methylnaphthalene	91-57-6	2.63E-06	4.0E-03	1.5E+02	1.00E-01	7.36E-07	4.0E-03	5.4E+02	2.82E-05			6.99E-10			1.2E+02
SVOC	3&4-Methylphenol	65794-96-4	2.63E-06	5.0E-03	1.9E+02	1.00E-01	7.36E-07	5.0E-03	6.8E+02	1.15E-05			6.99E-10			1.5E+02
SVOC	Naphthalene	91-20-3	2.63E-06	2.0E-02	7.6E+02	1.30E-01	9.57E-07	2.0E-02	2.1E+03	4.72E-05	3.0E-03	3.9E+02	6.99E-10	3.0E-03	2.6E+07	2.3E+02
SVOC	Perylene	198-55-0	2.63E-06										6.99E-10			
SVOC	Phenanthrene	85-01-8	2.63E-06	3.0E-02	1.1E+03	1.30E-01	9.57E-07	3.0E-02	3.1E+03	3.27E-06			6.99E-10			8.4E+02
SVOC	Phenol	108-95-2	2.63E-06	3.0E-01	1.1E+04	1.00E-01	7.36E-07	3.0E-01	4.1E+04	1.08E-05			6.99E-10			8.9E+03
SVOC	Pyrene	129-00-0	2.63E-06	3.0E-02	1.1E+03	1.30E-01	9.57E-07	3.0E-02	3.1E+03	4.76E-07			6.99E-10			8.4E+02
PHYS	Organic Carbon (total)	C-012	2.63E-06										6.99E-10			
PCB	PCBs (total)	1336-36-3	2.63E-06	2.0E-05	7.6E-01	1.40E-01	1.03E-06	2.0E-05	1.9E+00	1.64E-06			6.99E-10			5.5E-01
INORG	Antimony	7440-36-0	2.63E-06	4.0E-04	1.5E+01			6.0E-05					6.99E-10			1.5E+01
INORG	Arsenic	7440-38-2	2.63E-06	3.0E-04	1.1E+01	3.00E-02	2.21E-07	3.0E-04	1.4E+02		1.5E-05		6.99E-10	1.5E-05	1.3E+05	1.1E+01

Attachment E-2.6: Noncancer RBSL Calculations for Exposure of Recreators to Soil
Janesville Assembly Plant, Janesville, Wisconsin

			Soil Ingestion			Soil Dermal Contact				Soil Vapor Inhalation			Soil Particulate Inhalation			All Routes
Chem Group	**Chemical**	**CASRN**	**ADD*** (kgSoil/ kgBW/d)	**RfD_{oral}** (mg/kg/d)	**RBSL** (mg/kg)	**ABS_{derm}**	**ADD*** (kgSoil/ kgBW/d)	**RfD_{derm}** (mg/kg/d)	**RBSL** (mg/kg)	**C_{air*}** (kg/m^3)	**RfC** (mg/m^3)	**RBSL** (mg/kg)	**C_{air*}** (kg/m^3)	**RfC** (mg/m^3)	**RBSL** (mg/kg)	**RBSL** (mg/kg)
INORG	Barium	7440-39-3	2.63E-06	2.0E-01	7.6E+03			1.4E-02					6.99E-10			7.6E+03
INORG	Beryllium	7440-41-7	2.63E-06	2.0E-03	7.6E+01			1.4E-05			2.0E-05		6.99E-10	2.0E-05	1.7E+05	7.6E+01
INORG	Cadmium	7440-43-9	2.63E-06	1.0E-03	3.8E+01	1.00E-03	7.36E-09	2.5E-05	3.4E+02		1.0E-05		6.99E-10	1.0E-05	8.7E+04	3.4E+01
INORG	Chromium (total)	7440-47-3	2.63E-06	3.0E-03	1.1E+02			7.5E-05			1.0E-04		6.99E-10	1.0E-04	8.7E+05	1.1E+02
INORG	Chromium III	16065-83-1	2.63E-06	1.5E+00	5.7E+04			2.0E-02			5.0E-03		6.99E-10	5.0E-03	4.3E+07	5.7E+04
INORG	Cobalt	7440-48-4	2.63E-06	3.0E-04	1.1E+01			3.0E-04			6.0E-06		6.99E-10	6.0E-06	5.2E+04	1.1E+01
INORG	Copper	7440-50-8	2.63E-06	4.0E-02	1.5E+03			4.0E-02					6.99E-10			1.5E+03
INORG	Lead	7439-92-1	2.63E-06										6.99E-10			
INORG	Manganese	7439-96-5	2.63E-06	1.4E-01	5.3E+03			8.4E-03			5.0E-05		6.99E-10	5.0E-05	4.3E+05	5.3E+03
INORG	Mercury	7439-97-6	2.63E-06	3.0E-04	1.1E+01			2.1E-05		9.22E-06	3.0E-04	2.0E+02	6.99E-10	3.0E-04	2.6E+06	1.1E+01
INORG	Methyl mercury	22967-92-6	2.63E-06	1.0E-04	3.8E+00			1.0E-04					6.99E-10			3.8E+00
INORG	Nickel	7440-02-0	2.63E-06	2.0E-02	7.6E+02			8.0E-04			9.0E-05		6.99E-10	9.0E-05	7.8E+05	7.6E+02
INORG	Selenium	7782-49-2	2.63E-06	5.0E-03	1.9E+02			5.0E-03			2.0E-02		6.99E-10	2.0E-02	1.7E+08	1.9E+02
INORG	Silver	7440-22-4	2.63E-06	5.0E-03	1.9E+02			2.0E-04			1.0E-05		6.99E-10	1.0E-05	8.7E+04	1.9E+02
INORG	Thallium	7440-28-0	2.63E-06										6.99E-10			
INORG	Vanadium	7440-62-2	2.63E-06	5.0E-03	1.9E+02			1.3E-04			1.0E-04		6.99E-10	1.0E-04	8.7E+05	1.9E+02
INORG	Zinc	7440-66-6	2.63E-06	3.0E-01	1.1E+04			3.0E-01					6.99E-10			1.1E+04
Notes:																
Noncancer RBSLs are calculated at a target HQ of 0.1.																

Attachment E-3
Maintenance Worker Calculations

Attachment E-3

Maintenance Worker Calculations

Contents

Attachment E-3.1: Cancer RBSL Calculations for Exposure of Maintenance Workers to Sediment
Janesville Assembly Plant, Janesville, Wisconsin

				Sediment Ingestion				Sediment Dermal Contact					All Routes
Chem Group	**Chemical**	**CASRN**	**Cancer Class**	**LADD*** (kgSed/ kgBW/d)	**SF_{oral}** $(mg/kg/d)^{-1}$	**f_{oral}**	**RBSL** (mg/kg)	**ABS_{derm}**	**LADD*** (kgSed/ kgBW/d)	**SF_{derm}** $(mg/kg/d)^{-1}$	**f_{oral}**	**RBSL** (mg/kg)	**RBSL** (mg/kg)
VOC	Acetone	67-64-1	ID	1.40E-09									
VOC	2-Butanone	78-93-3	ID	1.40E-09									
VOC	Carbon Disulfide	75-15-0		1.40E-09									
VOC	Cumene	98-82-8	D	1.40E-09									
VOC	Cyclohexane	110-82-7	ID	1.40E-09									
VOC	Methyl Acetate	79-20-9	ID	1.40E-09									
VOC	Methylcyclohexane	108-87-2	ID	1.40E-09									
VOC	Methylene Chloride	75-09-2	LC	1.40E-09	2.0E-03	1	3.6E+05			2.0E-03	1		3.6E+05
VOC	1,2,4-Trichlorobenzene	120-82-1	LC	1.40E-09	2.9E-02		2.5E+04			2.9E-02			2.5E+04
VOC	1,2,4-Trimethylbenzene	95-63-6	ID	1.40E-09									
VOC	1,3,5-Trimethylbenzene	108-67-8	ID	1.40E-09									
VOC	Xylenes (total)	1330-20-7	ID	1.40E-09									
SVOC	Acenaphthene	83-32-9	ID	1.40E-09				1.30E-01	2.40E-09				
SVOC	Acenaphthylene	208-96-8	D	1.40E-09				1.30E-01	2.40E-09				
SVOC	Anthracene	120-12-7	ID	1.40E-09				1.30E-01	2.40E-09				
SVOC	Benzaldehyde	100-52-7		1.40E-09				1.00E-01	1.85E-09				
SVOC	Benzo(a)anthracene	56-55-3	B2	1.40E-09	7.3E-01	1	9.8E+02	1.30E-01	2.40E-09	7.3E-01	1		9.8E+02
SVOC	Benzo(a)pyrene	50-32-8	B2	1.40E-09	7.3E+00	1	9.8E+01	1.30E-01	2.40E-09	7.3E+00	1		9.8E+01
SVOC	Benzo(b)fluoranthene	205-99-2	B2	1.40E-09	7.3E-01	1	9.8E+02	1.30E-01	2.40E-09	7.3E-01	1		9.8E+02
SVOC	Benzo(g,h,i)perylene	191-24-2	D	1.40E-09				1.30E-01	2.40E-09				
SVOC	Benzo(k)fluoranthene	207-08-9	B2	1.40E-09	7.3E-02	1	9.8E+03	1.30E-01	2.40E-09	7.3E-02	1		9.8E+03
SVOC	1,1-Biphenyl	92-52-4	SC	1.40E-09	8.2E-03		8.7E+04	1.00E-01	1.85E-09	8.2E-03		6.6E+04	3.8E+04
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.40E-09	1.4E-02		5.1E+04	1.00E-01	1.85E-09	1.4E-02		3.9E+04	2.2E+04
SVOC	Butylbenzylphthalate	85-68-7	C	1.40E-09	1.9E-03		3.8E+05	1.00E-01	1.85E-09	1.9E-03		2.9E+05	1.6E+05
SVOC	Caprolactam	105-60-2		1.40E-09				1.00E-01	1.85E-09				
SVOC	Carbazole	86-74-8	B2	1.40E-09	2.0E-02		3.6E+04	1.00E-01	1.85E-09	2.0E-02		2.7E+04	1.5E+04
SVOC	Chrysene	218-01-9	B2	1.40E-09	7.3E-03	1	9.8E+04	1.30E-01	2.40E-09	7.3E-03	1		9.8E+04
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1.40E-09	7.3E+00	1	9.8E+01	1.30E-01	2.40E-09	7.3E+00	1		9.8E+01
SVOC	Dibenzofuran	132-64-9	D	1.40E-09				1.00E-01	1.85E-09				
SVOC	Di-n-butylphthalate	84-74-2	D	1.40E-09				1.00E-01	1.85E-09				
SVOC	Fluoranthene	206-44-0	D	1.40E-09				1.30E-01	2.40E-09				
SVOC	Fluorene	86-73-7	D	1.40E-09				1.30E-01	2.40E-09				
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1.40E-09	7.3E-01	1	9.8E+02	1.30E-01	2.40E-09	7.3E-01	1		9.8E+02
SVOC	Isophorone	78-59-1	C	1.40E-09	9.5E-04		7.5E+05	1.00E-01	1.85E-09	9.5E-04		5.7E+05	3.2E+05
SVOC	2-Methylnaphthalene	91-57-6	ID	1.40E-09				1.00E-01	1.85E-09				
SVOC	3&4-Methylphenol	65794-96-4		1.40E-09				1.00E-01	1.85E-09				
SVOC	Naphthalene	91-20-3	C	1.40E-09				1.30E-01	2.40E-09				
SVOC	Perylene	198-55-0		1.40E-09									
SVOC	Phenanthrene	85-01-8	D	1.40E-09				1.30E-01	2.40E-09				
SVOC	Phenol	108-95-2	ID	1.40E-09				1.00E-01	1.85E-09				
SVOC	Pyrene	129-00-0	NC	1.40E-09				1.30E-01	2.40E-09				

Attachment E-3.1: Cancer RBSL Calculations for Exposure of Maintenance Workers to Sediment
Janesville Assembly Plant, Janesville, Wisconsin

				Sediment Ingestion				Sediment Dermal Contact					All Routes
Chem Group	**Chemical**	**CASRN**	**Cancer Class**	**LADD*** (kgSed/ kgBW/d)	**SF_{oral}** $(mg/kg/d)^{-1}$	**f_{oral}**	**RBSL** (mg/kg)	**ABS_{derm}**	**LADD*** (kgSed/ kgBW/d)	**SF_{derm}** $(mg/kg/d)^{-1}$	**f_{oral}**	**RBSL** (mg/kg)	**RBSL** (mg/kg)
PHYS	Organic Carbon (total)	C-012		1.40E-09									
PCB	PCBs (total)	1336-36-3	B2	1.40E-09	2.0E+00		3.6E+02	1.40E-01	2.58E-09	2.0E+00		1.9E+02	1.3E+02
INORG	Antimony	7440-36-0	ID	1.40E-09									
INORG	Arsenic	7440-38-2	A	1.40E-09	1.5E+00		4.8E+02	3.00E-02	5.54E-10	1.5E+00		1.2E+03	3.4E+02
INORG	Barium	7440-39-3	NC	1.40E-09									
INORG	Beryllium	7440-41-7	B1	1.40E-09									
INORG	Cadmium	7440-43-9	B1	1.40E-09				1.00E-03	1.85E-11				
INORG	Chromium (total)	7440-47-3		1.40E-09	5.0E-01		1.4E+03			2.0E+01			1.4E+03
INORG	Chromium III	16065-83-1	D	1.40E-09									
INORG	Cobalt	7440-48-4	LC	1.40E-09									
INORG	Copper	7440-50-8	D	1.40E-09									
INORG	Lead	7439-92-1	B2	1.40E-09									
INORG	Manganese	7439-96-5	D	1.40E-09									
INORG	Mercury	7439-97-6	D	1.40E-09									
INORG	Methyl mercury	22967-92-6	C	1.40E-09									
INORG	Nickel	7440-02-0	A	1.40E-09									
INORG	Selenium	7782-49-2	D	1.40E-09									
INORG	Silver	7440-22-4	D	1.40E-09									
INORG	Thallium	7440-28-0	ID	1.40E-09									
INORG	Vanadium	7440-62-2	ID	1.40E-09									
INORG	Zinc	7440-66-6	ID	1.40E-09									

Notes:

f_{oral} is the fraction of the oral toxicity value that USEPA identified as having a mutagenic mode of action.

Cancer RBSLs are calculated at a target cancer risk of 1E-06.

Attachment E-3.2: Noncancer RBSL Calculations for Exposure of Maintenance Workers to Sediment
Janesville Assembly Plant, Janesville, Wisconsin

			Sediment Ingestion			Sediment Dermal Contact				All Routes
Chem Group	**Chemical**	**CASRN**	**ADD*** (kgSed/ kgBW/d)	**RfD_{oral}** (mg/kg/d)	**RBSL** (mg/kg)	**ABS_{derm}**	**ADD*** (kgSed/ kgBW/d)	**RfD_{derm}** (mg/kg/d)	**RBSL** (mg/kg)	**RBSL** (mg/kg)
VOC	Acetone	67-64-1	9.78E-09	9.0E-01	9.20E+06			9.0E-01		9.2E+06
VOC	2-Butanone	78-93-3	9.78E-09	6.0E-01	6.13E+06			6.0E-01		6.1E+06
VOC	Carbon Disulfide	75-15-0	9.78E-09	1.0E-01	1.02E+06			1.0E-01		1.0E+06
VOC	Cumene	98-82-8	9.78E-09	1.0E-01	1.02E+06			1.0E-01		1.0E+06
VOC	Cyclohexane	110-82-7	9.78E-09							
VOC	Methyl Acetate	79-20-9	9.78E-09	1.0E+00	1.02E+07			1.0E+00		1.0E+07
VOC	Methylcyclohexane	108-87-2	9.78E-09							
VOC	Methylene Chloride	75-09-2	9.78E-09	6.0E-03	6.13E+04			6.0E-03		6.1E+04
VOC	1,2,4-Trichlorobenzene	120-82-1	9.78E-09	1.0E-02	1.02E+05			1.0E-02		1.0E+05
VOC	1,2,4-Trimethylbenzene	95-63-6	9.78E-09							
VOC	1,3,5-Trimethylbenzene	108-67-8	9.78E-09							
VOC	Xylenes (total)	1330-20-7	9.78E-09	2.0E-01	2.04E+06			2.0E-01		2.0E+06
SVOC	Acenaphthene	83-32-9	9.78E-09	6.0E-02	6.13E+05	1.30E-01	1.68E-08	6.0E-02	3.57E+05	2.3E+05
SVOC	Acenaphthylene	208-96-8	9.78E-09	3.0E-02	3.07E+05	1.30E-01	1.68E-08	3.0E-02	1.79E+05	1.1E+05
SVOC	Anthracene	120-12-7	9.78E-09	3.0E-01	3.07E+06	1.30E-01	1.68E-08	3.0E-01	1.79E+06	1.1E+06
SVOC	Benzaldehyde	100-52-7	9.78E-09	1.0E-01	1.02E+06	1.00E-01	1.29E-08	1.0E-01	7.74E+05	4.4E+05
SVOC	Benzo(a)anthracene	56-55-3	9.78E-09			1.30E-01	1.68E-08			
SVOC	Benzo(a)pyrene	50-32-8	9.78E-09			1.30E-01	1.68E-08			
SVOC	Benzo(b)fluoranthene	205-99-2	9.78E-09			1.30E-01	1.68E-08			
SVOC	Benzo(g,h,i)perylene	191-24-2	9.78E-09	3.0E-02	3.07E+05	1.30E-01	1.68E-08	3.0E-02	1.79E+05	1.1E+05
SVOC	Benzo(k)fluoranthene	207-08-9	9.78E-09			1.30E-01	1.68E-08			
SVOC	1,1-Biphenyl	92-52-4	9.78E-09	5.0E-01	5.11E+06	1.00E-01	1.29E-08	5.0E-01	3.87E+06	2.2E+06
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	9.78E-09	2.0E-02	2.04E+05	1.00E-01	1.29E-08	2.0E-02	1.55E+05	8.8E+04
SVOC	Butylbenzylphthalate	85-68-7	9.78E-09	2.0E-01	2.04E+06	1.00E-01	1.29E-08	2.0E-01	1.55E+06	8.8E+05
SVOC	Caprolactam	105-60-2	9.78E-09	5.0E-01	5.11E+06	1.00E-01	1.29E-08	5.0E-01	3.87E+06	2.2E+06
SVOC	Carbazole	86-74-8	9.78E-09			1.00E-01	1.29E-08			
SVOC	Chrysene	218-01-9	9.78E-09			1.30E-01	1.68E-08			
SVOC	Dibenz(a,h)anthracene	53-70-3	9.78E-09			1.30E-01	1.68E-08			
SVOC	Dibenzofuran	132-64-9	9.78E-09	4.0E-03	4.09E+04	1.00E-01	1.29E-08	4.0E-03	3.10E+04	1.8E+04
SVOC	Di-n-butylphthalate	84-74-2	9.78E-09	1.0E-01	1.02E+06	1.00E-01	1.29E-08	1.0E-01	7.74E+05	4.4E+05
SVOC	Fluoranthene	206-44-0	9.78E-09	4.0E-02	4.09E+05	1.30E-01	1.68E-08	4.0E-02	2.38E+05	1.5E+05
SVOC	Fluorene	86-73-7	9.78E-09	4.0E-02	4.09E+05	1.30E-01	1.68E-08	4.0E-02	2.38E+05	1.5E+05
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	9.78E-09			1.30E-01	1.68E-08			
SVOC	Isophorone	78-59-1	9.78E-09	2.0E-01	2.04E+06	1.00E-01	1.29E-08	2.0E-01	1.55E+06	8.8E+05
SVOC	2-Methylnaphthalene	91-57-6	9.78E-09	4.0E-03	4.09E+04	1.00E-01	1.29E-08	4.0E-03	3.10E+04	1.8E+04

Attachment E-3.2: Noncancer RBSL Calculations for Exposure of Maintenance Workers to Sediment
Janesville Assembly Plant, Janesville, Wisconsin

			Sediment Ingestion			Sediment Dermal Contact				All Routes
Chem Group	**Chemical**	**CASRN**	**ADD*** (kgSed/ kgBW/d)	**RfD_{oral}** (mg/kg/d)	**RBSL** (mg/kg)	**ABS_{derm}**	**ADD*** (kgSed/ kgBW/d)	**RfD_{derm}** (mg/kg/d)	**RBSL** (mg/kg)	**RBSL** (mg/kg)
SVOC	3&4-Methylphenol	65794-96-4	9.78E-09	5.0E-03	5.11E+04	1.00E-01	1.29E-08	5.0E-03	3.87E+04	2.2E+04
SVOC	Naphthalene	91-20-3	9.78E-09	2.0E-02	2.04E+05	1.30E-01	1.68E-08	2.0E-02	1.19E+05	7.5E+04
SVOC	Perylene	198-55-0	9.78E-09							
SVOC	Phenanthrene	85-01-8	9.78E-09	3.0E-02	3.07E+05	1.30E-01	1.68E-08	3.0E-02	1.79E+05	1.1E+05
SVOC	Phenol	108-95-2	9.78E-09	3.0E-01	3.07E+06	1.00E-01	1.29E-08	3.0E-01	2.32E+06	1.3E+06
SVOC	Pyrene	129-00-0	9.78E-09	3.0E-02	3.07E+05	1.30E-01	1.68E-08	3.0E-02	1.79E+05	1.1E+05
PHYS	Organic Carbon (total)	C-012	9.78E-09							
PCB	PCBs (total)	1336-36-3	9.78E-09	2.0E-05	2.04E+02	1.40E-01	1.81E-08	2.0E-05	1.11E+02	7.2E+01
INORG	Antimony	7440-36-0	9.78E-09	4.0E-04	4.09E+03			6.0E-05		4.1E+03
INORG	Arsenic	7440-38-2	9.78E-09	3.0E-04	3.07E+03	3.00E-02	3.87E-09	3.0E-04	7.74E+03	2.2E+03
INORG	Barium	7440-39-3	9.78E-09	2.0E-01	2.04E+06			1.4E-02		2.0E+06
INORG	Beryllium	7440-41-7	9.78E-09	2.0E-03	2.04E+04			1.4E-05		2.0E+04
INORG	Cadmium	7440-43-9	9.78E-09	1.0E-03	1.02E+04	1.00E-03	1.29E-10	2.5E-05	1.94E+04	6.7E+03
INORG	Chromium (total)	7440-47-3	9.78E-09	3.0E-03	3.07E+04			7.5E-05		3.1E+04
INORG	Chromium III	16065-83-1	9.78E-09	1.5E+00	1.53E+07			2.0E-02		1.5E+07
INORG	Cobalt	7440-48-4	9.78E-09	3.0E-04	3.07E+03			3.0E-04		3.1E+03
INORG	Copper	7440-50-8	9.78E-09	4.0E-02	4.09E+05			4.0E-02		4.1E+05
INORG	Lead	7439-92-1	9.78E-09							
INORG	Manganese	7439-96-5	9.78E-09	1.4E-01	1.43E+06			8.4E-03		1.4E+06
INORG	Mercury	7439-97-6	9.78E-09	3.0E-04	3.07E+03			2.1E-05		3.1E+03
INORG	Methyl mercury	22967-92-6	9.78E-09	1.0E-04	1.02E+03			1.0E-04		1.0E+03
INORG	Nickel	7440-02-0	9.78E-09	2.0E-02	2.04E+05			8.0E-04		2.0E+05
INORG	Selenium	7782-49-2	9.78E-09	5.0E-03	5.11E+04			5.0E-03		5.1E+04
INORG	Silver	7440-22-4	9.78E-09	5.0E-03	5.11E+04			2.0E-04		5.1E+04
INORG	Thallium	7440-28-0	9.78E-09							
INORG	Vanadium	7440-62-2	9.78E-09	5.0E-03	5.11E+04			1.3E-04		5.1E+04
INORG	Zinc	7440-66-6	9.78E-09	3.0E-01	3.07E+06			3.0E-01		3.1E+06

Notes:

Noncancer RBSLs are calculated at a target HQ of 0.1.

Attachment E-4
Landscaper Calculations

Attachment E-4

Landscaper Calculations

Contents

Attachment E-4.1: Vapor Flux from Soil to Outdoor Air
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical	CASRN	K_{oc} (L/kg)	K_d (L/kg)	H (unitless)	D_{air} (m^2/d)	D_{water} (m^2/d)	R_L (unitless)	D_G (m^2/d)	D_L (m^2/d)	D_E (m^2/d)	Infinite J_v (kg/m^2-s)	Finite depth Z1 ERFC term	Finite depth Z2 ERFC term	J_v (kg/m^2-s)
VOC	Acetone	67-64-1	5.81E-01		8.52E-04	1.07E+00	9.85E-05	5.80E-02	1.69E-01	4.66E-08	2.49E-03	1.79E-05	0.00E+00	1.39E+00	1.02E-05
VOC	2-Butanone	78-93-3	2.00E+00		1.45E-03	6.98E-01	8.47E-05	6.29E-02	1.10E-01	4.00E-08	2.53E-03	1.81E-05	0.00E+00	1.40E+00	1.02E-05
VOC	Carbon Disulfide	75-15-0	4.59E+01		7.18E-01	8.99E-01	8.64E-05	4.38E-01	1.42E-01	4.08E-08	2.33E-01	1.73E-04	0.00E+00	2.38E+00	1.29E-05
VOC	Cumene	98-82-8	7.05E+02		1.81E-01	5.62E-01	6.13E-05	2.45E+00	8.87E-02	2.90E-08	6.54E-03	2.90E-05	0.00E+00	1.79E+00	1.13E-05
VOC	Cyclohexane	110-82-7	6.35E+02		4.92E+00	7.25E-01	7.86E-05	3.73E+00	1.15E-01	3.72E-08	1.51E-01	1.39E-04	0.00E+00	2.35E+00	1.28E-05
VOC	Methyl Acetate	79-20-9	1.66E+00		1.92E-03	8.27E-01	9.50E-05	6.20E-02	1.31E-01	4.49E-08	4.06E-03	2.29E-05	0.00E+00	1.62E+00	1.08E-05
VOC	Methylcyclohexane	108-87-2	2.66E+02		8.58E+00	6.35E-01	7.36E-05	3.68E+00	1.00E-01	3.48E-08	2.34E-01	1.74E-04	0.00E+00	2.38E+00	1.29E-05
VOC	Methylene Chloride	75-09-2	1.17E+01		5.04E-02	8.73E-01	1.01E-04	1.11E-01	1.38E-01	4.78E-08	6.28E-02	8.99E-05	0.00E+00	2.27E+00	1.26E-05
VOC	1,2,4-Trichlorobenzene	120-82-1	1.79E+03		1.88E-02	2.59E-01	7.11E-05	6.02E+00	4.10E-02	3.36E-08	1.28E-04	4.06E-06	0.00E+00	2.39E-02	4.04E-06
VOC	1,2,4-Trimethylbenzene	95-63-6	1.18E+03		9.32E-02	5.24E-01	6.84E-05	4.00E+00	8.27E-02	3.23E-08	1.93E-03	1.58E-05	0.00E+00	1.26E+00	9.79E-06
VOC	1,3,5-Trimethylbenzene	108-67-8	1.76E+03		8.91E-02	5.20E-01	7.49E-05	5.93E+00	8.22E-02	3.54E-08	1.23E-03	1.26E-05	0.00E+00	1.01E+00	9.03E-06
VOC	Xylenes (total)	1330-20-7	3.86E+02		1.70E-01	6.74E-01	7.56E-05	1.39E+00	1.06E-01	3.57E-08	1.30E-02	4.10E-05	0.00E+00	2.00E+00	1.18E-05
SVOC	Acenaphthene	83-32-9	7.14E+03		1.58E-03	3.64E-01	6.64E-05	2.38E+01	5.75E-02	3.14E-08	3.83E-06	7.03E-07	0.00E+00	0.00E+00	7.03E-07
SVOC	Acenaphthylene	208-96-8	7.47E+03		1.59E-03	3.88E-01	6.03E-05	2.49E+01	6.13E-02	2.85E-08	3.93E-06	7.11E-07	0.00E+00	0.00E+00	7.11E-07
SVOC	Anthracene	120-12-7	2.97E+04		5.45E-04	2.80E-01	6.69E-05	9.87E+01	4.42E-02	3.16E-08	2.45E-07	1.77E-07	0.00E+00	0.00E+00	1.77E-07
SVOC	Benzaldehyde	100-52-7	2.85E+01		2.89E-04	6.23E-01	7.84E-05	1.51E-01	9.84E-02	3.70E-08	1.89E-04	4.94E-06	0.00E+00	8.34E-02	4.86E-06
SVOC	Benzo(a)anthracene	56-55-3	4.01E+05		1.85E-05	4.41E-01	7.78E-05	1.33E+03	6.96E-02	3.68E-08	9.97E-10	1.13E-08	0.00E+00	0.00E+00	1.13E-08
SVOC	Benzo(a)pyrene	50-32-8	1.01E+06		3.78E-06	3.72E-01	7.78E-05	3.37E+03	5.87E-02	3.68E-08	7.68E-11	3.15E-09	0.00E+00	0.00E+00	3.15E-09
SVOC	Benzo(b)fluoranthene	205-99-2	1.24E+06		4.87E-04	1.95E-01	4.80E-05	4.13E+03	3.09E-02	2.27E-08	3.64E-09	2.17E-08	0.00E+00	0.00E+00	2.17E-08
SVOC	Benzo(g,h,i)perylene	191-24-2	1.28E+07		4.63E-06	1.88E-01	4.54E-05	4.25E+04	2.96E-02	2.15E-08	3.73E-12	6.93E-10	0.00E+00	0.00E+00	6.93E-10
SVOC	Benzo(k)fluoranthene	207-08-9	1.24E+06		3.12E-06	1.95E-01	4.80E-05	4.13E+03	3.09E-02	2.27E-08	2.88E-11	1.92E-09	0.00E+00	0.00E+00	1.92E-09
SVOC	1,1-Biphenyl	92-52-4	1.05E+04		5.42E-03	3.49E-01	7.04E-05	3.49E+01	5.52E-02	3.33E-08	8.58E-06	1.05E-06	0.00E+00	0.00E+00	1.05E-06
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	1.50E+07		4.02E-07	3.03E-01	3.16E-05	4.98E+04	4.79E-02	1.49E-08	6.86E-13	2.97E-10	0.00E+00	0.00E+00	2.97E-10
SVOC	Butylbenzylphthalate	85-68-7	5.73E+04		7.42E-06	1.50E-01	4.17E-05	1.90E+02	2.38E-02	1.97E-08	1.03E-09	1.15E-08	0.00E+00	0.00E+00	1.15E-08
SVOC	Caprolactam	105-60-2	6.51E-01		7.04E-08	5.98E-01	7.77E-05	5.80E-02	9.45E-02	3.67E-08	7.48E-07	3.10E-07	0.00E+00	0.00E+00	3.10E-07
SVOC	Carbazole	86-74-8	3.38E+03		1.16E-07	3.37E-01	6.07E-05	1.13E+01	5.32E-02	2.87E-08	3.09E-09	2.00E-08	0.00E+00	0.00E+00	2.00E-08
SVOC	Chrysene	218-01-9	4.01E+05		4.59E-04	2.14E-01	5.37E-05	1.33E+03	3.39E-02	2.54E-08	1.17E-08	3.88E-08	0.00E+00	0.00E+00	3.88E-08
SVOC	Dibenz(a,h)anthracene	53-70-3	3.77E+06		1.02E-08	1.75E-01	4.48E-05	1.25E+04	2.76E-02	2.12E-08	1.71E-12	4.70E-10	0.00E+00	0.00E+00	4.70E-10
SVOC	Dibenzofuran	132-64-9	2.07E+04		4.44E-05	2.06E-01	5.18E-05	6.87E+01	3.25E-02	2.45E-08	2.14E-08	5.24E-08	0.00E+00	0.00E+00	5.24E-08
SVOC	Di-n-butylphthalate	84-74-2	3.40E+04		5.46E-09	3.78E-01	6.79E-05	1.13E+02	5.98E-02	3.21E-08	2.87E-10	6.08E-09	0.00E+00	0.00E+00	6.08E-09
SVOC	Fluoranthene	206-44-0	1.08E+05		1.15E-04	2.61E-01	5.49E-05	3.58E+02	4.12E-02	2.59E-08	1.33E-08	4.14E-08	0.00E+00	0.00E+00	4.14E-08
SVOC	Fluorene	86-73-7	1.38E+04		6.44E-04	3.14E-01	6.81E-05	4.57E+01	4.96E-02	3.22E-08	6.98E-07	3.00E-07	0.00E+00	0.00E+00	3.00E-07
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	3.45E+06		4.89E-06	1.64E-01	4.89E-05	1.14E+04	2.59E-02	2.31E-08	1.31E-11	1.30E-09	0.00E+00	0.00E+00	1.30E-09
SVOC	Isophorone	78-59-1	4.69E+01		8.80E-05	5.38E-01	5.84E-05	2.12E-01	8.51E-02	2.76E-08	3.55E-05	2.14E-06	0.00E+00	2.20E-06	2.14E-06
SVOC	2-Methylnaphthalene	91-57-6	6.23E+03		8.19E-03	4.51E-01	6.70E-05	2.08E+01	7.13E-02	3.17E-08	2.81E-05	1.90E-06	0.00E+00	8.35E-08	1.90E-06
SVOC	3&4-Methylphenol	65794-96-4	7.72E+01		1.40E-05	6.39E-01	8.64E-05	3.12E-01	1.01E-01	4.08E-08	4.65E-06	7.74E-07	0.00E+00	0.00E+00	7.74E-07
SVOC	Naphthalene	91-20-3	2.01E+03		6.57E-03	5.10E-01	6.48E-05	6.73E+00	8.06E-02	3.06E-08	7.87E-05	3.18E-06	0.00E+00	2.40E-03	3.18E-06
SVOC	Perylene	198-55-0			0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
SVOC	Phenanthrene	85-01-8	2.42E+04		5.91E-04	3.24E-01	6.45E-05	8.05E+01	5.12E-02	3.05E-08	3.76E-07	2.20E-07	0.00E+00	0.00E+00	2.20E-07
SVOC	Phenol	108-95-2	2.88E+01		5.21E-06	7.08E-01	7.86E-05	1.51E-01	1.12E-01	3.72E-08	4.10E-06	7.26E-07	0.00E+00	0.00E+00	7.26E-07
SVOC	Pyrene	129-00-0	1.06E+05		7.46E-05	2.35E-01	6.26E-05	3.50E+02	3.71E-02	2.96E-08	7.99E-09	3.21E-08	0.00E+00	0.00E+00	3.21E-08
PHYS	Organic Carbon (total)	C-012			0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
PCB	PCBs (total)	1336-36-3	2.45E+06		2.80E-02	1.75E-01	4.32E-05	8.15E+03	2.76E-02	2.04E-08	9.46E-08	1.10E-07	0.00E+00	0.00E+00	1.10E-07
INORG	Antimony	7440-36-0		4.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Arsenic	7440-38-2		2.90E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Barium	7440-39-3		4.10E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Beryllium	7440-41-7		7.90E+02	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Cadmium	7440-43-9		7.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Chromium (total)	7440-47-3		1.90E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00

Attachment E-4.1: Vapor Flux from Soil to Outdoor Air
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical	CASRN	K_{oc} (L/kg)	K_d (L/kg)	H (unitless)	D_{air} (m^2/d)	D_{water} (m^2/d)	R_L (unitless)	D_G (m^2/d)	D_L (m^2/d)	D_E (m^2/d)	Infinite J_v (kg/m^2-s)	Finite depth Z1 ERFC term	Finite depth Z2 ERFC term	J_v (kg/m^2-s)
INORG	Chromium III	16065-83-1		1.80E+06	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Cobalt	7440-48-4		4.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Copper	7440-50-8		3.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Lead	7439-92-1		9.00E+02	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Manganese	7439-96-5		6.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Mercury	7439-97-6		1.00E+03	1.19E-01	2.65E-01	5.44E-05	1.66E+03	4.19E-02	2.57E-08	3.00E-06	6.21E-07	0.00E+00	0.00E+00	6.21E-07
INORG	Methyl mercury	22967-92-6		7.00E+03	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Nickel	7440-02-0		6.50E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Selenium	7782-49-2		5.00E+00	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Silver	7440-22-4		8.30E+00	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Thallium	7440-28-0		7.10E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Vanadium	7440-62-2		1.00E+03	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
INORG	Zinc	7440-66-6		6.20E+01	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00
Notes:	Soil bulk density	kg/L	ρ_b	1.66											
	Soil porosity	L/L-soil	θ	0.38											
	Soil water content	L/L-soil	θ_w	0.06											
	Soil air-filled porosity	L/L-soil	θ_a	0.32											
	Soil organic carbon fraction	unitless	f_{oc}	0.002											
	Averaging period (Exposure Duration)	year	T	10											
		days	T	3650											
		s	T	3.2E+08											
	Molar Gas Constant	L-mmHg/ mole-^oK	R	62.411											
	Temperature	^oC	Temp	10											
		K	Temp	283											
	Clean soil above source	m	Z_1	0.00											
	Bottom of source depth	m	Z_2	2.50											
	The Kd for organic compounds is the Koc times the foc.														

Attachment E-4.2: Cancer RBSL Calculations for Exposure of Landscaper to Soil
Janesville Assembly Plant, Janesville, Wisconsin

				Soil Ingestion				Soil Dermal Contact					Soil Vapor Inhalation				Soil Particulate Inhalation				All Routes
Chem Group	Chemical	CASRN	Cancer Class	LADD* (kgSoil/ kgBW/d)	SF_{oral} (mg/kg/d)$^{-1}$	f_{oral}	RBSL (mg/kg)	ABS_{derm}	LADD* (kgSoil/ kgBW/d)	SF_{derm} (mg/kg/d)$^{-1}$	f_{oral}	RBSL (mg/kg)	C_{air*} (kg/m^3)	URF (m^3/mg)	f_{inh}	RBSL (mg/kg)	C_{air*} (kg/m^3)	URF (m^3/mg)	f_{inh}	RBSL (mg/kg)	RBSL (mg/kg)
VOC	Acetone	67-64-1	ID	1.68E-08									1.17E-04				5.00E-08				
VOC	2-Butanone	78-93-3	ID	1.68E-08									1.17E-04				5.00E-08				
VOC	Carbon Disulfide	75-15-0		1.68E-08									1.48E-04				5.00E-08				
VOC	Cumene	98-82-8	D	1.68E-08									1.30E-04				5.00E-08				
VOC	Cyclohexane	110-82-7	ID	1.68E-08									1.47E-04				5.00E-08				
VOC	Methyl Acetate	79-20-9	ID	1.68E-08									1.24E-04				5.00E-08				
VOC	Methylcyclohexane	108-87-2	ID	1.68E-08									1.48E-04				5.00E-08				
VOC	Methylene Chloride	75-09-2	LC	1.68E-08	2.0E-03	1	3.0E+04			2.0E-03	1		1.44E-04	1.0E-05	1	1.8E+05	5.00E-08	1.0E-05	1	5.1E+08	2.6E+04
VOC	1,2,4-Trichlorobenzene	120-82-1	LC	1.68E-08	2.9E-02		2.1E+03			2.9E-02			4.64E-05				5.00E-08				2.1E+03
VOC	1,2,4-Trimethylbenzene	95-63-6	ID	1.68E-08									1.13E-04				5.00E-08				
VOC	1,3,5-Trimethylbenzene	108-67-8	ID	1.68E-08									1.04E-04				5.00E-08				
VOC	Xylenes (total)	1330-20-7	ID	1.68E-08									1.36E-04				5.00E-08				
SVOC	Acenaphthene	83-32-9	ID	1.68E-08				1.30E-01	1.44E-08				8.08E-06				5.00E-08				
SVOC	Acenaphthylene	208-96-8	D	1.68E-08				1.30E-01	1.44E-08				8.18E-06				5.00E-08				
SVOC	Anthracene	120-12-7	ID	1.68E-08				1.30E-01	1.44E-08				2.04E-06				5.00E-08				
SVOC	Benzaldehyde	100-52-7		1.68E-08				1.00E-01	1.11E-08				5.59E-05				5.00E-08				
SVOC	Benzo(a)anthracene	56-55-3	B2	1.68E-08	7.3E-01	1	8.2E+01	1.30E-01	1.44E-08	7.3E-01	1	9.5E+01	1.30E-07	8.8E-02	1	2.2E+04	5.00E-08	8.8E-02	1	5.8E+04	4.4E+01
SVOC	Benzo(a)pyrene	50-32-8	B2	1.68E-08	7.3E+00	1	8.2E+00	1.30E-01	1.44E-08	7.3E+00	1	9.5E+00	3.62E-08	8.8E-01	1	8.0E+03	5.00E-08	8.8E-01	1	5.8E+03	4.4E+00
SVOC	Benzo(b)fluoranthene	205-99-2	B2	1.68E-08	7.3E-01	1	8.2E+01	1.30E-01	1.44E-08	7.3E-01	1	9.5E+01	2.49E-07	8.8E-02	1	1.2E+04	5.00E-08	8.8E-02	1	5.8E+04	4.4E+01
SVOC	Benzo(g,h,i)perylene	191-24-2	D	1.68E-08				1.30E-01	1.44E-08				7.97E-09				5.00E-08				
SVOC	Benzo(k)fluoranthene	207-08-9	B2	1.68E-08	7.3E-02	1	8.2E+02	1.30E-01	1.44E-08	7.3E-02	1	9.5E+02	2.21E-08	8.8E-03	1	1.3E+06	5.00E-08	8.8E-03	1	5.8E+05	4.4E+02
SVOC	1,1-Biphenyl	92-52-4	SC	1.68E-08	8.2E-03		7.3E+03	1.00E-01	1.11E-08	8.2E-03		1.1E+04	1.21E-05				5.00E-08				4.4E+03
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.68E-08	1.4E-02		4.3E+03	1.00E-01	1.11E-08	1.4E-02		6.5E+03	3.42E-09				5.00E-08				2.6E+03
SVOC	Butylbenzylphthalate	85-68-7	C	1.68E-08	1.9E-03		3.1E+04	1.00E-01	1.11E-08	1.9E-03		4.8E+04	1.32E-07				5.00E-08				1.9E+04
SVOC	Caprolactam	105-60-2		1.68E-08				1.00E-01	1.11E-08				3.57E-06				5.00E-08				
SVOC	Carbazole	86-74-8	B2	1.68E-08	2.0E-02		3.0E+03	1.00E-01	1.11E-08	2.0E-02		4.5E+03	2.29E-07				5.00E-08				1.8E+03
SVOC	Chrysene	218-01-9	B2	1.68E-08	7.3E-03	1	8.2E+03	1.30E-01	1.44E-08	7.3E-03	1	9.5E+03	4.46E-07	8.8E-04	1	6.5E+05	5.00E-08	8.8E-04	1	5.8E+06	4.4E+03
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1.68E-08	7.3E+00	1	8.2E+00	1.30E-01	1.44E-08	7.3E+00	1	9.5E+00	5.40E-09	8.8E-01	1	5.4E+04	5.00E-08	8.8E-01	1	5.8E+03	4.4E+00
SVOC	Dibenzofuran	132-64-9	D	1.68E-08				1.00E-01	1.11E-08				6.03E-07				5.00E-08				
SVOC	Di-n-butylphthalate	84-74-2	D	1.68E-08				1.00E-01	1.11E-08				6.99E-08				5.00E-08				
SVOC	Fluoranthene	206-44-0	D	1.68E-08				1.30E-01	1.44E-08				4.76E-07				5.00E-08				
SVOC	Fluorene	86-73-7	D	1.68E-08				1.30E-01	1.44E-08				3.45E-06				5.00E-08				
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1.68E-08	7.3E-01	1	8.2E+01	1.30E-01	1.44E-08	7.3E-01	1	9.5E+01	1.49E-08	8.8E-02	1	1.9E+05	5.00E-08	8.8E-02	1	5.8E+04	4.4E+01
SVOC	Isophorone	78-59-1	C	1.68E-08	9.5E-04		6.3E+04	1.00E-01	1.11E-08	9.5E-04		9.5E+04	2.46E-05				5.00E-08				3.8E+04
SVOC	2-Methylnaphthalene	91-57-6	ID	1.68E-08				1.00E-01	1.11E-08				2.19E-05				5.00E-08				
SVOC	3&4-Methylphenol	65794-96-4		1.68E-08				1.00E-01	1.11E-08				8.90E-06				5.00E-08				
SVOC	Naphthalene	91-20-3	C	1.68E-08				1.30E-01	1.44E-08				3.66E-05	3.4E-02		2.1E+02	5.00E-08	3.4E-02		1.5E+05	2.1E+02
SVOC	Perylene	198-55-0		1.68E-08													5.00E-08				
SVOC	Phenanthrene	85-01-8	D	1.68E-08				1.30E-01	1.44E-08				2.53E-06				5.00E-08				
SVOC	Phenol	108-95-2	ID	1.68E-08				1.00E-01	1.11E-08				8.35E-06				5.00E-08				
SVOC	Pyrene	129-00-0	NC	1.68E-08				1.30E-01	1.44E-08				3.69E-07				5.00E-08				
PHYS	Organic Carbon (total)	C-012		1.68E-08													5.00E-08				
PCB	PCBs (total)	1336-36-3	B2	1.68E-08	2.0E+00		3.0E+01	1.40E-01	1.55E-08	2.0E+00		3.2E+01	1.27E-06	5.7E-01		3.5E+02	5.00E-08	5.7E-01		8.9E+03	1.5E+01
INORG	Antimony	7440-36-0	ID	1.68E-08													5.00E-08				
INORG	Arsenic	7440-38-2	A	1.68E-08	1.5E+00		4.0E+01	3.00E-02	3.32E-09	1.5E+00		2.0E+02		4.3E+00			5.00E-08	4.3E+00		1.2E+03	3.2E+01
INORG	Barium	7440-39-3	NC	1.68E-08													5.00E-08				
INORG	Beryllium	7440-41-7	B1	1.68E-08										2.4E+00			5.00E-08	2.4E+00		2.1E+03	2.1E+03
INORG	Cadmium	7440-43-9	B1	1.68E-08				1.00E-03	1.11E-10					1.8E+00			5.00E-08	1.8E+00		2.8E+03	2.8E+03
INORG	Chromium (total)	7440-47-3		1.68E-08	5.0E-01		1.2E+02			2.0E+01				1.2E+01			5.00E-08	1.2E+01		4.3E+02	9.3E+01
INORG	Chromium III	16065-83-1	D	1.68E-08													5.00E-08				
INORG	Cobalt	7440-48-4	LC	1.68E-08										9.0E+00			5.00E-08	9.0E+00		5.7E+02	5.7E+02
INORG	Copper	7440-50-8	D	1.68E-08													5.00E-08				

Attachment E-4.2: Cancer RBSL Calculations for Exposure of Landscaper to Soil
Janesville Assembly Plant, Janesville, Wisconsin

				Soil Ingestion				Soil Dermal Contact					Soil Vapor Inhalation				Soil Particulate Inhalation				All Routes
Chem Group	**Chemical**	**CASRN**	**Cancer Class**	**LADD*** (kgSoil/ kgBW/d)	**SF_{oral}** (mg/kg/d)$^{-1}$	**f_{oral}**	**RBSL** (mg/kg)	**ABS_{derm}**	**LADD*** (kgSoil/ kgBW/d)	**SF_{derm}** (mg/kg/d)$^{-1}$	**f_{oral}**	**RBSL** (mg/kg)	**C_{air*}** (kg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**RBSL** (mg/kg)	**C_{air*}** (kg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**RBSL** (mg/kg)	**RBSL** (mg/kg)
INORG	Lead	7439-92-1	B2	1.68E-08													5.00E-08				
INORG	Manganese	7439-96-5	D	1.68E-08													5.00E-08				
INORG	Mercury	7439-97-6	D	1.68E-08									7.14E-06				5.00E-08				
INORG	Methyl mercury	22967-92-6	C	1.68E-08													5.00E-08				
INORG	Nickel	7440-02-0	A	1.68E-08										2.4E-01			5.00E-08	2.4E-01		2.1E+04	2.1E+04
INORG	Selenium	7782-49-2	D	1.68E-08													5.00E-08				
INORG	Silver	7440-22-4	D	1.68E-08													5.00E-08				
INORG	Thallium	7440-28-0	ID	1.68E-08													5.00E-08				
INORG	Vanadium	7440-62-2	ID	1.68E-08													5.00E-08				
INORG	Zinc	7440-66-6	ID	1.68E-08													5.00E-08				
Notes:																					
f_{oral} and f_{inh} are the fraction of the oral and inhalation toxicity values, respectively, that USEPA identified as having a mutagenic mode of action.																					
Cancer RBSLs are calculated at a target cancer risk of 1E-06.																					

Attachment E-4.3: Noncancer RBSL Calculations for Exposure of Landscaper to Soil
Janesville Assembly Plant, Janesville, Wisconsin

			Soil Ingestion			Soil Dermal Contact				Soil Vapor Inhalation			Soil Particulate Inhalation			All Routes
Chem Group	Chemical	CASRN	ADD* (kgSoil/ kgBW/d)	RfD_{oral} (mg/kg/d)	RBSL (mg/kg)	ABS_{derm}	ADD* (kgSoil/ kgBW/d)	RfD_{derm} (mg/kg/d)	RBSL (mg/kg)	C_{air*} (kg/m^3)	RfC (mg/m^3)	RBSL (mg/kg)	C_{air*} (kg/m^3)	RfC (mg/m^3)	RBSL (mg/kg)	RBSL (mg/kg)
VOC	Acetone	67-64-1	1.17E-07	9.0E-01	7.7E+05			9.0E-01		1.17E-04	3.1E+01	9.6E+05	5.00E-08	3.1E+01	2.3E+09	4.3E+05
VOC	2-Butanone	78-93-3	1.17E-07	6.0E-01	5.1E+05			6.0E-01		1.17E-04	5.0E+00	1.6E+05	5.00E-08	5.0E+00	3.7E+08	1.2E+05
VOC	Carbon Disulfide	75-15-0	1.17E-07	1.0E-01	8.5E+04			1.0E-01		1.48E-04	7.0E-01	1.7E+04	5.00E-08	7.0E-01	5.1E+07	1.4E+04
VOC	Cumene	98-82-8	1.17E-07	1.0E-01	8.5E+04			1.0E-01		1.30E-04	4.0E-01	1.1E+04	5.00E-08	4.0E-01	2.9E+07	9.9E+03
VOC	Cyclohexane	110-82-7	1.17E-07							1.47E-04	6.0E+00	1.5E+05	5.00E-08	6.0E+00	4.4E+08	1.5E+05
VOC	Methyl Acetate	79-20-9	1.17E-07	1.0E+00	8.5E+05			1.0E+00		1.24E-04			5.00E-08			8.5E+05
VOC	Methylcyclohexane	108-87-2	1.17E-07							1.48E-04			5.00E-08			
VOC	Methylene Chloride	75-09-2	1.17E-07	6.0E-03	5.1E+03			6.0E-03		1.44E-04	6.0E-01	1.5E+04	5.00E-08	6.0E-01	4.4E+07	3.8E+03
VOC	1,2,4-Trichlorobenzene	120-82-1	1.17E-07	1.0E-02	8.5E+03			1.0E-02		4.64E-05	2.0E-03	1.6E+02	5.00E-08	2.0E-03	1.5E+05	1.5E+02
VOC	1,2,4-Trimethylbenzene	95-63-6	1.17E-07							1.13E-04	7.0E-03	2.3E+02	5.00E-08	7.0E-03	5.1E+05	2.3E+02
VOC	1,3,5-Trimethylbenzene	108-67-8	1.17E-07							1.04E-04	1.0E-02	3.5E+02	5.00E-08	1.0E-02	7.3E+05	3.5E+02
VOC	Xylenes (total)	1330-20-7	1.17E-07	2.0E-01	1.7E+05			2.0E-01		1.36E-04	1.0E-01	2.7E+03	5.00E-08	1.0E-01	7.3E+06	2.6E+03
SVOC	Acenaphthene	83-32-9	1.17E-07	6.0E-02	5.1E+04	1.30E-01	1.01E-07	6.0E-02	6.0E+04	8.08E-06			5.00E-08			2.8E+04
SVOC	Acenaphthylene	208-96-8	1.17E-07	3.0E-02	2.6E+04	1.30E-01	1.01E-07	3.0E-02	3.0E+04	8.18E-06			5.00E-08			1.4E+04
SVOC	Anthracene	120-12-7	1.17E-07	3.0E-01	2.6E+05	1.30E-01	1.01E-07	3.0E-01	3.0E+05	2.04E-06			5.00E-08			1.4E+05
SVOC	Benzaldehyde	100-52-7	1.17E-07	1.0E-01	8.5E+04	1.00E-01	7.75E-08	1.0E-01	1.3E+05	5.59E-05			5.00E-08			5.1E+04
SVOC	Benzo(a)anthracene	56-55-3	1.17E-07			1.30E-01	1.01E-07			1.30E-07			5.00E-08			
SVOC	Benzo(a)pyrene	50-32-8	1.17E-07			1.30E-01	1.01E-07			3.62E-08			5.00E-08			
SVOC	Benzo(b)fluoranthene	205-99-2	1.17E-07			1.30E-01	1.01E-07			2.49E-07			5.00E-08			
SVOC	Benzo(g,h,i)perylene	191-24-2	1.17E-07	3.0E-02	2.6E+04	1.30E-01	1.01E-07	3.0E-02	3.0E+04	7.97E-09			5.00E-08			1.4E+04
SVOC	Benzo(k)fluoranthene	207-08-9	1.17E-07			1.30E-01	1.01E-07			2.21E-08			5.00E-08			
SVOC	1,1-Biphenyl	92-52-4	1.17E-07	5.0E-01	4.3E+05	1.00E-01	7.75E-08	5.0E-01	6.5E+05	1.21E-05			5.00E-08			2.6E+05
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	1.17E-07	2.0E-02	1.7E+04	1.00E-01	7.75E-08	2.0E-02	2.6E+04	3.42E-09			5.00E-08			1.0E+04
SVOC	Butylbenzylphthalate	85-68-7	1.17E-07	2.0E-01	1.7E+05	1.00E-01	7.75E-08	2.0E-01	2.6E+05	1.32E-07			5.00E-08			1.0E+05
SVOC	Caprolactam	105-60-2	1.17E-07	5.0E-01	4.3E+05	1.00E-01	7.75E-08	5.0E-01	6.5E+05	3.57E-06	2.2E-03	2.3E+03	5.00E-08	2.2E-03	1.6E+05	2.2E+03
SVOC	Carbazole	86-74-8	1.17E-07			1.00E-01	7.75E-08			2.29E-07			5.00E-08			
SVOC	Chrysene	218-01-9	1.17E-07			1.30E-01	1.01E-07			4.46E-07			5.00E-08			
SVOC	Dibenz(a,h)anthracene	53-70-3	1.17E-07			1.30E-01	1.01E-07			5.40E-09			5.00E-08			
SVOC	Dibenzofuran	132-64-9	1.17E-07	4.0E-03	3.4E+03	1.00E-01	7.75E-08	4.0E-03	5.2E+03	6.03E-07			5.00E-08			2.1E+03
SVOC	Di-n-butylphthalate	84-74-2	1.17E-07	1.0E-01	8.5E+04	1.00E-01	7.75E-08	1.0E-01	1.3E+05	6.99E-08			5.00E-08			5.1E+04
SVOC	Fluoranthene	206-44-0	1.17E-07	4.0E-02	3.4E+04	1.30E-01	1.01E-07	4.0E-02	4.0E+04	4.76E-07			5.00E-08			1.8E+04
SVOC	Fluorene	86-73-7	1.17E-07	4.0E-02	3.4E+04	1.30E-01	1.01E-07	4.0E-02	4.0E+04	3.45E-06			5.00E-08			1.8E+04
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	1.17E-07			1.30E-01	1.01E-07			1.49E-08			5.00E-08			
SVOC	Isophorone	78-59-1	1.17E-07	2.0E-01	1.7E+05	1.00E-01	7.75E-08	2.0E-01	2.6E+05	2.46E-05	2.0E+00	3.0E+05	5.00E-08	2.0E+00	1.5E+08	7.6E+04
SVOC	2-Methylnaphthalene	91-57-6	1.17E-07	4.0E-03	3.4E+03	1.00E-01	7.75E-08	4.0E-03	5.2E+03	2.19E-05			5.00E-08			2.1E+03
SVOC	3&4-Methylphenol	65794-96-4	1.17E-07	5.0E-03	4.3E+03	1.00E-01	7.75E-08	5.0E-03	6.5E+03	8.90E-06			5.00E-08			2.6E+03
SVOC	Naphthalene	91-20-3	1.17E-07	2.0E-02	1.7E+04	1.30E-01	1.01E-07	2.0E-02	2.0E+04	3.66E-05	3.0E-03	3.0E+02	5.00E-08	3.0E-03	2.2E+05	2.9E+02
SVOC	Perylene	198-55-0	1.17E-07										5.00E-08			
SVOC	Phenanthrene	85-01-8	1.17E-07	3.0E-02	2.6E+04	1.30E-01	1.01E-07	3.0E-02	3.0E+04	2.53E-06			5.00E-08			1.4E+04
SVOC	Phenol	108-95-2	1.17E-07	3.0E-01	2.6E+05	1.00E-01	7.75E-08	3.0E-01	3.9E+05	8.35E-06			5.00E-08			1.5E+05
SVOC	Pyrene	129-00-0	1.17E-07	3.0E-02	2.6E+04	1.30E-01	1.01E-07	3.0E-02	3.0E+04	3.69E-07			5.00E-08			1.4E+04
PHYS	Organic Carbon (total)	C-012	1.17E-07										5.00E-08			
PCB	PCBs (total)	1336-36-3	1.17E-07	2.0E-05	1.7E+01	1.40E-01	1.08E-07	2.0E-05	1.8E+01	1.27E-06			5.00E-08			8.9E+00
INORG	Antimony	7440-36-0	1.17E-07	4.0E-04	3.4E+02			6.0E-05					5.00E-08			3.4E+02
INORG	Arsenic	7440-38-2	1.17E-07	3.0E-04	2.6E+02	3.00E-02	2.32E-08	3.0E-04	1.3E+03		1.5E-05		5.00E-08	1.5E-05	1.1E+03	1.8E+02

Attachment E-4.3: Noncancer RBSL Calculations for Exposure of Landscaper to Soil
Janesville Assembly Plant, Janesville, Wisconsin

			Soil Ingestion			Soil Dermal Contact				Soil Vapor Inhalation			Soil Particulate Inhalation			All Routes
Chem Group	**Chemical**	**CASRN**	**ADD*** (kgSoil/ kgBW/d)	**RfD_{oral}** (mg/kg/d)	**RBSL** (mg/kg)	**ABS_{derm}**	**ADD*** (kgSoil/ kgBW/d)	**RfD_{derm}** (mg/kg/d)	**RBSL** (mg/kg)	**C_{air*}** (kg/m^3)	**RfC** (mg/m^3)	**RBSL** (mg/kg)	**C_{air*}** (kg/m^3)	**RfC** (mg/m^3)	**RBSL** (mg/kg)	**RBSL** (mg/kg)
INORG	Barium	7440-39-3	1.17E-07	2.0E-01	1.7E+05			1.4E-02					5.00E-08			1.7E+05
INORG	Beryllium	7440-41-7	1.17E-07	2.0E-03	1.7E+03			1.4E-05			2.0E-05		5.00E-08	2.0E-05	1.5E+03	7.9E+02
INORG	Cadmium	7440-43-9	1.17E-07	1.0E-03	8.5E+02	1.00E-03	7.75E-10	2.5E-05	3.2E+03		1.0E-05		5.00E-08	1.0E-05	7.3E+02	3.5E+02
INORG	Chromium (total)	7440-47-3	1.17E-07	3.0E-03	2.6E+03			7.5E-05			1.0E-04		5.00E-08	1.0E-04	7.3E+03	1.9E+03
INORG	Chromium III	16065-83-1	1.17E-07	1.5E+00	1.3E+06			2.0E-02			5.0E-03		5.00E-08	5.0E-03	3.7E+05	2.8E+05
INORG	Cobalt	7440-48-4	1.17E-07	3.0E-04	2.6E+02			3.0E-04			6.0E-06		5.00E-08	6.0E-06	4.4E+02	1.6E+02
INORG	Copper	7440-50-8	1.17E-07	4.0E-02	3.4E+04			4.0E-02					5.00E-08			3.4E+04
INORG	Lead	7439-92-1	1.17E-07										5.00E-08			
INORG	Manganese	7439-96-5	1.17E-07	1.4E-01	1.2E+05			8.4E-03			5.0E-05		5.00E-08	5.0E-05	3.7E+03	3.5E+03
INORG	Mercury	7439-97-6	1.17E-07	3.0E-04	2.6E+02			2.1E-05		7.14E-06	3.0E-04	1.5E+02	5.00E-08	3.0E-04	2.2E+04	9.5E+01
INORG	Methyl mercury	22967-92-6	1.17E-07	1.0E-04	8.5E+01			1.0E-04					5.00E-08			8.5E+01
INORG	Nickel	7440-02-0	1.17E-07	2.0E-02	1.7E+04			8.0E-04			9.0E-05		5.00E-08	9.0E-05	6.6E+03	4.7E+03
INORG	Selenium	7782-49-2	1.17E-07	5.0E-03	4.3E+03			5.0E-03			2.0E-02		5.00E-08	2.0E-02	1.5E+06	4.2E+03
INORG	Silver	7440-22-4	1.17E-07	5.0E-03	4.3E+03			2.0E-04			1.0E-05		5.00E-08	1.0E-05	7.3E+02	6.2E+02
INORG	Thallium	7440-28-0	1.17E-07										5.00E-08			
INORG	Vanadium	7440-62-2	1.17E-07	5.0E-03	4.3E+03			1.3E-04			1.0E-04		5.00E-08	1.0E-04	7.3E+03	2.7E+03
INORG	Zinc	7440-66-6	1.17E-07	3.0E-01	2.6E+05			3.0E-01					5.00E-08			2.6E+05
Notes:																
Noncancer RBSLs are calculated at a target HQ of 0.1.																

Attachment E-4.4: USEPA Adult Lead Model for Exposure to Soil Lead Janesville Assembly Plant, Janesville, Wisconsin			
			USEPA (2009) Pregnant Workers
Soil Ingestion			
Soil Pb concentration		mg-Pb/kg-soil	2,240
Gastrointestinal absorption	**AF**	unitless	0.12
Ingestion rate	**IR**	mg-soil/day	50
Conversion factor		kg/mg	1E-06
Fraction contaminated		unitless	1
Exposure frequency	**EF**	days/year	219
Averaging time	**AT**	days	365
Uptake of lead		ug-Pb/day	8.06
Baseline blood lead	**$PbB_{baseline}$**	ug-Pb/dL	1.0
Biokinetic slope factor	**BSF**	ug-Pb/dL per ug-Pb/day	0.4
Geometric std deviation	**GSD**		1.8
Ratio of fetal PbB to maternal PbB	**$R_{f/m}$**	unitless	0.9
Blood lead goal	**PbB_{goal}**	ug-Pb/dL	10
Soil Pb to meet PbB_{goal} at specific percentiles	**z**	**Percentile**	**Soil Pb** (mg/kg)
	0.000	50	7,022
	0.674	75	4,496
	1.036	85	3,501
	1.282	90	2,938
	1.645	**95**	**2,240**
	2.054	98	1,613
	2.326	99	1,271
Note:			
1. From *Recommendations of the Technical Review Workgroup for Lead for an Approach to Assessing Risks associated with Adult Exposure to Lead in Soil (USEPA, 2003b), including Update of the Adult Lead Methodology's Default Baseline Blood Lead Concentration and Geometric Standard Deviation Parameters (USEPA 2009).*			
2. The shaded value represents the screening level.			

Attachment E-5
Screening Results

Attachment E-5

Data Screening Results

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Attachment E-5.1: Sediment Screening Results Summary - Recreator
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Recreator Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Sed Contact RBSL	Recreator Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Soil Contact RBSL
SS-1	SVOC	Acenaphthene	83-32-9	ID	1	1	4.08E-02	4.08E-02	5.3E+03	7.7E-06	1.7E+03	2.4E-05
SS-1	SVOC	Acenaphthylene	208-96-8	D	1	1	8.73E-02	8.73E-02	2.6E+03	3.3E-05	8.4E+02	1.0E-04
SS-1	SVOC	Anthracene	120-12-7	ID	1	1	1.78E-01	1.78E-01	2.6E+04	6.8E-06	8.4E+03	2.1E-05
SS-1	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	3.96E-01	3.96E-01	1.9E+00	2.1E-01	7.2E-01	5.5E-01
SS-1	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	4.40E-01	4.40E-01	1.9E-01	**2.4E+00**	7.2E-02	**6.1E+00**
SS-1	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	3.35E-01	3.35E-01	1.9E+00	1.8E-01	7.2E-01	4.7E-01
SS-1	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	2.40E-01	2.40E-01	2.6E+03	9.1E-05	8.4E+02	2.9E-04
SS-1	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	3.49E-01	3.49E-01	1.9E+01	1.9E-02	7.2E+00	4.9E-02
SS-1	SVOC	Butylbenzylphthalate	85-68-7	C	1	1	2.30E+00	2.30E+00	2.8E+03	8.2E-04	1.2E+03	1.9E-03
SS-1	SVOC	Chrysene	218-01-9	B2	1	1	4.33E-01	4.33E-01	1.9E+02	2.3E-03	7.2E+01	6.0E-03
SS-1	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	6.67E-02	6.67E-02	1.9E-01	3.6E-01	7.2E-02	9.3E-01
SS-1	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	1.50E-01	1.50E-01	9.6E+03	1.6E-05	3.0E+03	5.0E-05
SS-1	SVOC	Fluoranthene	206-44-0	D	1	1	8.79E-01	8.79E-01	3.5E+03	2.5E-04	1.1E+03	7.9E-04
SS-1	SVOC	Fluorene	86-73-7	D	1	1	5.18E-02	5.18E-02	3.5E+03	1.5E-05	1.1E+03	4.6E-05
SS-1	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	2.27E-01	2.27E-01	1.9E+00	1.2E-01	7.2E-01	3.2E-01
SS-1	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	2.30E-02	2.30E-02	3.8E+02	6.0E-05	1.2E+02	1.9E-04
SS-1	SVOC	Naphthalene	91-20-3	C	1	1	2.03E-02	2.03E-02	1.8E+03	1.2E-05	2.0E+02	1.0E-04
SS-1	SVOC	Perylene	198-55-0		1	1	2.01E-01	2.01E-01				
SS-1	SVOC	Phenanthrene	85-01-8	D	1	1	4.78E-01	4.78E-01	2.6E+03	1.8E-04	8.4E+02	5.7E-04
SS-1	SVOC	Pyrene	129-00-0	NC	1	1	7.56E-01	7.56E-01	2.6E+03	2.9E-04	8.4E+02	9.0E-04
SS-1	PHYS	Organic Carbon (total)	C-012		1	1	4.63E+04	4.63E+04				
SS-1	PCB	PCBs (total)	1336-36-3	B2	1	1	4.70E-02	4.70E-02	1.7E+00	2.8E-02	5.5E-01	8.6E-02
SS-1	INORG	Antimony	7440-36-0	ID	1	1	4.40E-01	4.40E-01	5.5E+01	8.0E-03	1.5E+01	2.9E-02
SS-1	INORG	Arsenic	7440-38-2	A	1	1	4.60E+00	4.60E+00	5.6E+00	8.2E-01	1.9E+00	**2.4E+00**
SS-1	INORG	Barium	7440-39-3	NC	1	1	8.95E+01	8.95E+01	2.7E+04	3.3E-03	7.6E+03	1.2E-02
SS-1	INORG	Beryllium	7440-41-7	B1	1	1	3.80E-01	3.80E-01	2.7E+02	1.4E-03	7.6E+01	5.0E-03
SS-1	INORG	Cadmium	7440-43-9	B1	1	1	8.80E-01	8.80E-01	1.2E+02	7.5E-03	3.4E+01	2.6E-02
SS-1	INORG	Chromium (total)	7440-47-3		1	1	2.05E+01	2.05E+01	2.2E+01	9.2E-01	6.2E+00	**3.3E+00**
SS-1	INORG	Cobalt	7440-48-4	LC	1	1	5.00E+00	5.00E+00	4.1E+01	1.2E-01	1.1E+01	4.4E-01
SS-1	INORG	Copper	7440-50-8	D	1	1	1.67E+01	1.67E+01	5.5E+03	3.1E-03	1.5E+03	1.1E-02
SS-1	INORG	Lead	7439-92-1	B2	1	1	9.99E+01	9.99E+01	4.3E+03	2.3E-02	4.3E+03	2.3E-02
SS-1	INORG	Manganese	7439-96-5	D	1	1	2.39E+02	2.39E+02	1.9E+04	1.2E-02	5.3E+03	4.5E-02
SS-1	INORG	Mercury	7439-97-6	D	1	1	4.90E+00	4.90E+00	4.1E+01	1.2E-01	1.1E+01	4.5E-01
SS-1	INORG	Methyl mercury	22967-92-6	C	1	1	1.50E-03	1.50E-03	1.4E+01	1.1E-04	3.8E+00	3.9E-04
SS-1	INORG	Nickel	7440-02-0	A	1	1	1.16E+01	1.16E+01	2.7E+03	4.2E-03	7.6E+02	1.5E-02
SS-1	INORG	Selenium	7782-49-2	D	1	1	1.50E+00	1.50E+00	6.8E+02	2.2E-03	1.9E+02	7.9E-03
SS-1	INORG	Silver	7440-22-4	D	1	1	2.40E-01	2.40E-01	6.8E+02	3.5E-04	1.9E+02	1.3E-03
SS-1	INORG	Thallium	7440-28-0	ID	1	1	1.40E-01	1.40E-01				
SS-1	INORG	Vanadium	7440-62-2	ID	1	1	1.49E+01	1.49E+01	6.8E+02	2.2E-02	1.9E+02	7.8E-02
SS-1	INORG	Zinc	7440-66-6	ID	1	1	1.01E+02	1.01E+02	4.1E+04	2.5E-03	1.1E+04	8.9E-03
SS-2	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	3.93E+02	3.93E+02				
SS-2	VOC	Acetone	67-64-1	ID	1	1	3.90E-02	3.90E-02	1.2E+05	3.2E-07	3.3E+04	1.2E-06
SS-2	VOC	Methylcyclohexane	108-87-2	ID	1	1	2.80E-03	2.80E-03				

Attachment E-5.1: Sediment Screening Results Summary - Recreator
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Recreator Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Sed Contact RBSL	Recreator Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Soil Contact RBSL
SS-2	SVOC	Acenaphthene	83-32-9	ID	1	1	2.48E-02	2.48E-02	5.3E+03	4.7E-06	1.7E+03	1.5E-05
SS-2	SVOC	Acenaphthylene	208-96-8	D	1	1	8.91E-02	8.91E-02	2.6E+03	3.4E-05	8.4E+02	1.1E-04
SS-2	SVOC	Anthracene	120-12-7	ID	1	1	1.06E-01	1.06E-01	2.6E+04	4.0E-06	8.4E+03	1.3E-05
SS-2	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	2.12E-01	2.12E-01	1.9E+00	1.1E-01	7.2E-01	3.0E-01
SS-2	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	2.51E-01	2.51E-01	1.9E-01	**1.4E+00**	7.2E-02	**3.5E+00**
SS-2	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	2.00E-01	2.00E-01	1.9E+00	1.1E-01	7.2E-01	2.8E-01
SS-2	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	1.52E-01	1.52E-01	2.6E+03	5.8E-05	8.4E+02	1.8E-04
SS-2	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	1.96E-01	1.96E-01	1.9E+01	1.1E-02	7.2E+00	2.7E-02
SS-2	SVOC	Chrysene	218-01-9	B2	1	1	2.52E-01	2.52E-01	1.9E+02	1.4E-03	7.2E+01	3.5E-03
SS-2	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	4.47E-02	4.47E-02	1.9E-01	2.4E-01	7.2E-02	6.2E-01
SS-2	SVOC	Fluoranthene	206-44-0	D	1	1	4.45E-01	4.45E-01	3.5E+03	1.3E-04	1.1E+03	4.0E-04
SS-2	SVOC	Fluorene	86-73-7	D	1	1	2.89E-02	2.89E-02	3.5E+03	8.2E-06	1.1E+03	2.6E-05
SS-2	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	1.41E-01	1.41E-01	1.9E+00	7.6E-02	7.2E-01	2.0E-01
SS-2	SVOC	Naphthalene	91-20-3	C	1	1	2.36E-02	2.36E-02	1.8E+03	1.3E-05	2.0E+02	1.2E-04
SS-2	SVOC	Perylene	198-55-0		1	1	2.80E-01	2.80E-01				
SS-2	SVOC	Phenanthrene	85-01-8	D	1	1	3.09E-01	3.09E-01	2.6E+03	1.2E-04	8.4E+02	3.7E-04
SS-2	SVOC	Pyrene	129-00-0	NC	1	1	4.03E-01	4.03E-01	2.6E+03	1.5E-04	8.4E+02	4.8E-04
SS-2	PHYS	Organic Carbon (total)	C-012		1	1	7.19E+04	7.19E+04				
SS-2	INORG	Antimony	7440-36-0	ID	1	1	2.70E-01	2.70E-01	5.5E+01	4.9E-03	1.5E+01	1.8E-02
SS-2	INORG	Arsenic	7440-38-2	A	1	1	6.20E+00	6.20E+00	5.6E+00	**1.1E+00**	1.9E+00	**3.3E+00**
SS-2	INORG	Barium	7440-39-3	NC	1	1	1.53E+02	1.53E+02	2.7E+04	5.6E-03	7.6E+03	2.0E-02
SS-2	INORG	Beryllium	7440-41-7	B1	1	1	5.30E-01	5.30E-01	2.7E+02	1.9E-03	7.6E+01	7.0E-03
SS-2	INORG	Cadmium	7440-43-9	B1	1	1	6.20E-01	6.20E-01	1.2E+02	5.3E-03	3.4E+01	1.8E-02
SS-2	INORG	Chromium III	16065-83-1	D	1	1	2.04E+01	2.04E+01	2.1E+05	9.9E-05	5.7E+04	3.6E-04
SS-2	INORG	Cobalt	7440-48-4	LC	1	1	5.70E+00	5.70E+00	4.1E+01	1.4E-01	1.1E+01	5.0E-01
SS-2	INORG	Copper	7440-50-8	D	1	1	2.64E+01	2.64E+01	5.5E+03	4.8E-03	1.5E+03	1.7E-02
SS-2	INORG	Lead	7439-92-1	B2	1	1	1.37E+02	1.37E+02	4.3E+03	3.2E-02	4.3E+03	3.2E-02
SS-2	INORG	Manganese	7439-96-5	D	1	1	3.55E+02	3.55E+02	1.9E+04	1.9E-02	5.3E+03	6.8E-02
SS-2	INORG	Mercury	7439-97-6	D	1	1	2.75E+01	2.75E+01	4.1E+01	6.7E-01	1.1E+01	**2.5E+00**
SS-2	INORG	Methyl mercury	22967-92-6	C	1	1	9.70E-04	9.70E-04	1.4E+01	7.1E-05	3.8E+00	2.6E-04
SS-2	INORG	Nickel	7440-02-0	A	1	1	1.37E+01	1.37E+01	2.7E+03	5.0E-03	7.6E+02	1.8E-02
SS-2	INORG	Selenium	7782-49-2	D	1	1	1.50E+00	1.50E+00	6.8E+02	2.2E-03	1.9E+02	7.9E-03
SS-2	INORG	Silver	7440-22-4	D	1	1	1.50E-01	1.50E-01	6.8E+02	2.2E-04	1.9E+02	7.9E-04
SS-2	INORG	Thallium	7440-28-0	ID	1	1	2.10E-01	2.10E-01				
SS-2	INORG	Vanadium	7440-62-2	ID	1	1	2.15E+01	2.15E+01	6.8E+02	3.1E-02	1.9E+02	1.1E-01
SS-2	INORG	Zinc	7440-66-6	ID	1	1	2.13E+02	2.13E+02	4.1E+04	5.2E-03	1.1E+04	1.9E-02
SS-3	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	3.40E+02	3.40E+02				
SS-3	VOC	Acetone	67-64-1	ID	1	1	6.90E-02	6.90E-02	1.2E+05	5.6E-07	3.3E+04	2.1E-06
SS-3	VOC	Methylcyclohexane	108-87-2	ID	1	1	3.90E-02	3.90E-02				
SS-3	SVOC	Acenaphthene	83-32-9	ID	1	1	1.24E-01	1.24E-01	5.3E+03	2.4E-05	1.7E+03	7.4E-05
SS-3	SVOC	Acenaphthylene	208-96-8	D	1	1	7.10E-02	7.10E-02	2.6E+03	2.7E-05	8.4E+02	8.5E-05
SS-3	SVOC	Anthracene	120-12-7	ID	1	1	3.21E-01	3.21E-01	2.6E+04	1.2E-05	8.4E+03	3.8E-05
SS-3	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	5.70E-01	5.70E-01	1.9E+00	3.1E-01	7.2E-01	7.9E-01

Attachment E-5.1: Sediment Screening Results Summary - Recreator
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Recreator Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Sed Contact RBSL	Recreator Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Soil Contact RBSL
SS-3	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	5.30E-01	5.30E-01	1.9E-01	**2.9E+00**	7.2E-02	**7.4E+00**
SS-3	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	4.88E-01	4.88E-01	1.9E+00	2.6E-01	7.2E-01	6.8E-01
SS-3	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	3.13E-01	3.13E-01	2.6E+03	1.2E-04	8.4E+02	3.7E-04
SS-3	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	4.42E-01	4.42E-01	1.9E+01	2.4E-02	7.2E+00	6.2E-02
SS-3	SVOC	Butylbenzylphthalate	85-68-7	C	1	1	1.30E-01	1.30E-01	2.8E+03	4.6E-05	1.2E+03	1.0E-04
SS-3	SVOC	Chrysene	218-01-9	B2	1	1	7.61E-01	7.61E-01	1.9E+02	4.1E-03	7.2E+01	1.1E-02
SS-3	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	9.29E-02	9.29E-02	1.9E-01	5.0E-01	7.2E-02	**1.3E+00**
SS-3	SVOC	Dibenzofuran	132-64-9	D	1	1	6.20E-02	6.20E-02	3.8E+02	1.6E-04	1.2E+02	5.2E-04
SS-3	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	1.30E-01	1.30E-01	9.6E+03	1.4E-05	3.0E+03	4.4E-05
SS-3	SVOC	Fluoranthene	206-44-0	D	1	1	1.25E+00	1.25E+00	3.5E+03	3.6E-04	1.1E+03	1.1E-03
SS-3	SVOC	Fluorene	86-73-7	D	1	1	1.36E-01	1.36E-01	3.5E+03	3.9E-05	1.1E+03	1.2E-04
SS-3	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	2.95E-01	2.95E-01	1.9E+00	1.6E-01	7.2E-01	4.1E-01
SS-3	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	1.00E-01	1.00E-01	3.8E+02	2.6E-04	1.2E+02	8.4E-04
SS-3	SVOC	Naphthalene	91-20-3	C	1	1	3.32E-01	3.32E-01	1.8E+03	1.9E-04	2.0E+02	1.6E-03
SS-3	SVOC	Perylene	198-55-0		1	1	2.21E-01	2.21E-01				
SS-3	SVOC	Phenanthrene	85-01-8	D	1	1	1.09E+00	1.09E+00	2.6E+03	4.1E-04	8.4E+02	1.3E-03
SS-3	SVOC	Pyrene	129-00-0	NC	1	1	1.13E+00	1.13E+00	2.6E+03	4.3E-04	8.4E+02	1.4E-03
SS-3	PHYS	Organic Carbon (total)	C-012		1	1	4.61E+04	4.61E+04				
SS-3	PCB	PCBs (total)	1336-36-3	B2	1	1	1.80E-01	1.80E-01	1.7E+00	1.1E-01	5.5E-01	3.3E-01
SS-3	INORG	Antimony	7440-36-0	ID	1	1	3.50E-01	3.50E-01	5.5E+01	6.4E-03	1.5E+01	2.3E-02
SS-3	INORG	Arsenic	7440-38-2	A	1	1	6.20E+00	6.20E+00	5.6E+00	**1.1E+00**	1.9E+00	**3.3E+00**
SS-3	INORG	Barium	7440-39-3	NC	1	1	1.71E+02	1.71E+02	2.7E+04	6.2E-03	7.6E+03	2.2E-02
SS-3	INORG	Beryllium	7440-41-7	B1	1	1	3.10E-01	3.10E-01	2.7E+02	1.1E-03	7.6E+01	4.1E-03
SS-3	INORG	Cadmium	7440-43-9	B1	1	1	9.60E-01	9.60E-01	1.2E+02	8.2E-03	3.4E+01	2.8E-02
SS-3	INORG	Chromium III	16065-83-1	D	1	1	2.00E+01	2.00E+01	2.1E+05	9.7E-05	5.7E+04	3.5E-04
SS-3	INORG	Cobalt	7440-48-4	LC	1	1	3.90E+00	3.90E+00	4.1E+01	9.5E-02	1.1E+01	3.4E-01
SS-3	INORG	Copper	7440-50-8	D	1	1	2.71E+01	2.71E+01	5.5E+03	4.9E-03	1.5E+03	1.8E-02
SS-3	INORG	Lead	7439-92-1	B2	1	1	2.94E+02	2.94E+02	4.3E+03	6.8E-02	4.3E+03	6.8E-02
SS-3	INORG	Manganese	7439-96-5	D	1	1	3.24E+02	3.24E+02	1.9E+04	1.7E-02	5.3E+03	6.2E-02
SS-3	INORG	Mercury	7439-97-6	D	1	1	2.40E+00	2.40E+00	4.1E+01	5.8E-02	1.1E+01	2.2E-01
SS-3	INORG	Methyl mercury	22967-92-6	C	1	1	1.20E-03	1.20E-03	1.4E+01	8.8E-05	3.8E+00	3.2E-04
SS-3	INORG	Nickel	7440-02-0	A	1	1	8.50E+00	8.50E+00	2.7E+03	3.1E-03	7.6E+02	1.1E-02
SS-3	INORG	Selenium	7782-49-2	D	1	1	1.20E+00	1.20E+00	6.8E+02	1.8E-03	1.9E+02	6.3E-03
SS-3	INORG	Silver	7440-22-4	D	1	1	1.90E-01	1.90E-01	6.8E+02	2.8E-04	1.9E+02	1.0E-03
SS-3	INORG	Thallium	7440-28-0	ID	1	1	1.20E-01	1.20E-01				
SS-3	INORG	Vanadium	7440-62-2	ID	1	1	1.28E+01	1.28E+01	6.8E+02	1.9E-02	1.9E+02	6.7E-02
SS-3	INORG	Zinc	7440-66-6	ID	1	1	2.89E+02	2.89E+02	4.1E+04	7.0E-03	1.1E+04	2.5E-02
SS-4	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	5.58E+02	5.58E+02				
SS-4	VOC	Cumene	98-82-8	D	1	1	4.90E-01	4.90E-01	1.4E+04	3.6E-05	2.9E+03	1.7E-04
SS-4	VOC	Cyclohexane	110-82-7	ID	1	1	2.80E-01	2.80E-01			1.5E+05	1.9E-06
SS-4	VOC	Methyl Acetate	79-20-9	ID	1	1	2.20E-01	2.20E-01	1.4E+05	1.6E-06	3.8E+04	5.8E-06
SS-4	VOC	Methylcyclohexane	108-87-2	ID	1	1	2.30E+00	2.30E+00				
SS-4	VOC	1,2,4-Trimethylbenzene	95-63-6	ID	1	1	4.20E+00	4.20E+00			2.5E+02	1.7E-02

Attachment E-5.1: Sediment Screening Results Summary - Recreator
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Recreator Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Sed Contact RBSL	Recreator Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Soil Contact RBSL
SS-4	VOC	1,3,5-Trimethylbenzene	108-67-8	ID	1	1	2.30E+00	2.30E+00			4.0E+02	5.8E-03
SS-4	VOC	Xylenes (total)	1330-20-7	ID	1	1	9.40E-01	9.40E-01	2.7E+04	3.4E-05	2.0E+03	4.6E-04
SS-4	SVOC	Acenaphthene	83-32-9	ID	1	1	5.12E-01	5.12E-01	5.3E+03	9.7E-05	1.7E+03	3.1E-04
SS-4	SVOC	Acenaphthylene	208-96-8	D	1	1	2.77E-01	2.77E-01	2.6E+03	1.1E-04	8.4E+02	3.3E-04
SS-4	SVOC	Anthracene	120-12-7	ID	1	1	1.10E+00	1.10E+00	2.6E+04	4.2E-05	8.4E+03	1.3E-04
SS-4	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	1.47E+00	1.47E+00	1.9E+00	7.9E-01	7.2E-01	**2.0E+00**
SS-4	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	1.21E+00	1.21E+00	1.9E-01	**6.5E+00**	7.2E-02	**1.7E+01**
SS-4	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	1.18E+00	1.18E+00	1.9E+00	6.4E-01	7.2E-01	**1.6E+00**
SS-4	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	7.07E-01	7.07E-01	2.6E+03	2.7E-04	8.4E+02	8.5E-04
SS-4	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	1.10E+00	1.10E+00	1.9E+01	5.9E-02	7.2E+00	1.5E-01
SS-4	SVOC	1,1-Biphenyl	92-52-4	SC	1	1	4.80E-01	4.80E-01	6.5E+02	7.4E-04	2.9E+02	1.7E-03
SS-4	SVOC	Chrysene	218-01-9	B2	1	1	2.76E+00	2.76E+00	1.9E+02	1.5E-02	7.2E+01	3.8E-02
SS-4	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	2.22E-01	2.22E-01	1.9E-01	**1.2E+00**	7.2E-02	**3.1E+00**
SS-4	SVOC	Dibenzofuran	132-64-9	D	1	1	1.90E+00	1.90E+00	3.8E+02	5.0E-03	1.2E+02	1.6E-02
SS-4	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	6.70E+00	6.70E+00	9.6E+03	7.0E-04	3.0E+03	2.3E-03
SS-4	SVOC	Fluoranthene	206-44-0	D	1	1	3.20E+00	3.20E+00	3.5E+03	9.1E-04	1.1E+03	2.9E-03
SS-4	SVOC	Fluorene	86-73-7	D	1	1	8.76E-01	8.76E-01	3.5E+03	2.5E-04	1.1E+03	7.9E-04
SS-4	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	6.37E-01	6.37E-01	1.9E+00	3.4E-01	7.2E-01	8.9E-01
SS-4	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	7.40E+00	7.40E+00	3.8E+02	1.9E-02	1.2E+02	6.2E-02
SS-4	SVOC	Naphthalene	91-20-3	C	1	1	1.87E+00	1.87E+00	1.8E+03	1.1E-03	2.0E+02	9.2E-03
SS-4	SVOC	Perylene	198-55-0		1	1	4.02E-01	4.02E-01				
SS-4	SVOC	Phenanthrene	85-01-8	D	1	1	3.94E+00	3.94E+00	2.6E+03	1.5E-03	8.4E+02	4.7E-03
SS-4	SVOC	Pyrene	129-00-0	NC	1	1	3.29E+00	3.29E+00	2.6E+03	1.2E-03	8.4E+02	3.9E-03
SS-4	PHYS	Organic Carbon (total)	C-012		1	1	8.07E+04	8.07E+04				
SS-4	INORG	Antimony	7440-36-0	ID	1	1	5.02E+01	5.02E+01	5.5E+01	9.2E-01	1.5E+01	**3.3E+00**
SS-4	INORG	Arsenic	7440-38-2	A	1	1	7.60E+00	7.60E+00	5.6E+00	**1.4E+00**	1.9E+00	**4.0E+00**
SS-4	INORG	Barium	7440-39-3	NC	1	1	2.27E+03	2.27E+03	2.7E+04	8.3E-02	7.6E+03	3.0E-01
SS-4	INORG	Beryllium	7440-41-7	B1	1	1	5.60E-01	5.60E-01	2.7E+02	2.0E-03	7.6E+01	7.4E-03
SS-4	INORG	Cadmium	7440-43-9	B1	1	1	4.50E+00	4.50E+00	1.2E+02	3.9E-02	3.4E+01	1.3E-01
SS-4	INORG	Chromium III	16065-83-1	D	1	1	1.81E+02	1.81E+02	2.1E+05	8.8E-04	5.7E+04	3.2E-03
SS-4	INORG	Cobalt	7440-48-4	LC	1	1	5.90E+00	5.90E+00	4.1E+01	1.4E-01	1.1E+01	5.2E-01
SS-4	INORG	Copper	7440-50-8	D	1	1	1.35E+02	1.35E+02	5.5E+03	2.5E-02	1.5E+03	8.9E-02
SS-4	INORG	Lead	7439-92-1	B2	1	1	1.34E+03	1.34E+03	4.3E+03	3.1E-01	4.3E+03	3.1E-01
SS-4	INORG	Manganese	7439-96-5	D	1	1	3.90E+02	3.90E+02	1.9E+04	2.0E-02	5.3E+03	7.4E-02
SS-4	INORG	Mercury	7439-97-6	D	1	1	9.30E+00	9.30E+00	4.1E+01	2.3E-01	1.1E+01	8.6E-01
SS-4	INORG	Methyl mercury	22967-92-6	C	1	1	1.40E-03	1.40E-03	1.4E+01	1.0E-04	3.8E+00	3.7E-04
SS-4	INORG	Nickel	7440-02-0	A	1	1	1.48E+01	1.48E+01	2.7E+03	5.4E-03	7.6E+02	1.9E-02
SS-4	INORG	Selenium	7782-49-2	D	1	1	2.10E+00	2.10E+00	6.8E+02	3.1E-03	1.9E+02	1.1E-02
SS-4	INORG	Silver	7440-22-4	D	1	1	2.20E-01	2.20E-01	6.8E+02	3.2E-04	1.9E+02	1.2E-03
SS-4	INORG	Thallium	7440-28-0	ID	1	1	2.20E-01	2.20E-01				
SS-4	INORG	Vanadium	7440-62-2	ID	1	1	1.87E+01	1.87E+01	6.8E+02	2.7E-02	1.9E+02	9.8E-02
SS-4	INORG	Zinc	7440-66-6	ID	1	1	1.91E+03	1.91E+03	4.1E+04	4.7E-02	1.1E+04	1.7E-01
SS-5	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	5.49E+02	5.49E+02				

Attachment E-5.1: Sediment Screening Results Summary - Recreator
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Recreator Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Sed Contact RBSL	Recreator Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Soil Contact RBSL
SS-5	VOC	Acetone	67-64-1	ID	1	1	1.30E-01	1.30E-01	1.2E+05	1.1E-06	3.3E+04	3.9E-06
SS-5	VOC	2-Butanone	78-93-3	ID	1	1	2.30E-02	2.30E-02	8.2E+04	2.8E-07	2.0E+04	1.1E-06
SS-5	VOC	Cumene	98-82-8	D	1	1	1.40E-01	1.40E-01	1.4E+04	1.0E-05	2.9E+03	4.9E-05
SS-5	VOC	Cyclohexane	110-82-7	ID	1	1	8.40E-02	8.40E-02			1.5E+05	5.6E-07
SS-5	VOC	Methylcyclohexane	108-87-2	ID	1	1	3.90E-01	3.90E-01				
SS-5	VOC	1,2,4-Trimethylbenzene	95-63-6	ID	1	1	6.00E-01	6.00E-01			2.5E+02	2.4E-03
SS-5	VOC	1,3,5-Trimethylbenzene	108-67-8	ID	1	1	2.50E-01	2.50E-01			4.0E+02	6.3E-04
SS-5	VOC	Xylenes (total)	1330-20-7	ID	1	1	5.30E-02	5.30E-02	2.7E+04	1.9E-06	2.0E+03	2.6E-05
SS-5	SVOC	Acenaphthene	83-32-9	ID	1	1	9.94E-01	9.94E-01	5.3E+03	1.9E-04	1.7E+03	5.9E-04
SS-5	SVOC	Acenaphthylene	208-96-8	D	1	1	1.31E-01	1.31E-01	2.6E+03	5.0E-05	8.4E+02	1.6E-04
SS-5	SVOC	Anthracene	120-12-7	ID	1	1	2.16E+00	2.16E+00	2.6E+04	8.2E-05	8.4E+03	2.6E-04
SS-5	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	3.76E+00	3.76E+00	1.9E+00	**2.0E+00**	7.2E-01	**5.2E+00**
SS-5	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	3.51E+00	3.51E+00	1.9E-01	**1.9E+01**	7.2E-02	**4.9E+01**
SS-5	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	2.99E+00	2.99E+00	1.9E+00	**1.6E+00**	7.2E-01	**4.2E+00**
SS-5	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	1.87E+00	1.87E+00	2.6E+03	7.1E-04	8.4E+02	2.2E-03
SS-5	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	3.14E+00	3.14E+00	1.9E+01	1.7E-01	7.2E+00	4.4E-01
SS-5	SVOC	Butylbenzylphthalate	85-68-7	C	1	1	2.90E+02	2.90E+02	2.8E+03	1.0E-01	1.2E+03	2.3E-01
SS-5	SVOC	Chrysene	218-01-9	B2	1	1	4.22E+00	4.22E+00	1.9E+02	2.3E-02	7.2E+01	5.9E-02
SS-5	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	5.72E-01	5.72E-01	1.9E-01	**3.1E+00**	7.2E-02	**8.0E+00**
SS-5	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	1.30E+01	1.30E+01	9.6E+03	1.4E-03	3.0E+03	4.4E-03
SS-5	SVOC	Fluoranthene	206-44-0	D	1	1	9.63E+00	9.63E+00	3.5E+03	2.7E-03	1.1E+03	8.6E-03
SS-5	SVOC	Fluorene	86-73-7	D	1	1	1.31E+00	1.31E+00	3.5E+03	3.7E-04	1.1E+03	1.2E-03
SS-5	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	1.81E+00	1.81E+00	1.9E+00	9.8E-01	7.2E-01	**2.5E+00**
SS-5	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	1.30E+00	1.30E+00	3.8E+02	3.4E-03	1.2E+02	1.1E-02
SS-5	SVOC	Naphthalene	91-20-3	C	1	1	1.23E+00	1.23E+00	1.8E+03	7.0E-04	2.0E+02	6.1E-03
SS-5	SVOC	Perylene	198-55-0		1	1	1.06E+00	1.06E+00				
SS-5	SVOC	Phenanthrene	85-01-8	D	1	1	9.09E+00	9.09E+00	2.6E+03	3.5E-03	8.4E+02	1.1E-02
SS-5	SVOC	Pyrene	129-00-0	NC	1	1	7.37E+00	7.37E+00	2.6E+03	2.8E-03	8.4E+02	8.8E-03
SS-5	PHYS	Organic Carbon (total)	C-012		1	1	7.88E+04	7.88E+04				
SS-5	PCB	PCBs (total)	1336-36-3	B2	1	1	4.70E-01	4.70E-01	1.7E+00	2.8E-01	5.5E-01	8.6E-01
SS-5	INORG	Antimony	7440-36-0	ID	1	1	3.20E+01	3.20E+01	5.5E+01	5.8E-01	1.5E+01	**2.1E+00**
SS-5	INORG	Arsenic	7440-38-2	A	1	1	7.10E+00	7.10E+00	5.6E+00	**1.3E+00**	1.9E+00	**3.8E+00**
SS-5	INORG	Barium	7440-39-3	NC	1	1	1.12E+03	1.12E+03	2.7E+04	4.1E-02	7.6E+03	1.5E-01
SS-5	INORG	Beryllium	7440-41-7	B1	1	1	1.70E-01	1.70E-01	2.7E+02	6.2E-04	7.6E+01	2.2E-03
SS-5	INORG	Cadmium	7440-43-9	B1	1	1	8.00E+00	8.00E+00	1.2E+02	6.9E-02	3.4E+01	2.3E-01
SS-5	INORG	Chromium III	16065-83-1	D	1	1	1.76E+02	1.76E+02	2.1E+05	8.6E-04	5.7E+04	3.1E-03
SS-5	INORG	Cobalt	7440-48-4	LC	1	1	3.80E+00	3.80E+00	4.1E+01	9.3E-02	1.1E+01	3.3E-01
SS-5	INORG	Copper	7440-50-8	D	1	1	4.03E+01	4.03E+01	5.5E+03	7.4E-03	1.5E+03	2.6E-02
SS-5	INORG	Lead	7439-92-1	B2	1	1	1.47E+03	1.47E+03	4.3E+03	3.4E-01	4.3E+03	3.4E-01
SS-5	INORG	Manganese	7439-96-5	D	1	1	3.71E+02	3.71E+02	1.9E+04	1.9E-02	5.3E+03	7.1E-02
SS-5	INORG	Mercury	7439-97-6	D	1	1	2.70E-01	2.70E-01	4.1E+01	6.6E-03	1.1E+01	2.5E-02
SS-5	INORG	Methyl mercury	22967-92-6	C	1	1	2.20E-04	2.20E-04	1.4E+01	1.6E-05	3.8E+00	5.8E-05
SS-5	INORG	Nickel	7440-02-0	A	1	1	2.92E+01	2.92E+01	2.7E+03	1.1E-02	7.6E+02	3.8E-02

Attachment E-5.1: Sediment Screening Results Summary - Recreator
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Recreator Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Sed Contact RBSL	Recreator Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Soil Contact RBSL
SS-5	INORG	Selenium	7782-49-2	D	1	1	2.00E+00	2.00E+00	6.8E+02	2.9E-03	1.9E+02	1.1E-02
SS-5	INORG	Silver	7440-22-4	D	1	1	2.10E-01	2.10E-01	6.8E+02	3.1E-04	1.9E+02	1.1E-03
SS-5	INORG	Thallium	7440-28-0	ID	1	1	1.00E-01	1.00E-01				
SS-5	INORG	Zinc	7440-66-6	ID	1	1	1.97E+03	1.97E+03	4.1E+04	4.8E-02	1.1E+04	1.7E-01
SS-6	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	6.93E+02	6.93E+02				
SS-6	VOC	Acetone	67-64-1	ID	1	1	9.70E-02	9.70E-02	1.2E+05	7.9E-07	3.3E+04	2.9E-06
SS-6	VOC	Cumene	98-82-8	D	1	1	6.70E-02	6.70E-02	1.4E+04	4.9E-06	2.9E+03	2.3E-05
SS-6	VOC	Cyclohexane	110-82-7	ID	1	1	2.80E-02	2.80E-02			1.5E+05	1.9E-07
SS-6	VOC	Methylcyclohexane	108-87-2	ID	1	1	4.50E-01	4.50E-01				
SS-6	SVOC	Acenaphthene	83-32-9	ID	1	1	3.81E-01	3.81E-01	5.3E+03	7.2E-05	1.7E+03	2.3E-04
SS-6	SVOC	Acenaphthylene	208-96-8	D	1	1	1.31E-01	1.31E-01	2.6E+03	5.0E-05	8.4E+02	1.6E-04
SS-6	SVOC	Anthracene	120-12-7	ID	1	1	9.24E-01	9.24E-01	2.6E+04	3.5E-05	8.4E+03	1.1E-04
SS-6	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	1.41E+00	1.41E+00	1.9E+00	7.6E-01	7.2E-01	**2.0E+00**
SS-6	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	1.08E+00	1.08E+00	1.9E-01	**5.8E+00**	7.2E-02	**1.5E+01**
SS-6	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	1.36E+00	1.36E+00	1.9E+00	7.3E-01	7.2E-01	**1.9E+00**
SS-6	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	7.08E-01	7.08E-01	2.6E+03	2.7E-04	8.4E+02	8.5E-04
SS-6	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	9.70E-01	9.70E-01	1.9E+01	5.2E-02	7.2E+00	1.4E-01
SS-6	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1	1	1.20E+01	1.20E+01	3.8E+02	3.2E-02	1.7E+02	7.1E-02
SS-6	SVOC	Butylbenzylphthalate	85-68-7	C	1	1	7.00E+01	7.00E+01	2.8E+03	2.5E-02	1.2E+03	5.6E-02
SS-6	SVOC	Chrysene	218-01-9	B2	1	1	2.37E+00	2.37E+00	1.9E+02	1.3E-02	7.2E+01	3.3E-02
SS-6	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	1.95E-01	1.95E-01	1.9E-01	**1.1E+00**	7.2E-02	**2.7E+00**
SS-6	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	2.30E+00	2.30E+00	9.6E+03	2.4E-04	3.0E+03	7.7E-04
SS-6	SVOC	Fluoranthene	206-44-0	D	1	1	4.22E+00	4.22E+00	3.5E+03	1.2E-03	1.1E+03	3.8E-03
SS-6	SVOC	Fluorene	86-73-7	D	1	1	8.37E-01	8.37E-01	3.5E+03	2.4E-04	1.1E+03	7.5E-04
SS-6	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	6.12E-01	6.12E-01	1.9E+00	3.3E-01	7.2E-01	8.5E-01
SS-6	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	6.10E-01	6.10E-01	3.8E+02	1.6E-03	1.2E+02	5.1E-03
SS-6	SVOC	Naphthalene	91-20-3	C	1	1	4.89E-01	4.89E-01	1.8E+03	2.8E-04	2.0E+02	2.4E-03
SS-6	SVOC	Perylene	198-55-0		1	1	5.75E-01	5.75E-01				
SS-6	SVOC	Phenanthrene	85-01-8	D	1	1	5.67E+00	5.67E+00	2.6E+03	2.2E-03	8.4E+02	6.8E-03
SS-6	SVOC	Pyrene	129-00-0	NC	1	1	3.24E+00	3.24E+00	2.6E+03	1.2E-03	8.4E+02	3.9E-03
SS-6	PHYS	Organic Carbon (total)	C-012		1	1	5.35E+04	5.35E+04				
SS-6	PCB	PCBs (total)	1336-36-3	B2	1	1	1.20E+00	1.20E+00	1.7E+00	7.0E-01	5.5E-01	**2.2E+00**
SS-6	INORG	Antimony	7440-36-0	ID	1	1	3.06E+01	3.06E+01	5.5E+01	5.6E-01	1.5E+01	**2.0E+00**
SS-6	INORG	Arsenic	7440-38-2	A	1	1	1.02E+01	1.02E+01	5.6E+00	**1.8E+00**	1.9E+00	**5.4E+00**
SS-6	INORG	Barium	7440-39-3	NC	1	1	1.14E+03	1.14E+03	2.7E+04	4.2E-02	7.6E+03	1.5E-01
SS-6	INORG	Beryllium	7440-41-7	B1	1	1	2.50E-01	2.50E-01	2.7E+02	9.1E-04	7.6E+01	3.3E-03
SS-6	INORG	Cadmium	7440-43-9	B1	1	1	5.79E+01	5.79E+01	1.2E+02	5.0E-01	3.4E+01	**1.7E+00**
SS-6	INORG	Chromium III	16065-83-1	D	1	1	2.61E+02	2.61E+02	2.1E+05	1.3E-03	5.7E+04	4.6E-03
SS-6	INORG	Cobalt	7440-48-4	LC	1	1	5.20E+00	5.20E+00	4.1E+01	1.3E-01	1.1E+01	4.6E-01
SS-6	INORG	Copper	7440-50-8	D	1	1	5.08E+01	5.08E+01	5.5E+03	9.3E-03	1.5E+03	3.3E-02
SS-6	INORG	Lead	7439-92-1	B2	1	1	1.87E+03	1.87E+03	4.3E+03	4.3E-01	4.3E+03	4.3E-01
SS-6	INORG	Manganese	7439-96-5	D	1	1	5.48E+02	5.48E+02	1.9E+04	2.9E-02	5.3E+03	1.0E-01
SS-6	INORG	Mercury	7439-97-6	D	1	1	4.60E-01	4.60E-01	4.1E+01	1.1E-02	1.1E+01	4.3E-02

Attachment E-5.1: Sediment Screening Results Summary - Recreator
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Recreator Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Sed Contact RBSL	Recreator Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Soil Contact RBSL
SS-6	INORG	Methyl mercury	22967-92-6	C	1	1	2.40E-04	2.40E-04	1.4E+01	1.8E-05	3.8E+00	6.3E-05
SS-6	INORG	Nickel	7440-02-0	A	1	1	1.27E+01	1.27E+01	2.7E+03	4.6E-03	7.6E+02	1.7E-02
SS-6	INORG	Selenium	7782-49-2	D	1	1	1.51E+01	1.51E+01	6.8E+02	2.2E-02	1.9E+02	7.9E-02
SS-6	INORG	Silver	7440-22-4	D	1	1	3.40E-01	3.40E-01	6.8E+02	5.0E-04	1.9E+02	1.8E-03
SS-6	INORG	Thallium	7440-28-0	ID	1	1	1.10E-01	1.10E-01				
SS-6	INORG	Vanadium	7440-62-2	ID	1	1	1.00E+01	1.00E+01	6.8E+02	1.5E-02	1.9E+02	5.3E-02
SS-6	INORG	Zinc	7440-66-6	ID	1	1	9.04E+02	9.04E+02	4.1E+04	2.2E-02	1.1E+04	7.9E-02
SS-7	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	1.18E+02	1.18E+02				
SS-7	SVOC	Acenaphthene	83-32-9	ID	1	1	2.37E-01	2.37E-01	5.3E+03	4.5E-05	1.7E+03	1.4E-04
SS-7	SVOC	Acenaphthylene	208-96-8	D	1	1	1.68E-01	1.68E-01	2.6E+03	6.4E-05	8.4E+02	2.0E-04
SS-7	SVOC	Anthracene	120-12-7	ID	1	1	9.95E-01	9.95E-01	2.6E+04	3.8E-05	8.4E+03	1.2E-04
SS-7	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	1.96E+00	1.96E+00	1.9E+00	**1.1E+00**	7.2E-01	**2.7E+00**
SS-7	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	1.73E+00	1.73E+00	1.9E-01	**9.3E+00**	7.2E-02	**2.4E+01**
SS-7	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	1.78E+00	1.78E+00	1.9E+00	9.6E-01	7.2E-01	**2.5E+00**
SS-7	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	1.10E+00	1.10E+00	2.6E+03	4.2E-04	8.4E+02	1.3E-03
SS-7	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	1.48E+00	1.48E+00	1.9E+01	8.0E-02	7.2E+00	2.1E-01
SS-7	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1	1	9.20E+00	9.20E+00	3.8E+02	2.4E-02	1.7E+02	5.5E-02
SS-7	SVOC	Butylbenzylphthalate	85-68-7	C	1	1	1.60E+00	1.60E+00	2.8E+03	5.7E-04	1.2E+03	1.3E-03
SS-7	SVOC	Chrysene	218-01-9	B2	1	1	3.06E+00	3.06E+00	1.9E+02	1.7E-02	7.2E+01	4.3E-02
SS-7	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	2.92E-01	2.92E-01	1.9E-01	**1.6E+00**	7.2E-02	**4.1E+00**
SS-7	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	2.40E+00	2.40E+00	9.6E+03	2.5E-04	3.0E+03	8.1E-04
SS-7	SVOC	Fluoranthene	206-44-0	D	1	1	4.93E+00	4.93E+00	3.5E+03	1.4E-03	1.1E+03	4.4E-03
SS-7	SVOC	Fluorene	86-73-7	D	1	1	5.06E-01	5.06E-01	3.5E+03	1.4E-04	1.1E+03	4.5E-04
SS-7	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	9.51E-01	9.51E-01	1.9E+00	5.1E-01	7.2E-01	**1.3E+00**
SS-7	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	7.30E-01	7.30E-01	3.8E+02	1.9E-03	1.2E+02	6.1E-03
SS-7	SVOC	Naphthalene	91-20-3	C	1	1	3.70E-01	3.70E-01	1.8E+03	2.1E-04	2.0E+02	1.8E-03
SS-7	SVOC	Perylene	198-55-0		1	1	6.81E-01	6.81E-01				
SS-7	SVOC	Phenanthrene	85-01-8	D	1	1	2.66E+00	2.66E+00	2.6E+03	1.0E-03	8.4E+02	3.2E-03
SS-7	SVOC	Pyrene	129-00-0	NC	1	1	4.45E+00	4.45E+00	2.6E+03	1.7E-03	8.4E+02	5.3E-03
SS-7	PHYS	Organic Carbon (total)	C-012		1	1	1.09E+05	1.09E+05				
SS-7	PCB	PCBs (total)	1336-36-3	B2	1	1	8.10E-01	8.10E-01	1.7E+00	4.7E-01	5.5E-01	**1.5E+00**
SS-7	INORG	Antimony	7440-36-0	ID	1	1	3.34E+01	3.34E+01	5.5E+01	6.1E-01	1.5E+01	**2.2E+00**
SS-7	INORG	Arsenic	7440-38-2	A	1	1	9.30E+00	9.30E+00	5.6E+00	**1.7E+00**	1.9E+00	**4.9E+00**
SS-7	INORG	Barium	7440-39-3	NC	1	1	1.52E+03	1.52E+03	2.7E+04	5.6E-02	7.6E+03	2.0E-01
SS-7	INORG	Beryllium	7440-41-7	B1	1	1	3.00E-01	3.00E-01	2.7E+02	1.1E-03	7.6E+01	3.9E-03
SS-7	INORG	Cadmium	7440-43-9	B1	1	1	9.70E+00	9.70E+00	1.2E+02	8.3E-02	3.4E+01	2.8E-01
SS-7	INORG	Chromium III	16065-83-1	D	1	1	1.52E+02	1.52E+02	2.1E+05	7.4E-04	5.7E+04	2.7E-03
SS-7	INORG	Cobalt	7440-48-4	LC	1	1	4.50E+00	4.50E+00	4.1E+01	1.1E-01	1.1E+01	3.9E-01
SS-7	INORG	Copper	7440-50-8	D	1	1	9.39E+01	9.39E+01	5.5E+03	1.7E-02	1.5E+03	6.2E-02
SS-7	INORG	Lead	7439-92-1	B2	1	1	1.88E+03	1.88E+03	4.3E+03	4.4E-01	4.3E+03	4.4E-01
SS-7	INORG	Manganese	7439-96-5	D	1	1	3.57E+02	3.57E+02	1.9E+04	1.9E-02	5.3E+03	6.8E-02
SS-7	INORG	Mercury	7439-97-6	D	1	1	1.30E+00	1.30E+00	4.1E+01	3.2E-02	1.1E+01	1.2E-01
SS-7	INORG	Methyl mercury	22967-92-6	C	1	1	4.70E-04	4.70E-04	1.4E+01	3.4E-05	3.8E+00	1.2E-04

Attachment E-5.1: Sediment Screening Results Summary - Recreator
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Recreator Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Sed Contact RBSL	Recreator Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Soil Contact RBSL
SS-7	INORG	Nickel	7440-02-0	A	1	1	1.35E+01	1.35E+01	2.7E+03	4.9E-03	7.6E+02	1.8E-02
SS-7	INORG	Selenium	7782-49-2	D	1	1	2.30E+00	2.30E+00	6.8E+02	3.4E-03	1.9E+02	1.2E-02
SS-7	INORG	Silver	7440-22-4	D	1	1	3.50E-01	3.50E-01	6.8E+02	5.1E-04	1.9E+02	1.8E-03
SS-7	INORG	Thallium	7440-28-0	ID	1	1	1.40E-01	1.40E-01				
SS-7	INORG	Vanadium	7440-62-2	ID	1	1	9.20E+00	9.20E+00	6.8E+02	1.3E-02	1.9E+02	4.8E-02
SS-7	INORG	Zinc	7440-66-6	ID	1	1	1.48E+03	1.48E+03	4.1E+04	3.6E-02	1.1E+04	1.3E-01
SS-9	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	2.37E+02	2.37E+02				
SS-9	SVOC	Acenaphthene	83-32-9	ID	1	1	4.13E-01	4.13E-01	5.3E+03	7.8E-05	1.7E+03	2.5E-04
SS-9	SVOC	Acenaphthylene	208-96-8	D	1	1	1.44E-01	1.44E-01	2.6E+03	5.5E-05	8.4E+02	1.7E-04
SS-9	SVOC	Anthracene	120-12-7	ID	1	1	9.68E-01	9.68E-01	2.6E+04	3.7E-05	8.4E+03	1.2E-04
SS-9	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	1.86E+00	1.86E+00	1.9E+00	1.0E+00	7.2E-01	**2.6E+00**
SS-9	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	1.61E+00	1.61E+00	1.9E-01	**8.7E+00**	7.2E-02	**2.2E+01**
SS-9	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	1.68E+00	1.68E+00	1.9E+00	9.1E-01	7.2E-01	**2.3E+00**
SS-9	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	1.08E+00	1.08E+00	2.6E+03	4.1E-04	8.4E+02	1.3E-03
SS-9	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	1.38E+00	1.38E+00	1.9E+01	7.5E-02	7.2E+00	1.9E-01
SS-9	SVOC	Butylbenzylphthalate	85-68-7	C	1	1	3.20E+00	3.20E+00	2.8E+03	1.1E-03	1.2E+03	2.6E-03
SS-9	SVOC	Chrysene	218-01-9	B2	1	1	2.82E+00	2.82E+00	1.9E+02	1.5E-02	7.2E+01	3.9E-02
SS-9	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	2.58E-01	2.58E-01	1.9E-01	**1.4E+00**	7.2E-02	**3.6E+00**
SS-9	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	1.70E+00	1.70E+00	9.6E+03	1.8E-04	3.0E+03	5.7E-04
SS-9	SVOC	Fluoranthene	206-44-0	D	1	1	4.79E+00	4.79E+00	3.5E+03	1.4E-03	1.1E+03	4.3E-03
SS-9	SVOC	Fluorene	86-73-7	D	1	1	5.96E-01	5.96E-01	3.5E+03	1.7E-04	1.1E+03	5.3E-04
SS-9	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	9.24E-01	9.24E-01	1.9E+00	5.0E-01	7.2E-01	**1.3E+00**
SS-9	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	3.60E-01	3.60E-01	3.8E+02	9.4E-04	1.2E+02	3.0E-03
SS-9	SVOC	Naphthalene	91-20-3	C	1	1	2.40E-01	2.40E-01	1.8E+03	1.4E-04	2.0E+02	1.2E-03
SS-9	SVOC	Perylene	198-55-0		1	1	6.84E-01	6.84E-01				
SS-9	SVOC	Phenanthrene	85-01-8	D	1	1	4.78E+00	4.78E+00	2.6E+03	1.8E-03	8.4E+02	5.7E-03
SS-9	SVOC	Pyrene	129-00-0	NC	1	1	4.18E+00	4.18E+00	2.6E+03	1.6E-03	8.4E+02	5.0E-03
SS-9	PHYS	Organic Carbon (total)	C-012		1	1	1.31E+05	1.31E+05				
SS-9	PCB	PCBs (total)	1336-36-3	B2	1	1	4.46E-01	4.46E-01	1.7E+00	2.6E-01	5.5E-01	8.2E-01
SS-9	INORG	Antimony	7440-36-0	ID	1	1	2.30E+01	2.30E+01	5.5E+01	4.2E-01	1.5E+01	**1.5E+00**
SS-9	INORG	Arsenic	7440-38-2	A	1	1	8.10E+00	8.10E+00	5.6E+00	**1.4E+00**	1.9E+00	**4.3E+00**
SS-9	INORG	Barium	7440-39-3	NC	1	1	1.34E+03	1.34E+03	2.7E+04	4.9E-02	7.6E+03	1.8E-01
SS-9	INORG	Beryllium	7440-41-7	B1	1	1	3.60E-01	3.60E-01	2.7E+02	1.3E-03	7.6E+01	4.7E-03
SS-9	INORG	Cadmium	7440-43-9	B1	1	1	1.41E+01	1.41E+01	1.2E+02	1.2E-01	3.4E+01	4.1E-01
SS-9	INORG	Chromium III	16065-83-1	D	1	1	1.83E+02	1.83E+02	2.1E+05	8.9E-04	5.7E+04	3.2E-03
SS-9	INORG	Cobalt	7440-48-4	LC	1	1	6.10E+00	6.10E+00	4.1E+01	1.5E-01	1.1E+01	5.3E-01
SS-9	INORG	Copper	7440-50-8	D	1	1	7.87E+01	7.87E+01	5.5E+03	1.4E-02	1.5E+03	5.2E-02
SS-9	INORG	Lead	7439-92-1	B2	1	1	1.39E+03	1.39E+03	4.3E+03	3.2E-01	4.3E+03	3.2E-01
SS-9	INORG	Manganese	7439-96-5	D	1	1	2.18E+02	2.18E+02	1.9E+04	1.1E-02	5.3E+03	4.1E-02
SS-9	INORG	Mercury	7439-97-6	D	1	1	6.20E-01	6.20E-01	4.1E+01	1.5E-02	1.1E+01	5.7E-02
SS-9	INORG	Methyl mercury	22967-92-6	C	1	1	4.80E-04	4.80E-04	1.4E+01	3.5E-05	3.8E+00	1.3E-04
SS-9	INORG	Nickel	7440-02-0	A	1	1	1.47E+01	1.47E+01	2.7E+03	5.4E-03	7.6E+02	1.9E-02
SS-9	INORG	Selenium	7782-49-2	D	1	1	4.30E+00	4.30E+00	6.8E+02	6.3E-03	1.9E+02	2.3E-02

Attachment E-5.1: Sediment Screening Results Summary - Recreator
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Recreator Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Sed Contact RBSL	Recreator Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Recreator Soil Contact RBSL
SS-9	INORG	Silver	7440-22-4	D	1	1	2.50E-01	2.50E-01	6.8E+02	3.7E-04	1.9E+02	1.3E-03
SS-9	INORG	Thallium	7440-28-0	ID	1	1	1.50E-01	1.50E-01				
SS-9	INORG	Vanadium	7440-62-2	ID	1	1	1.41E+01	1.41E+01	6.8E+02	2.1E-02	1.9E+02	7.4E-02
SS-9	INORG	Zinc	7440-66-6	ID	1	1	2.04E+03	2.04E+03	4.1E+04	5.0E-02	1.1E+04	1.8E-01

Notes:
1. Only constituents detected at each location are shown.
2. Sediment screening levels are only compared to max detected concentration at each location with a bottom depth of 0.5 ft or less.
3. When acid-volatile sulfide is present, chromium can only exist in the chromium III oxidation state. Therefore, for samples with AVS detections, chromium (total) has been converted to chromium III.
4. The criteria for river sediment contact are the lower of the criteria at either the target cancer risk of 1E-6 or target hazard quotient of 0.1.
5. The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the criteria for Xylenes (total).
6. The concentrations for the PCB Aroclors were summed before comparing to the criteria for PCBs (total).
7. Concentration/criterion ratios greater than 1 are shaded in bold.
8. Chem Group - chemical group
9. Carc Class - USEPA Weight-of-Evidence Cancer Classification

Attachment E-5.2: Sediment Screening Results Summary - Maintenance Worker
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Maintenance Worker Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Maintenance Worker Sed Contact RBSL
SS-1	SVOC	Acenaphthene	83-32-9	ID	1	1	4.08E-02	4.08E-02	2.3E+05	1.8E-07
SS-1	SVOC	Acenaphthylene	208-96-8	D	1	1	8.73E-02	8.73E-02	1.1E+05	7.7E-07
SS-1	SVOC	Anthracene	120-12-7	ID	1	1	1.78E-01	1.78E-01	1.1E+06	1.6E-07
SS-1	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	3.96E-01	3.96E-01	9.8E+02	4.0E-04
SS-1	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	4.40E-01	4.40E-01	9.8E+01	4.5E-03
SS-1	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	3.35E-01	3.35E-01	9.8E+02	3.4E-04
SS-1	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	2.40E-01	2.40E-01	1.1E+05	2.1E-06
SS-1	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	3.49E-01	3.49E-01	9.8E+03	3.6E-05
SS-1	SVOC	Butylbenzylphthalate	85-68-7	C	1	1	2.30E+00	2.30E+00	1.6E+05	1.4E-05
SS-1	SVOC	Chrysene	218-01-9	B2	1	1	4.33E-01	4.33E-01	9.8E+04	4.4E-06
SS-1	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	6.67E-02	6.67E-02	9.8E+01	6.8E-04
SS-1	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	1.50E-01	1.50E-01	4.4E+05	3.4E-07
SS-1	SVOC	Fluoranthene	206-44-0	D	1	1	8.79E-01	8.79E-01	1.5E+05	5.8E-06
SS-1	SVOC	Fluorene	86-73-7	D	1	1	5.18E-02	5.18E-02	1.5E+05	3.4E-07
SS-1	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	2.27E-01	2.27E-01	9.8E+02	2.3E-04
SS-1	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	2.30E-02	2.30E-02	1.8E+04	1.3E-06
SS-1	SVOC	Naphthalene	91-20-3	C	1	1	2.03E-02	2.03E-02	7.5E+04	2.7E-07
SS-1	SVOC	Perylene	198-55-0		1	1	2.01E-01	2.01E-01		
SS-1	SVOC	Phenanthrene	85-01-8	D	1	1	4.78E-01	4.78E-01	1.1E+05	4.2E-06
SS-1	SVOC	Pyrene	129-00-0	NC	1	1	7.56E-01	7.56E-01	1.1E+05	6.7E-06
SS-1	PHYS	Organic Carbon (total)	C-012		1	1	4.63E+04	4.63E+04		
SS-1	PCB	PCBs (total)	1336-36-3	B2	1	1	4.70E-02	4.70E-02	7.2E+01	6.5E-04
SS-1	INORG	Antimony	7440-36-0	ID	1	1	4.40E-01	4.40E-01	4.1E+03	1.1E-04
SS-1	INORG	Arsenic	7440-38-2	A	1	1	4.60E+00	4.60E+00	3.4E+02	1.3E-02
SS-1	INORG	Barium	7440-39-3	NC	1	1	8.95E+01	8.95E+01	2.0E+06	4.4E-05
SS-1	INORG	Beryllium	7440-41-7	B1	1	1	3.80E-01	3.80E-01	2.0E+04	1.9E-05
SS-1	INORG	Cadmium	7440-43-9	B1	1	1	8.80E-01	8.80E-01	6.7E+03	1.3E-04
SS-1	INORG	Chromium (total)	7440-47-3		1	1	2.05E+01	2.05E+01	1.4E+03	1.4E-02
SS-1	INORG	Cobalt	7440-48-4	LC	1	1	5.00E+00	5.00E+00	3.1E+03	1.6E-03
SS-1	INORG	Copper	7440-50-8	D	1	1	1.67E+01	1.67E+01	4.1E+05	4.1E-05
SS-1	INORG	Lead	7439-92-1	B2	1	1	9.99E+01	9.99E+01		
SS-1	INORG	Manganese	7439-96-5	D	1	1	2.39E+02	2.39E+02	1.4E+06	1.7E-04
SS-1	INORG	Mercury	7439-97-6	D	1	1	4.90E+00	4.90E+00	3.1E+03	1.6E-03
SS-1	INORG	Methyl mercury	22967-92-6	C	1	1	1.50E-03	1.50E-03	1.0E+03	1.5E-06
SS-1	INORG	Nickel	7440-02-0	A	1	1	1.16E+01	1.16E+01	2.0E+05	5.7E-05
SS-1	INORG	Selenium	7782-49-2	D	1	1	1.50E+00	1.50E+00	5.1E+04	2.9E-05

Attachment E-5.2: Sediment Screening Results Summary - Maintenance Worker
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Maintenance Worker Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Maintenance Worker Sed Contact RBSL
SS-1	INORG	Silver	7440-22-4	D	1	1	2.40E-01	2.40E-01	5.1E+04	4.7E-06
SS-1	INORG	Thallium	7440-28-0	ID	1	1	1.40E-01	1.40E-01		
SS-1	INORG	Vanadium	7440-62-2	ID	1	1	1.49E+01	1.49E+01	5.1E+04	2.9E-04
SS-1	INORG	Zinc	7440-66-6	ID	1	1	1.01E+02	1.01E+02	3.1E+06	3.3E-05
SS-2	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	3.93E+02	3.93E+02		
SS-2	VOC	Acetone	67-64-1	ID	1	1	3.90E-02	3.90E-02	9.2E+06	4.2E-09
SS-2	VOC	Methylcyclohexane	108-87-2	ID	1	1	2.80E-03	2.80E-03		
SS-2	SVOC	Acenaphthene	83-32-9	ID	1	1	2.48E-02	2.48E-02	2.3E+05	1.1E-07
SS-2	SVOC	Acenaphthylene	208-96-8	D	1	1	8.91E-02	8.91E-02	1.1E+05	7.9E-07
SS-2	SVOC	Anthracene	120-12-7	ID	1	1	1.06E-01	1.06E-01	1.1E+06	9.4E-08
SS-2	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	2.12E-01	2.12E-01	9.8E+02	2.2E-04
SS-2	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	2.51E-01	2.51E-01	9.8E+01	2.6E-03
SS-2	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	2.00E-01	2.00E-01	9.8E+02	2.0E-04
SS-2	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	1.52E-01	1.52E-01	1.1E+05	1.3E-06
SS-2	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	1.96E-01	1.96E-01	9.8E+03	2.0E-05
SS-2	SVOC	Chrysene	218-01-9	B2	1	1	2.52E-01	2.52E-01	9.8E+04	2.6E-06
SS-2	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	4.47E-02	4.47E-02	9.8E+01	4.6E-04
SS-2	SVOC	Fluoranthene	206-44-0	D	1	1	4.45E-01	4.45E-01	1.5E+05	3.0E-06
SS-2	SVOC	Fluorene	86-73-7	D	1	1	2.89E-02	2.89E-02	1.5E+05	1.9E-07
SS-2	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	1.41E-01	1.41E-01	9.8E+02	1.4E-04
SS-2	SVOC	Naphthalene	91-20-3	C	1	1	2.36E-02	2.36E-02	7.5E+04	3.1E-07
SS-2	SVOC	Perylene	198-55-0		1	1	2.80E-01	2.80E-01		
SS-2	SVOC	Phenanthrene	85-01-8	D	1	1	3.09E-01	3.09E-01	1.1E+05	2.7E-06
SS-2	SVOC	Pyrene	129-00-0	NC	1	1	4.03E-01	4.03E-01	1.1E+05	3.6E-06
SS-2	PHYS	Organic Carbon (total)	C-012		1	1	7.19E+04	7.19E+04		
SS-2	INORG	Antimony	7440-36-0	ID	1	1	2.70E-01	2.70E-01	4.1E+03	6.6E-05
SS-2	INORG	Arsenic	7440-38-2	A	1	1	6.20E+00	6.20E+00	3.4E+02	1.8E-02
SS-2	INORG	Barium	7440-39-3	NC	1	1	1.53E+02	1.53E+02	2.0E+06	7.5E-05
SS-2	INORG	Beryllium	7440-41-7	B1	1	1	5.30E-01	5.30E-01	2.0E+04	2.6E-05
SS-2	INORG	Cadmium	7440-43-9	B1	1	1	6.20E-01	6.20E-01	6.7E+03	9.3E-05
SS-2	INORG	Chromium III	16065-83-1	D	1	1	2.04E+01	2.04E+01	1.5E+07	1.3E-06
SS-2	INORG	Cobalt	7440-48-4	LC	1	1	5.70E+00	5.70E+00	3.1E+03	1.9E-03
SS-2	INORG	Copper	7440-50-8	D	1	1	2.64E+01	2.64E+01	4.1E+05	6.5E-05
SS-2	INORG	Lead	7439-92-1	B2	1	1	1.37E+02	1.37E+02		
SS-2	INORG	Manganese	7439-96-5	D	1	1	3.55E+02	3.55E+02	1.4E+06	2.5E-04
SS-2	INORG	Mercury	7439-97-6	D	1	1	2.75E+01	2.75E+01	3.1E+03	9.0E-03

Attachment E-5.2: Sediment Screening Results Summary - Maintenance Worker
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Maintenance Worker Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Maintenance Worker Sed Contact RBSL
SS-2	INORG	Methyl mercury	22967-92-6	C	1	1	9.70E-04	9.70E-04	1.0E+03	9.5E-07
SS-2	INORG	Nickel	7440-02-0	A	1	1	1.37E+01	1.37E+01	2.0E+05	6.7E-05
SS-2	INORG	Selenium	7782-49-2	D	1	1	1.50E+00	1.50E+00	5.1E+04	2.9E-05
SS-2	INORG	Silver	7440-22-4	D	1	1	1.50E-01	1.50E-01	5.1E+04	2.9E-06
SS-2	INORG	Thallium	7440-28-0	ID	1	1	2.10E-01	2.10E-01		
SS-2	INORG	Vanadium	7440-62-2	ID	1	1	2.15E+01	2.15E+01	5.1E+04	4.2E-04
SS-2	INORG	Zinc	7440-66-6	ID	1	1	2.13E+02	2.13E+02	3.1E+06	6.9E-05
SS-3	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	3.40E+02	3.40E+02		
SS-3	VOC	Acetone	67-64-1	ID	1	1	6.90E-02	6.90E-02	9.2E+06	7.5E-09
SS-3	VOC	Methylcyclohexane	108-87-2	ID	1	1	3.90E-02	3.90E-02		
SS-3	SVOC	Acenaphthene	83-32-9	ID	1	1	1.24E-01	1.24E-01	2.3E+05	5.5E-07
SS-3	SVOC	Acenaphthylene	208-96-8	D	1	1	7.10E-02	7.10E-02	1.1E+05	6.3E-07
SS-3	SVOC	Anthracene	120-12-7	ID	1	1	3.21E-01	3.21E-01	1.1E+06	2.8E-07
SS-3	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	5.70E-01	5.70E-01	9.8E+02	5.8E-04
SS-3	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	5.30E-01	5.30E-01	9.8E+01	5.4E-03
SS-3	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	4.88E-01	4.88E-01	9.8E+02	5.0E-04
SS-3	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	3.13E-01	3.13E-01	1.1E+05	2.8E-06
SS-3	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	4.42E-01	4.42E-01	9.8E+03	4.5E-05
SS-3	SVOC	Butylbenzylphthalate	85-68-7	C	1	1	1.30E-01	1.30E-01	1.6E+05	8.0E-07
SS-3	SVOC	Chrysene	218-01-9	B2	1	1	7.61E-01	7.61E-01	9.8E+04	7.8E-06
SS-3	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	9.29E-02	9.29E-02	9.8E+01	9.5E-04
SS-3	SVOC	Dibenzofuran	132-64-9	D	1	1	6.20E-02	6.20E-02	1.8E+04	3.5E-06
SS-3	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	1.30E-01	1.30E-01	4.4E+05	3.0E-07
SS-3	SVOC	Fluoranthene	206-44-0	D	1	1	1.25E+00	1.25E+00	1.5E+05	8.3E-06
SS-3	SVOC	Fluorene	86-73-7	D	1	1	1.36E-01	1.36E-01	1.5E+05	9.0E-07
SS-3	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	2.95E-01	2.95E-01	9.8E+02	3.0E-04
SS-3	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	1.00E-01	1.00E-01	1.8E+04	5.7E-06
SS-3	SVOC	Naphthalene	91-20-3	C	1	1	3.32E-01	3.32E-01	7.5E+04	4.4E-06
SS-3	SVOC	Perylene	198-55-0		1	1	2.21E-01	2.21E-01		
SS-3	SVOC	Phenanthrene	85-01-8	D	1	1	1.09E+00	1.09E+00	1.1E+05	9.7E-06
SS-3	SVOC	Pyrene	129-00-0	NC	1	1	1.13E+00	1.13E+00	1.1E+05	1.0E-05
SS-3	PHYS	Organic Carbon (total)	C-012		1	1	4.61E+04	4.61E+04		
SS-3	PCB	PCBs (total)	1336-36-3	B2	1	1	1.80E-01	1.80E-01	7.2E+01	2.5E-03
SS-3	INORG	Antimony	7440-36-0	ID	1	1	3.50E-01	3.50E-01	4.1E+03	8.6E-05
SS-3	INORG	Arsenic	7440-38-2	A	1	1	6.20E+00	6.20E+00	3.4E+02	1.8E-02
SS-3	INORG	Barium	7440-39-3	NC	1	1	1.71E+02	1.71E+02	2.0E+06	8.4E-05

Attachment E-5.2: Sediment Screening Results Summary - Maintenance Worker
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Maintenance Worker Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Maintenance Worker Sed Contact RBSL
SS-3	INORG	Beryllium	7440-41-7	B1	1	1	3.10E-01	3.10E-01	2.0E+04	1.5E-05
SS-3	INORG	Cadmium	7440-43-9	B1	1	1	9.60E-01	9.60E-01	6.7E+03	1.4E-04
SS-3	INORG	Chromium III	16065-83-1	D	1	1	2.00E+01	2.00E+01	1.5E+07	1.3E-06
SS-3	INORG	Cobalt	7440-48-4	LC	1	1	3.90E+00	3.90E+00	3.1E+03	1.3E-03
SS-3	INORG	Copper	7440-50-8	D	1	1	2.71E+01	2.71E+01	4.1E+05	6.6E-05
SS-3	INORG	Lead	7439-92-1	B2	1	1	2.94E+02	2.94E+02		
SS-3	INORG	Manganese	7439-96-5	D	1	1	3.24E+02	3.24E+02	1.4E+06	2.3E-04
SS-3	INORG	Mercury	7439-97-6	D	1	1	2.40E+00	2.40E+00	3.1E+03	7.8E-04
SS-3	INORG	Methyl mercury	22967-92-6	C	1	1	1.20E-03	1.20E-03	1.0E+03	1.2E-06
SS-3	INORG	Nickel	7440-02-0	A	1	1	8.50E+00	8.50E+00	2.0E+05	4.2E-05
SS-3	INORG	Selenium	7782-49-2	D	1	1	1.20E+00	1.20E+00	5.1E+04	2.3E-05
SS-3	INORG	Silver	7440-22-4	D	1	1	1.90E-01	1.90E-01	5.1E+04	3.7E-06
SS-3	INORG	Thallium	7440-28-0	ID	1	1	1.20E-01	1.20E-01		
SS-3	INORG	Vanadium	7440-62-2	ID	1	1	1.28E+01	1.28E+01	5.1E+04	2.5E-04
SS-3	INORG	Zinc	7440-66-6	ID	1	1	2.89E+02	2.89E+02	3.1E+06	9.4E-05
SS-4	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	5.58E+02	5.58E+02		
SS-4	VOC	Cumene	98-82-8	D	1	1	4.90E-01	4.90E-01	1.0E+06	4.8E-07
SS-4	VOC	Cyclohexane	110-82-7	ID	1	1	2.80E-01	2.80E-01		
SS-4	VOC	Methyl Acetate	79-20-9	ID	1	1	2.20E-01	2.20E-01	1.0E+07	2.2E-08
SS-4	VOC	Methylcyclohexane	108-87-2	ID	1	1	2.30E+00	2.30E+00		
SS-4	VOC	1,2,4-Trimethylbenzene	95-63-6	ID	1	1	4.20E+00	4.20E+00		
SS-4	VOC	1,3,5-Trimethylbenzene	108-67-8	ID	1	1	2.30E+00	2.30E+00		
SS-4	VOC	Xylenes (total)	1330-20-7	ID	1	1	9.40E-01	9.40E-01	2.0E+06	4.6E-07
SS-4	SVOC	Acenaphthene	83-32-9	ID	1	1	5.12E-01	5.12E-01	2.3E+05	2.3E-06
SS-4	SVOC	Acenaphthylene	208-96-8	D	1	1	2.77E-01	2.77E-01	1.1E+05	2.5E-06
SS-4	SVOC	Anthracene	120-12-7	ID	1	1	1.10E+00	1.10E+00	1.1E+06	9.7E-07
SS-4	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	1.47E+00	1.47E+00	9.8E+02	1.5E-03
SS-4	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	1.21E+00	1.21E+00	9.8E+01	1.2E-02
SS-4	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	1.18E+00	1.18E+00	9.8E+02	1.2E-03
SS-4	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	7.07E-01	7.07E-01	1.1E+05	6.3E-06
SS-4	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	1.10E+00	1.10E+00	9.8E+03	1.1E-04
SS-4	SVOC	1,1-Biphenyl	92-52-4	SC	1	1	4.80E-01	4.80E-01	3.8E+04	1.3E-05
SS-4	SVOC	Chrysene	218-01-9	B2	1	1	2.76E+00	2.76E+00	9.8E+04	2.8E-05
SS-4	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	2.22E-01	2.22E-01	9.8E+01	2.3E-03
SS-4	SVOC	Dibenzofuran	132-64-9	D	1	1	1.90E+00	1.90E+00	1.8E+04	1.1E-04
SS-4	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	6.70E+00	6.70E+00	4.4E+05	1.5E-05

Attachment E-5.2: Sediment Screening Results Summary - Maintenance Worker
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Maintenance Worker Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Maintenance Worker Sed Contact RBSL
SS-4	SVOC	Fluoranthene	206-44-0	D	1	1	3.20E+00	3.20E+00	1.5E+05	2.1E-05
SS-4	SVOC	Fluorene	86-73-7	D	1	1	8.76E-01	8.76E-01	1.5E+05	5.8E-06
SS-4	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	6.37E-01	6.37E-01	9.8E+02	6.5E-04
SS-4	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	7.40E+00	7.40E+00	1.8E+04	4.2E-04
SS-4	SVOC	Naphthalene	91-20-3	C	1	1	1.87E+00	1.87E+00	7.5E+04	2.5E-05
SS-4	SVOC	Perylene	198-55-0		1	1	4.02E-01	4.02E-01		
SS-4	SVOC	Phenanthrene	85-01-8	D	1	1	3.94E+00	3.94E+00	1.1E+05	3.5E-05
SS-4	SVOC	Pyrene	129-00-0	NC	1	1	3.29E+00	3.29E+00	1.1E+05	2.9E-05
SS-4	PHYS	Organic Carbon (total)	C-012		1	1	8.07E+04	8.07E+04		
SS-4	INORG	Antimony	7440-36-0	ID	1	1	5.02E+01	5.02E+01	4.1E+03	1.2E-02
SS-4	INORG	Arsenic	7440-38-2	A	1	1	7.60E+00	7.60E+00	3.4E+02	2.2E-02
SS-4	INORG	Barium	7440-39-3	NC	1	1	2.27E+03	2.27E+03	2.0E+06	1.1E-03
SS-4	INORG	Beryllium	7440-41-7	B1	1	1	5.60E-01	5.60E-01	2.0E+04	2.7E-05
SS-4	INORG	Cadmium	7440-43-9	B1	1	1	4.50E+00	4.50E+00	6.7E+03	6.7E-04
SS-4	INORG	Chromium III	16065-83-1	D	1	1	1.81E+02	1.81E+02	1.5E+07	1.2E-05
SS-4	INORG	Cobalt	7440-48-4	LC	1	1	5.90E+00	5.90E+00	3.1E+03	1.9E-03
SS-4	INORG	Copper	7440-50-8	D	1	1	1.35E+02	1.35E+02	4.1E+05	3.3E-04
SS-4	INORG	Lead	7439-92-1	B2	1	1	1.34E+03	1.34E+03		
SS-4	INORG	Manganese	7439-96-5	D	1	1	3.90E+02	3.90E+02	1.4E+06	2.7E-04
SS-4	INORG	Mercury	7439-97-6	D	1	1	9.30E+00	9.30E+00	3.1E+03	3.0E-03
SS-4	INORG	Methyl mercury	22967-92-6	C	1	1	1.40E-03	1.40E-03	1.0E+03	1.4E-06
SS-4	INORG	Nickel	7440-02-0	A	1	1	1.48E+01	1.48E+01	2.0E+05	7.2E-05
SS-4	INORG	Selenium	7782-49-2	D	1	1	2.10E+00	2.10E+00	5.1E+04	4.1E-05
SS-4	INORG	Silver	7440-22-4	D	1	1	2.20E-01	2.20E-01	5.1E+04	4.3E-06
SS-4	INORG	Thallium	7440-28-0	ID	1	1	2.20E-01	2.20E-01		
SS-4	INORG	Vanadium	7440-62-2	ID	1	1	1.87E+01	1.87E+01	5.1E+04	3.7E-04
SS-4	INORG	Zinc	7440-66-6	ID	1	1	1.91E+03	1.91E+03	3.1E+06	6.2E-04
SS-5	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	5.49E+02	5.49E+02		
SS-5	VOC	Acetone	67-64-1	ID	1	1	1.30E-01	1.30E-01	9.2E+06	1.4E-08
SS-5	VOC	2-Butanone	78-93-3	ID	1	1	2.30E-02	2.30E-02	6.1E+06	3.8E-09
SS-5	VOC	Cumene	98-82-8	D	1	1	1.40E-01	1.40E-01	1.0E+06	1.4E-07
SS-5	VOC	Cyclohexane	110-82-7	ID	1	1	8.40E-02	8.40E-02		
SS-5	VOC	Methylcyclohexane	108-87-2	ID	1	1	3.90E-01	3.90E-01		
SS-5	VOC	1,2,4-Trimethylbenzene	95-63-6	ID	1	1	6.00E-01	6.00E-01		
SS-5	VOC	1,3,5-Trimethylbenzene	108-67-8	ID	1	1	2.50E-01	2.50E-01		
SS-5	VOC	Xylenes (total)	1330-20-7	ID	1	1	5.30E-02	5.30E-02	2.0E+06	2.6E-08

Attachment E-5.2: Sediment Screening Results Summary - Maintenance Worker
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Maintenance Worker Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Maintenance Worker Sed Contact RBSL
SS-5	SVOC	Acenaphthene	83-32-9	ID	1	1	9.94E-01	9.94E-01	2.3E+05	4.4E-06
SS-5	SVOC	Acenaphthylene	208-96-8	D	1	1	1.31E-01	1.31E-01	1.1E+05	1.2E-06
SS-5	SVOC	Anthracene	120-12-7	ID	1	1	2.16E+00	2.16E+00	1.1E+06	1.9E-06
SS-5	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	3.76E+00	3.76E+00	9.8E+02	3.8E-03
SS-5	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	3.51E+00	3.51E+00	9.8E+01	3.6E-02
SS-5	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	2.99E+00	2.99E+00	9.8E+02	3.1E-03
SS-5	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	1.87E+00	1.87E+00	1.1E+05	1.7E-05
SS-5	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	3.14E+00	3.14E+00	9.8E+03	3.2E-04
SS-5	SVOC	Butylbenzylphthalate	85-68-7	C	1	1	2.90E+02	2.90E+02	1.6E+05	1.8E-03
SS-5	SVOC	Chrysene	218-01-9	B2	1	1	4.22E+00	4.22E+00	9.8E+04	4.3E-05
SS-5	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	5.72E-01	5.72E-01	9.8E+01	5.8E-03
SS-5	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	1.30E+01	1.30E+01	4.4E+05	3.0E-05
SS-5	SVOC	Fluoranthene	206-44-0	D	1	1	9.63E+00	9.63E+00	1.5E+05	6.4E-05
SS-5	SVOC	Fluorene	86-73-7	D	1	1	1.31E+00	1.31E+00	1.5E+05	8.7E-06
SS-5	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	1.81E+00	1.81E+00	9.8E+02	1.8E-03
SS-5	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	1.30E+00	1.30E+00	1.8E+04	7.4E-05
SS-5	SVOC	Naphthalene	91-20-3	C	1	1	1.23E+00	1.23E+00	7.5E+04	1.6E-05
SS-5	SVOC	Perylene	198-55-0		1	1	1.06E+00	1.06E+00		
SS-5	SVOC	Phenanthrene	85-01-8	D	1	1	9.09E+00	9.09E+00	1.1E+05	8.1E-05
SS-5	SVOC	Pyrene	129-00-0	NC	1	1	7.37E+00	7.37E+00	1.1E+05	6.5E-05
SS-5	PHYS	Organic Carbon (total)	C-012		1	1	7.88E+04	7.88E+04		
SS-5	PCB	PCBs (total)	1336-36-3	B2	1	1	4.70E-01	4.70E-01	7.2E+01	6.5E-03
SS-5	INORG	Antimony	7440-36-0	ID	1	1	3.20E+01	3.20E+01	4.1E+03	7.8E-03
SS-5	INORG	Arsenic	7440-38-2	A	1	1	7.10E+00	7.10E+00	3.4E+02	2.1E-02
SS-5	INORG	Barium	7440-39-3	NC	1	1	1.12E+03	1.12E+03	2.0E+06	5.5E-04
SS-5	INORG	Beryllium	7440-41-7	B1	1	1	1.70E-01	1.70E-01	2.0E+04	8.3E-06
SS-5	INORG	Cadmium	7440-43-9	B1	1	1	8.00E+00	8.00E+00	6.7E+03	1.2E-03
SS-5	INORG	Chromium III	16065-83-1	D	1	1	1.76E+02	1.76E+02	1.5E+07	1.1E-05
SS-5	INORG	Cobalt	7440-48-4	LC	1	1	3.80E+00	3.80E+00	3.1E+03	1.2E-03
SS-5	INORG	Copper	7440-50-8	D	1	1	4.03E+01	4.03E+01	4.1E+05	9.9E-05
SS-5	INORG	Lead	7439-92-1	B2	1	1	1.47E+03	1.47E+03		
SS-5	INORG	Manganese	7439-96-5	D	1	1	3.71E+02	3.71E+02	1.4E+06	2.6E-04
SS-5	INORG	Mercury	7439-97-6	D	1	1	2.70E-01	2.70E-01	3.1E+03	8.8E-05
SS-5	INORG	Methyl mercury	22967-92-6	C	1	1	2.20E-04	2.20E-04	1.0E+03	2.2E-07
SS-5	INORG	Nickel	7440-02-0	A	1	1	2.92E+01	2.92E+01	2.0E+05	1.4E-04
SS-5	INORG	Selenium	7782-49-2	D	1	1	2.00E+00	2.00E+00	5.1E+04	3.9E-05

Attachment E-5.2: Sediment Screening Results Summary - Maintenance Worker
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Maintenance Worker Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Maintenance Worker Sed Contact RBSL
SS-5	INORG	Silver	7440-22-4	D	1	1	2.10E-01	2.10E-01	5.1E+04	4.1E-06
SS-5	INORG	Thallium	7440-28-0	ID	1	1	1.00E-01	1.00E-01		
SS-5	INORG	Zinc	7440-66-6	ID	1	1	1.97E+03	1.97E+03	3.1E+06	6.4E-04
SS-6	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	6.93E+02	6.93E+02		
SS-6	VOC	Acetone	67-64-1	ID	1	1	9.70E-02	9.70E-02	9.2E+06	1.1E-08
SS-6	VOC	Cumene	98-82-8	D	1	1	6.70E-02	6.70E-02	1.0E+06	6.6E-08
SS-6	VOC	Cyclohexane	110-82-7	ID	1	1	2.80E-02	2.80E-02		
SS-6	VOC	Methylcyclohexane	108-87-2	ID	1	1	4.50E-01	4.50E-01		
SS-6	SVOC	Acenaphthene	83-32-9	ID	1	1	3.81E-01	3.81E-01	2.3E+05	1.7E-06
SS-6	SVOC	Acenaphthylene	208-96-8	D	1	1	1.31E-01	1.31E-01	1.1E+05	1.2E-06
SS-6	SVOC	Anthracene	120-12-7	ID	1	1	9.24E-01	9.24E-01	1.1E+06	8.2E-07
SS-6	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	1.41E+00	1.41E+00	9.8E+02	1.4E-03
SS-6	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	1.08E+00	1.08E+00	9.8E+01	1.1E-02
SS-6	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	1.36E+00	1.36E+00	9.8E+02	1.4E-03
SS-6	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	7.08E-01	7.08E-01	1.1E+05	6.3E-06
SS-6	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	9.70E-01	9.70E-01	9.8E+03	9.9E-05
SS-6	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1	1	1.20E+01	1.20E+01	2.2E+04	5.4E-04
SS-6	SVOC	Butylbenzylphthalate	85-68-7	C	1	1	7.00E+01	7.00E+01	1.6E+05	4.3E-04
SS-6	SVOC	Chrysene	218-01-9	B2	1	1	2.37E+00	2.37E+00	9.8E+04	2.4E-05
SS-6	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	1.95E-01	1.95E-01	9.8E+01	2.0E-03
SS-6	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	2.30E+00	2.30E+00	4.4E+05	5.2E-06
SS-6	SVOC	Fluoranthene	206-44-0	D	1	1	4.22E+00	4.22E+00	1.5E+05	2.8E-05
SS-6	SVOC	Fluorene	86-73-7	D	1	1	8.37E-01	8.37E-01	1.5E+05	5.6E-06
SS-6	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	6.12E-01	6.12E-01	9.8E+02	6.2E-04
SS-6	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	6.10E-01	6.10E-01	1.8E+04	3.5E-05
SS-6	SVOC	Naphthalene	91-20-3	C	1	1	4.89E-01	4.89E-01	7.5E+04	6.5E-06
SS-6	SVOC	Perylene	198-55-0		1	1	5.75E-01	5.75E-01		
SS-6	SVOC	Phenanthrene	85-01-8	D	1	1	5.67E+00	5.67E+00	1.1E+05	5.0E-05
SS-6	SVOC	Pyrene	129-00-0	NC	1	1	3.24E+00	3.24E+00	1.1E+05	2.9E-05
SS-6	PHYS	Organic Carbon (total)	C-012		1	1	5.35E+04	5.35E+04		
SS-6	PCB	PCBs (total)	1336-36-3	B2	1	1	1.20E+00	1.20E+00	7.2E+01	1.7E-02
SS-6	INORG	Antimony	7440-36-0	ID	1	1	3.06E+01	3.06E+01	4.1E+03	7.5E-03
SS-6	INORG	Arsenic	7440-38-2	A	1	1	1.02E+01	1.02E+01	3.4E+02	3.0E-02
SS-6	INORG	Barium	7440-39-3	NC	1	1	1.14E+03	1.14E+03	2.0E+06	5.6E-04
SS-6	INORG	Beryllium	7440-41-7	B1	1	1	2.50E-01	2.50E-01	2.0E+04	1.2E-05
SS-6	INORG	Cadmium	7440-43-9	B1	1	1	5.79E+01	5.79E+01	6.7E+03	8.7E-03

Attachment E-5.2: Sediment Screening Results Summary - Maintenance Worker
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Maintenance Worker Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Maintenance Worker Sed Contact RBSL
SS-6	INORG	Chromium III	16065-83-1	D	1	1	2.61E+02	2.61E+02	1.5E+07	1.7E-05
SS-6	INORG	Cobalt	7440-48-4	LC	1	1	5.20E+00	5.20E+00	3.1E+03	1.7E-03
SS-6	INORG	Copper	7440-50-8	D	1	1	5.08E+01	5.08E+01	4.1E+05	1.2E-04
SS-6	INORG	Lead	7439-92-1	B2	1	1	1.87E+03	1.87E+03		
SS-6	INORG	Manganese	7439-96-5	D	1	1	5.48E+02	5.48E+02	1.4E+06	3.8E-04
SS-6	INORG	Mercury	7439-97-6	D	1	1	4.60E-01	4.60E-01	3.1E+03	1.5E-04
SS-6	INORG	Methyl mercury	22967-92-6	C	1	1	2.40E-04	2.40E-04	1.0E+03	2.3E-07
SS-6	INORG	Nickel	7440-02-0	A	1	1	1.27E+01	1.27E+01	2.0E+05	6.2E-05
SS-6	INORG	Selenium	7782-49-2	D	1	1	1.51E+01	1.51E+01	5.1E+04	3.0E-04
SS-6	INORG	Silver	7440-22-4	D	1	1	3.40E-01	3.40E-01	5.1E+04	6.7E-06
SS-6	INORG	Thallium	7440-28-0	ID	1	1	1.10E-01	1.10E-01		
SS-6	INORG	Vanadium	7440-62-2	ID	1	1	1.00E+01	1.00E+01	5.1E+04	2.0E-04
SS-6	INORG	Zinc	7440-66-6	ID	1	1	9.04E+02	9.04E+02	3.1E+06	2.9E-04
SS-7	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	1.18E+02	1.18E+02		
SS-7	SVOC	Acenaphthene	83-32-9	ID	1	1	2.37E-01	2.37E-01	2.3E+05	1.0E-06
SS-7	SVOC	Acenaphthylene	208-96-8	D	1	1	1.68E-01	1.68E-01	1.1E+05	1.5E-06
SS-7	SVOC	Anthracene	120-12-7	ID	1	1	9.95E-01	9.95E-01	1.1E+06	8.8E-07
SS-7	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	1.96E+00	1.96E+00	9.8E+02	2.0E-03
SS-7	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	1.73E+00	1.73E+00	9.8E+01	1.8E-02
SS-7	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	1.78E+00	1.78E+00	9.8E+02	1.8E-03
SS-7	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	1.10E+00	1.10E+00	1.1E+05	9.7E-06
SS-7	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	1.48E+00	1.48E+00	9.8E+03	1.5E-04
SS-7	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1	1	9.20E+00	9.20E+00	2.2E+04	4.2E-04
SS-7	SVOC	Butylbenzylphthalate	85-68-7	C	1	1	1.60E+00	1.60E+00	1.6E+05	9.9E-06
SS-7	SVOC	Chrysene	218-01-9	B2	1	1	3.06E+00	3.06E+00	9.8E+04	3.1E-05
SS-7	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	2.92E-01	2.92E-01	9.8E+01	3.0E-03
SS-7	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	2.40E+00	2.40E+00	4.4E+05	5.4E-06
SS-7	SVOC	Fluoranthene	206-44-0	D	1	1	4.93E+00	4.93E+00	1.5E+05	3.3E-05
SS-7	SVOC	Fluorene	86-73-7	D	1	1	5.06E-01	5.06E-01	1.5E+05	3.4E-06
SS-7	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	9.51E-01	9.51E-01	9.8E+02	9.7E-04
SS-7	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	7.30E-01	7.30E-01	1.8E+04	4.1E-05
SS-7	SVOC	Naphthalene	91-20-3	C	1	1	3.70E-01	3.70E-01	7.5E+04	4.9E-06
SS-7	SVOC	Perylene	198-55-0		1	1	6.81E-01	6.81E-01		
SS-7	SVOC	Phenanthrene	85-01-8	D	1	1	2.66E+00	2.66E+00	1.1E+05	2.4E-05
SS-7	SVOC	Pyrene	129-00-0	NC	1	1	4.45E+00	4.45E+00	1.1E+05	3.9E-05
SS-7	PHYS	Organic Carbon (total)	C-012		1	1	1.09E+05	1.09E+05		

Attachment E-5.2: Sediment Screening Results Summary - Maintenance Worker
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Maintenance Worker Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Maintenance Worker Sed Contact RBSL
SS-7	PCB	PCBs (total)	1336-36-3	B2	1	1	8.10E-01	8.10E-01	7.2E+01	1.1E-02
SS-7	INORG	Antimony	7440-36-0	ID	1	1	3.34E+01	3.34E+01	4.1E+03	8.2E-03
SS-7	INORG	Arsenic	7440-38-2	A	1	1	9.30E+00	9.30E+00	3.4E+02	2.7E-02
SS-7	INORG	Barium	7440-39-3	NC	1	1	1.52E+03	1.52E+03	2.0E+06	7.4E-04
SS-7	INORG	Beryllium	7440-41-7	B1	1	1	3.00E-01	3.00E-01	2.0E+04	1.5E-05
SS-7	INORG	Cadmium	7440-43-9	B1	1	1	9.70E+00	9.70E+00	6.7E+03	1.5E-03
SS-7	INORG	Chromium III	16065-83-1	D	1	1	1.52E+02	1.52E+02	1.5E+07	9.9E-06
SS-7	INORG	Cobalt	7440-48-4	LC	1	1	4.50E+00	4.50E+00	3.1E+03	1.5E-03
SS-7	INORG	Copper	7440-50-8	D	1	1	9.39E+01	9.39E+01	4.1E+05	2.3E-04
SS-7	INORG	Lead	7439-92-1	B2	1	1	1.88E+03	1.88E+03		
SS-7	INORG	Manganese	7439-96-5	D	1	1	3.57E+02	3.57E+02	1.4E+06	2.5E-04
SS-7	INORG	Mercury	7439-97-6	D	1	1	1.30E+00	1.30E+00	3.1E+03	4.2E-04
SS-7	INORG	Methyl mercury	22967-92-6	C	1	1	4.70E-04	4.70E-04	1.0E+03	4.6E-07
SS-7	INORG	Nickel	7440-02-0	A	1	1	1.35E+01	1.35E+01	2.0E+05	6.6E-05
SS-7	INORG	Selenium	7782-49-2	D	1	1	2.30E+00	2.30E+00	5.1E+04	4.5E-05
SS-7	INORG	Silver	7440-22-4	D	1	1	3.50E-01	3.50E-01	5.1E+04	6.8E-06
SS-7	INORG	Thallium	7440-28-0	ID	1	1	1.40E-01	1.40E-01		
SS-7	INORG	Vanadium	7440-62-2	ID	1	1	9.20E+00	9.20E+00	5.1E+04	1.8E-04
SS-7	INORG	Zinc	7440-66-6	ID	1	1	1.48E+03	1.48E+03	3.1E+06	4.8E-04
SS-9	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	2.37E+02	2.37E+02		
SS-9	SVOC	Acenaphthene	83-32-9	ID	1	1	4.13E-01	4.13E-01	2.3E+05	1.8E-06
SS-9	SVOC	Acenaphthylene	208-96-8	D	1	1	1.44E-01	1.44E-01	1.1E+05	1.3E-06
SS-9	SVOC	Anthracene	120-12-7	ID	1	1	9.68E-01	9.68E-01	1.1E+06	8.6E-07
SS-9	SVOC	Benzo(a)anthracene	56-55-3	B2	1	1	1.86E+00	1.86E+00	9.8E+02	1.9E-03
SS-9	SVOC	Benzo(a)pyrene	50-32-8	B2	1	1	1.61E+00	1.61E+00	9.8E+01	1.6E-02
SS-9	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1	1	1.68E+00	1.68E+00	9.8E+02	1.7E-03
SS-9	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1	1	1.08E+00	1.08E+00	1.1E+05	9.6E-06
SS-9	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1	1	1.38E+00	1.38E+00	9.8E+03	1.4E-04
SS-9	SVOC	Butylbenzylphthalate	85-68-7	C	1	1	3.20E+00	3.20E+00	1.6E+05	2.0E-05
SS-9	SVOC	Chrysene	218-01-9	B2	1	1	2.82E+00	2.82E+00	9.8E+04	2.9E-05
SS-9	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1	1	2.58E-01	2.58E-01	9.8E+01	2.6E-03
SS-9	SVOC	Di-n-butylphthalate	84-74-2	D	1	1	1.70E+00	1.70E+00	4.4E+05	3.9E-06
SS-9	SVOC	Fluoranthene	206-44-0	D	1	1	4.79E+00	4.79E+00	1.5E+05	3.2E-05
SS-9	SVOC	Fluorene	86-73-7	D	1	1	5.96E-01	5.96E-01	1.5E+05	4.0E-06
SS-9	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1	1	9.24E-01	9.24E-01	9.8E+02	9.4E-04
SS-9	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	3.60E-01	3.60E-01	1.8E+04	2.0E-05

Attachment E-5.2: Sediment Screening Results Summary - Maintenance Worker
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Maintenance Worker Sed Contact RBSL (mg/kg)	Ratio of Max Detect to Maintenance Worker Sed Contact RBSL
SS-9	SVOC	Naphthalene	91-20-3	C	1	1	2.40E-01	2.40E-01	7.5E+04	3.2E-06
SS-9	SVOC	Perylene	198-55-0		1	1	6.84E-01	6.84E-01		
SS-9	SVOC	Phenanthrene	85-01-8	D	1	1	4.78E+00	4.78E+00	1.1E+05	4.2E-05
SS-9	SVOC	Pyrene	129-00-0	NC	1	1	4.18E+00	4.18E+00	1.1E+05	3.7E-05
SS-9	PHYS	Organic Carbon (total)	C-012		1	1	1.31E+05	1.31E+05		
SS-9	PCB	PCBs (total)	1336-36-3	B2	1	1	4.46E-01	4.46E-01	7.2E+01	6.2E-03
SS-9	INORG	Antimony	7440-36-0	ID	1	1	2.30E+01	2.30E+01	4.1E+03	5.6E-03
SS-9	INORG	Arsenic	7440-38-2	A	1	1	8.10E+00	8.10E+00	3.4E+02	2.4E-02
SS-9	INORG	Barium	7440-39-3	NC	1	1	1.34E+03	1.34E+03	2.0E+06	6.6E-04
SS-9	INORG	Beryllium	7440-41-7	B1	1	1	3.60E-01	3.60E-01	2.0E+04	1.8E-05
SS-9	INORG	Cadmium	7440-43-9	B1	1	1	1.41E+01	1.41E+01	6.7E+03	2.1E-03
SS-9	INORG	Chromium III	16065-83-1	D	1	1	1.83E+02	1.83E+02	1.5E+07	1.2E-05
SS-9	INORG	Cobalt	7440-48-4	LC	1	1	6.10E+00	6.10E+00	3.1E+03	2.0E-03
SS-9	INORG	Copper	7440-50-8	D	1	1	7.87E+01	7.87E+01	4.1E+05	1.9E-04
SS-9	INORG	Lead	7439-92-1	B2	1	1	1.39E+03	1.39E+03		
SS-9	INORG	Manganese	7439-96-5	D	1	1	2.18E+02	2.18E+02	1.4E+06	1.5E-04
SS-9	INORG	Mercury	7439-97-6	D	1	1	6.20E-01	6.20E-01	3.1E+03	2.0E-04
SS-9	INORG	Methyl mercury	22967-92-6	C	1	1	4.80E-04	4.80E-04	1.0E+03	4.7E-07
SS-9	INORG	Nickel	7440-02-0	A	1	1	1.47E+01	1.47E+01	2.0E+05	7.2E-05
SS-9	INORG	Selenium	7782-49-2	D	1	1	4.30E+00	4.30E+00	5.1E+04	8.4E-05
SS-9	INORG	Silver	7440-22-4	D	1	1	2.50E-01	2.50E-01	5.1E+04	4.9E-06
SS-9	INORG	Thallium	7440-28-0	ID	1	1	1.50E-01	1.50E-01		
SS-9	INORG	Vanadium	7440-62-2	ID	1	1	1.41E+01	1.41E+01	5.1E+04	2.8E-04
SS-9	INORG	Zinc	7440-66-6	ID	1	1	2.04E+03	2.04E+03	3.1E+06	6.7E-04

Notes:

1. Only constituents detected at each location are shown.
2. Sediment screening levels are compared to max detected concentration at each location with a bottom depth of 0.5 ft or less.
3. When acid-volatile sulfide is present, chromium can only exist in the chromium III oxidation state. Therefore, for samples with AVS detections, chromium (total) has been converted to chromium III.
4. The criteria for river sediment contact are the lower of the criteria at either the target cancer risk of 1E-6 or target hazard quotient of 0.1.
5. The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the criteria for Xylenes (total).
6. The concentrations for the PCB Aroclors were summed before comparing to the criteria for PCBs (total).
7. Concentration/criterion ratios greater than 1 are shaded in bold.
8. Chem Group - chemical group
9. Carc Class - USEPA Weight-of-Evidence Cancer Classification

Attachment E-5.3: Sediment Screening Results Summary - Landscaper
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Landscaper Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Landscaper Soil Contact RBSL
SS-1	SVOC	Acenaphthene	83-32-9	ID	2	2	4.08E-02	5.10E-02	2.8E+04	1.9E-06
SS-1	SVOC	Acenaphthylene	208-96-8	D	2	2	3.20E-02	8.73E-02	1.4E+04	6.3E-06
SS-1	SVOC	Anthracene	120-12-7	ID	2	2	1.50E-01	1.78E-01	1.4E+05	1.3E-06
SS-1	SVOC	Benzo(a)anthracene	56-55-3	B2	2	2	3.10E-01	3.96E-01	4.4E+01	9.0E-03
SS-1	SVOC	Benzo(a)pyrene	50-32-8	B2	2	2	2.40E-01	4.40E-01	4.4E+00	1.0E-01
SS-1	SVOC	Benzo(b)fluoranthene	205-99-2	B2	2	2	2.70E-01	3.35E-01	4.4E+01	7.6E-03
SS-1	SVOC	Benzo(g,h,i)perylene	191-24-2	D	2	2	1.50E-01	2.40E-01	1.4E+04	1.7E-05
SS-1	SVOC	Benzo(k)fluoranthene	207-08-9	B2	2	2	1.70E-01	3.49E-01	4.4E+02	7.9E-04
SS-1	SVOC	Butylbenzylphthalate	85-68-7	C	2	1	2.30E+00	2.30E+00	1.9E+04	1.2E-04
SS-1	SVOC	Chrysene	218-01-9	B2	2	2	3.20E-01	4.33E-01	4.4E+03	9.9E-05
SS-1	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	2	2	3.50E-02	6.67E-02	4.4E+00	1.5E-02
SS-1	SVOC	Dibenzofuran	132-64-9	D	2	1	3.90E-02	3.90E-02	2.1E+03	1.9E-05
SS-1	SVOC	Di-n-butylphthalate	84-74-2	D	2	1	1.50E-01	1.50E-01	5.1E+04	2.9E-06
SS-1	SVOC	Fluoranthene	206-44-0	D	2	2	6.90E-01	8.79E-01	1.8E+04	4.8E-05
SS-1	SVOC	Fluorene	86-73-7	D	2	2	5.18E-02	8.10E-02	1.8E+04	4.4E-06
SS-1	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	2	2	1.20E-01	2.27E-01	4.4E+01	5.2E-03
SS-1	SVOC	Isophorone	78-59-1	C	2	1	3.10E-02	3.10E-02	3.8E+04	8.2E-07
SS-1	SVOC	2-Methylnaphthalene	91-57-6	ID	2	2	2.30E-02	3.00E-02	2.1E+03	1.5E-05
SS-1	SVOC	Naphthalene	91-20-3	C	2	2	2.03E-02	3.30E-02	2.9E+02	1.1E-04
SS-1	SVOC	Perylene	198-55-0		1	1	2.01E-01	2.01E-01		
SS-1	SVOC	Phenanthrene	85-01-8	D	2	2	4.78E-01	5.50E-01	1.4E+04	4.0E-05
SS-1	SVOC	Pyrene	129-00-0	NC	2	2	6.70E-01	7.56E-01	1.4E+04	5.5E-05
SS-1	PHYS	Organic Carbon (total)	C-012		2	2	4.63E+04	4.91E+04		
SS-1	PCB	PCBs (total)	1336-36-3	B2	2	1	4.70E-02	4.70E-02	8.9E+00	5.3E-03
SS-1	INORG	Antimony	7440-36-0	ID	2	2	1.30E-01	4.40E-01	3.4E+02	1.3E-03
SS-1	INORG	Arsenic	7440-38-2	A	2	2	4.50E+00	4.60E+00	3.2E+01	1.4E-01
SS-1	INORG	Barium	7440-39-3	NC	2	2	8.95E+01	1.13E+02	1.7E+05	6.6E-04
SS-1	INORG	Beryllium	7440-41-7	B1	2	2	3.80E-01	5.70E-01	7.9E+02	7.3E-04
SS-1	INORG	Cadmium	7440-43-9	B1	2	2	5.20E-01	8.80E-01	3.5E+02	2.5E-03
SS-1	INORG	Chromium (total)	7440-47-3		2	2	1.57E+01	2.05E+01	9.3E+01	2.2E-01
SS-1	INORG	Cobalt	7440-48-4	LC	2	2	5.00E+00	6.00E+00	1.6E+02	3.7E-02
SS-1	INORG	Copper	7440-50-8	D	2	2	1.67E+01	1.83E+01	3.4E+04	5.4E-04
SS-1	INORG	Lead	7439-92-1	B2	2	2	4.37E+01	9.99E+01	2.2E+03	4.5E-02
SS-1	INORG	Manganese	7439-96-5	D	2	2	2.39E+02	2.46E+02	3.5E+03	6.9E-02
SS-1	INORG	Mercury	7439-97-6	D	2	2	4.90E+00	1.23E+01	9.5E+01	1.3E-01
SS-1	INORG	Methyl mercury	22967-92-6	C	1	1	1.50E-03	1.50E-03	8.5E+01	1.8E-05

Attachment E-5.3: Sediment Screening Results Summary - Landscaper
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Landscaper Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Landscaper Soil Contact RBSL
SS-1	INORG	Nickel	7440-02-0	A	2	2	1.16E+01	1.28E+01	4.7E+03	2.7E-03
SS-1	INORG	Selenium	7782-49-2	D	2	2	1.50E+00	1.80E+00	4.2E+03	4.2E-04
SS-1	INORG	Silver	7440-22-4	D	2	2	1.50E-01	2.40E-01	6.2E+02	3.9E-04
SS-1	INORG	Thallium	7440-28-0	ID	2	2	1.40E-01	2.10E-01		
SS-1	INORG	Vanadium	7440-62-2	ID	2	2	1.49E+01	2.05E+01	2.7E+03	7.6E-03
SS-1	INORG	Zinc	7440-66-6	ID	2	2	9.11E+01	1.01E+02	2.6E+05	4.0E-04
SS-2	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	3.93E+02	3.93E+02		
SS-2	VOC	Acetone	67-64-1	ID	4	3	3.60E-02	4.40E-02	4.3E+05	1.0E-07
SS-2	VOC	Methylcyclohexane	108-87-2	ID	4	1	2.80E-03	2.80E-03		
SS-2	SVOC	Acenaphthene	83-32-9	ID	4	2	1.30E-02	2.48E-02	2.8E+04	9.0E-07
SS-2	SVOC	Acenaphthylene	208-96-8	D	4	3	2.00E-02	8.91E-02	1.4E+04	6.5E-06
SS-2	SVOC	Anthracene	120-12-7	ID	4	4	8.30E-03	1.06E-01	1.4E+05	7.7E-07
SS-2	SVOC	Benzaldehyde	100-52-7		4	1	3.80E-02	3.80E-02	5.1E+04	7.4E-07
SS-2	SVOC	Benzo(a)anthracene	56-55-3	B2	4	4	2.40E-02	2.60E-01	4.4E+01	5.9E-03
SS-2	SVOC	Benzo(a)pyrene	50-32-8	B2	4	4	1.90E-02	2.51E-01	4.4E+00	5.7E-02
SS-2	SVOC	Benzo(b)fluoranthene	205-99-2	B2	4	4	2.50E-02	2.70E-01	4.4E+01	6.2E-03
SS-2	SVOC	Benzo(g,h,i)perylene	191-24-2	D	4	4	1.00E-02	1.52E-01	1.4E+04	1.1E-05
SS-2	SVOC	Benzo(k)fluoranthene	207-08-9	B2	4	3	5.30E-02	1.96E-01	4.4E+02	4.5E-04
SS-2	SVOC	Chrysene	218-01-9	B2	4	4	2.80E-02	3.30E-01	4.4E+03	7.5E-05
SS-2	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	4	1	4.47E-02	4.47E-02	4.4E+00	1.0E-02
SS-2	SVOC	Dibenzofuran	132-64-9	D	4	1	1.90E-02	1.90E-02	2.1E+03	9.3E-06
SS-2	SVOC	Di-n-butylphthalate	84-74-2	D	4	1	3.40E-02	3.40E-02	5.1E+04	6.6E-07
SS-2	SVOC	Fluoranthene	206-44-0	D	4	4	4.50E-02	6.00E-01	1.8E+04	3.3E-05
SS-2	SVOC	Fluorene	86-73-7	D	4	2	2.80E-02	2.89E-02	1.8E+04	1.6E-06
SS-2	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	4	4	1.20E-02	1.41E-01	4.4E+01	3.2E-03
SS-2	SVOC	2-Methylnaphthalene	91-57-6	ID	4	2	2.20E-02	4.00E-02	2.1E+03	1.9E-05
SS-2	SVOC	3&4-Methylphenol	65794-96-4		4	1	7.70E-02	7.70E-02	2.6E+03	3.0E-05
SS-2	SVOC	Naphthalene	91-20-3	C	4	3	2.36E-02	5.90E-02	2.9E+02	2.0E-04
SS-2	SVOC	Perylene	198-55-0		1	1	2.80E-01	2.80E-01		
SS-2	SVOC	Phenanthrene	85-01-8	D	4	4	3.60E-02	3.60E-01	1.4E+04	2.6E-05
SS-2	SVOC	Phenol	108-95-2	ID	4	2	2.60E-02	3.20E-02	1.5E+05	2.1E-07
SS-2	SVOC	Pyrene	129-00-0	NC	4	4	4.90E-02	5.80E-01	1.4E+04	4.2E-05
SS-2	PHYS	Organic Carbon (total)	C-012		4	4	5.10E+04	7.19E+04		
SS-2	INORG	Antimony	7440-36-0	ID	4	4	7.80E-02	8.90E-01	3.4E+02	2.6E-03
SS-2	INORG	Arsenic	7440-38-2	A	4	4	3.90E+00	6.20E+00	3.2E+01	1.9E-01
SS-2	INORG	Barium	7440-39-3	NC	4	4	1.28E+02	1.53E+02	1.7E+05	9.0E-04

Attachment E-5.3: Sediment Screening Results Summary - Landscaper
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Landscaper Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Landscaper Soil Contact RBSL
SS-2	INORG	Beryllium	7440-41-7	B1	4	4	4.90E-01	6.80E-01	7.9E+02	8.6E-04
SS-2	INORG	Cadmium	7440-43-9	B1	4	4	2.90E-01	6.20E-01	3.5E+02	1.8E-03
SS-2	INORG	Chromium III	16065-83-1	D	4	4	1.68E+01	2.04E+01	2.8E+05	7.2E-05
SS-2	INORG	Cobalt	7440-48-4	LC	4	4	5.70E+00	7.30E+00	1.6E+02	4.5E-02
SS-2	INORG	Copper	7440-50-8	D	4	4	1.54E+01	2.64E+01	3.4E+04	7.7E-04
SS-2	INORG	Lead	7439-92-1	B2	4	4	2.14E+01	1.37E+02	2.2E+03	6.1E-02
SS-2	INORG	Manganese	7439-96-5	D	4	4	3.43E+02	3.63E+02	3.5E+03	1.0E-01
SS-2	INORG	Mercury	7439-97-6	D	4	4	9.30E-01	2.75E+01	9.5E+01	2.9E-01
SS-2	INORG	Methyl mercury	22967-92-6	C	1	1	9.70E-04	9.70E-04	8.5E+01	1.1E-05
SS-2	INORG	Nickel	7440-02-0	A	4	4	1.27E+01	1.37E+01	4.7E+03	2.9E-03
SS-2	INORG	Selenium	7782-49-2	D	4	4	1.40E+00	1.60E+00	4.2E+03	3.8E-04
SS-2	INORG	Silver	7440-22-4	D	4	4	8.00E-02	1.50E-01	6.2E+02	2.4E-04
SS-2	INORG	Thallium	7440-28-0	ID	4	4	1.60E-01	2.10E-01		
SS-2	INORG	Vanadium	7440-62-2	ID	4	4	1.95E+01	2.24E+01	2.7E+03	8.3E-03
SS-2	INORG	Zinc	7440-66-6	ID	4	4	6.81E+01	2.13E+02	2.6E+05	8.3E-04
SS-3	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	3.40E+02	3.40E+02		
SS-3	VOC	Acetone	67-64-1	ID	2	1	6.90E-02	6.90E-02	4.3E+05	1.6E-07
SS-3	VOC	Methylcyclohexane	108-87-2	ID	2	1	3.90E-02	3.90E-02		
SS-3	SVOC	Acenaphthene	83-32-9	ID	2	1	1.24E-01	1.24E-01	2.8E+04	4.5E-06
SS-3	SVOC	Acenaphthylene	208-96-8	D	2	2	8.50E-03	7.10E-02	1.4E+04	5.2E-06
SS-3	SVOC	Anthracene	120-12-7	ID	2	2	2.40E-02	3.21E-01	1.4E+05	2.3E-06
SS-3	SVOC	Benzo(a)anthracene	56-55-3	B2	2	2	5.60E-02	5.70E-01	4.4E+01	1.3E-02
SS-3	SVOC	Benzo(a)pyrene	50-32-8	B2	2	2	4.90E-02	5.30E-01	4.4E+00	1.2E-01
SS-3	SVOC	Benzo(b)fluoranthene	205-99-2	B2	2	2	4.90E-02	4.88E-01	4.4E+01	1.1E-02
SS-3	SVOC	Benzo(g,h,i)perylene	191-24-2	D	2	2	3.00E-02	3.13E-01	1.4E+04	2.3E-05
SS-3	SVOC	Benzo(k)fluoranthene	207-08-9	B2	2	2	3.10E-02	4.42E-01	4.4E+02	1.0E-03
SS-3	SVOC	Butylbenzylphthalate	85-68-7	C	2	1	1.30E-01	1.30E-01	1.9E+04	6.9E-06
SS-3	SVOC	Chrysene	218-01-9	B2	2	2	6.40E-02	7.61E-01	4.4E+03	1.7E-04
SS-3	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	2	1	9.29E-02	9.29E-02	4.4E+00	2.1E-02
SS-3	SVOC	Dibenzofuran	132-64-9	D	2	1	6.20E-02	6.20E-02	2.1E+03	3.0E-05
SS-3	SVOC	Di-n-butylphthalate	84-74-2	D	2	1	1.30E-01	1.30E-01	5.1E+04	2.5E-06
SS-3	SVOC	Fluoranthene	206-44-0	D	2	2	1.20E-01	1.25E+00	1.8E+04	6.8E-05
SS-3	SVOC	Fluorene	86-73-7	D	2	2	1.40E-02	1.36E-01	1.8E+04	7.4E-06
SS-3	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	2	2	2.30E-02	2.95E-01	4.4E+01	6.7E-03
SS-3	SVOC	2-Methylnaphthalene	91-57-6	ID	2	1	1.00E-01	1.00E-01	2.1E+03	4.9E-05
SS-3	SVOC	Naphthalene	91-20-3	C	2	2	9.10E-03	3.32E-01	2.9E+02	1.1E-03

Attachment E-5.3: Sediment Screening Results Summary - Landscaper
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Landscaper Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Landscaper Soil Contact RBSL
SS-3	SVOC	Perylene	198-55-0		1	1	2.21E-01	2.21E-01		
SS-3	SVOC	Phenanthrene	85-01-8	D	2	2	9.80E-02	1.09E+00	1.4E+04	7.9E-05
SS-3	SVOC	Phenol	108-95-2	ID	2	1	2.40E-02	2.40E-02	1.5E+05	1.6E-07
SS-3	SVOC	Pyrene	129-00-0	NC	2	2	1.20E-01	1.13E+00	1.4E+04	8.2E-05
SS-3	PHYS	Organic Carbon (total)	C-012		2	2	4.61E+04	6.03E+04		
SS-3	PCB	PCBs (total)	1336-36-3	B2	2	1	1.80E-01	1.80E-01	8.9E+00	2.0E-02
SS-3	INORG	Antimony	7440-36-0	ID	2	2	8.20E-02	3.50E-01	3.4E+02	1.0E-03
SS-3	INORG	Arsenic	7440-38-2	A	2	2	3.80E+00	6.20E+00	3.2E+01	1.9E-01
SS-3	INORG	Barium	7440-39-3	NC	2	2	1.16E+02	1.71E+02	1.7E+05	1.0E-03
SS-3	INORG	Beryllium	7440-41-7	B1	2	2	3.10E-01	4.40E-01	7.9E+02	5.6E-04
SS-3	INORG	Cadmium	7440-43-9	B1	2	2	4.30E-01	9.60E-01	3.5E+02	2.7E-03
SS-3	INORG	Chromium III	16065-83-1	D	2	2	1.51E+01	2.00E+01	2.8E+05	7.0E-05
SS-3	INORG	Cobalt	7440-48-4	LC	2	2	3.90E+00	5.60E+00	1.6E+02	3.5E-02
SS-3	INORG	Copper	7440-50-8	D	2	2	1.52E+01	2.71E+01	3.4E+04	8.0E-04
SS-3	INORG	Lead	7439-92-1	B2	2	2	3.76E+01	2.94E+02	2.2E+03	1.3E-01
SS-3	INORG	Manganese	7439-96-5	D	2	2	3.24E+02	3.84E+02	3.5E+03	1.1E-01
SS-3	INORG	Mercury	7439-97-6	D	2	2	1.50E+00	2.40E+00	9.5E+01	2.5E-02
SS-3	INORG	Methyl mercury	22967-92-6	C	1	1	1.20E-03	1.20E-03	8.5E+01	1.4E-05
SS-3	INORG	Nickel	7440-02-0	A	2	2	8.50E+00	1.14E+01	4.7E+03	2.4E-03
SS-3	INORG	Selenium	7782-49-2	D	2	2	1.20E+00	1.50E+00	4.2E+03	3.5E-04
SS-3	INORG	Silver	7440-22-4	D	2	2	7.70E-02	1.90E-01	6.2E+02	3.0E-04
SS-3	INORG	Thallium	7440-28-0	ID	2	2	1.20E-01	1.30E-01		
SS-3	INORG	Vanadium	7440-62-2	ID	2	2	1.28E+01	1.76E+01	2.7E+03	6.5E-03
SS-3	INORG	Zinc	7440-66-6	ID	2	2	7.52E+01	2.89E+02	2.6E+05	1.1E-03
SS-4	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	5.58E+02	5.58E+02		
SS-4	VOC	Cumene	98-82-8	D	3	3	4.90E-01	5.30E-01	9.9E+03	5.3E-05
SS-4	VOC	Cyclohexane	110-82-7	ID	3	3	1.60E-01	2.80E-01	1.5E+05	1.9E-06
SS-4	VOC	Methyl Acetate	79-20-9	ID	3	3	2.20E-01	2.30E-01	8.5E+05	2.7E-07
SS-4	VOC	Methylcyclohexane	108-87-2	ID	3	3	1.30E+00	2.30E+00		
SS-4	VOC	1,2,4-Trimethylbenzene	95-63-6	ID	3	3	3.50E-01	4.20E+00	2.3E+02	1.9E-02
SS-4	VOC	1,3,5-Trimethylbenzene	108-67-8	ID	3	3	1.50E-01	2.30E+00	3.5E+02	6.5E-03
SS-4	VOC	Xylenes (total)	1330-20-7	ID	3	3	1.20E-01	9.40E-01	2.6E+03	3.6E-04
SS-4	SVOC	Acenaphthene	83-32-9	ID	3	3	5.12E-01	1.10E+00	2.8E+04	4.0E-05
SS-4	SVOC	Acenaphthylene	208-96-8	D	3	1	2.77E-01	2.77E-01	1.4E+04	2.0E-05
SS-4	SVOC	Anthracene	120-12-7	ID	3	3	1.10E+00	1.70E+00	1.4E+05	1.2E-05
SS-4	SVOC	Benzo(a)anthracene	56-55-3	B2	3	3	1.47E+00	3.60E+00	4.4E+01	8.2E-02

Attachment E-5.3: Sediment Screening Results Summary - Landscaper
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Landscaper Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Landscaper Soil Contact RBSL
SS-4	SVOC	Benzo(a)pyrene	50-32-8	B2	3	3	1.21E+00	2.70E+00	4.4E+00	6.1E-01
SS-4	SVOC	Benzo(b)fluoranthene	205-99-2	B2	3	3	1.18E+00	3.30E+00	4.4E+01	7.5E-02
SS-4	SVOC	Benzo(g,h,i)perylene	191-24-2	D	3	3	7.07E-01	1.10E+00	1.4E+04	8.0E-05
SS-4	SVOC	Benzo(k)fluoranthene	207-08-9	B2	3	3	9.10E-01	1.30E+00	4.4E+02	3.0E-03
SS-4	SVOC	1,1-Biphenyl	92-52-4	SC	3	3	4.30E-01	5.70E-01	4.4E+03	1.3E-04
SS-4	SVOC	Chrysene	218-01-9	B2	3	3	2.76E+00	4.60E+00	4.4E+03	1.1E-03
SS-4	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	3	1	2.22E-01	2.22E-01	4.4E+00	5.1E-02
SS-4	SVOC	Dibenzofuran	132-64-9	D	3	3	8.50E-01	1.90E+00	2.1E+03	9.3E-04
SS-4	SVOC	Di-n-butylphthalate	84-74-2	D	3	3	4.00E+00	6.70E+00	5.1E+04	1.3E-04
SS-4	SVOC	Fluoranthene	206-44-0	D	3	3	3.20E+00	6.60E+00	1.8E+04	3.6E-04
SS-4	SVOC	Fluorene	86-73-7	D	3	3	8.76E-01	1.90E+00	1.8E+04	1.0E-04
SS-4	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	3	3	6.37E-01	1.20E+00	4.4E+01	2.7E-02
SS-4	SVOC	2-Methylnaphthalene	91-57-6	ID	3	3	6.30E+00	1.40E+01	2.1E+03	6.8E-03
SS-4	SVOC	Naphthalene	91-20-3	C	3	3	1.87E+00	5.20E+00	2.9E+02	1.8E-02
SS-4	SVOC	Perylene	198-55-0		1	1	4.02E-01	4.02E-01		
SS-4	SVOC	Phenanthrene	85-01-8	D	3	3	3.94E+00	9.30E+00	1.4E+04	6.8E-04
SS-4	SVOC	Pyrene	129-00-0	NC	3	3	3.29E+00	7.90E+00	1.4E+04	5.7E-04
SS-4	PHYS	Organic Carbon (total)	C-012		3	3	8.07E+04	3.99E+05		
SS-4	INORG	Antimony	7440-36-0	ID	3	3	5.10E+00	5.98E+01	3.4E+02	1.8E-01
SS-4	INORG	Arsenic	7440-38-2	A	3	3	7.60E+00	1.19E+01	3.2E+01	3.7E-01
SS-4	INORG	Barium	7440-39-3	NC	3	3	4.26E+02	2.27E+03	1.7E+05	1.3E-02
SS-4	INORG	Beryllium	7440-41-7	B1	3	3	4.00E-01	5.60E-01	7.9E+02	7.1E-04
SS-4	INORG	Cadmium	7440-43-9	B1	3	3	1.70E+00	4.50E+00	3.5E+02	1.3E-02
SS-4	INORG	Chromium III	16065-83-1	D	3	3	5.17E+01	1.97E+02	2.8E+05	6.9E-04
SS-4	INORG	Cobalt	7440-48-4	LC	3	3	4.30E+00	5.90E+00	1.6E+02	3.7E-02
SS-4	INORG	Copper	7440-50-8	D	3	3	5.33E+01	1.52E+02	3.4E+04	4.5E-03
SS-4	INORG	Lead	7439-92-1	B2	3	3	6.57E+02	1.63E+03	2.2E+03	7.3E-01
SS-4	INORG	Manganese	7439-96-5	D	3	3	2.36E+02	3.94E+02	3.5E+03	1.1E-01
SS-4	INORG	Mercury	7439-97-6	D	3	3	8.40E+00	1.48E+01	9.5E+01	1.6E-01
SS-4	INORG	Methyl mercury	22967-92-6	C	1	1	1.40E-03	1.40E-03	8.5E+01	1.6E-05
SS-4	INORG	Nickel	7440-02-0	A	3	3	1.23E+01	1.48E+01	4.7E+03	3.1E-03
SS-4	INORG	Selenium	7782-49-2	D	3	3	1.50E+00	2.10E+00	4.2E+03	4.9E-04
SS-4	INORG	Silver	7440-22-4	D	3	3	2.20E-01	2.90E-01	6.2E+02	4.7E-04
SS-4	INORG	Thallium	7440-28-0	ID	3	3	2.10E-01	2.20E-01		
SS-4	INORG	Vanadium	7440-62-2	ID	3	3	1.25E+01	1.87E+01	2.7E+03	7.0E-03
SS-4	INORG	Zinc	7440-66-6	ID	3	3	6.05E+02	1.91E+03	2.6E+05	7.5E-03

Attachment E-5.3: Sediment Screening Results Summary - Landscaper
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Landscaper Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Landscaper Soil Contact RBSL
SS-5	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	5.49E+02	5.49E+02		
SS-5	VOC	Acetone	67-64-1	ID	3	1	1.30E-01	1.30E-01	4.3E+05	3.0E-07
SS-5	VOC	2-Butanone	78-93-3	ID	3	1	2.30E-02	2.30E-02	1.2E+05	1.9E-07
SS-5	VOC	Cumene	98-82-8	D	3	3	1.40E-01	1.00E+00	9.9E+03	1.0E-04
SS-5	VOC	Cyclohexane	110-82-7	ID	3	1	8.40E-02	8.40E-02	1.5E+05	5.6E-07
SS-5	VOC	Methylcyclohexane	108-87-2	ID	3	3	3.90E-01	2.00E+00		
SS-5	VOC	Methylene Chloride	75-09-2	LC	3	2	3.00E-01	3.80E-01	3.8E+03	9.9E-05
SS-5	VOC	1,2,4-Trichlorobenzene	120-82-1	LC	3	1	1.30E-01	1.30E-01	1.5E+02	8.4E-04
SS-5	VOC	1,2,4-Trimethylbenzene	95-63-6	ID	3	3	6.00E-01	1.60E+01	2.3E+02	7.0E-02
SS-5	VOC	1,3,5-Trimethylbenzene	108-67-8	ID	3	3	2.50E-01	5.90E+00	3.5E+02	1.7E-02
SS-5	VOC	Xylenes (total)	1330-20-7	ID	3	3	5.30E-02	2.40E+00	2.6E+03	9.1E-04
SS-5	SVOC	Acenaphthene	83-32-9	ID	3	3	9.94E-01	7.10E+00	2.8E+04	2.6E-04
SS-5	SVOC	Acenaphthylene	208-96-8	D	3	1	1.31E-01	1.31E-01	1.4E+04	9.5E-06
SS-5	SVOC	Anthracene	120-12-7	ID	3	3	2.16E+00	1.20E+01	1.4E+05	8.7E-05
SS-5	SVOC	Benzo(a)anthracene	56-55-3	B2	3	3	3.76E+00	2.00E+01	4.4E+01	4.6E-01
SS-5	SVOC	Benzo(a)pyrene	50-32-8	B2	3	3	3.51E+00	1.50E+01	4.4E+00	**3.4E+00**
SS-5	SVOC	Benzo(b)fluoranthene	205-99-2	B2	3	3	2.99E+00	2.30E+01	4.4E+01	5.2E-01
SS-5	SVOC	Benzo(g,h,i)perylene	191-24-2	D	3	3	1.87E+00	9.00E+00	1.4E+04	6.5E-04
SS-5	SVOC	Benzo(k)fluoranthene	207-08-9	B2	3	3	3.14E+00	9.10E+00	4.4E+02	2.1E-02
SS-5	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	3	1	2.70E+01	2.70E+01	2.6E+03	1.1E-02
SS-5	SVOC	Butylbenzylphthalate	85-68-7	C	3	3	3.10E+00	2.90E+02	1.9E+04	1.5E-02
SS-5	SVOC	Carbazole	86-74-8	B2	3	1	8.80E+00	8.80E+00	1.8E+03	4.9E-03
SS-5	SVOC	Chrysene	218-01-9	B2	3	3	4.22E+00	2.30E+01	4.4E+03	5.3E-03
SS-5	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	3	2	5.72E-01	2.60E+00	4.4E+00	5.9E-01
SS-5	SVOC	Dibenzofuran	132-64-9	D	3	1	3.80E+00	3.80E+00	2.1E+03	1.9E-03
SS-5	SVOC	Di-n-butylphthalate	84-74-2	D	3	3	5.30E+00	1.30E+01	5.1E+04	2.5E-04
SS-5	SVOC	Fluoranthene	206-44-0	D	3	3	9.63E+00	6.00E+01	1.8E+04	3.3E-03
SS-5	SVOC	Fluorene	86-73-7	D	3	3	1.31E+00	7.80E+00	1.8E+04	4.3E-04
SS-5	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	3	3	1.81E+00	8.20E+00	4.4E+01	1.9E-01
SS-5	SVOC	2-Methylnaphthalene	91-57-6	ID	3	3	1.30E+00	3.50E+00	2.1E+03	1.7E-03
SS-5	SVOC	Naphthalene	91-20-3	C	3	3	1.23E+00	5.20E+00	2.9E+02	1.8E-02
SS-5	SVOC	Perylene	198-55-0		1	1	1.06E+00	1.06E+00		
SS-5	SVOC	Phenanthrene	85-01-8	D	3	3	9.09E+00	5.90E+01	1.4E+04	4.3E-03
SS-5	SVOC	Pyrene	129-00-0	NC	3	3	7.37E+00	4.40E+01	1.4E+04	3.2E-03
SS-5	PHYS	Organic Carbon (total)	C-012		3	3	7.88E+04	1.76E+05		
SS-5	PCB	PCBs (total)	1336-36-3	B2	3	3	4.70E-01	8.70E-01	8.9E+00	9.8E-02

Attachment E-5.3: Sediment Screening Results Summary - Landscaper
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Landscaper Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Landscaper Soil Contact RBSL
SS-5	INORG	Antimony	7440-36-0	ID	3	3	3.20E+01	5.11E+02	3.4E+02	**1.5E+00**
SS-5	INORG	Arsenic	7440-38-2	A	3	3	7.10E+00	4.04E+01	3.2E+01	**1.3E+00**
SS-5	INORG	Barium	7440-39-3	NC	3	3	1.12E+03	3.88E+03	1.7E+05	2.3E-02
SS-5	INORG	Beryllium	7440-41-7	B1	3	3	1.70E-01	3.90E-01	7.9E+02	5.0E-04
SS-5	INORG	Cadmium	7440-43-9	B1	3	3	8.00E+00	3.19E+01	3.5E+02	9.1E-02
SS-5	INORG	Chromium III	16065-83-1	D	3	3	1.76E+02	7.46E+02	2.8E+05	2.6E-03
SS-5	INORG	Cobalt	7440-48-4	LC	3	3	3.80E+00	1.06E+01	1.6E+02	6.6E-02
SS-5	INORG	Copper	7440-50-8	D	3	3	4.03E+01	1.59E+02	3.4E+04	4.7E-03
SS-5	INORG	Lead	7439-92-1	B2	3	3	1.47E+03	8.57E+03	2.2E+03	**3.8E+00**
SS-5	INORG	Manganese	7439-96-5	D	3	3	3.71E+02	6.78E+02	3.5E+03	1.9E-01
SS-5	INORG	Mercury	7439-97-6	D	3	3	2.70E-01	1.70E+00	9.5E+01	1.8E-02
SS-5	INORG	Methyl mercury	22967-92-6	C	1	1	2.20E-04	2.20E-04	8.5E+01	2.6E-06
SS-5	INORG	Nickel	7440-02-0	A	3	3	2.10E+01	1.03E+02	4.7E+03	2.2E-02
SS-5	INORG	Selenium	7782-49-2	D	3	3	2.00E+00	5.40E+00	4.2E+03	1.3E-03
SS-5	INORG	Silver	7440-22-4	D	3	3	2.10E-01	1.30E+00	6.2E+02	2.1E-03
SS-5	INORG	Thallium	7440-28-0	ID	3	3	1.00E-01	2.40E-01		
SS-5	INORG	Vanadium	7440-62-2	ID	3	2	5.60E+00	1.13E+01	2.7E+03	4.2E-03
SS-5	INORG	Zinc	7440-66-6	ID	3	3	1.97E+03	5.59E+03	2.6E+05	2.2E-02
SS-6	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	6.93E+02	6.93E+02		
SS-6	VOC	Acetone	67-64-1	ID	3	3	9.70E-02	3.00E-01	4.3E+05	7.0E-07
SS-6	VOC	Cumene	98-82-8	D	3	3	6.70E-02	2.30E-01	9.9E+03	2.3E-05
SS-6	VOC	Cyclohexane	110-82-7	ID	3	3	2.80E-02	9.00E-02	1.5E+05	6.0E-07
SS-6	VOC	Methylcyclohexane	108-87-2	ID	3	3	4.50E-01	1.80E+00		
SS-6	SVOC	Acenaphthene	83-32-9	ID	3	3	3.81E-01	4.50E+00	2.8E+04	1.6E-04
SS-6	SVOC	Acenaphthylene	208-96-8	D	3	3	1.31E-01	4.50E-01	1.4E+04	3.3E-05
SS-6	SVOC	Anthracene	120-12-7	ID	3	3	9.24E-01	7.50E+00	1.4E+05	5.5E-05
SS-6	SVOC	Benzo(a)anthracene	56-55-3	B2	3	3	1.41E+00	1.40E+01	4.4E+01	3.2E-01
SS-6	SVOC	Benzo(a)pyrene	50-32-8	B2	3	3	1.08E+00	1.20E+01	4.4E+00	**2.7E+00**
SS-6	SVOC	Benzo(b)fluoranthene	205-99-2	B2	3	3	1.36E+00	1.60E+01	4.4E+01	3.7E-01
SS-6	SVOC	Benzo(g,h,i)perylene	191-24-2	D	3	3	7.08E-01	6.40E+00	1.4E+04	4.7E-04
SS-6	SVOC	Benzo(k)fluoranthene	207-08-9	B2	3	3	9.70E-01	6.90E+00	4.4E+02	1.6E-02
SS-6	SVOC	1,1-Biphenyl	92-52-4	SC	3	1	5.90E-01	5.90E-01	4.4E+03	1.3E-04
SS-6	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	3	2	1.10E+01	1.20E+01	2.6E+03	4.7E-03
SS-6	SVOC	Butylbenzylphthalate	85-68-7	C	3	1	7.00E+01	7.00E+01	1.9E+04	3.7E-03
SS-6	SVOC	Caprolactam	105-60-2		3	1	2.80E+01	2.80E+01	2.2E+03	1.3E-02
SS-6	SVOC	Carbazole	86-74-8	B2	3	1	3.70E+00	3.70E+00	1.8E+03	2.1E-03

Attachment E-5.3: Sediment Screening Results Summary - Landscaper
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Landscaper Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Landscaper Soil Contact RBSL
SS-6	SVOC	Chrysene	218-01-9	B2	3	3	2.37E+00	1.40E+01	4.4E+03	3.2E-03
SS-6	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	3	2	1.95E-01	2.20E+00	4.4E+00	5.0E-01
SS-6	SVOC	Dibenzofuran	132-64-9	D	3	2	8.80E-01	2.90E+00	2.1E+03	1.4E-03
SS-6	SVOC	Di-n-butylphthalate	84-74-2	D	3	3	2.30E+00	4.10E+00	5.1E+04	8.0E-05
SS-6	SVOC	Fluoranthene	206-44-0	D	3	3	4.22E+00	3.40E+01	1.8E+04	1.9E-03
SS-6	SVOC	Fluorene	86-73-7	D	3	3	8.37E-01	5.50E+00	1.8E+04	3.0E-04
SS-6	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	3	3	6.12E-01	5.80E+00	4.4E+01	1.3E-01
SS-6	SVOC	2-Methylnaphthalene	91-57-6	ID	3	3	6.10E-01	4.40E+00	2.1E+03	2.1E-03
SS-6	SVOC	Naphthalene	91-20-3	C	3	3	4.89E-01	2.60E+00	2.9E+02	9.0E-03
SS-6	SVOC	Perylene	198-55-0		1	1	5.75E-01	5.75E-01		
SS-6	SVOC	Phenanthrene	85-01-8	D	3	3	5.67E+00	3.70E+01	1.4E+04	2.7E-03
SS-6	SVOC	Pyrene	129-00-0	NC	3	3	3.24E+00	3.00E+01	1.4E+04	2.2E-03
SS-6	PHYS	Organic Carbon (total)	C-012		3	3	5.35E+04	9.62E+04		
SS-6	PCB	PCBs (total)	1336-36-3	B2	3	1	1.20E+00	1.20E+00	8.9E+00	1.4E-01
SS-6	INORG	Antimony	7440-36-0	ID	3	3	1.50E+01	3.59E+01	3.4E+02	1.1E-01
SS-6	INORG	Arsenic	7440-38-2	A	3	3	8.40E+00	1.02E+01	3.2E+01	3.2E-01
SS-6	INORG	Barium	7440-39-3	NC	3	3	9.45E+02	1.14E+03	1.7E+05	6.7E-03
SS-6	INORG	Beryllium	7440-41-7	B1	3	3	2.50E-01	4.80E-01	7.9E+02	6.1E-04
SS-6	INORG	Cadmium	7440-43-9	B1	3	3	4.10E+00	5.79E+01	3.5E+02	1.7E-01
SS-6	INORG	Chromium III	16065-83-1	D	3	3	1.02E+02	2.61E+02	2.8E+05	9.2E-04
SS-6	INORG	Cobalt	7440-48-4	LC	3	3	5.20E+00	6.00E+00	1.6E+02	3.7E-02
SS-6	INORG	Copper	7440-50-8	D	3	3	5.08E+01	9.18E+01	3.4E+04	2.7E-03
SS-6	INORG	Lead	7439-92-1	B2	3	3	6.37E+02	1.87E+03	2.2E+03	8.3E-01
SS-6	INORG	Manganese	7439-96-5	D	3	3	5.25E+02	6.29E+02	3.5E+03	1.8E-01
SS-6	INORG	Mercury	7439-97-6	D	3	3	4.60E-01	7.20E+00	9.5E+01	7.5E-02
SS-6	INORG	Methyl mercury	22967-92-6	C	1	1	2.40E-04	2.40E-04	8.5E+01	2.8E-06
SS-6	INORG	Nickel	7440-02-0	A	3	3	1.27E+01	1.50E+01	4.7E+03	3.2E-03
SS-6	INORG	Selenium	7782-49-2	D	3	3	2.20E+00	1.51E+01	4.2E+03	3.6E-03
SS-6	INORG	Silver	7440-22-4	D	3	3	2.20E-01	3.40E-01	6.2E+02	5.5E-04
SS-6	INORG	Thallium	7440-28-0	ID	3	3	1.10E-01	2.30E-01		
SS-6	INORG	Vanadium	7440-62-2	ID	3	3	1.00E+01	1.44E+01	2.7E+03	5.4E-03
SS-6	INORG	Zinc	7440-66-6	ID	3	3	9.04E+02	1.25E+03	2.6E+05	4.9E-03
SS-7	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	1.18E+02	1.18E+02		
SS-7	VOC	Acetone	67-64-1	ID	2	1	3.30E-02	3.30E-02	4.3E+05	7.7E-08
SS-7	VOC	Methylcyclohexane	108-87-2	ID	2	1	8.30E-02	8.30E-02		
SS-7	SVOC	Acenaphthene	83-32-9	ID	2	2	2.37E-01	2.90E-01	2.8E+04	1.1E-05

Attachment E-5.3: Sediment Screening Results Summary - Landscaper
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Landscaper Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Landscaper Soil Contact RBSL
SS-7	SVOC	Acenaphthylene	208-96-8	D	2	1	1.68E-01	1.68E-01	1.4E+04	1.2E-05
SS-7	SVOC	Anthracene	120-12-7	ID	2	2	4.10E-01	9.95E-01	1.4E+05	7.2E-06
SS-7	SVOC	Benzo(a)anthracene	56-55-3	B2	2	2	8.40E-01	1.96E+00	4.4E+01	4.5E-02
SS-7	SVOC	Benzo(a)pyrene	50-32-8	B2	2	2	6.60E-01	1.73E+00	4.4E+00	3.9E-01
SS-7	SVOC	Benzo(b)fluoranthene	205-99-2	B2	2	2	6.50E-01	1.78E+00	4.4E+01	4.1E-02
SS-7	SVOC	Benzo(g,h,i)perylene	191-24-2	D	2	2	3.50E-01	1.10E+00	1.4E+04	8.0E-05
SS-7	SVOC	Benzo(k)fluoranthene	207-08-9	B2	2	2	3.30E-01	1.48E+00	4.4E+02	3.4E-03
SS-7	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	2	1	9.20E+00	9.20E+00	2.6E+03	3.6E-03
SS-7	SVOC	Butylbenzylphthalate	85-68-7	C	2	1	1.60E+00	1.60E+00	1.9E+04	8.5E-05
SS-7	SVOC	Chrysene	218-01-9	B2	2	2	9.40E-01	3.06E+00	4.4E+03	7.0E-04
SS-7	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	2	1	2.92E-01	2.92E-01	4.4E+00	6.6E-02
SS-7	SVOC	Di-n-butylphthalate	84-74-2	D	2	2	1.20E+00	2.40E+00	5.1E+04	4.7E-05
SS-7	SVOC	Fluoranthene	206-44-0	D	2	2	2.00E+00	4.93E+00	1.8E+04	2.7E-04
SS-7	SVOC	Fluorene	86-73-7	D	2	1	5.06E-01	5.06E-01	1.8E+04	2.8E-05
SS-7	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	2	2	3.10E-01	9.51E-01	4.4E+01	2.2E-02
SS-7	SVOC	2-Methylnaphthalene	91-57-6	ID	2	2	4.70E-01	7.30E-01	2.1E+03	3.6E-04
SS-7	SVOC	Naphthalene	91-20-3	C	2	2	3.70E-01	3.80E-01	2.9E+02	1.3E-03
SS-7	SVOC	Perylene	198-55-0		1	1	6.81E-01	6.81E-01		
SS-7	SVOC	Phenanthrene	85-01-8	D	2	2	1.10E+00	2.66E+00	1.4E+04	1.9E-04
SS-7	SVOC	Pyrene	129-00-0	NC	2	2	1.70E+00	4.45E+00	1.4E+04	3.2E-04
SS-7	PHYS	Organic Carbon (total)	C-012		2	2	2.27E+04	1.09E+05		
SS-7	PCB	PCBs (total)	1336-36-3	B2	2	1	8.10E-01	8.10E-01	8.9E+00	9.1E-02
SS-7	INORG	Antimony	7440-36-0	ID	2	2	1.58E+01	3.34E+01	3.4E+02	9.8E-02
SS-7	INORG	Arsenic	7440-38-2	A	2	2	6.30E+00	9.30E+00	3.2E+01	2.9E-01
SS-7	INORG	Barium	7440-39-3	NC	2	2	5.30E+02	1.52E+03	1.7E+05	8.9E-03
SS-7	INORG	Beryllium	7440-41-7	B1	2	2	3.00E-01	4.00E-01	7.9E+02	5.1E-04
SS-7	INORG	Cadmium	7440-43-9	B1	2	2	3.40E+00	9.70E+00	3.5E+02	2.8E-02
SS-7	INORG	Chromium III	16065-83-1	D	2	2	1.19E+02	1.52E+02	2.8E+05	5.4E-04
SS-7	INORG	Cobalt	7440-48-4	LC	2	2	4.50E+00	4.50E+00	1.6E+02	2.8E-02
SS-7	INORG	Copper	7440-50-8	D	2	2	5.16E+01	9.39E+01	3.4E+04	2.8E-03
SS-7	INORG	Lead	7439-92-1	B2	2	2	5.83E+02	1.88E+03	2.2E+03	8.4E-01
SS-7	INORG	Manganese	7439-96-5	D	2	2	3.42E+02	3.57E+02	3.5E+03	1.0E-01
SS-7	INORG	Mercury	7439-97-6	D	2	2	1.30E+00	2.70E+00	9.5E+01	2.8E-02
SS-7	INORG	Methyl mercury	22967-92-6	C	1	1	4.70E-04	4.70E-04	8.5E+01	5.5E-06
SS-7	INORG	Nickel	7440-02-0	A	2	2	1.13E+01	1.35E+01	4.7E+03	2.8E-03
SS-7	INORG	Selenium	7782-49-2	D	2	2	1.70E+00	2.30E+00	4.2E+03	5.4E-04

Attachment E-5.3: Sediment Screening Results Summary - Landscaper
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Landscaper Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Landscaper Soil Contact RBSL
SS-7	INORG	Silver	7440-22-4	D	2	2	3.30E-01	3.50E-01	6.2E+02	5.6E-04
SS-7	INORG	Thallium	7440-28-0	ID	2	2	1.40E-01	1.40E-01		
SS-7	INORG	Vanadium	7440-62-2	ID	2	2	9.20E+00	1.13E+01	2.7E+03	4.2E-03
SS-7	INORG	Zinc	7440-66-6	ID	2	2	6.41E+02	1.48E+03	2.6E+05	5.8E-03
SS-9	WQ	Sulfide (Acid Soluble)	18496-25-8AS		1	1	2.37E+02	2.37E+02		
SS-9	VOC	Acetone	67-64-1	ID	4	1	5.00E-02	5.00E-02	4.3E+05	1.2E-07
SS-9	VOC	Carbon Disulfide	75-15-0		4	3	2.30E-03	2.50E-02	1.4E+04	1.7E-06
SS-9	VOC	Methylcyclohexane	108-87-2	ID	4	1	2.70E-03	2.70E-03		
SS-9	SVOC	Acenaphthene	83-32-9	ID	4	2	2.10E-01	4.13E-01	2.8E+04	1.5E-05
SS-9	SVOC	Acenaphthylene	208-96-8	D	4	1	1.44E-01	1.44E-01	1.4E+04	1.0E-05
SS-9	SVOC	Anthracene	120-12-7	ID	4	4	2.60E-01	9.68E-01	1.4E+05	7.0E-06
SS-9	SVOC	Benzo(a)anthracene	56-55-3	B2	4	4	7.40E-01	1.86E+00	4.4E+01	4.2E-02
SS-9	SVOC	Benzo(a)pyrene	50-32-8	B2	4	4	4.40E-01	1.61E+00	4.4E+00	3.7E-01
SS-9	SVOC	Benzo(b)fluoranthene	205-99-2	B2	4	4	7.70E-01	1.68E+00	4.4E+01	3.8E-02
SS-9	SVOC	Benzo(g,h,i)perylene	191-24-2	D	4	4	4.50E-01	1.08E+00	1.4E+04	7.9E-05
SS-9	SVOC	Benzo(k)fluoranthene	207-08-9	B2	4	4	3.00E-01	1.38E+00	4.4E+02	3.1E-03
SS-9	SVOC	Butylbenzylphthalate	85-68-7	C	4	2	2.70E+00	3.20E+00	1.9E+04	1.7E-04
SS-9	SVOC	Chrysene	218-01-9	B2	4	4	9.20E-01	2.82E+00	4.4E+03	6.4E-04
SS-9	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	4	1	2.58E-01	2.58E-01	4.4E+00	5.9E-02
SS-9	SVOC	Di-n-butylphthalate	84-74-2	D	4	2	1.20E+00	1.70E+00	5.1E+04	3.3E-05
SS-9	SVOC	Fluoranthene	206-44-0	D	4	4	1.70E+00	4.79E+00	1.8E+04	2.6E-04
SS-9	SVOC	Fluorene	86-73-7	D	4	2	2.60E-01	5.96E-01	1.8E+04	3.3E-05
SS-9	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	4	2	5.10E-01	9.24E-01	4.4E+01	2.1E-02
SS-9	SVOC	2-Methylnaphthalene	91-57-6	ID	4	3	2.30E-01	4.00E-01	2.1E+03	1.9E-04
SS-9	SVOC	Naphthalene	91-20-3	C	4	4	1.80E-01	3.00E-01	2.9E+02	1.0E-03
SS-9	SVOC	Perylene	198-55-0		1	1	6.84E-01	6.84E-01		
SS-9	SVOC	Phenanthrene	85-01-8	D	4	4	5.00E-01	4.78E+00	1.4E+04	3.5E-04
SS-9	SVOC	Pyrene	129-00-0	NC	4	4	2.00E+00	4.18E+00	1.4E+04	3.0E-04
SS-9	PHYS	Organic Carbon (total)	C-012		4	4	6.65E+04	1.31E+05		
SS-9	PCB	PCBs (total)	1336-36-3	B2	4	3	2.80E-02	4.46E-01	8.9E+00	5.0E-02
SS-9	INORG	Antimony	7440-36-0	ID	4	4	1.70E+00	2.30E+01	3.4E+02	6.8E-02
SS-9	INORG	Arsenic	7440-38-2	A	4	4	6.70E+00	1.20E+01	3.2E+01	3.7E-01
SS-9	INORG	Barium	7440-39-3	NC	4	4	1.75E+02	1.34E+03	1.7E+05	7.9E-03
SS-9	INORG	Beryllium	7440-41-7	B1	4	4	3.60E-01	5.60E-01	7.9E+02	7.1E-04
SS-9	INORG	Cadmium	7440-43-9	B1	4	4	1.10E+00	1.41E+01	3.5E+02	4.0E-02
SS-9	INORG	Chromium III	16065-83-1	D	4	4	3.10E+01	1.83E+02	2.8E+05	6.4E-04

Attachment E-5.3: Sediment Screening Results Summary - Landscaper
Janesville Assembly Plant, Janesville, Wisconsin

Location	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Landscaper Soil Contact RBSL (mg/kg)	Ratio of Max Detect to Landscaper Soil Contact RBSL
SS-9	INORG	Cobalt	7440-48-4	LC	4	4	4.90E+00	6.10E+00	1.6E+02	3.8E-02
SS-9	INORG	Copper	7440-50-8	D	4	4	3.39E+01	7.87E+01	3.4E+04	2.3E-03
SS-9	INORG	Lead	7439-92-1	B2	4	4	3.70E+02	1.39E+03	2.2E+03	6.2E-01
SS-9	INORG	Manganese	7439-96-5	D	4	4	1.80E+02	2.18E+02	3.5E+03	6.2E-02
SS-9	INORG	Mercury	7439-97-6	D	4	4	6.20E-01	5.90E+00	9.5E+01	6.2E-02
SS-9	INORG	Methyl mercury	22967-92-6	C	1	1	4.80E-04	4.80E-04	8.5E+01	5.6E-06
SS-9	INORG	Nickel	7440-02-0	A	4	4	1.29E+01	1.47E+01	4.7E+03	3.1E-03
SS-9	INORG	Selenium	7782-49-2	D	4	4	2.10E+00	4.30E+00	4.2E+03	1.0E-03
SS-9	INORG	Silver	7440-22-4	D	4	4	2.50E-01	2.60E-01	6.2E+02	4.2E-04
SS-9	INORG	Thallium	7440-28-0	ID	4	4	1.50E-01	2.30E-01		
SS-9	INORG	Vanadium	7440-62-2	ID	4	4	1.41E+01	2.38E+01	2.7E+03	8.8E-03
SS-9	INORG	Zinc	7440-66-6	ID	4	4	3.38E+02	2.04E+03	2.6E+05	8.0E-03

Notes:

1. Only constituents detected at each location are shown.
2. Landscaper RBSLs are compared to max detected concentration at each location with a bottom depth of 2 ft or less.
3. When acid-volatile sulfide is present, chromium can only exist in the chromium III oxidation state. Therefore, for samples with AVS detections, chromium (total) has been converted to chromium III.
4. The criteria for river sediment contact are the lower of the criteria at either the target cancer risk of 1E-6 or target hazard quotient of 0.1.
5. The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the criteria for Xylenes (total).
6. The concentrations for the PCB Aroclors were summed before comparing to the criteria for PCBs (total).
7. Concentration/criterion ratios greater than 1 are shaded in bold.
8. Chem Group - chemical group
9. Carc Class - USEPA Weight-of-Evidence Cancer Classification

Attachment E-5.4: Sediment Samples Exceeding Recreator Risk-Based Screening Levels
Janesville Assembly Plant, Janesville, Wisconsin

Location	Sample Type	Top Depth (ft)	Bottom Depth (ft)	Sample Date	Chem Group	Chemical	CASRN	Conc (mg/kg)	Qual	Limit (mg/kg)	Recreator Sed Contact RBSL	Ratio of Conc to Recreator Sed Contact RBSL	Recreator Soil Contact RBSL (mg/kg)	Ratio of Conc to Recreator Soil Contact RBSL
SS-1	N	0	0.5	3/10/2016	SVOC	Benzo(a)pyrene	50-32-8	4.40E-01		4.80E-03	1.9E-01	**2.4E+00**	7.2E-02	**6.1E+00**
SS-1	N	0	0.5	3/10/2016	INORG	Arsenic	7440-38-2	4.60E+00		4.40E-02	5.6E+00	8.2E-01	1.9E+00	**2.4E+00**
SS-1	N	0	0.5	3/10/2016	INORG	Chromium (total)	7440-47-3	2.05E+01		1.00E-01	2.2E+01	9.2E-01	6.2E+00	**3.3E+00**
SS-2	N	0	0.5	3/10/2016	SVOC	Benzo(a)pyrene	50-32-8	2.51E-01		4.30E-03	1.9E-01	**1.4E+00**	7.2E-02	**3.5E+00**
SS-2	N	0	0.5	3/10/2016	INORG	Arsenic	7440-38-2	6.20E+00		4.50E-02	5.6E+00	**1.1E+00**	1.9E+00	**3.3E+00**
SS-2	N	0	0.5	3/10/2016	INORG	Mercury	7439-97-6	2.75E+01		3.10E-01	4.1E+01	6.7E-01	1.1E+01	**2.5E+00**
SS-3	N	0	0.5	3/10/2016	SVOC	Benzo(a)pyrene	50-32-8	5.30E-01		3.50E-03	1.9E-01	**2.9E+00**	7.2E-02	**7.4E+00**
SS-3	N	0	0.5	3/10/2016	SVOC	Dibenz(a,h)anthracene	53-70-3	9.29E-02		3.50E-03	1.9E-01	5.0E-01	7.2E-02	**1.3E+00**
SS-3	N	0	0.5	3/10/2016	INORG	Arsenic	7440-38-2	6.20E+00		4.60E-02	5.6E+00	**1.1E+00**	1.9E+00	**3.3E+00**
SS-4	N	0	0.5	3/9/2016	SVOC	Benzo(a)anthracene	56-55-3	1.47E+00		3.80E-02	1.9E+00	7.9E-01	7.2E-01	**2.0E+00**
SS-4	N	0	0.5	3/9/2016	SVOC	Benzo(a)pyrene	50-32-8	1.21E+00		3.80E-02	1.9E-01	**6.5E+00**	7.2E-02	**1.7E+01**
SS-4	N	0	0.5	3/9/2016	SVOC	Benzo(b)fluoranthene	205-99-2	1.18E+00		3.80E-02	1.9E+00	6.4E-01	7.2E-01	**1.6E+00**
SS-4	N	0	0.5	3/9/2016	SVOC	Dibenz(a,h)anthracene	53-70-3	2.22E-01		3.80E-02	1.9E-01	**1.2E+00**	7.2E-02	**3.1E+00**
SS-4	N	0	0.5	3/9/2016	INORG	Antimony	7440-36-0	5.02E+01		2.80E-02	5.5E+01	9.2E-01	1.5E+01	**3.3E+00**
SS-4	N	0	0.5	3/9/2016	INORG	Arsenic	7440-38-2	7.60E+00		5.10E-02	5.6E+00	**1.4E+00**	1.9E+00	**4.0E+00**
SS-5	N	0	0.5	3/10/2016	SVOC	Benzo(a)anthracene	56-55-3	3.76E+00		2.40E-02	1.9E+00	**2.0E+00**	7.2E-01	**5.2E+00**
SS-5	N	0	0.5	3/10/2016	SVOC	Benzo(a)pyrene	50-32-8	3.51E+00		2.40E-02	1.9E-01	**1.9E+01**	7.2E-02	**4.9E+01**
SS-5	N	0	0.5	3/10/2016	SVOC	Benzo(b)fluoranthene	205-99-2	2.99E+00		2.40E-02	1.9E+00	**1.6E+00**	7.2E-01	**4.2E+00**
SS-5	N	0	0.5	3/10/2016	SVOC	Dibenz(a,h)anthracene	53-70-3	5.72E-01		2.40E-02	1.9E-01	**3.1E+00**	7.2E-02	**8.0E+00**
SS-5	N	0	0.5	3/10/2016	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	1.81E+00		2.40E-02	1.9E+00	9.8E-01	7.2E-01	**2.5E+00**
SS-5	N	0	0.5	3/10/2016	INORG	Antimony	7440-36-0	3.20E+01		1.50E-02	5.5E+01	5.8E-01	1.5E+01	**2.1E+00**
SS-5	N	0	0.5	3/10/2016	INORG	Arsenic	7440-38-2	7.10E+00		2.80E-02	5.6E+00	**1.3E+00**	1.9E+00	**3.8E+00**
SS-6	N	0	0.5	3/9/2016	SVOC	Benzo(a)anthracene	56-55-3	1.41E+00		4.50E-03	1.9E+00	7.6E-01	7.2E-01	**2.0E+00**
SS-6	N	0	0.5	3/9/2016	SVOC	Benzo(a)pyrene	50-32-8	1.08E+00		4.50E-03	1.9E-01	**5.8E+00**	7.2E-02	**1.5E+01**
SS-6	N	0	0.5	3/9/2016	SVOC	Benzo(b)fluoranthene	205-99-2	1.36E+00		4.50E-03	1.9E+00	7.3E-01	7.2E-01	**1.9E+00**
SS-6	N	0	0.5	3/9/2016	SVOC	Dibenz(a,h)anthracene	53-70-3	1.95E-01		4.50E-03	1.9E-01	**1.1E+00**	7.2E-02	**2.7E+00**
SS-6	N	0	0.5	3/9/2016	PCB	PCBs (total)	1336-36-3	1.20E+00	J	4.80E-01	1.7E+00	7.0E-01	5.5E-01	**2.2E+00**
SS-6	N	0	0.5	3/9/2016	INORG	Antimony	7440-36-0	3.06E+01		2.00E-02	5.5E+01	5.6E-01	1.5E+01	**2.0E+00**
SS-6	N	0	0.5	3/9/2016	INORG	Arsenic	7440-38-2	1.02E+01		3.70E-02	5.6E+00	**1.8E+00**	1.9E+00	**5.4E+00**
SS-6	N	0	0.5	3/9/2016	INORG	Cadmium	7440-43-9	5.79E+01		5.30E-03	1.2E+02	5.0E-01	3.4E+01	**1.7E+00**
SS-7	N	0	0.5	3/9/2016	SVOC	Benzo(a)anthracene	56-55-3	1.96E+00		1.90E-02	1.9E+00	**1.1E+00**	7.2E-01	**2.7E+00**
SS-7	N	0	0.5	3/9/2016	SVOC	Benzo(a)pyrene	50-32-8	1.73E+00		1.90E-02	1.9E-01	**9.3E+00**	7.2E-02	**2.4E+01**
SS-7	N	0	0.5	3/9/2016	SVOC	Benzo(b)fluoranthene	205-99-2	1.78E+00		1.90E-02	1.9E+00	9.6E-01	7.2E-01	**2.5E+00**
SS-7	N	0	0.5	3/9/2016	SVOC	Dibenz(a,h)anthracene	53-70-3	2.92E-01		1.90E-02	1.9E-01	**1.6E+00**	7.2E-02	**4.1E+00**
SS-7	N	0	0.5	3/9/2016	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	9.51E-01		1.90E-02	1.9E+00	5.1E-01	7.2E-01	**1.3E+00**
SS-7	N	0	0.5	3/9/2016	PCB	PCBs (total)	1336-36-3	8.10E-01	J	1.60E-01	1.7E+00	4.7E-01	5.5E-01	**1.5E+00**
SS-7	N	0	0.5	3/9/2016	INORG	Antimony	7440-36-0	3.34E+01		3.10E-02	5.5E+01	6.1E-01	1.5E+01	**2.2E+00**
SS-7	N	0	0.5	3/9/2016	INORG	Arsenic	7440-38-2	9.30E+00		5.80E-02	5.6E+00	**1.7E+00**	1.9E+00	**4.9E+00**
SS-9	N	0	0.5	3/10/2016	SVOC	Benzo(a)anthracene	56-55-3	1.86E+00		1.90E-02	1.9E+00	1.0E+00	7.2E-01	**2.6E+00**
SS-9	N	0	0.5	3/10/2016	SVOC	Benzo(a)pyrene	50-32-8	1.61E+00		1.90E-02	1.9E-01	**8.7E+00**	7.2E-02	**2.2E+01**
SS-9	N	0	0.5	3/10/2016	SVOC	Benzo(b)fluoranthene	205-99-2	1.68E+00		1.90E-02	1.9E+00	9.1E-01	7.2E-01	**2.3E+00**
SS-9	N	0	0.5	3/10/2016	SVOC	Dibenz(a,h)anthracene	53-70-3	2.58E-01		1.90E-02	1.9E-01	**1.4E+00**	7.2E-02	**3.6E+00**
SS-9	N	0	0.5	3/10/2016	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	9.24E-01		1.90E-02	1.9E+00	5.0E-01	7.2E-01	**1.3E+00**
SS-9	N	0	0.5	3/10/2016	INORG	Antimony	7440-36-0	2.30E+01	J	2.50E-02	5.5E+01	4.2E-01	1.5E+01	**1.5E+00**
SS-9	N	0	0.5	3/10/2016	INORG	Arsenic	7440-38-2	8.10E+00		4.60E-02	5.6E+00	**1.4E+00**	1.9E+00	**4.3E+00**

Attachment E-5.5: Sediment Samples Exceeding Landscaper Risk-Based Screening Levels
Janesville Assembly Plant, Janesville, Wisconsin

Location	Sample Type	Top Depth (ft)	Bottom Depth (ft)	Sample Date	Chem Group	Chemical	CASRN	Conc (mg/kg)	Qual	Limit (mg/kg)	Landscaper Soil Contact RBSL (mg/kg)	Ratio of Conc to Landscaper Soil Contact RBSL
SS-5	N	0.5	2	3/10/2016	SVOC	Benzo(a)pyrene	50-32-8	1.50E+01		9.80E-02	4.4E+00	**3.4E+00**
SS-5	N	0.5	2	3/10/2016	INORG	Lead	7439-92-1	2.66E+03		8.60E-01	2.2E+03	**1.2E+00**
SS-5	N	0	2	3/10/2016	SVOC	Benzo(a)pyrene	50-32-8	7.60E+00		1.40E-01	4.4E+00	**1.7E+00**
SS-5	N	0	2	3/10/2016	INORG	Antimony	7440-36-0	5.11E+02		3.10E-01	3.4E+02	**1.5E+00**
SS-5	N	0	2	3/10/2016	INORG	Arsenic	7440-38-2	4.04E+01		5.70E-02	3.2E+01	**1.3E+00**
SS-5	N	0	2	3/10/2016	INORG	Lead	7439-92-1	8.57E+03		9.80E-01	2.2E+03	**3.8E+00**
SS-6	N	0.5	2	3/9/2016	SVOC	Benzo(a)pyrene	50-32-8	1.20E+01		6.80E-02	4.4E+00	**2.7E+00**

Appendix F
Screening Level Ecological Risk Assessment (provided by Ramboll-Environ)

Appendix F

Screening-Level Ecological Risk Assessment

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List of Acronyms

ASNRI	Area of Special Natural Resource Interest
ATSDR	Agency for Toxic Substances and Disease Registry
AVS	acid volatile sulfide
BEHP	bis(2-ethylhexyl)phthalate
COPEC	constituent of potential ecological concern
CSM	conceptual site model
DNR	Department of Natural Resources
Eco-SSL	Ecological Soil Screening Levels
ERA	ecological risk assessment
ESA	Environmental Site Assessment
ESB	equilibrium partitioning sediment benchmark
ESL	ecological screening level
GM	General Motors
HQ	hazard quotient
LOEC	lowest observed effect concentration
log Koc	log organic carbon-water partition coefficient
MEC	midpoint effect concentration
µmol/gOC	micromoles per gram organic carbon
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
MW	molecular weight
NOEC	no observed effect concentration
NPDES	National Pollutant Discharge Elimination System
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PEC	probable effect concentration
QAPP	quality assurance project plan
ROI	receptor of interest
SCV	secondary chronic toxicity value
SEM	simultaneously extracted metals
SLERA	screening-level ecological risk assessment
SMDP	scientific management decision point

SVOC	semivolatile organic compound
TEC	threshold effect concentration
TOC	total organic carbon
TU	toxic units
µmol/gOC	micromoles per gram organic carbon
U.S. EPA	United States Environmental Protection Agency
U.S. FWS	United States Fish and Wildlife Service
VOC	volatile organic compound
WPDES	Wisconsin Pollutant Discharge Elimination System

F Screening-Level Ecological Risk Assessment

A screening-level ecological risk assessment (SLERA) was conducted to evaluate sediment data collected from the Rock River near the former General Motors LLC (GM) Janesville Assembly Site located in Janesville, Wisconsin. A summary of this SLERA is provided in the *Draft Sediment Investigation and Data Evaluation Report* for the Site. The SLERA's goals are to (1) describe the current ecological characteristics of the Rock River Study Area; and (2) to evaluate which exposure pathways and chemicals within the Study Area require additional study. This SLERA is not intended to yield definitive estimates of ecological risk, but rather to rule out areas, constituents, and pathways that clearly are not of ecological concern, in order to focus on the most ecologically relevant issues.

F.1 Technical Approach

This SLERA has been prepared based on guidance issued by the United States Environmental Protection Agency (U.S. EPA) for conducting ecological risk assessments (ERAs) (U.S. EPA 1997, 1998, 2000, 2001). The objective of a SLERA is to provide either (1) a defensible conclusion that negligible ecological risk exists, or (2) that certain contaminants and exposure pathways can be eliminated from further consideration in the ERA process (U.S. EPA 1997). The U.S. EPA guidance (U.S. EPA 1997) states that a SLERA may reach one of the following conclusions:

- There is adequate information to conclude that ecological risks are negligible, and therefore, no need exists for remediation on the basis of ecological risk
- The information is not adequate to make a decision at this point, and the ERA process will continue
- The information indicates a potential for adverse ecological effects, and a more thorough assessment is warranted.

If a SLERA supports the first decision (i.e., negligible risk), the ERA process ends with an appropriately performed and documented SLERA.

The SLERA is an initial step in a tiered process for site ecological evaluations. The U.S. EPA's ERA process involves a SLERA (Steps 1 and 2) and a baseline ERA (or BERA; Steps 3 through 8). According to U.S. EPA (2000):

> *"The Problem Formulation [i.e., Step 3] is commonly thought of in two parts: Step 3a and Step 3b. Step 3a serves to introduce information to refine the risk estimates from steps one and two. … At many Sites, a single deliverable document consisting of the reporting of results from Steps 1, 2 and 3a may be submitted."*

Constituents identified in Steps 1 and 2 may be eliminated from further consideration based on the refinement of certain assumptions, such as consideration of more realistic bioavailability (i.e., available for uptake into organisms of ecological relevance), ecotoxicity potential, and reasonable chemical exposure estimates. This SLERA includes Steps 1 though 3a.

Three major elements are included in an ERA: problem formulation, analysis of exposure and ecological effects, and risk calculation. Progression from the SLERA to the BERA (Step 3a)

involves iterative consideration and refinement of these major elements, as necessary. Multiple lines of evidence may be considered to draw conclusions regarding the need for further evaluation.

F.2 Problem Formulation

The screening-level problem formulation provides the foundation for the SLERA by describing or defining the following:

- Ecological setting and Study Area definition (Section F.2.1)
- Potentially complete exposure pathways (Section F.2.2)
- Potentially exposed ecological receptors (Section F.2.3)
- Preliminary assessment and measurement endpoints (Section F.2.4)
- A preliminary conceptual site model (CSM) (Section F.2.5)

Information within this section was derived from multiple sources, including the *Monterey Dam Impoundment Sediment Report* (Inter-Fluve 2015) and the *Phase II Environmental Site Assessment (ESA) Work Plan* (GHD 2016a).

F.2.1 Ecological Setting

The 145-acre GM Site is located to the south of the Rock River. The facility is separated from the Rock River by West Delavan Drive and several private properties and an electrical utility substation that border the river on the north side of West Delavan Drive. The facility's nexus to the river is primarily from storm water that is collected from the main assembly plant property, which discharges via a Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit No. WI-0049344 outfall to the Rock River. The Study Area for this SLERA is the area of the Rock River in the vicinity of this storm water outfall, as represented by sediment samples collected in March, 2016 (Figure F-1). In addition to the GM outfall, sediments in the Study Area may contain chemicals originating from upstream sources.

The Rock River is part of the Lower Rock River drainage basin, covering over 3,700 square miles (Wisconsin Department of Natural Resources [WDNR] 2016a). The Rock River watershed is approximately 31,200 acres in size, consisting of 32 miles of waterways, 124 acres of lakes, and 250 acres of wetlands (WDNR 2016b). Because the Rock River is listed as a scenic urban waterway by the WDNR, the Rock River is designated as an Area of Special Natural Resource Interest (ASNRI). Agriculture dominates the Rock River watershed, with smaller percentages of forest and grassland. Forests are dominated by maple, basswood, lowland hardwoods, and oak.

The Rock River, flowing from east to west, is approximately 400 to 800 feet wide in the reach immediately north of the Site. The Monterey Dam, located approximately one-quarter mile downstream of the Site, consists of two spillways, each approximately 185 to 190 feet long. One spillway is perpendicular to the flow of the river, while the other spillway is parallel to the flow (Inter-Fluve 2015). Because the dam was constructed in 1855, the City of Janesville is currently considering whether to repair or remove these spillways. Sediment has been impounded upstream of the dam, most notably in a relatively large embayment area located to the north of the river, just upstream of the dam (Inter-Fluve 2015). Fine sediment, consisting of muck, silt, and sand, has deposited in several lower energy areas in the margins outside of the main river

channel, which generally is located along the center line of the existing river (Figure F-1). The main channel consists primarily of sandy gravel and cobbles.

F.2.2 Potentially Complete Exposure Pathways

A complete exposure pathway is one in which constituents can be traced or are expected to travel from the source to a receptor (U.S. EPA 1997). Therefore, a chemical and an exposure point (e.g., sediment), its release and migration from the source, a receptor, and an exposure route through which the receptor takes up the chemical must all be present in order for a pathway to be considered complete.

Potentially complete exposure pathways evaluated in this SLERA include direct contact of organisms with surface sediment and exposure to bioaccumulative chemicals through the food web. Exposure to subsurface sediment is considered an incomplete pathway for ecological receptors. Site-related chemicals in storm water may enter the Rock River via the WPDES-permitted outfall to the river. Chemicals from potential upstream sources also may enter the Rock River Study Area through the transport of resuspended sediment or dissolved chemicals.

Both direct and indirect exposure pathways may exist for invertebrates and fish in the Rock River and for birds and mammals that utilize the river. Biota potentially act as both a receptor and a secondary source of chemical contamination. Possible exposure routes include inhalation, dermal contact, ingestion through diet, and ingestion of surface water and/or sediment. Benthic (bottom-dwelling) invertebrates (e.g., crayfish, insect larvae) are potentially exposed to chemicals in sediment through direct contact between sediment porewater (i.e., the interstitial water within the sediment) and structures, such as gills and setae, and ingestion of sediment. Fish may be potentially exposed via gill transfer from water, water and/or sediment ingestion, prey ingestion, or dermal contact with surface water. Wildlife are potentially exposed via inhalation, dermal contact, ingestion of aquatic plants and animals, drinking water, and incidental sediment ingestion. Although inhalation and dermal exposures occur, these routes are poorly characterized for most wildlife species. Ingestion of prey is assumed to dominate wildlife exposure. Since some chemicals bioaccumulate throughout the food web, concentrations of chemicals in prey may be elevated relative to concentrations in sediment.

F.2.3 Potentially Exposed Ecological Receptors

Potential ecological receptors are identified based on the environmental setting for the Study Area (Section F.2.1) and potentially complete exposure pathways (Section F.2.2). Most healthy riverine ecosystems support a variety of organisms that are potential ecological receptors of chemical exposures, including benthic invertebrates, fish, birds, and mammals. Due to the close proximity to residential, commercial, and industrial areas, wildlife that may use the Rock River Study Area are likely limited to transient, urban-tolerant species, such as the great blue heron (*Ardea herodias*), mallard (*Anas platyrhynchos*), and raccoon (*Procyon lotor*).

It is not feasible to complete risk calculations for all species potentially exposed. Such an effort would also be duplicative because of the similarity of exposure patterns among closely related species and those with similar feeding guilds. For these reasons, representative receptors of interest (ROIs) are selected.

Selection criteria for ROIs include sensitivity, exposure potential, expected presence within the Study Area, ecological relevance, trophic level, feeding habits, and the availability of life history information. The rationale for selecting each ROI is discussed below.

- Benthic Invertebrates. The benthic invertebrate community lives in constant and direct contact with surface sediment and sediment porewater that may be impacted. Invertebrates have vital functions within the ecosystem, including serving as a prey base for higher trophic level organisms and cycling of nutrients.
- Fish. The fish community lives may be exposed to Site-related chemicals via sediment and the food chain (i.e., secondary consumers). The fish community often dominates the aquatic ecosystem, in terms of biomass, and fish serve as a prey base for piscivorous wildlife.
- Wildlife. Birds and mammals are exposed to chemicals in surface sediment primarily through prey ingestion. As higher trophic level species, birds and mammals are susceptible to compounds that bioaccumulate through the food chain. Species-specific foraging strategies and choices of prey may also promote incidental sediment ingestion. Because this Study Area is highly developed, use of the Site by wildlife may be limited.

F.2.3.1 Threatened and Endangered Species

Threatened and endangered species that might be dependent on the Rock River impoundment, including the Study Area, were reviewed to support the SLERA. Relevant information was obtained from federal and state web sites. Complete search results are provided as Attachment F1.

In Rock County, Wisconsin, there are three federally-listed species under the Endangered Species Act, according to the United States Fish and Wildlife Service (U.S. FWS) as of April 2016 (U.S. FWS 2016a). These include the eastern prairie fringed orchid (*Platanthera leucophaea*), prairie bush-clover (*Lespedeza leptostachya*), and the northern long-eared bat (*Myotis septentrionalis*). Of these, two species (eastern prairie fringed orchid and prairie bush-clover) are terrestrial plant species and are not relevant to the current assessment. The northern long-eared bat is listed as federally threatened but is unlikely to occur in the Study Area given its habitat requirements (Table F-1). These bats require large caves or abandoned mines to overwinter, and they roost in cavities or crevices of live trees and hunt in mature forests during the summer (U.S. FWS 2016b). These habitats are not present in close proximity to the Site.

Additionally, the U.S. FWS is proposing to list the Eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*) as a threatened species. The whooping crane (*Grus americana*) is currently being reintroduced to the eastern United States and is listed as a nonessential experimental population (Table F-1). These two species are not likely to utilize the Rock River impoundment for critical portions of their life histories due to the lack of preferred natural habitat and frequency of human disturbances (Table F-1).

The state of Wisconsin lists 45 species in Rock County as threatened or endangered (WDNR 2016c; Attachment F1) as of April 2016. Of these 45 species, four of the species might possibly occur in the Rock River impoundment, including three fish species (pallid shiner [*Hybopsis amnis*), black buffalo [*Ictiobus niger*], redfin shiner [*Lythrurus umbratilis*]) and one mussel species (purple wartyback [*Cyclonaias tuberculata*]). Although the presence of these species

cannot be definitively excluded, they are unlikely to occur in the Study Area. According to WDNR maps of the distribution of Wisconsin fish species, the pallid shiner, black buffalo, and redfin shiner have not been observed in Rock County over the record of their data collection, which goes back as far as 1875 in some cases (WDNR 2016d). Unionidae families, including the purple wartyback, are experiencing declines and extirpation from waterbodies around the country due to habitat modifications and water pollution (WDNR 2016e). The Monterey Dam and subsequent impoundment of the Rock River is a habitat modification that could have potentially resulted in mussel population decline in the vicinity of the Study Area. Additionally, Unionid mussels are highly sensitive to water pollution, including urban runoff that is typically ubiquitous near population centers such as Janesville.

Other aquatic-associated species are unlikely to inhabit the impoundment based on their habitat requirements (Table F-1). Given the characteristics of the impoundment habitat, the Study Area is not likely to be a critical habitat for any federal or state-listed threatened or endangered species.

F.2.4 Preliminary Assessment and Measurement Endpoints

Assessment endpoints are the explicit expression of ecological entities (e.g., mammal populations) and attributes (e.g., reproductive ability) to be protected (U.S. EPA 1997, 2004). The selection of assessment endpoints depends on knowledge about the receiving environment, chemicals released (including ecotoxicological properties and concentrations that cause adverse impacts), and the values that will drive risk management decision-making (Suter et al. 1995). The following assessment endpoints are identified in this SLERA for the Study Area:

- Benthic invertebrate community structure and function in the Rock River Study Area
- Fish community structure and function in the Rock River Study Area
- Survival and reproduction of aquatic-feeding bird and mammal populations utilizing the Rock River Study Area

“Community structure and function” refers to the types and diversity of species present and their ecological roles (e.g., serving as prey for wildlife). Community structure and function generally does not depend on the presence or absence of any single species. “Population” refers to a group of interbreeding individuals of a single species, occurring within a geographic area.

Because direct measurement of assessment endpoints is often difficult or impossible, measurement endpoints are used to provide the information necessary to evaluate whether the values associated with the assessment endpoint are being protected. A measurement endpoint is a measurable ecological characteristic and/or response to a stressor (U.S. EPA 1998). In this SLERA, potential adverse effects of chemicals on the survival or reproduction of ecological receptors, and consequent effects on populations and communities, are indirectly evaluated in the initial screening evaluation through comparison to conservative ecotoxicity screening levels.

E.2.5 Conceptual Site Model

A CSM is a representation of predicted relationships between ecological entities and the stressors to which they may be exposed. The preliminary CSM for this SLERA integrates information from the ecological setting, potentially complete exposure pathways, potentially

exposed ecological receptors, and the preliminary assessment endpoints. Table F-2 illustrates the preliminary ecological CSM for the Study Area, based on current conditions.

While this SLERA focuses primarily on current conditions, potential future conditions area also evaluated assuming removal of the Monterey Dam (Section F.7). If the dam is removed, then sediment in the Study Area will become exposed and will function as soil. Whether ecological exposure pathways are complete under this scenario will depend on future land use. For example, if the newly exposed area is developed as a mowed recreational area, then ecological habitat—and thus ecological exposures—will be minimal. Ecological exposure pathways may be complete if a more naturalistic habitat is created or is allowed to emerge through ecological succession. In the absence of a defined CSM for future ecological exposures, the SLERA for the dam removal scenario is limited to a simple comparison to soil screening values.

F.3 Screening-Level Exposure Assessment

Sediment samples collected from the Study Area in 2016, under the methods described in the *Revised Sediment Investigation Work Plan* (GHD 2016b), were used in the evaluation of potential ecological risks. Eight sediment samples were collected in Rock River Study Area (Figure F-1). Sediment concentrations are reported on a dry weight basis.

The following data handling practices were applied: (1) surface sediment was defined as the upper 0.5 foot below the sediment surface; (2) duplicate results were averaged, including non-detect concentrations (set to one-half the detection limit) as applicable; and (3) concentrations of nonpolar organic chemicals were adjusted by total organic carbon (TOC) content for comparison to criteria (see Section F.4). Consistent with U.S. EPA guidance (1997, 2000, 2001), exposure estimates used in this SLERA are the maximum concentrations of constituents detected in surface sediment in the Rock River Study Area.

F.4 Screening-Level Effects Characterization

The screening-level ecological effects evaluation involves the identification of appropriate ecotoxicity screening levels for detected constituents in each environmental medium. Ecotoxicity screening levels are chemical concentrations in environmental media below which there is negligible risk to receptors exposed to those media (U.S. EPA 2000). The ecotoxicity-based screening values used in the selection of preliminary constituents of potential ecological concern (COPECs) were purposefully chosen to ensure that the process is inherently conservative, by focusing on values that reflect adverse effects in individual organisms. This means that a larger number of constituents may be identified as COPECs than are likely to pose significant risks of population-level effects. Although the first of U.S. EPA's risk management principles is to reduce risks to levels that will result in recovery and maintenance of healthy local populations and communities of biota, SLERAs typically focus on individual-level effects to ensure the conservatism of the outcome (U.S. EPA 1999).

The selected sediment screening levels for use in this SLERA are presented in Table F-3 and are listed below, in order of preference and availability.

- WDNR consensus-based sediment quality guidelines (WDNR 2003), including:
  - Lower effect level (the threshold effect concentration [TEC])

  - Midpoint effect level (the midpoint effect concentration [MEC])
  - Upper effect level (the probable effect concentration [PEC])
- U.S. EPA Region 5 Ecological Screening Levels (ESLs) (U.S. EPA 2003a)

For nonpolar organic chemicals (e.g., polycyclic aromatic hydrocarbons [PAHs]), concentrations are normalized to TOC so that they are expressed on a dry weight normalized basis at 1% organic carbon for comparison to the WDNR effect levels. For example, a chemical concentration of 5 milligrams per kilogram (mg/kg) dry weight in sediment containing 2% organic carbon is equivalent to 2.5 mg/kg normalized to 1% organic carbon.

F.5 Screening-Level Risk Characterization

The screening-level risk characterization involves the calculation of hazard quotients (HQs), which are the ratio of the maximum exposure estimate to the ecotoxicological screening values identified in the screening-level ecological effects characterization. The unitless HQs are considered a measurement endpoint that can provide an initial understanding of potential ecological risks. An HQ equal to or less than a value of 1 (to one significant figure) indicates that adverse impacts are considered unlikely (U.S. EPA 1997, 2000, 2004). An HQ greater than 1 is an indication that further evaluation may be necessary to evaluate the potential for adverse impacts. Therefore, those constituents in sediment with HQs greater than 1 are carried forward as preliminary COPECs. Additionally, those constituents for which no screening criteria exist (Section F.4) are also identified as preliminary COPECs.

Table F-4 provides summary statistics (i.e., frequency of detection, maximum and average concentrations) for detected constituents in sediment and compares the maximum detected concentrations to sediment screening values. The following are preliminary COPECs identified for sediment:

Summary of Chemicals Retained for Refined Screening Evaluation of Sediment

Chemical Group	Chemical Name	
VOCs	1,2,4-Trimethylbenzene*	Cyclohexane*
	1,3,5-Trimethylbenzene*	Methyl Acetate*
	Acetone	Methylcyclohexane*
	Cumene*	Xylenes (total)
SVOCs	1,1-Biphenyl*	C2-Naphthalenes*
	2-Methylnaphthalene	C3-Anthracenes/Phenanthrenes*
	Acenaphthene	C3-Benzo(a)anthracene/Chrysene*
	Acenaphthylene	C3-Fluorenes*
	Anthracene	C3-Naphthalenes*
	Benzo(a)anthracene	C4-Anthracenes/Phenanthrenes*
	Benzo(a)pyrene	C4-Benzo(a)anthracene/Chrysene*
	Benzo(b)fluoranthene	C4-Naphthalenes*
	Benzo(e)pyrene	Chrysene/Triphenylene*
	Benzo(j+k)fluoranthene*	Dibenz(a,h)anthracene
	bis(2-Ethylhexyl)phthalate	Dibenzofuran
	Butylbenzylphthalate	Fluoranthene
	C1-Anthracenes/Phenanthrenes*	Fluorene
	C1-Benzo(a)anthracene/Chrysene*	PAHs (High MW)*
	C1-Fluoranthenes/Pyrenes*	PAHs (Low MW)*
	C1-Fluorenes*	Perylene*
	C1-Naphthalenes*	Phenanthrene
	C2-Anthracenes/Phenanthrenes*	Pyrene
	C2-Benzo(a)anthracene/Chrysene*	
	C2-Fluorenes*	
Inorganics	Antimony	Mercury
	Barium*	Methylmercury
	Beryllium*	Selenium*
	Cadmium	Thallium*
	Chromium (total)	Vanadium*
	Copper	Zinc
	Lead	
PCBs	Aroclor-1254*	PCBs (total)
	Aroclor-1268*	

*No screening value available
MW: molecular weight
PAH: polycyclic aromatic hydrocarbon
PCB: polychlorinated biphenyl

F.6 Refined Screening Evaluation – Step 3a

The second tier of the screening process, or Step 3a, considers additional information to further evaluate the potential for the preliminary COPECs identified in Section F.5 to adversely affect aquatic organisms and aquatic-feeding wildlife. The refined screening evaluation presented in this section more fully describes the COPECs in each media and which locations may have the potential to adversely affect ecological receptors. Following this refined evaluation, only those COPECs and locations that warrant further study, if any, are identified.

Several lines of evidence may be considered in the refined evaluation, including the following:

- Background or reference concentrations
- Reasonable exposure estimates
- Frequency of detection
- Outliers and spatial distribution
- Relationship to other media
- Alternative ecotoxicological benchmarks
- Additional ecotoxicological information, including metal speciation
- Factors that limit bioavailability
- Bioaccumulation potential
- Site-specific habitat considerations

Maximum concentrations of several volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals exceed the screening criteria for sediment and are identified as preliminary COPECs. Additionally, no sediment screening criteria are available for several chemicals. These chemicals along with those that have maximum concentrations that exceed screening criteria are discussed in more detail below.

F.6.1 VOCs and SVOCs

A refined screening analysis was conducted for PAHs, other hydrocarbons and related compounds, and phthalate esters. Chemicals in these categories were evaluated either because the maximum detected concentration exceeds a conservative screening value, or because no sediment screening criteria is available (Table F-4).

Potential effects due to PAHs were evaluated cumulatively, including all PAHs measured (even though certain PAHs were present at concentrations lower than individual chemical-based screening values). Measured PAHs included acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(e)pyrene, benzo(g,h,i)perylene, benzo(j)fluoranthene/benzo(k)fluoranthene, C1-benzo(a)anthracenes/chrysenes, C1-fluoranthenes/pyrenes, C1-fluorenes, C1-naphthalenes, C1-phenanthrenes/anthracenes, C2-benzo(a)anthracenes/chrysenes, C2-fluorenes, C2-naphthalenes, C2-phenanthrenes/anthracenes, C3-benzo(a)anthracenes/chrysenes, C3-fluorenes, C3-naphthalenes, C3-phenanthrenes/anthracenes, C4-

benzo(a)anthracenes/chrysenes, C4-naphthalenes, C4-phenanthrenes/anthracenes, chrysene/triphenylene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, perylene, phenanthrene, and pyrene.

Certain hydrocarbons and related compounds are identified as requiring a refined screening evaluation, either because the maximum detected concentration exceeds a conservative screening value, or, in most cases, because no sediment screening criteria is available (Table F-4). These chemicals include the following:

- Eight VOCs: acetone, cumene, cyclohexane, methyl acetate, methylcyclohexane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and total xylenes
- Two SVOCs: 1,1-biphenyl and dibenzofuran

Phthalate esters considered in the refined screening analysis include butyl benzyl phthalate and bis(2-ethylhexyl)phthalate.

F.6.2.1 PAHs

For PAHs, risks to benthic invertebrates were evaluated using a cumulative exposure model developed by U.S. EPA (2003). This approach accounts for the influence of chemical-specific characteristics and site-specific sediment characteristics on the bioavailability of chemicals. The U.S. EPA model addresses an extended analyte list including alkylated PAHs and is based on the observation that PAH concentrations in sediment interstitial water (porewater) are predictive of whole sediment toxicity to benthic invertebrates. Porewater screening benchmarks are extrapolated to sediment, assuming equilibrium partitioning of chemical concentrations between sediment organic carbon and porewater. Toxic units (TUs) were calculated for each chemical by dividing the concentrations measured in sediment by the screening benchmarks, and then summed to yield a total TU (sum-TU) for the sample. If the sum-TU is less than 1.0, then toxicity to benthic invertebrates is not expected due to the chemicals included in the model. If the Sum-TU is greater than 1.0, then additional study may be needed. The PAH model was implemented using two approaches, characterized by (1) evaluation of partitioning to all sediment organic carbon collectively, and (2) evaluation of partitioning to black carbon (soot) and “normal,” amorphous organic carbon as separate phases. Black carbon has a particularly strong affinity for PAHs. The results of the first model indicated that toxicity is not expected in four of the eight samples (SS-1, SS-2, SS-3, and SS-9). These results were also supported by the results of the second model that specifically incorporates black carbon. However, the results for the other four samples (SS-4, SS-5, SS-6 and SS-7) were conflicting. The results of the first model could not rule out toxicity to benthic invertebrates because the sum-TUs for these four samples were slightly greater than U.S. EPA’s threshold of 1.0; whereas the sum-TUs for the second model were below U.S. EPA’s threshold of 1.0 for these four samples. All sediment samples, including SS-4, SS-5, SS-6 and SS-7, had sum-TUs lower than a threshold that is considered protective of *Hyallela azteca*, a sensitive benthic invertebrate species commonly used in sediment toxicity testing (McDonough et al., 2010). U.S. EPA acknowledges that the first model overestimates toxicity for some sediment samples, and that the second model can lead to uncertain results (U.S. EPA 2012). Using all of this information, these models indicated that toxicity is unlikely, but the results for four samples (SS-4, SS-5, SS-6 and SS-7) are uncertain. A detailed description of the evaluation of PAH-related risks to benthic invertebrates is provided in Appendix G.

PAHs are identified by U.S. EPA (2000) as bioaccumulative compounds. Although PAHs can bioaccumulate in invertebrates, they are rapidly metabolized in fish. Additional evaluation such as a food web model would be needed to determine whether PAHs could pose a risk to aquatic-feeding wildlife at the Site. Therefore, PAHs are retained collectively as a COPEC.

F.6.2.2 Other Hydrocarbons

In addition to PAHs, several other hydrocarbons and related compounds[1] (primarily VOCs) required refined screening. Cumulative exposure and potential toxicity to benthic invertebrates was assessed for these chemicals, which are characterized by a nonspecific narcotic mode of action. Attachment F2 presents the assessment of these compounds using a cumulative narcosis model, consistent with U.S. EPA (2008) methods.

Concentrations of multiple VOCs and SVOCs measured in surface sediment sample SS-4 and acetone measured in surface sample SS-5 were screened against equilibrium partitioning sediment benchmarks (ESBs) to assess potential effects on benthic organisms. Consistent with U.S. EPA (2008) methods, a narcosis model was used to calculate secondary chronic toxicity values (SCVs) applicable to chemical concentrations in sediment porewater. The SCVs were then used to calculate ESBs applicable to concentrations in whole sediment. As described above for PAHs, TUs were calculated and compare to U.S. EPA's threshold of 1.0 to determine if these constituents could be ruled out or may need additional study.

The calculation resulted in a sum-TU of 0.96 for sample SS-4. Acetone is a common laboratory contaminant, and therefore concentrations reported herein may not be reflective of actual acetone concentrations in Rock River sediments. The TU calculated for acetone in SS-5 was 0.0004. Based on these results, the compounds included in this analysis are not expected to be a primary cause of toxicity to benthic invertebrates in Rock River sediments. These compounds could contribute, along with PAHs, to total narcotic exposures at a level exceeding the sum-TU threshold of 1. However, the sum-TU contribution of non-PAH narcotic compounds is not large enough to affect the conclusions drawn from the PAH assessment presented in Appendix F.

The hydrocarbons evaluated in Attachment F2 are not considered bioaccumulative. Therefore, no additional evaluation is needed for these compounds with respect to potential risks at higher trophic levels.

F.6.2.3 Phthalate Esters

The refined screening evaluation for phthalate esters is performed separately from the hydrocarbons considered narcotic toxicants, because phthalates may exert toxicity through other modes of action (U.S. EPA 2008). Additional toxicological information specific to butyl benzyl phthalate and bis(2-ethylhexyl)phthalate (BEHP) is discussed below. Because phthalates have only limited bioaccumulation potential (Mackintosh et al. 2004), and wildlife exposures occur primarily through diet, this discussion focuses on potential risks to benthic invertebrates.

[1] Although acetone, methyl acetate and dibenzofuran are not hydrocarbons, they are thought to exert toxicity via the same mode of action and thus were assessed together with several non-PAH hydrocarbons.

The maximum concentration of butyl benzyl phthalate in Rock River surface sediment was 37 mg/kg normalized to 1% organic carbon. For comparison, an equilibrium partitioning sediment benchmark is derived based on chronic aquatic toxicity data for this compound. Additional information on the equilibrium partitioning approach is provided in Attachment F2. As reviewed by Staples et al. (1997), the aquatic toxicity of butyl benzyl phthalate is well characterized, with the lowest chronic NOEC for growth and reproduction endpoints identified as 75 micrograms per liter (µg/L). If one applies this NOEC to sediment porewater, based on a log organic carbon-water partition coefficient (log Koc) of 4.76 (U.S. EPA 2008), the resulting equilibrium partitioning sediment benchmark is 43 mg/kg normalized to 1% organic carbon. Because the maximum reported sediment concentration is below this refined equilibrium partitioning sediment benchmark, it can be concluded that butyl benzyl phthalate is unlikely to adversely affect benthic invertebrates.

BEHP was detected in two of eight sediment samples at concentrations exceeding the Region 5 ESL. No Wisconsin Sediment Quality Guideline Values are available for BEHP. BEHP is found in plastics and is ubiquitous in the environment, and it is also a common laboratory contaminant. In aqueous exposures BEHP is not toxic to aquatic organisms at concentrations up to the solubility limit (Call et al. 2001; Rhodes et al. 1995); for example, studies using sediment spiked with 3,000 mg/kg BEHP had no effect on either survival or growth of midges and amphipods (Call et al. 2001). Based on these studies, BEHP is unlikely to adversely affect benthic organisms at the concentrations detected in sediment. In summary, butyl benzyl phthalate and BEHP do not warrant further evaluation as COPECs.

F.6.3 PCBs

Concentrations of total PCBs in Rock River surface sediments collected adjacent to the Site range from 0.047 mg/kg to 1.2 mg/kg. On an organic carbon-normalized basis, the maximum total PCB concentration is 0.22 mg/kg at 1% organic carbon. Fuchsman et al. (2006) reviewed cause-effect, concentration-response relationships for PCB effects on benthic invertebrates, and using the equilibrium partitioning approach, sediment quality benchmarks for various PCB Aroclor mixtures were calculated as 2.1 to 38 mg/kg normalized to 1% organic carbon, depending on the composition of the PCB mixture. These equilibrium partitioning benchmarks are consistent with published results of spiked sediment toxicity studies using PCBs, as well as sediment toxicity evaluations at sediment sites contaminated primarily with PCBs (Fuchsman et al. 2006). On this basis, the PCB concentrations reported in Rock River sediments are unlikely to adversely affect benthic invertebrates.

PCBs are bioaccumulative, and higher trophic levels have the potential to be significantly exposed. Estimated PCB concentrations in whole fish are presented in Attachment F3 and range from 1.6 to 4.3 mg/kg based on the maximum detected total PCB concentration in sediment. In a study of Aroclor 1254 effects in sheepshead minnows, Hansen et al. (1974) demonstrated no adverse effects on reproduction or larval survival associated with an adult whole-body PCB concentration of 1.9 mg/kg wet weight. Based on the screening results, refinement is necessary to account for the fact that fish are not exposed to the maximum sediment concentration at all times. . Furthermore, additional evaluation, such as a food web model, would be required to determine whether PCBs in fish could pose a risk to aquatic-feeding wildlife at the Site. It is notable, however, that the highest PCB concentrations in surface

sediments are attributable to Aroclor 1268. Folland et al. (2016) demonstrated that Aroclor 1268 is less toxic to mink than other, more typical Aroclor mixtures, by at least an order of magnitude.

F.6.4 Metals

Several metals exceed the screening criteria for sediment or have no sediment screening criteria available (Table F-4). These metals are discussed below.

F.6.4.1 Antimony

The maximum detected concentration of antimony in Rock Creek sediment was 50 mg/kg. Sediment toxicity information is generally lacking for antimony, and no screening criterion for antimony is available. Mason and Dragun (1996) report mean background antimony concentrations ranging from 0.2 to 0.5 mg/kg in Wisconsin sediments, indicating that the concentrations reported from sample locations SS-4 through SS-9 are elevated. Although sediment toxicity data for antimony is lacking, U.S. EPA's (1988) draft ambient water quality criteria derivation for antimony indicates this metal is relatively nontoxic to aquatic organisms. Specifically, genus mean acute values (based on short-term 50% lethal concentrations) for freshwater species range from 500 to >25,800 µg/L, while chronic values for a subset of these species range from 1,600 to 3,200 µg/L (U.S. EPA 1988). By comparison, water quality criteria for many metals are in the low µg/L range. Antimony does not bioaccumulate. For these reasons, antimony does not merit further evaluation as a COPEC.

F.6.4.2 Barium

The maximum detected concentration of barium in Rock Creek sediment was 2,270 mg/kg. Sediment toxicity information is generally lacking for barium, and no screening criterion for barium is available. Mason and Dragun (1996) report mean background barium concentrations ranging from 430 to 890 mg/kg in sediment from Midwestern states, indicating that the concentrations reported from sample locations SS-4 through SS-9 are elevated. According to the Agency for Toxic Substances and Disease Registry (ATSDR; 2007), barium in sediments occurs primarily in the form of barium sulfate (barite). Barite is practically insoluble and exhibits very low toxicity in soil (Menzie et al. 2008). Barium has also been shown to be relatively nontoxic to aquatic organisms (Warrington 2000). Barium does not bioaccumulate. For these reasons, barium does not merit further evaluation as a COPEC.

F.6.4.3 Beryllium

Beryllium was detected in sediment adjacent to the Site at concentrations ranging from 0.17 mg/kg to 0.56 mg/kg. No sediment screening criterion exists for beryllium, and information on cause-effect, concentration-response relationships for beryllium effects on benthic invertebrates is generally lacking. Mason and Dragun (1996) report mean background beryllium concentrations ranging from 1.0 to 3.6 mg/kg in sediment from Midwestern states. Thus, the beryllium concentrations reported from Rock River sediment samples do not appear to be elevated. Also, beryllium does not bioaccumulate. For these reasons, beryllium does not merit further evaluation as a COPEC.

F.6.4.4 Chromium

Chromium was detected at a maximum sediment concentration that exceeds the TEC (HQ=6), MEC (HQ=3), and PEC (HQ=2) (Table F-4). Although chromium does not form insoluble sulfide

complexes, acid volatile sulfide (AVS) data can provide insight into the likelihood of sediment toxicity due to chromium (U.S. EPA 2005a). The toxicity and bioavailability of chromium depend on whether it is present as trivalent or hexavalent chromium. Hexavalent chromium [Cr(VI)] is geochemically unstable in reducing environments where AVS is present, such that AVS and Cr(VI) will not coexist in sediments (U.S. EPA 2005a, Martello et al. 2007). Trivalent chromium [Cr(III)] is highly insoluble and relatively non-toxic, and as a result, chromium toxicity is not expected in sediments that contain AVS (U.S. EPA 2005a). AVS was detected in all but one Site-related sediment samples (see Section F.6.4.9 below); the only location where AVS was not detected (SS-1) corresponds to the lowest chromium concentration reported in surface sediment. Therefore, chromium is unlikely to adversely affect benthic invertebrates in sediment. In addition, only Cr(VI) is identified by U.S. EPA (2000) as a bioaccumulative metal; Cr(III) is not so identified. Therefore, chromium does not merit further evaluation as a COPEC.

F.6.4.5 Mercury and Methylmercury

Mercury was detected in Rock River surface sediment at concentrations ranging from 0.19 mg/kg to 28 mg/kg. Conder et al. (2015) reviewed cause-effect, concentration-response information for mercury effects on benthic invertebrates. The authors' case study review of mercury-contaminated sediment sites indicated no observed effect concentrations (NOECs) ranging from 0.23 mg/kg to 1,200 mg/kg and lowest observed effect concentrations (LOECs) ranging from 1.6 mg/kg to 972 mg/kg. Based on this data set, the likelihood of mercury-related toxicity to benthic invertebrates in Rock River sediments is uncertain. Although a lack of mercury-related toxicity is plausible, additional site-specific information would be needed to draw definitive conclusions.

For higher trophic level receptors, potential ecological risks due to mercury are generally related to mercury's tendency to biomagnify through the food web. Mercury exists in sediment in both inorganic and organic forms, with methylmercury being the most toxic and most bioaccumulative form. The site-specific methylation and bioaccumulation potential of mercury are strongly site-specific. Therefore, to facilitate interpretation of potential mercury bioaccumulation, surface sediment samples collected from the same area in March 2016 were analyzed for both total mercury and methylmercury. Modeled estimates of methylmercury concentrations in Rock River fish, based on maximum and average methylmercury concentrations in sediment, range from 0.01 to 0.04 mg/kg wet weight (Attachment F4). The estimated mercury concentrations in adult whole fish are similar to concentrations reported in fish collected by WDNR from the Rock River, upstream and downstream of Janesville. Thus, methylmercury concentrations in sediment adjacent to the Site indicate a low potential for locally elevated mercury concentrations in fish.

The mercury concentrations estimated in Rock River fish are well below the fish tissue screening value of 0.2 mg/kg wet weight developed by Beckvar et al. (2005), which applies to potential effects of mercury on fish. A comparable fish tissue-based screening value is not available for wildlife. However, considering that predicted fish tissue mercury concentrations adjacent to the Site are similar to those measured upstream, Site-related risks to wildlife are not expected due to mercury. Thus, mercury is retained as a COPEC for benthic invertebrates, but not for fish and wildlife.

F.6.4.6 Selenium

Selenium was detected in sediment at concentrations ranging from 1.2 mg/kg to 15.1 mg/kg. No WDNR or U.S. EPA Region 5 screening values exist for selenium. Mean background selenium concentrations in sediment are generally less than 1 mg/kg (Mason and Dragun 1996), indicating that the concentrations reported from Rock River sediments are somewhat elevated. Little is known about the toxicity of selenium to sediment-dwelling invertebrates; fish and birds are generally the receptors of concern for selenium. Lemly (1998) reviewed selenium effects on fish and wildlife and determined that sediment concentrations in the range of 1 to 5 mg/kg were associated with a lack of adverse effects. Because fish and wildlife are mobile and the Study Area is relatively small, it is appropriate to consider average sediment exposures. Based on an average sediment selenium concentration of 3.8 mg/kg, selenium does not merit further consideration as a COPEC.

F.6.4.7 Thallium

Thallium was detected in Rock River sediment at concentrations ranging from 0.10 mg/kg to 0.22 mg/kg. No sediment screening criteria exist for thallium, and little information is available on background concentrations in sediment. Borgmann et al. (1998) developed a critical body residue for the amphipod *Hyalella azteca* of 59 mg/kg and identified biota-sediment accumulation factors of 0.99 to 1.15. Based on these data, a toxicity threshold for thallium in sediment would be on the order of 40 to 60 mg/kg. Thallium also is not known to bioaccumulate. For these reasons, thallium is not considered further in this SLERA.

F.6.4.8 Vanadium

Vanadium was detected in sediment at concentrations ranging from 9.2 mg/kg to 22 mg/kg. No sediment screening value is available from WDNR and U.S. EPA Region 5. Mason and Dragun (1996) report mean background vanadium concentrations ranging from 40 to 70 mg/kg in sediment from Midwestern states. Thus, the vanadium concentrations reported from Rock River sediment samples do not appear to be elevated. Vanadium also does not bioaccumulate. For these reasons, vanadium is not considered further in this SLERA.

F.6.4.9 Cumulative (Simultaneously Extracted Metals [SEM]) Metals

The U.S. EPA (2005a) has developed recommendations for assessing the risk of sediment toxicity due to mixtures of divalent metals, specifically cadmium, copper, lead, nickel, and zinc[2] based on an understanding of the primary factors controlling the concentrations of these metals in sediment porewater (i.e., bioavailability or availability for uptake by organisms). Extensive evidence has shown that chemical bioavailability can differ dramatically among different types of sediment, with chemical concentrations in porewater showing a much closer relationship with toxicity than dry-weight whole-sediment concentrations (Ankley et al. 1996; Di Toro et al. 1991; U.S. EPA 2003b, 2005a, 2008).

[2] Although nickel concentrations are below applicable screening values, nickel is included in this analysis for assessment of cumulative metal exposures. Silver can also be included in SEM-AVS analyses, but in the analyses performed for this SLERA, silver results were rejected during data validation for several samples, and no silver was detected in the remaining samples.

The most important such factor for divalent metals is the concentration of AVS present in the sample. The metals listed above form insoluble complexes with sulfide. Thus, if the concentration of AVS is greater than the concentration of SEM in sediment on a molar basis, the metals are not present in the porewater and do not cause toxicity (Ankley et al. 1996, U.S. EPA 2005a). This premise has been shown to hold true in toxicity tests of sediments collected from sites contaminated primarily with metals (Hansen et al. 1996).

A refinement of the SEM–AVS approach addresses the role of TOC as a secondary factor controlling the bioavailability of these metals in sediments where SEM concentrations exceed the concentrations of AVS. As described by U.S. EPA (2005a), one can predict with 90 percent confidence that sediment toxicity will not occur if the organic-carbon normalized concentration of "excess" metals ([ΣSEM-AVS]/foc) is less than 130 micromoles per gram organic carbon (µmol/gOC). Similarly, sediment toxicity is expected with 90 percent confidence if (ΣSEM-AVS)/foc exceeds 3,000 µmol/gOC. The likelihood of toxicity associated with intermediate values is uncertain. For the purposes of this SLERA, the effects benchmark for (ΣSEM-AVS)/foc is conservatively identified as 130 µmol/gOC. As summarized in Table F-5, the AVS-SEM evaluation indicates that toxicity to benthic invertebrates is unlikely for mixtures of cadmium, copper, lead, nickel, and zinc in Rock River sediment.

The SEM-AVS results for the Rock River are conservative, because sampling was conducted during a time of year when AVS concentrations are expected to be low. During late winter, cold temperatures promote oxygenation and low microbial activity, and organic inputs (and hence biological oxygen demand) are relatively low. During warmer months, coinciding with greater benthic invertebrate activity, AVS levels are expected to be higher. Thus, seasonal changes in AVS concentrations are not expected to affect the conclusion that adverse effects of divalent metals on benthic invertebrates are unlikely.

Although the SEM-AVS approach has been shown to be predictive of sediment toxicity to benthic invertebrates, it is less effective as a predictor of bioaccumulation (U.S. EPA 2005a). Cadmium, copper, lead, and zinc are identified by U.S. EPA (2000) as bioaccumulative metals, although they do not biomagnify through the food web. Additional evaluation such as a food web model would be needed to determine whether these metals could pose a risk to aquatic-feeding wildlife at the Site.

F.6.5 Summary of COPECs in Sediment

Based on the refined screening evaluation, COPECs that may warrant further evaluation of potential risks to benthic invertebrates include:

- PAHs
- Mercury

This SLERA does not include a refined analysis of potential risks to wildlife using a food web model. Such an analysis may be warranted to refine risk estimates for wildlife. The COPECs retained for evaluation of potential risks to fish and/or aquatic-feeding wildlife include:

- PAHs
- PCBs

- Cadmium
- Copper
- Lead
- Zinc

F.7 Exposed Soil Scenario

This SLERA also considers the potential removal of the Monterey Dam and the subsequent changes to the Rock River water levels upstream of the dam. If the dam is removed, water levels in the impoundment upstream of the dam will gradually decline, and the width of the river will be reduced to the limits of the main river channel. The location of the expected river channel under this scenario is shown in Figure F-1. Sediment in the shallow areas outside of the new river channel would then be exposed. Therefore, this SLERA evaluates the potential for adverse effects associated with the exposed sediment under this hypothetical future scenario; this exposed sediment is treated as surface soil in this evaluation.

The biologically active zone in soil is typically deeper than in sediment (U.S. EPA 2015). Therefore, the screening analysis for hypothetical future soils conservatively includes sediment samples collected to a depth of two feet. The selected soil screening levels for use in this SLERA are presented in Table F-6 and are listed below, in order of preference and availability.

- U.S. EPA Ecological Soil Screening Levels (Eco-SSLs) (U.S. EPA 2005b)
- U.S. EPA Region 5 Ecological Screening Levels (ESLs) (U.S. EPA 2003a)

Maximum concentrations of several VOCs, SVOCs, PCBs, and metals exceed the screening values for surface soil and are identified as preliminary COPECs. Additionally, no soil screening values are available for several chemicals. The following are preliminary COPECs identified for surface soil (Table F-7):

Summary of Chemicals Retained for Possible Further Evaluation of Dam Removal Scenario

Chemical Group	Chemical Name	
VOCs	1,2,4-Trimethylbenzene*	Cyclohexane*
	1,3,5-Trimethylbenzene*	Methyl Acetate*
	Cumene*	Methylcyclohexane*
SVOCs	1,1-Biphenyl*	C2-Naphthalenes*
	2-Methylnaphthalene	C3-Anthracenes/Phenanthrenes*
	3&4-Methylphenol*	C3-Benzo(a)anthracene/Chrysene*
	Benzaldehyde*	C3-Fluorenes*
	Benzo(a)pyrene	C3-Naphthalenes*
	Benzo(e)pyrene*	C4-Anthracenes/Phenanthrenes*
	Benzo(j+k)fluoranthene*	C4-Benzo(a)anthracene/Chrysene*
	bis(2-Ethylhexyl)phthalate	C4-Naphthalenes*
	Butylbenzylphthalate	Caprolactam*
	C1-Anthracenes/Phenanthrenes*	Carbazole*
	C1-Benzo(a)anthracene/Chrysene*	Chrysene/Triphenylene*
	C1-Fluoranthenes/Pyrenes*	Dibenzofuran*
	C1-Fluorenes*	Di-n-butylphthalate
	C1-Naphthalenes*	Naphthalene
	C2-Anthracenes/Phenanthrenes*	PAHs (High MW)
	C2-Benzo(a)anthracene/Chrysene*	PAHs (total)*
	C2-Fluorenes*	Perylene*
Inorganics	Antimony	Manganese
	Arsenic	Mercury
	Barium	Nickel
	Cadmium	Selenium
	Chromium (total)	Thallium
	Copper	Vanadium
	Lead	Zinc
PCBs	Aroclor-1254*	PCBs (total)
	Aroclor-1268*	

*Chemical is retained for further evaluation due to lack of screening value
MW: molecular weight
PAH: polycyclic aromatic hydrocarbon
PCB: polychlorinated biphenyl

Refinement of the screening analysis for hypothetical future soil exposures cannot be accomplished as readily as for current sediment exposures. For example, metal geochemistry would likely change due to increased oxygenation of soil as compared to sediment. Thus,

current analyses of parameters such as SEM-AVS and methylmercury are not applicable. Also, concentrations of some constituents, such as metals, are higher in the 0.5 to 2 foot depth interval than in surface sediments. In general, elevated concentrations of lead, antimony, barium, cadmium, and zinc tend to co-occur at sample locations SS-4 through SS-9. Elevated mercury concentrations do not co-occur with the other metals; the maximum mercury concentration was reported from sample location SS-2. As additional information becomes available regarding the likelihood of dam removal and the nature of post-removal land use planning, a CSM can be developed for future ecological exposures. At that time, additional refinement of the screening analysis for future soil exposures may be warranted.

F.8 Summary and Conclusions

This SLERA identified numerous chemicals detected in Rock River sediment that do not warrant further evaluation with respect to potential ecological risks. Additional evaluation beyond a SLERA may be required for the following scenarios:

- If the dam remains in place - Chemicals that would require additional evaluation to better understand potential ecological risks would include PAHs, PCBs, and certain metals (lead, cadmium, zinc, copper, and mercury).
- If the dam is removed - The need for refinement of the screening analysis will depend on plans for future land use. For example, if the area is to be maintained with regular mowing, then ecological habitat and ecological exposures would be very limited. If more naturalistic conditions are a goal, then further consideration of future ecological risks would be required.

The need for further evaluation of potential ecological risks and the types of evaluation required will be determined in consultation with WDNR and the City of Janesville, as additional information becomes available regarding repair or removal of the Monterey Dam.

F.9 References

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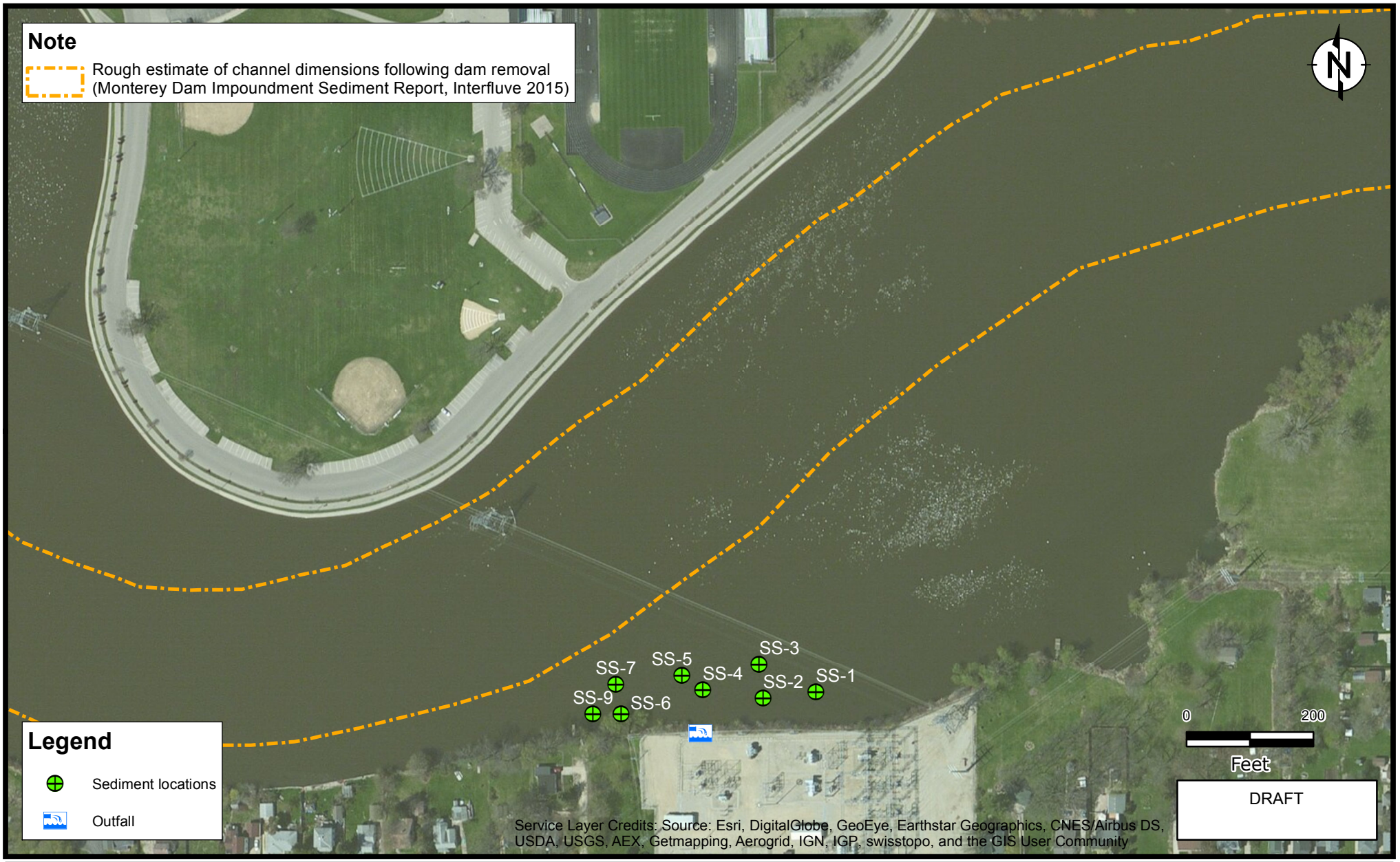
Figures



RAMBOLL ENVIRON

DRAFTED BY: RD | DATE: 5/6/2016

Rock River Sediment Sample Locations

Janesville Assembly Plant

1000 General Motors Drive, Janesville, Wisconsin

FIGURE **F1**

PROJECT: 0227748A

Tables

Table F1: Potential for Occurrence of Federal and State Threatened and Endangered Species in the Rock River Impoundment
Janesville Assembly Plant, Janesville, Wisconsin

Scientific Name	Common Name	Rock County, WI Status[a,b]	Federal Status[b,c]	Habitat	Diet	Likelihood of Presence in River Area
Myotis septentrionalis	Northern Long-Eared Bat		T	Nests underneath bark, in cavities or in crevices of both live trees and snags (dead trees); feed in understory of forested areas	Insects	Unlikely due to limited habitat
Sistrurus catenatus catenatus	Eastern Massasauga	E	C	Open-canopy, emergent wetlands and upland vegetation types left by glacial retreat, undeveloped shorelines associated with a small open water body, cattail stands and sedge tussock wetlands	Mammals	None; lack of appropriate habitat
Grus americana	Whooping Crane		NEP	Migration roost habitat ranges from wetlands to small stock ponds, breeding: any wetland with minimal human disturbance	Insects, rodents,birds, fish	Unlikely due to limited habitat and frequent human disturbance in impoundment area
Regina septemvittata	Queensnake	E		Semiaquatic; prefer clear spring fed-streams that have moderate to fast currents, and rocky substrates with somewhat wooded or brushy edges, with ample crayfish	Crayfish, amphibians, fish	None; lack of appropriate habitat
Terrapene ornata	Ornate Box Turtle	E		Sandy soils, dry prairies, and oak savannas	NA	None; lack of appropriate habitat
Chlidonias niger	Black Tern	E		Breeds in marshes, along sloughs, rivers, lakeshores, and impoundments, or in wet meadows, typically in sites with mixture of emergent vegetation and open water. Cattails, bulrushes, burreed, and/or phragmites commonly are present in nesting areas	Insects, crustaceans, fish	Unlikely due to limited habitat and lack of emergent vegetation in impoundment area
Lanius ludovicianus	Loggerhead Shrike	E		Open country with scattered trees and shrubs	Insects, rodents, birds	None; lack of appropriate habitat
Setophaga dominica	Yellow-Throated Warbler	E		Mature upland pine-hardwood relicts embedded within large forest tracts	Insects	None; lack of appropriate habitat
Ammodramus henslowii	Henslow's Sparrow	T		Undisturbed pastures and meadows	Insects, seeds	None; lack of appropriate habitat

Table F1: Potential for Occurrence of Federal and State Threatened and Endangered Species in the Rock River Impoundment
Janesville Assembly Plant, Janesville, Wisconsin

Scientific Name	Common Name	Rock County, WI Status[a,b]	Federal Status[b,c]	Habitat	Diet	Likelihood of Presence in River Area
Buteo lineatus	Red-Shouldered Hawk	T		Larger stands of older-aged to mature bottomland hardwoods along riparian areas, deciduous swamps, and northern hardwoods or mixed deciduous – coniferous upland forests	Mammals, reptiles, fish, amphibians, birds and invertebrates	Unlikely due to limited habitat in impoundment area
Empidonax virescens	Acadian Flycatcher	T		Large, old, unfragmented forest with dense canopy cover	Insects	None; lack of appropriate habitat
Nyctanassa violacea	Yellow-Crowned Night-Heron	T		Ponds, wooded swamp, riparian forest, and lowland deciduous forest	Mainly crayfish; also mussels, frogs, aquatic insects	Unlikely due to limited habitat near impoundment
Setophaga cerulea	Cerulean Warbler	T		Mature upland and lowland hardwood forests	Insects	None; lack of appropriate habitat
Setophaga citrina	Hooded Warbler	T		Upland forest types with dense shrubs, saplings, and brambles	Insects	None; lack of appropriate habitat
Erimystax x-punctatus	Gravel Chub	E		Deep, swift waters of medium-to-large-sized rivers over pea-gravel bottom	Algae, detritus	None; lack of appropriate habitat
Fundulus dispar	Starhead Topminnow	E		Glacial lakes and clear, well-vegetated floodplain lakes, swamps and marshes. Prefer quiet, clear to slightly turbid (cloudy), shallow backwaters with an abundance of submergent vegetation.	Insects, crustaceans, vegetation	Unlikely due to limited habitat in impoundment
Hybopsis amnis	Pallid Shiner	E		Sand and mud in shallow, slow-moving, moderately clear, warm and well-oxygenated waters in impoundments with little or no current	NA	Possible; cannot exclude the possibility of residing in impoundment
Ictiobus niger	Black Buffalo	T		Strong currents and fast riffles of large rivers. Also occupy sloughs, silty backwaters and impoundments.	Mollusks, insects, algae	Possible; cannot exclude the possibility of residing in impoundment
Lythrurus umbratilis	Redfin Shiner	T		Turbid waters of pools in low-gradient streams over substrates of boulders, cobble, sand, silt or detritus	Algae, insects	Possible; cannot exclude the possibility of residing in impoundment

Table F1: Potential for Occurrence of Federal and State Threatened and Endangered Species in the Rock River Impoundment
Janesville Assembly Plant, Janesville, Wisconsin

Scientific Name	Common Name	Rock County, WI Status[a,b]	Federal Status[b,c]	Habitat	Diet	Likelihood of Presence in River Area
Moxostoma carinatum	River Redhorse	T		Moderate to swift waters of large rivers, lower portions of their main tributaries, reservoirs and pools over clean gravel and rubble. Seldom found in deep water with mud, silt, or sand bottom.	Mollusks, insects	Unlikely due to limited habitat in impoundment and intolerance to siltation and turbidity
Notropis anogenus	Pugnose Shiner	T		Clear, heavily vegetated glacial lakes and vegetated pools and runs of low gradient creeks and rivers, over bottoms of sand, mud, marl, or gravel	Algae, insects	Unlikely due to limited habitat in impoundment and intolerance to turbidity
Notropis nubilus	Ozark Minnow	T		Clear, small-to-medium-sized streams with slow current and devoid of vegetation. Often seen in protected backwaters near riffles or in pools immediately below riffles where the current slackens and bottom is gravel or rubble.	Algae	Unlikely due to limited habitat in impoundment and intolerance to siltation and turbidity
Cyclonaias tuberculata	Purple Wartyback	E		Medium sized rivers with water ranging up to five feet in slow to moderate current. Found in rocky areas with gravel and cobble substrate.	NA	Possible; cannot exclude the possibility of residing in impoundment
Villosa iris	Rainbow Shell	E		Small streams, with moderate to strong currents, living within and below riffles on a sand, gravel or mud bottom in water less than a meter deep.	NA	Unlikely due to limited habitat in impoundment
Quadrula metanevra	Monkeyface	T		Swift, clean water in larger rivers in gravel or mixed sand and gravel.	NA	None; lack of appropriate habitat
Venustaconcha ellipsiformis	Ellipse	T		Inhabits small to medium sized streams with good current, in shallow water, on sand or gravel bottoms.	NA	None; lack of appropriate habitat

a. http://dnr.wi.gov/topic/NHI/Data.asp?tool=county&mode=detail&county=54
b. E : endangered; T: threatened; C: candidate for future listing; NEP: nonessential experimental population
c. http://www.fws.gov/midwest/Endangered/lists/wisc-cty.html
NA: not available

Table F2: Conceptual Site Model for Ecological Exposures
Former Janesville Assembly Plant, Janesville, Wisconsin

Receptor Population	Exposure Medium	Exposure Route	Comments
Off-Site			
Aquatic Organisms	Sediment	Ingestion, contact	Habitat in the Rock River Study Area and vicinity is sufficient to support aquatic organisms, such as benthic invertebrates and fish, and exposure to Site-related constituents may occur from ingestion of and/or contact with sediment.
	Biota tissue	Ingestion, food web	Habitat in the Rock River Study Area and vicinity is sufficient to support aquatic organisms, such as benthic invertebrates and fish, and exposure to Site-related constituents may occur through bioaccumulation in the food web and ingestion of prey items.
Aquatic-feeding wildlife	Sediment	Ingestion, contact[a]	Aquatic-feeding wildlife may utilize the Rock River Study Area and vicinity for foraging and exposure to Site-related constituents may occur from ingestion of and/or contact with sediment.
	Biota tissue	Ingestion, food web	Aquatic-feeding wildlife may utilize the Rock River Study Area and vicinity for foraging and exposure to Site-related constituents may occur bioaccumulation in the food web and ingestion of prey items.

a. Dermal contact is considered minimal.
AOI: Area of interest

Table F3: Sediment Screening Values
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical Name	CASRN	Sediment TEC (a) (mg/kg)	Sediment TEC (a) µg/kg at 1% TOC)	Region 5 Sediment ESL (b) (µg/kg)	TEC SQGV (mg/kg)	TEC SQGV Basis	Sediment MEC (a) (mg/kg)	Sediment MEC (a) (µg/kg at 1% TOC)	MEC SQGV (mg/kg)	MEC SQGV Basis	Sediment PEC (a) (mg/kg)	Sediment PEC (a) (ug/kg at 1% TOC)	PEC SQGV (mg/kg)	PEC SQGV Basis
WQ	Sulfide (total)	18496-25-8					NC				NC				NC
VOC	Acetone	67-64-1			9.9E+00	9.9E-03	R5 ESL			9.9E-03	R5 ESL			9.9E-03	R5 ESL
VOC	2-Butanone	78-93-3			4.2E+01	4.2E-02	R5 ESL			4.2E-02	R5 ESL			4.2E-02	R5 ESL
VOC	Carbon Disulfide	75-15-0			2.4E+01	2.4E-02	R5 ESL			2.4E-02	R5 ESL			2.4E-02	R5 ESL
VOC	Cumene	98-82-8					NC				NC				NC
VOC	Cyclohexane	110-82-7					NC				NC				NC
VOC	Methyl Acetate	79-20-9					NC				NC				NC
VOC	Methylcyclohexane	108-87-2					NC				NC				NC
VOC	Methylene Chloride	75-09-2			1.6E+02	1.6E-01	R5 ESL			1.6E-01	R5 ESL			1.6E-01	R5 ESL
VOC	1,2,4-Trimethylbenzene	95-63-6					NC				NC				NC
VOC	1,3,5-Trimethylbenzene	108-67-8					NC				NC				NC
VOC	Xylenes (total)	1330-20-7		2.5E+01	4.3E+02	2.5E-02	TEC-TOC		3.8E+01	3.8E-02	MEC-TOC		5.0E+01	5.0E-02	PEC-TOC
SVOC	PAHs (High MW)	130498-29-2H					NC				NC				NC
SVOC	PAHs (Low MW)	130498-29-2L					NC				NC				NC
SVOC	PAHs (total)	130498-29-2		1.6E+03		1.6E+00	TEC-TOC		1.2E+04	1.2E+01	MEC-TOC		2.3E+04	2.3E+01	PEC-TOC
SVOC	Acenaphthene	83-32-9		6.7E+00	6.7E+00	6.7E-03	TEC-TOC		4.8E+01	4.8E-02	MEC-TOC		8.9E+01	8.9E-02	PEC-TOC
SVOC	Acenaphthylene	208-96-8		5.9E+00	5.9E+00	5.9E-03	TEC-TOC		6.7E+01	6.7E-02	MEC-TOC		1.3E+02	1.3E-01	PEC-TOC
SVOC	Anthracene	120-12-7		5.7E+01	5.7E+01	5.7E-02	TEC-TOC		4.5E+02	4.5E-01	MEC-TOC		8.5E+02	8.5E-01	PEC-TOC
SVOC	C1-Anthracenes/Phenanthrenes	C1-120127/85018					NC				NC				NC
SVOC	C2-Anthracenes/Phenanthrenes	C2-120127/85018					NC				NC				NC
SVOC	C3-Anthracenes/Phenanthrenes	C3-120127/85018					NC				NC				NC
SVOC	C4-Anthracenes/Phenanthrenes	C4-120127/85018					NC				NC				NC
SVOC	Benzaldehyde	100-52-7					NC				NC				NC
SVOC	Benzo(a)anthracene	56-55-3		1.1E+02	1.1E+02	1.1E-01	TEC-TOC		5.8E+02	5.8E-01	MEC-TOC		1.1E+03	1.1E+00	PEC-TOC
SVOC	C1-Benzo(a)anthracene/Chrysene	C1-BaA/218019					NC				NC				NC
SVOC	C2-Benzo(a)anthracene/Chrysene	C2-BaA/218019					NC				NC				NC
SVOC	C3-Benzo(a)anthracene/Chrysene	C3-BaA/218019					NC				NC				NC
SVOC	C4-Benzo(a)anthracene/Chrysene	C4-BaA/218019					NC				NC				NC
SVOC	Benzo(a)pyrene	50-32-8		1.5E+02	1.5E+02	1.5E-01	TEC-TOC		8.0E+02	8.0E-01	MEC-TOC		1.5E+03	1.5E+00	PEC-TOC
SVOC	Benzo(b)fluoranthene	205-99-2		2.4E+02	1.0E+04	2.4E-01	TEC-TOC		6.8E+03	6.8E+00	MEC-TOC		1.3E+04	1.3E+01	PEC-TOC
SVOC	Benzo(e)pyrene	192-97-2		1.5E+02		1.5E-01	TEC-TOC		8.0E+02	8.0E-01	MEC-TOC		1.5E+03	1.5E+00	PEC-TOC
SVOC	Benzo(g,h,i)perylene	191-24-2		1.7E+02	1.7E+02	1.7E-01	TEC-TOC		1.7E+03	1.7E+00	MEC-TOC		3.2E+03	3.2E+00	PEC-TOC
SVOC	Benzo(j+k)fluoranthene	205-99-2_207-08-9					NC				NC				NC
SVOC	Benzo(k)fluoranthene	207-08-9		2.4E+02	2.4E+02	2.4E-01	TEC-TOC		6.8E+03	6.8E+00	MEC-TOC		1.3E+04	1.3E+01	PEC-TOC
SVOC	1,1-Biphenyl	92-52-4					NC				NC				NC
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7			1.8E+02	1.8E-01	R5 ESL			1.8E-01	R5 ESL			1.8E-01	R5 ESL
SVOC	Butylbenzylphthalate	85-68-7			2.0E+03	2.0E+00	R5 ESL			2.0E+00	R5 ESL			2.0E+00	R5 ESL
SVOC	Caprolactam	105-60-2					NC				NC				NC
SVOC	Chrysene	218-01-9		1.7E+02	1.7E+02	1.7E-01	TEC-TOC		7.3E+02	7.3E-01	MEC-TOC		1.3E+03	1.3E+00	PEC-TOC
SVOC	Chrysene/Triphenylene	218-01-9_217-59-4					NC				NC				NC
SVOC	Dibenz(a,h)anthracene	53-70-3		3.3E+01	3.3E+01	3.3E-02	TEC-TOC		8.4E+01	8.4E-02	MEC-TOC		1.4E+02	1.4E-01	PEC-TOC
SVOC	Dibenzofuran	132-64-9		1.5E+02	4.5E+02	1.5E-01	TEC-TOC		3.7E+02	3.7E-01	MEC-TOC		5.8E+02	5.8E-01	PEC-TOC
SVOC	Di-n-butylphthalate	84-74-2		2.2E+03	1.1E+03	2.2E+00	TEC-TOC		9.6E+03	9.6E+00	MEC-TOC		1.7E+04	1.7E+01	PEC-TOC
SVOC	Di-n-octylphthalate	117-84-0		5.8E+02	4.1E+04	5.8E-01	TEC-TOC		2.3E+04	2.3E+01	MEC-TOC		4.5E+04	4.5E+01	PEC-TOC
SVOC	Fluoranthene	206-44-0		4.2E+02	4.2E+02	4.2E-01	TEC-TOC		1.3E+03	1.3E+00	MEC-TOC		2.2E+03	2.2E+00	PEC-TOC
SVOC	C1-Fluoranthenes/Pyrenes	C1-206440/Ps					NC				NC				NC
SVOC	Fluorene	86-73-7		7.7E+01	7.7E+01	7.7E-02	TEC-TOC		3.1E+02	3.1E-01	MEC-TOC		5.4E+02	5.4E-01	PEC-TOC
SVOC	C1-Fluorenes	C1-86-73-7					NC				NC				NC
SVOC	C2-Fluorenes	C2-86-73-7					NC				NC				NC
SVOC	C3-Fluorenes	C3-86-73-7					NC				NC				NC
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5		2.0E+02	2.0E+02	2.0E-01	TEC-TOC		1.7E+03	1.7E+00	MEC-TOC		3.2E+03	3.2E+00	PEC-TOC
SVOC	2-Methylnaphthalene	91-57-6		2.0E+01	2.0E+01	2.0E-02	TEC-TOC		1.1E+02	1.1E-01	MEC-TOC		2.0E+02	2.0E-01	PEC-TOC
SVOC	3&4-Methylphenol	65794-96-4					NC				NC				NC
SVOC	Naphthalene	91-20-3		1.8E+02	1.8E+02	1.8E-01	TEC-TOC		3.7E+02	3.7E-01	MEC-TOC		5.6E+02	5.6E-01	PEC-TOC
SVOC	C1-Naphthalenes	C1-Ns					NC				NC				NC
SVOC	C2-Naphthalenes	C2-Ns					NC				NC				NC
SVOC	C3-Naphthalenes	C3-Ns					NC				NC				NC

Table F3: Sediment Screening Values
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical Name	CASRN	Sediment TEC (a) (mg/kg)	Sediment TEC (a) µg/kg at 1% TOC)	Region 5 Sediment ESL (b) (µg/kg)	TEC SQGV (mg/kg)	TEC SQGV Basis	Sediment MEC (a) (mg/kg)	Sediment MEC (a) (µg/kg at 1% TOC)	MEC SQGV (mg/kg)	MEC SQGV Basis	Sediment PEC (a) (mg/kg)	Sediment PEC (a) (ug/kg at 1% TOC)	PEC SQGV (mg/kg)	PEC SQGV Basis
SVOC	C4-Naphthalenes	C4-Ns					NC				NC				NC
SVOC	Perylene	198-55-0					NC				NC				NC
SVOC	Phenanthrene	85-01-8		2.0E+02	2.0E+02	2.0E-01	TEC-TOC		6.9E+02	6.9E-01	MEC-TOC		1.2E+03	1.2E+00	PEC-TOC
SVOC	Phenol	108-95-2		4.2E+03	4.9E+01	4.2E+00	TEC-TOC		8.1E+03	8.1E+00	MEC-TOC		1.2E+04	1.2E+01	PEC-TOC
SVOC	Pyrene	129-00-0		2.0E+02	2.0E+02	2.0E-01	TEC-TOC		8.6E+02	8.6E-01	MEC-TOC		1.5E+03	1.5E+00	PEC-TOC
PHYS	Organic Carbon (total)	C-012					NC				NC				NC
PDIST	Oil and Grease	C-007					NC				NC				NC
PCB	PCBs (total)	1336-36-3		6.0E+01	6.0E+01	6.0E-02	TEC-TOC		3.7E+02	3.7E-01	MEC-TOC		6.8E+02	6.8E-01	PEC-TOC
PCB	Aroclor-1254	11097-69-1					NC				NC				NC
PCB	Aroclor-1268	11100-14-4					NC				NC				NC
OTHER	SEM/AVS Ratio	AVSRATIO					NC				NC				NC
INORG	Antimony	7440-36-0	2.0E+00			2.0E+00	TEC	1.4E+01		1.4E+01	MEC	2.5E+01		2.5E+01	PEC
INORG	Arsenic	7440-38-2	9.8E+00		9.8E+03	9.8E+00	TEC	2.1E+01		2.1E+01	MEC	3.3E+01		3.3E+01	PEC
INORG	Barium	7440-39-3					NC				NC				NC
INORG	Beryllium	7440-41-7					NC				NC				NC
INORG	Cadmium	7440-43-9	9.9E-01		9.9E+02	9.9E-01	TEC	3.0E+00		3.0E+00	MEC	5.0E+00		5.0E+00	PEC
INORG	Chromium (total)	7440-47-3	4.3E+01		4.3E+04	4.3E+01	TEC	7.7E+01		7.7E+01	MEC	1.1E+02		1.1E+02	PEC
INORG	Cobalt	7440-48-4			5.0E+04	5.0E+01	R5 ESL			5.0E+01	R5 ESL			5.0E+01	R5 ESL
INORG	Copper	7440-50-8	3.2E+01		3.2E+04	3.2E+01	TEC	9.1E+01		9.1E+01	MEC	1.5E+02		1.5E+02	PEC
INORG	Lead	7439-92-1	3.6E+01		3.6E+04	3.6E+01	TEC	8.3E+01		8.3E+01	MEC	1.3E+02		1.3E+02	PEC
INORG	Manganese	7439-96-5	4.6E+02			4.6E+02	TEC	7.8E+02		7.8E+02	MEC	1.1E+03		1.1E+03	PEC
INORG	Mercury	7439-97-6	1.8E-01		1.7E+02	1.8E-01	TEC	6.4E-01		6.4E-01	MEC	1.1E+00		1.1E+00	PEC
INORG	Methyl mercury	22967-92-6			1.0E-02	1.0E-05	R5 ESL			1.0E-05	R5 ESL			1.0E-05	R5 ESL
INORG	Nickel	7440-02-0	2.3E+01		2.3E+04	2.3E+01	TEC	3.6E+01		3.6E+01	MEC	4.9E+01		4.9E+01	PEC
INORG	Selenium	7782-49-2					NC				NC				NC
INORG	Silver	7440-22-4	1.6E+00		5.0E+02	1.6E+00	TEC	1.9E+00		1.9E+00	MEC	2.2E+00		2.2E+00	PEC
INORG	Thallium	7440-28-0					NC				NC				NC
INORG	Vanadium	7440-62-2					NC				NC				NC
INORG	Zinc	7440-66-6	1.2E+02		1.2E+05	1.2E+02	TEC	2.9E+02		2.9E+02	MEC	4.6E+02		4.6E+02	PEC

Notes:
(a) WDNR. 2003. Consensus-Based Sediment Quality Guidelines **.**
(b): USEPA Region 5 Ecological Screening Levels
INORG: inorganic
µg/kg: micrograms per kilogram
MEC: midpoint effect concentration
mg/kg: milligrams per kilogram
NC: no criterion
PEC: probable effect concentration
PDIST: petroleum distillates
PHYS: physical
R5 ESL: USEPA Region 5 Ecological Screening Level
SEM/AVS: simultaneously extractable metals/acid volatile sulfides
SQGV: sediment quality guideline value
TEC: threshold effect concentration
TOC: total organic carbon

Table F4: Sediment Summary and SLERA Table
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical Name	CASRN	Analyses	Detects	Freq of Detects	Average Detected Conc (mg/kg)	Maximum Detected Conc (mg/kg)	Location / Depth of Max Detect	Average Detected Conc Adjusted by TOC (mg/kg/%TOC)	Maximum Detected Conc Adjusted by TOC (mg/kg/%TOC)	Maximum Analytical Limit (mg/kg)	Maximum Analytical Limit Adjusted by TOC (mg/kg/%TOC)	Sediment TEC SQGV	Sediment TEC SQGV Basis	Sediment MEC-SQGV	Sediment MEC-SQGV Basis	Sediment PEC-SQGV	Sediment PEC-SQGV Basis	TEC Hazard Quotient	Retain for Step 3A?	Reason	MEC SQGV Hazard Quotient	PEC SQGV Hazard Quotient
VOC	Acetone	67-64-1	8	4	50.0%	8.4E-02	1.3E-01	SS-5 (0-0.5 ft bgs)	1.4E-02	1.8E-02	2.3E-01	2.9E-02	9.9E-03	R5 ESL	9.9E-03	R5 ESL	9.9E-03	R5 ESL	10	Yes	HQ > 1	10	10
VOC	2-Butanone	78-93-3	8	1	12.5%	2.3E-02	2.3E-02	SS-5 (0-0.5 ft bgs)	2.9E-03	2.9E-03	7.3E-02	9.0E-03	4.2E-02	R5 ESL	4.2E-02	R5 ESL	4.2E-02	R5 ESL	0.5	No	HQ ≤ 1	0.5	0.5
VOC	Cumene	98-82-8	8	3	37.5%	2.3E-01	4.9E-01	SS-4 (0-0.5 ft bgs)	3.0E-02	6.1E-02	2.0E-04	4.3E-05		NC		NC		NC	--	Yes	Detect But No Criterion	--	--
VOC	Cyclohexane	110-82-7	8	3	37.5%	1.3E-01	2.8E-01	SS-4 (0-0.5 ft bgs)	1.7E-02	3.5E-02	4.8E-04	1.0E-04		NC		NC		NC	--	Yes	Detect But No Criterion	--	--
VOC	Methyl Acetate	79-20-9	8	1	12.5%	2.2E-01	2.2E-01	SS-4 (0-0.5 ft bgs)	2.7E-02	2.7E-02	2.0E-03	4.3E-04		NC		NC		NC	--	Yes	Detect But No Criterion	--	--
VOC	Methylcyclohexane	108-87-2	8	5	62.5%	6.4E-01	2.3E+00	SS-4 (0-0.5 ft bgs)	8.5E-02	2.9E-01	5.8E-04	1.3E-04		NC		NC		NC	--	Yes	Detect But No Criterion	--	--
VOC	1,2,4-Trimethylbenzene	95-63-6	8	2	25.0%	2.4E+00	4.2E+00	SS-4 (0-0.5 ft bgs)	3.0E-01	5.2E-01	5.8E-04	1.3E-04		NC		NC		NC	--	Yes	Detect But No Criterion	--	--
VOC	1,3,5-Trimethylbenzene	108-67-8	8	2	25.0%	1.3E+00	2.3E+00	SS-4 (0-0.5 ft bgs)	1.6E-01	2.9E-01	2.9E-04	6.3E-05		NC		NC		NC	--	Yes	Detect But No Criterion	--	--
VOC	Xylenes (total)	1330-20-7	8	2	25.0%	5.0E-01	9.4E-01	SS-4 (0-0.5 ft bgs)	6.2E-02	1.2E-01	5.4E-04	1.2E-04	2.5E-02	TEC-TOC	3.8E-02	MEC-TOC	5.0E-02	PEC-TOC	5	Yes	HQ > 1	3	2
SVOC	PAHs (High MW)	130498-29-2H	8	8	100.0%	2.5E+01	5.0E+01	SS-5 (0-0.5 ft bgs)	3.1E+00	6.3E+00				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	PAHs (Low MW)	130498-29-2L	8	7	87.5%	1.6E+00	7.9E+00	SS-4 (0-0.5 ft bgs)	2.0E-01	9.8E-01	3.5E-03	4.9E-04		NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	PAHs (total)	130498-29-2	8	7	87.5%	1.6E+00	7.9E+00	SS-4 (0-0.5 ft bgs)	2.0E-01	9.8E-01	3.5E-03	4.9E-04	1.6E+00	TEC-TOC	1.2E+01	MEC-TOC	2.3E+01	PEC-TOC	0.6	No	HQ ≤ 1	0.08	0.04
SVOC	Acenaphthene	83-32-9	8	8	100.0%	3.4E-01	9.9E-01	SS-5 (0-0.5 ft bgs)	4.4E-02	1.3E-01			6.7E-03	TEC-TOC	4.8E-02	MEC-TOC	8.9E-02	PEC-TOC	20	Yes	HQ > 1	3	1
SVOC	Acenaphthylene	208-96-8	8	8	100.0%	1.4E-01	2.8E-01	SS-4 (0-0.5 ft bgs)	1.9E-02	3.4E-02			5.9E-03	TEC-TOC	6.7E-02	MEC-TOC	1.3E-01	PEC-TOC	6	Yes	HQ > 1	0.5	0.3
SVOC	Anthracene	120-12-7	8	8	100.0%	8.4E-01	2.2E+00	SS-5 (0-0.5 ft bgs)	1.1E-01	2.7E-01			5.7E-02	TEC-TOC	4.5E-01	MEC-TOC	8.5E-01	PEC-TOC	5	Yes	HQ > 1	0.6	0.3
SVOC	C1-Anthracenes/Phenanthrenes	C1-120127/85018	8	8	100.0%	3.4E+00	6.6E+00	SS-4 (0-0.5 ft bgs)	4.3E-01	1.1E+00				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	C2-Anthracenes/Phenanthrenes	C2-120127/85018	8	8	100.0%	6.2E+00	1.4E+01	SS-4 (0-0.5 ft bgs)	7.8E-01	2.0E+00				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	C3-Anthracenes/Phenanthrenes	C3-120127/85018	8	8	100.0%	6.4E+00	1.6E+01	SS-4 (0-0.5 ft bgs)	7.8E-01	1.9E+00				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	C4-Anthracenes/Phenanthrenes	C4-120127/85018	8	8	100.0%	3.6E+00	8.7E+00	SS-4 (0-0.5 ft bgs)	4.3E-01	1.1E+00				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	Benzo(a)anthracene	56-55-3	8	8	100.0%	1.5E+00	3.8E+00	SS-5 (0-0.5 ft bgs)	1.9E-01	4.8E-01			1.1E-01	TEC-TOC	5.8E-01	MEC-TOC	1.1E+00	PEC-TOC	4	Yes	HQ > 1	0.8	0.5
SVOC	C1-Benzo(a)anthracene/Chrysene	C1-BaA/218019	8	8	100.0%	1.6E+00	3.5E+00	SS-4 (0-0.5 ft bgs)	2.0E-01	4.3E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	C2-Benzo(a)anthracene/Chrysene	C2-BaA/218019	8	8	100.0%	1.7E+00	3.8E+00	SS-4 (0-0.5 ft bgs)	2.1E-01	4.7E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	C3-Benzo(a)anthracene/Chrysene	C3-BaA/218019	8	8	100.0%	1.3E+00	2.9E+00	SS-4 (0-0.5 ft bgs)	1.6E-01	3.7E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	C4-Benzo(a)anthracene/Chrysene	C4-BaA/218019	8	8	100.0%	9.2E-01	2.1E+00	SS-4 (0-0.5 ft bgs)	1.1E-01	2.6E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	Benzo(a)pyrene	50-32-8	8	8	100.0%	1.3E+00	3.5E+00	SS-5 (0-0.5 ft bgs)	1.7E-01	4.5E-01			1.5E-01	TEC-TOC	8.0E-01	MEC-TOC	1.5E+00	PEC-TOC	3	Yes	HQ > 1	0.6	0.3
SVOC	Benzo(b)fluoranthene	205-99-2	8	8	100.0%	1.3E+00	3.0E+00	SS-5 (0-0.5 ft bgs)	1.6E-01	3.8E-01			2.4E-01	TEC-TOC	6.8E+00	MEC-TOC	1.3E+01	PEC-TOC	2	Yes	HQ > 1	0.06	0.03
SVOC	Benzo(e)pyrene	192-97-2	8	8	100.0%	9.3E-01	2.2E+00	SS-5 (0-0.5 ft bgs)	1.2E-01	2.8E-01			1.5E-01	TEC-TOC	8.0E-01	MEC-TOC	1.5E+00	PEC-TOC	2	Yes	HQ > 1	0.4	0.2
SVOC	Benzo(g,h,i)perylene	191-24-2	8	8	100.0%	7.7E-01	1.9E+00	SS-5 (0-0.5 ft bgs)	9.8E-02	2.4E-01			1.7E-01	TEC-TOC	1.7E+00	MEC-TOC	3.2E+00	PEC-TOC	1	No	HQ ≤ 1	0.1	0.07
SVOC	Benzo(j+k)fluoranthene	205-99-2_207-08-9	8	8	100.0%	1.1E+00	3.1E+00	SS-5 (0-0.5 ft bgs)	1.4E-01	4.0E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	1,1-Biphenyl	92-52-4	8	1	12.5%	4.8E-01	4.8E-01	SS-4 (0-0.5 ft bgs)	5.9E-02	5.9E-02	3.5E-03	7.6E-04		NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	8	2	25.0%	1.1E+01	1.2E+01	SS-6 (0-0.5 ft bgs)	1.5E+00	2.2E+00	1.9E-02	4.1E-03	1.8E-01	R5 ESL	1.8E-01	R5 ESL	1.8E-01	R5 ESL	70	Yes	HQ > 1	70	70
SVOC	Butylbenzylphthalate	85-68-7	8	6	75.0%	6.1E+01	2.9E+02	SS-5 (0-0.5 ft bgs)	8.5E+00	3.7E+01	1.0E-02	1.4E-03	2.0E+00	R5 ESL	2.0E+00	R5 ESL	2.0E+00	R5 ESL	100	Yes	HQ > 1	100	100
SVOC	Chrysene/Triphenylene	218-01-9_217-59-4	8	8	100.0%	2.1E+00	4.2E+00	SS-5 (0-0.5 ft bgs)	2.6E-01	5.4E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	Dibenz(a,h)anthracene	53-70-3	8	8	100.0%	2.2E-01	5.7E-01	SS-5 (0-0.5 ft bgs)	2.8E-02	7.3E-02			3.3E-02	TEC-TOC	8.4E-02	MEC-TOC	1.4E-01	PEC-TOC	2	Yes	HQ > 1	0.9	0.5
SVOC	Dibenzofuran	132-64-9	8	2	25.0%	9.8E-01	1.9E+00	SS-4 (0-0.5 ft bgs)	1.2E-01	2.4E-01	6.6E-04	1.4E-04	1.5E-01	TEC-TOC	3.7E-01	MEC-TOC	5.8E-01	PEC-TOC	2	Yes	HQ > 1	0.6	0.4
SVOC	Di-n-butylphthalate	84-74-2	8	7	87.5%	3.8E+00	1.3E+01	SS-5 (0-0.5 ft bgs)	4.7E-01	1.6E+00	1.5E-02	2.1E-03	2.2E+00	TEC-TOC	9.6E+00	MEC-TOC	1.7E+01	PEC-TOC	0.7	No	HQ ≤ 1	0.2	0.1
SVOC	Fluoranthene	206-44-0	8	8	100.0%	3.7E+00	9.6E+00	SS-5 (0-0.5 ft bgs)	4.7E-01	1.2E+00			4.2E-01	TEC-TOC	1.3E+00	MEC-TOC	2.2E+00	PEC-TOC	3	Yes	HQ > 1	0.9	0.5
SVOC	C1-Fluoranthenes/Pyrenes	C1-206440/Ps	8	8	100.0%	2.2E+00	3.8E+00	SS-4 (0-0.5 ft bgs)	2.8E-01	4.9E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	Fluorene	86-73-7	8	8	100.0%	5.4E-01	1.3E+00	SS-5 (0-0.5 ft bgs)	7.1E-02	1.7E-01			7.7E-02	TEC-TOC	3.1E-01	MEC-TOC	5.4E-01	PEC-TOC	2	Yes	HQ > 1	0.5	0.3
SVOC	C1-Fluorenes	C1-86-73-7	8	8	100.0%	6.0E-01	1.3E+00	SS-4 (0-0.5 ft bgs)	7.4E-02	1.8E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	C2-Fluorenes	C2-86-73-7	8	8	100.0%	1.9E+00	4.3E+00	SS-4 (0-0.5 ft bgs)	2.4E-01	5.9E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	C3-Fluorenes	C3-86-73-7	8	8	100.0%	3.3E+00	7.9E+00	SS-4 (0-0.5 ft bgs)	4.0E-01	9.8E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8	8	100.0%	7.0E-01	1.8E+00	SS-5 (0-0.5 ft bgs)	8.9E-02	2.3E-01			2.0E-01	TEC-TOC	1.7E+00	MEC-TOC	3.2E+00	PEC-TOC	1	No	HQ ≤ 1	0.1	0.07
SVOC	2-Methylnaphthalene	91-57-6	8	7	87.5%	1.5E+00	7.4E+00	SS-4 (0-0.5 ft bgs)	1.9E-01	9.2E-01	5.0E-04	7.0E-05	2.0E-02	TEC-TOC	1.1E-01	MEC-TOC	2.0E-01	PEC-TOC	50	Yes	HQ > 1	8	5
SVOC	Naphthalene	91-20-3	8	8	100.0%	5.7E-01	1.9E+00	SS-4 (0-0.5 ft bgs)	7.6E-02	2.3E-01			1.8E-01	TEC-TOC	3.7E-01	MEC-TOC	5.6E-01	PEC-TOC	1	No	HQ ≤ 1	0.6	0.4
SVOC	C1-Naphthalenes	C1-Ns	8	8	100.0%	9.3E-01	4.1E+00	SS-4 (0-0.5 ft bgs)	1.2E-01	5.1E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	C2-Naphthalenes	C2-Ns	8	8	100.0%	2.2E+00	7.5E+00	SS-4 (0-0.5 ft bgs)	2.9E-01	9.3E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	C3-Naphthalenes	C3-Ns	8	8	100.0%	2.6E+00	7.6E+00	SS-4 (0-0.5 ft bgs)	3.3E-01	9.4E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	C4-Naphthalenes	C4-Ns	8	8	100.0%	2.6E+00	6.9E+00	SS-4 (0-0.5 ft bgs)	3.3E-01	8.6E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	Perylene	198-55-0	8	8	100.0%	5.1E-01	1.1E+00	SS-5 (0-0.5 ft bgs)	6.7E-02	1.3E-01				NC		NC		NC	--	Yes	Detect But No Criterion	--	--
SVOC	Phenanthrene	85-01-8	8	8	100.0%	3.5E+00	9.1E+00	SS-5 (0-0.5 ft bgs)	4.6E-01	1.2E+00			2.0E-01	TEC-TOC	6.9E-01	MEC-TOC	1.2E+00	PEC-TOC	6	Yes	HQ > 1	2	1
SVOC	Pyrene	129-00-0	8	8	100.0%	3.1E+00	7.4E+00	SS-5 (0-0.5 ft bgs)	3.9E-01	9.4E-01			2.0E-01	TEC-TOC	8.6E-01	MEC-TOC	1.5E+00	PEC-TOC	5	Yes	HQ > 1	1	0.6
PCB	PCBs (total)	1336-36-3	8	6	75.0%	5.3E-01	1.2E+00	SS-6 (0-0.5 ft bgs)	7.4E-02	2.2E-01	1.4E-02	1.9E-03	6.0E-02	TEC-TOC	3.7E-01	MEC-TOC	6.8E-01	PEC-TOC	4	Yes	HQ > 1	0.6	0.3
PCB	Aroclor-1254	11097-69-1	8	5	62.5%	1.3E-01	2.1E-01	SS-7 (0-0.5 ft bgs)	1.8E-02	3.9E-02	1.4E-02	2.6E-03		NC		NC		NC	--	Yes	Detect But No Criterion	--	--
PCB	Aroclor-1268	11100-14-4	8	4	50.0%	6.3E-01	1.2E+00	SS-6 (0-0.5 ft bgs)	8.8E-02	2.2E-01	1.3E-02	2.8E-03		NC		NC		NC	--	Yes	Detect But No Criterion	--	--
INORG	Antimony	7440-36-0	8	8	100.0%	2.1E+01	5.0E+01	SS-4 (0-0.5 ft bgs)					2.0E+00	TEC	1.4E+01	MEC	2.5E+01	PEC	30	Yes	HQ > 1	4	2
INORG	Arsenic	7440-38-2	8	8	100.0%	7.4E+00	1.0E+01	SS-6 (0-0.5 ft bgs)					9.8E+00	TEC	2.1E+01	MEC	3.3E+01	PEC	1	No	HQ ≤ 1	0.5	0.3
INORG	Barium	7440-39-3	8	8	100.0%	9.8E+02	2.3E+03	SS-4 (0-0.5 ft bgs)						NC		NC		NC	--	Yes	Detect But No Criterion	--	--
INORG	Beryllium	7440-41-7	8	8	100.0%	3.6E-01	5.6E-01	SS-4 (0-0.5 ft bgs)						NC		NC		NC	--	Yes	Detect But No Criterion	--	--
INORG	Cadmium	7440-43-9	8	8	100.0%	1.2E+01	5.8E+01	SS-6 (0-0.5 ft bgs)					9.9E-01	TEC	3.0E+00	MEC	5.0E+00	PEC	60	Yes	HQ > 1	20	10
INORG	Chromium (total)	7440-47-3	8	8	100.0%	1.3E+02	2.6E+02	SS-6 (0-0.5 ft bgs)					4.3E+01	TEC	7.7E+01	MEC	1.1E+02	PEC	6	Yes	HQ > 1	3	2
INORG	Cobalt	7440-48-4	8	8	100.0%	5.0E+00	6.1E+00	SS-9 (0-0.5 ft bgs)					5.0E+01	R5 ESL	5.0E+01	R5 ESL	5.0E+01	R5 ESL	0.1	No	HQ ≤ 1	0.1	0.1
INORG	Copper	7440-50-8	8	8	100.0%	5.9E+01	1.4E+02	SS-4 (0-0.5 ft bgs)					3.2E+01	TEC	9.1E+01	MEC	1.5E+02	PEC	4	Yes	HQ > 1	1	0.9
INORG	Lead	7439-92-1	8	8	100.0%	1.1E+03	1.9E+03	SS-7 (0-0.5 ft bgs)					3.6E+01	TEC	8.3E+01	MEC	1.3E+02	PEC	50	Yes	HQ > 1	20	10
INORG	Manganese	7439-96-5	8	8	100.0%	3.5E+02	5.5E+02	SS-6 (0-0.5 ft bgs)					4.6E+02	TEC	7.8E+02	MEC	1.1E+03	PEC	1	No	HQ ≤ 1	0.7	0.5
INORG	Mercury	7439-97-6	8	8	100.0%	5.8E+00	2.8E+01	SS-2 (0-0.5 ft bgs)					1.8E-01	TEC	6.4E-01	MEC	1.1E+00	PEC	200	Yes	HQ > 1	40	30
INORG	Methyl mercury	22967-92-6	8	8	100.0%	8.1E-04	1.5E-03	SS-1 (0-0.5 ft bgs)					1.0E-05	R5 ESL	1.0E-05	R5 ESL	1.0E-05	R5 ESL	200	Yes	HQ > 1	200	200

Table F4: Sediment Summary and SLERA Table
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical Name	CASRN	Analyses	Detects	Freq of Detects	Average Detected Conc (mg/kg)	Maximum Detected Conc (mg/kg)	Location / Depth of Max Detect	Average Detected Conc Adjusted by TOC (mg/kg/%TOC)	Maximum Detected Conc Adjusted by TOC (mg/kg/%TOC)	Maximum Analytical Limit (mg/kg)	Maximum Analytical Limit Adjusted by TOC (mg/kg/%TOC)	Sediment TEC SQGV	Sediment TEC SQGV Basis	Sediment MEC-SQGV	Sediment MEC-SQGV Basis	Sediment PEC-SQGV	Sediment PEC-SQGV Basis	TEC Hazard Quotient	Retain for Step 3A?	Reason	MEC SQGV Hazard Quotient	PEC SQGV Hazard Quotient
INORG	Nickel	7440-02-0	8	8	100.0%	1.5E+01	2.9E+01	SS-5 (0-0.5 ft bgs)					2.3E+01	TEC	3.6E+01	MEC	4.9E+01	PEC	1	No	HQ ≤ 1	0.8	0.6
INORG	Selenium	7782-49-2	8	8	100.0%	3.8E+00	1.5E+01	SS-6 (0-0.5 ft bgs)						NC		NC		NC	--	Yes	Detect But No Criterion	--	--
INORG	Silver	7440-22-4	8	8	100.0%	2.4E-01	3.5E-01	SS-7 (0-0.5 ft bgs)					1.6E+00	TEC	1.9E+00	MEC	2.2E+00	PEC	0.2	No	HQ ≤ 1	0.2	0.2
INORG	Thallium	7440-28-0	8	8	100.0%	1.5E-01	2.2E-01	SS-4 (0-0.5 ft bgs)						NC		NC		NC	--	Yes	Detect But No Criterion	--	--
INORG	Vanadium	7440-62-2	8	7	87.5%	1.5E+01	2.2E+01	SS-2 (0-0.5 ft bgs)			3.7E-02			NC		NC		NC	--	Yes	Detect But No Criterion	--	--
INORG	Zinc	7440-66-6	8	8	100.0%	1.1E+03	2.0E+03	SS-9 (0-0.5 ft bgs)					1.2E+02	TEC	2.9E+02	MEC	4.6E+02	PEC	20	Yes	HQ > 1	7	4

Notes:
Only chemicals detected in surface sediment are included above.
bgs: below grround surface
ft: feet
HQ: hazard quotient
INORG: inorganics
MEC: midpoint effect concentration
mg/kg: milligram(s) per kilogram
NC: no criterion
PAH: polycyclic aromatic hydrocarbon
PCB: polychlorinted biphenyl
PEC: probable effect concentration
PDIST: petroleum distillates
R5 ESL: USEPA Region 5 Ecological Screening Level
SLERA: screening-level ecological risk assessment
SQGV: sediment quality guideline value
SVOC: semivolatile organic compound
TEC: threshold effect concentration
TOC: total organic carbon
VOC: volatile organic compound

HQ formatting	
0.2	≤ 1
2	≥1 - 10
20	≥10 - 100
200	≥100

Table F5. Evaluation of Simultaneously Extracted Metals (SEM) and Acid Volatile Sulfide (AVS) in Sediment
Janesville Assembly Plant, Janesville, Wisconsin

Location	TOC (%)	Cadmium (µmol/g)	Copper (µmol/g)	Lead (µmol/g)	Nickel (µmol/g)	Zinc (µmol/g)	AVS (µmol/g)	Organic Normalized Excess SEM[ab] (µmol/goc)
SS-1	4.6	0.0084	0.27	0.40	0.13	1.4	0	2.2
SS-2	7.2	0.0057	0.20	0.49	0.13	1.9	12	-168
SS-3	4.6	0.0071	0.16	0.58	0.077	1.8	11	-227
SS-4	8.1	0.050	2.2	9.4	0.17	45	17	-158
SS-5	7.9	0.041	0.18	17	1.0	41	17	-157
SS-6	5.4	0.033	0.39	4.0	0.13	32	22	-367
SS-7	11	0.029	0.87	8.7	0.10	15	3.7	-9
SS-9	13.1	0.11	0.74	5.9	0.10	16	7.4	-33

a. (∑SEM-AVS)/foc
b. Toxicity to benthic invertebrates is very unlikely at concentrations below 130 µmol/goc and very likely at concentrations above 3,000 µmol/goc (USEPA 2005a).

foc: fraction organic carbon [TOC(%)/100]
TOC: total organic carbon
µmol/g: micromoles per gram
µmol/goc: micromoles per gram organic carbon
USEPA: United States Environmental Protection Agency

Table F6: Surface Soil Screening Values
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical Name	CASRN	ECO SSL Avian (a) (mg/kg)	ECO SSL Invertebrate (a) (mg/kg)	ECO SSL Mammalian (a) (mg/kg)	ECO SSL Plant (a) (mg/kg)	Region 5 ESL (b) (mg/kg)	Soil ESC (mg/kg)	Soil ESC Basis
VOC	Acetone	67-64-1					2.5E+03	2.5E+00	R5 ESL
VOC	2-Butanone	78-93-3					9.0E+04	9.0E+01	R5 ESL
VOC	Carbon Disulfide	75-15-0					9.4E+01	9.4E-02	R5 ESL
VOC	Cumene	98-82-8							NC
VOC	Cyclohexane	110-82-7							NC
VOC	Methyl Acetate	79-20-9							NC
VOC	Methylcyclohexane	108-87-2							NC
VOC	Methylene Chloride	75-09-2					4.1E+03	4.1E+00	R5 ESL
VOC	Toluene	108-88-3					5.5E+03	5.5E+00	R5 ESL
VOC	1,2,4-Trichlorobenzene	120-82-1					1.1E+04	1.1E+01	R5 ESL
VOC	1,2,4-Trimethylbenzene	95-63-6							NC
VOC	1,3,5-Trimethylbenzene	108-67-8							NC
VOC	Xylenes (total)	1330-20-7					1.0E+04	1.0E+01	R5 ESL
SVOC	PAHs (High MW)	130498-29-2H		1.8E+01	1.1E+00			1.1E+00	Mammalian SSL
SVOC	PAHs (Low MW)	130498-29-2L		2.9E+01	1.0E+02			2.9E+01	Invertebrate SSL
SVOC	PAHs (total)	130498-29-2							NC
SVOC	Acenaphthene	83-32-9					6.8E+05	6.8E+02	R5 ESL
SVOC	Acenaphthylene	208-96-8					6.8E+05	6.8E+02	R5 ESL
SVOC	Anthracene	120-12-7					1.5E+06	1.5E+03	R5 ESL
SVOC	C1-Anthracenes/Phenanthrenes	C1-120127/85018							NC
SVOC	C3-Anthracenes/Phenanthrenes	C3-120127/85018							NC
SVOC	C4-Anthracenes/Phenanthrenes	C4-120127/85018							NC
SVOC	Benzaldehyde	100-52-7							NC
SVOC	Benzo(a)anthracene	56-55-3					5.2E+03	5.2E+00	R5 ESL
SVOC	C1-Benzo(a)anthracene/Chrysene	C1-BaA/218019							NC
SVOC	C2-Benzo(a)anthracene/Chrysene	C2-BaA/218019							NC
SVOC	C3-Benzo(a)anthracene/Chrysene	C3-BaA/218019							NC
SVOC	C4-Benzo(a)anthracene/Chrysene	C4-BaA/218019							NC
SVOC	Benzo(a)pyrene	50-32-8					1.5E+03	1.5E+00	R5 ESL
SVOC	Benzo(b)fluoranthene	205-99-2					6.0E+04	6.0E+01	R5 ESL
SVOC	Benzo(b+j)fluoranthene	205-99-2_205-82-3							NC
SVOC	Benzo(e)pyrene	192-97-2							NC
SVOC	Benzo(g,h,i)perylene	191-24-2					1.2E+05	1.2E+02	R5 ESL
SVOC	Benzo(k)fluoranthene	207-08-9					1.5E+05	1.5E+02	R5 ESL
SVOC	1,1-Biphenyl	92-52-4							NC
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7					9.3E+02	9.3E-01	R5 ESL
SVOC	Butylbenzylphthalate	85-68-7					2.4E+02	2.4E-01	R5 ESL
SVOC	Caprolactam	105-60-2							NC
SVOC	Carbazole	86-74-8							NC
SVOC	Chrysene	218-01-9					4.7E+03	4.7E+00	R5 ESL
SVOC	Chrysene/Triphenylene	218-01-9_217-59-4							NC
SVOC	Dibenz(a,h)anthracene	53-70-3					1.8E+04	1.8E+01	R5 ESL
SVOC	Dibenzofuran	132-64-9							NC
SVOC	Di-n-butylphthalate	84-74-2					1.5E+02	1.5E-01	R5 ESL
SVOC	Di-n-octylphthalate	117-84-0					7.1E+05	7.1E+02	R5 ESL
SVOC	Fluoranthene	206-44-0					1.2E+05	1.2E+02	R5 ESL
SVOC	C1-Fluoranthenes/Pyrenes	C1-206440/Ps							NC
SVOC	Fluorene	86-73-7					1.2E+05	1.2E+02	R5 ESL
SVOC	C1-Fluorenes	C1-86-73-7							NC
SVOC	C2-Fluorenes	C2-86-73-7							NC

Table F6: Surface Soil Screening Values
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical Name	CASRN	ECO SSL Avian (a) (mg/kg)	ECO SSL Invertebrate (a) (mg/kg)	ECO SSL Mammalian (a) (mg/kg)	ECO SSL Plant (a) (mg/kg)	Region 5 ESL (b) (mg/kg)	Soil ESC (mg/kg)	Soil ESC Basis
SVOC	C3-Fluorenes	C3-86-73-7							NC
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5					1.1E+05	1.1E+02	R5 ESL
SVOC	Isophorone	78-59-1					1.4E+05	1.4E+02	R5 ESL
SVOC	2-Methylnaphthalene	91-57-6					3.2E+03	3.2E+00	R5 ESL
SVOC	3&4-Methylphenol	65794-96-4							NC
SVOC	Naphthalene	91-20-3					9.9E+01	9.9E-02	R5 ESL
SVOC	C1-Naphthalenes	C1-Ns							NC
SVOC	C2-Naphthalenes	C2-Ns							NC
SVOC	C3-Naphthalenes	C3-Ns							NC
SVOC	C4-Naphthalenes	C4-Ns							NC
SVOC	C2-Naphthobenzothiophenes	C2-239350							NC
SVOC	Perylene	198-55-0							NC
SVOC	Phenanthrene	85-01-8					4.6E+04	4.6E+01	R5 ESL
SVOC	Phenol	108-95-2					1.2E+05	1.2E+02	R5 ESL
SVOC	Pyrene	129-00-0					7.9E+04	7.9E+01	R5 ESL
PCB	PCBs (total)	1336-36-3					3.3E-01	3.3E-04	R5 ESL
PCB	Aroclor-1254	11097-69-1							NC
PCB	Aroclor-1268	11100-14-4							NC
INORG	Antimony	7440-36-0		7.8E+01	2.7E-01		1.4E+02	2.7E-01	Mammalian SSL
INORG	Arsenic	7440-38-2	4.3E+01		4.6E+01	1.8E+01	5.7E+03	1.8E+01	Plant SSL
INORG	Barium	7440-39-3		3.3E+02	2.0E+03		1.0E+03	3.3E+02	Invertebrate SSL
INORG	Beryllium	7440-41-7		4.0E+01	2.1E+01		1.1E+03	2.1E+01	Mammalian SSL
INORG	Cadmium	7440-43-9	7.7E-01	1.4E+02	3.6E-01	3.2E+01	2.2E+00	3.6E-01	Mammalian SSL
INORG	Chromium (total)	7440-47-3					4.0E+02	4.0E-01	R5 ESL
INORG	Cobalt	7440-48-4	1.2E+02		2.3E+02	1.3E+01	1.4E+02	1.3E+01	Plant SSL
INORG	Copper	7440-50-8	2.8E+01	8.0E+01	4.9E+01	7.0E+01	5.4E+03	2.8E+01	Avian SSL
INORG	Lead	7439-92-1	1.1E+01	1.7E+03	5.6E+01	1.2E+02	5.4E+01	1.1E+01	Avian SSL
INORG	Manganese	7439-96-5	4.3E+03	4.5E+02	4.0E+03	2.2E+02		2.2E+02	Plant SSL
INORG	Mercury	7439-97-6					1.0E+02	1.0E-01	R5 ESL
INORG	Methyl mercury	22967-92-6					1.6E+00	1.6E-03	R5 ESL
INORG	Nickel	7440-02-0	2.1E+02	2.8E+02	1.3E+02	3.8E+01	1.4E+04	3.8E+01	Plant SSL
INORG	Selenium	7782-49-2	1.2E+00	4.1E+00	6.3E-01	5.2E-01	2.8E+01	5.2E-01	Plant SSL
INORG	Silver	7440-22-4	4.2E+00		1.4E+01	5.6E+02	4.0E+03	4.2E+00	Avian SSL
INORG	Thallium	7440-28-0					5.7E+01	5.7E-02	R5 ESL
INORG	Vanadium	7440-62-2	7.8E+00		2.8E+02		1.6E+03	7.8E+00	Avian SSL
INORG	Zinc	7440-66-6	4.6E+01	1.2E+02	7.9E+01	1.6E+02	6.6E+03	4.6E+01	Avian SSL

Notes:
(a) USEPA OSWER. 2007. Ecological Soil Screening Levels.
(b) USEPA RUSEPA Region 5. 2003. Ecological Screening Levels.
ECO SSL: Ecological Soil Screening Level
ESC: Ecological Screening Criterion
ESL: ecological screening level
INORG: inorganic
mg/kg: milligram(s) per kilogram
NC: no criterion
R5 ESL: USEPA Region 5 Ecological Screening Level
VOC: volatile organic compound
SSL: soil screening level
SVOC: semivolatile organic compound

Table F7: Soil Summary and SLERA Table
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical Name	CASRN	Analyses	Detects	Freq of Detects	Average Detected Conc (mg/kg)	Maximum Detected Conc (mg/kg)	Location / Depth of Max Detect	Maximum Analytical Limit (mg/kg)	Soil ESC	Soil ESC Basis	Hazard Quotient	Retain for Step 3A?	Reason	Avian HQ	Invert-ebrate HQ	Mam-malian HQ	Plant HQ	Region 5 ESL HQ
VOC	Acetone	67-64-1	23	10	43.5%	1.1E-01	3.0E-01	SS-6 (0.5-2 ft bgs)	2.3E-01	2.5E+00	R5 ESL	0.1	No	HQ ≤ 1	--	--	--	--	0.1
VOC	2-Butanone	78-93-3	23	1	4.3%	2.3E-02	2.3E-02	SS-5 (0-0.5 ft bgs)	7.3E-02	9.0E+01	R5 ESL	0.0003	No	HQ ≤ 1	--	--	--	--	0.0003
VOC	Carbon Disulfide	75-15-0	22	3	13.6%	1.0E-02	2.5E-02	SS-9 (0.5-1.5 ft bgs)	5.6E-02	9.4E-02	R5 ESL	0.3	No	HQ ≤ 1	--	--	--	--	0.3
VOC	Cumene	98-82-8	23	9	39.1%	4.2E-01	1.0E+00	SS-5 (0-2 ft bgs)	2.0E-04		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
VOC	Cyclohexane	110-82-7	23	7	30.4%	1.3E-01	2.8E-01	SS-4 (0-0.5 ft bgs)	3.0E-02		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
VOC	Methyl Acetate	79-20-9	23	3	13.0%	2.3E-01	2.3E-01	SS-4 (0.5-2 ft bgs)	5.5E-02		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
VOC	Methylcyclohexane	108-87-2	23	13	56.5%	9.3E-01	2.3E+00	SS-4 (0-0.5 ft bgs)	5.8E-04		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
VOC	Methylene Chloride	75-09-2	23	2	8.7%	3.4E-01	3.8E-01	SS-5 (0-2 ft bgs)	8.5E-02	4.1E+00	R5 ESL	0.09	No	HQ ≤ 1	--	--	--	--	0.09
VOC	1,2,4-Trichlorobenzene	120-82-1	22	1	4.5%	1.3E-01	1.3E-01	SS-5 (0.5-2 ft bgs)	3.0E-02	1.1E+01	R5 ESL	0.01	No	HQ ≤ 1	--	--	--	--	0.01
VOC	1,2,4-Trimethylbenzene	95-63-6	23	6	26.1%	4.9E+00	1.6E+01	SS-5 (0-2 ft bgs)	5.8E-04		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
VOC	1,3,5-Trimethylbenzene	108-67-8	23	6	26.1%	2.0E+00	5.9E+00	SS-5 (0-2 ft bgs)	2.9E-04		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
VOC	Xylenes (total)	1330-20-7	23	6	26.1%	8.6E-01	2.4E+00	SS-5 (0-2 ft bgs)	5.4E-04	1.0E+01	R5 ESL	0.2	No	HQ ≤ 1	--	--	--	--	0.2
SVOC	PAHs (High MW)	130498-29-2H	8	8	100.0%	2.5E+01	5.0E+01	SS-5 (0-0.5 ft bgs)		1.1E+00	Mammalian SSL	50	Yes	HQ > 1	--	3	50	--	--
SVOC	PAHs (Low MW)	130498-29-2L	23	19	82.6%	2.6E+00	1.5E+01	SS-4 (0.5-2 ft bgs)	3.5E-03	2.9E+01	Invertebrate SSL	0.5	No	HQ ≤ 1	--	0.5	0.1	--	--
SVOC	PAHs (total)	130498-29-2	23	19	82.6%	2.6E+00	1.5E+01	SS-4 (0.5-2 ft bgs)	3.5E-03		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	Acenaphthene	83-32-9	8	8	100.0%	3.4E-01	9.9E-01	SS-5 (0-0.5 ft bgs)		6.8E+02	R5 ESL	0.001	No	HQ ≤ 1	--	--	--	--	0.001
SVOC	Acenaphthylene	208-96-8	8	8	100.0%	1.4E-01	2.8E-01	SS-4 (0-0.5 ft bgs)		6.8E+02	R5 ESL	0.0004	No	HQ ≤ 1	--	--	--	--	0.0004
SVOC	Anthracene	120-12-7	8	8	100.0%	8.4E-01	2.2E+00	SS-5 (0-0.5 ft bgs)		1.5E+03	R5 ESL	0.001	No	HQ ≤ 1	--	--	--	--	0.001
SVOC	C1-Anthracenes/Phenanthrenes	C1-120127/85018	8	8	100.0%	3.4E+00	6.6E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	C2-Anthracenes/Phenanthrenes	C2-120127/85018	8	8	100.0%	6.2E+00	1.4E+01	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	C3-Anthracenes/Phenanthrenes	C3-120127/85018	8	8	100.0%	6.4E+00	1.6E+01	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	C4-Anthracenes/Phenanthrenes	C4-120127/85018	8	8	100.0%	3.6E+00	8.7E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	Benzaldehyde	100-52-7	23	1	4.3%	3.8E-02	3.8E-02	SS-2 (0-2 ft bgs)	1.2E-02		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	Benzo(a)anthracene	56-55-3	8	8	100.0%	1.5E+00	3.8E+00	SS-5 (0-0.5 ft bgs)		5.2E+00	R5 ESL	0.7	No	HQ ≤ 1	--	--	--	--	0.7
SVOC	C1-Benzo(a)anthracene/Chrysene	C1-BaA/218019	8	8	100.0%	1.6E+00	3.5E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	C2-Benzo(a)anthracene/Chrysene	C2-BaA/218019	8	8	100.0%	1.7E+00	3.8E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	C3-Benzo(a)anthracene/Chrysene	C3-BaA/218019	8	8	100.0%	1.3E+00	2.9E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	C4-Benzo(a)anthracene/Chrysene	C4-BaA/218019	8	8	100.0%	9.2E-01	2.1E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	Benzo(a)pyrene	50-32-8	8	8	100.0%	1.3E+00	3.5E+00	SS-5 (0-0.5 ft bgs)		1.5E+00	R5 ESL	2	Yes	HQ > 1	--	--	--	--	2
SVOC	Benzo(b)fluoranthene	205-99-2	8	8	100.0%	1.3E+00	3.0E+00	SS-5 (0-0.5 ft bgs)		6.0E+01	R5 ESL	0.05	No	HQ ≤ 1	--	--	--	--	0.05
SVOC	Benzo(e)pyrene	192-97-2	8	8	100.0%	9.3E-01	2.2E+00	SS-5 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	Benzo(g,h,i)perylene	191-24-2	8	8	100.0%	7.7E-01	1.9E+00	SS-5 (0-0.5 ft bgs)		1.2E+02	R5 ESL	0.02	No	HQ ≤ 1	--	--	--	--	0.02
SVOC	Benzo(j+k)fluoranthene	205-99-2_207-08-9	8	8	100.0%	1.1E+00	3.1E+00	SS-5 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	1,1-Biphenyl	92-52-4	23	4	17.4%	5.2E-01	5.9E-01	SS-6 (0.5-2 ft bgs)	3.5E-03		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	23	4	17.4%	1.5E+01	2.7E+01	SS-5 (0-2 ft bgs)	1.9E-02	9.3E-01	R5 ESL	30	Yes	HQ > 1	--	--	--	--	30
SVOC	Butylbenzylphthalate	85-68-7	23	9	39.1%	4.8E+01	2.9E+02	SS-5 (0-0.5 ft bgs)	1.0E-02	2.4E-01	R5 ESL	1,000	Yes	HQ > 1	--	--	--	--	1,000
SVOC	Caprolactam	105-60-2	23	1	4.3%	2.8E+01	2.8E+01	SS-6 (0-2 ft bgs)	3.7E-02		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	Carbazole	86-74-8	23	2	8.7%	6.3E+00	8.8E+00	SS-5 (0.5-2 ft bgs)	2.7E-02		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	Chrysene/Triphenylene	218-01-9_217-59-4	8	8	100.0%	2.1E+00	4.2E+00	SS-5 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	Dibenz(a,h)anthracene	53-70-3	8	8	100.0%	2.2E-01	5.7E-01	SS-5 (0-0.5 ft bgs)		1.8E+01	R5 ESL	0.03	No	HQ ≤ 1	--	--	--	--	0.03
SVOC	Dibenzofuran	132-64-9	23	9	39.1%	1.3E+00	3.8E+00	SS-5 (0.5-2 ft bgs)	6.6E-04		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	Di-n-butylphthalate	84-74-2	23	16	69.6%	4.0E+00	1.3E+01	SS-5 (0.5-2 ft bgs)	1.5E-02	1.5E-01	R5 ESL	90	Yes	HQ > 1	--	--	--	--	90
SVOC	Fluoranthene	206-44-0	8	8	100.0%	3.7E+00	9.6E+00	SS-5 (0-0.5 ft bgs)		1.2E+02	R5 ESL	0.08	No	HQ ≤ 1	--	--	--	--	0.08
SVOC	C1-Fluoranthenes/Pyrenes	C1-206440/Ps	8	8	100.0%	2.2E+00	3.8E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	Fluorene	86-73-7	8	8	100.0%	5.4E-01	1.3E+00	SS-5 (0-0.5 ft bgs)		1.2E+02	R5 ESL	0.01	No	HQ ≤ 1	--	--	--	--	0.01
SVOC	C1-Fluorenes	C1-86-73-7	8	8	100.0%	6.0E-01	1.3E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	C2-Fluorenes	C2-86-73-7	8	8	100.0%	1.9E+00	4.3E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	C3-Fluorenes	C3-86-73-7	8	8	100.0%	3.3E+00	7.9E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8	8	100.0%	7.0E-01	1.8E+00	SS-5 (0-0.5 ft bgs)		1.1E+02	R5 ESL	0.02	No	HQ ≤ 1	--	--	--	--	0.02
SVOC	Isophorone	78-59-1	23	1	4.3%	3.1E-02	3.1E-02	SS-1 (0.5-2 ft bgs)	1.3E-02	1.4E+02	R5 ESL	0.0002	No	HQ ≤ 1	--	--	--	--	0.0002
SVOC	2-Methylnaphthalene	91-57-6	23	19	82.6%	2.5E+00	1.4E+01	SS-4 (0.5-2 ft bgs)	5.0E-04	3.2E+00	R5 ESL	4	Yes	HQ > 1	--	--	--	--	4
SVOC	3&4-Methylphenol	65794-96-4	23	1	4.3%	7.7E-02	7.7E-02	SS-2 (0-2 ft bgs)	2.0E-02		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	Naphthalene	91-20-3	8	8	100.0%	5.7E-01	1.9E+00	SS-4 (0-0.5 ft bgs)		9.9E-02	R5 ESL	20	Yes	HQ > 1	--	--	--	--	20
SVOC	C1-Naphthalenes	C1-Ns	8	8	100.0%	9.3E-01	4.1E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	C2-Naphthalenes	C2-Ns	8	8	100.0%	2.2E+00	7.5E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	C3-Naphthalenes	C3-Ns	8	8	100.0%	2.6E+00	7.6E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	C4-Naphthalenes	C4-Ns	8	8	100.0%	2.6E+00	6.9E+00	SS-4 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--

Table F7: Soil Summary and SLERA Table
Janesville Assembly Plant, Janesville, Wisconsin

Chem Group	Chemical Name	CASRN	Analyses	Detects	Freq of Detects	Average Detected Conc (mg/kg)	Maximum Detected Conc (mg/kg)	Location / Depth of Max Detect	Maximum Analytical Limit (mg/kg)	Soil ESC	Soil ESC Basis	Hazard Quotient	Retain for Step 3A?	Reason	Avian HQ	Invert-ebrate HQ	Mam-malian HQ	Plant HQ	Region 5 ESL HQ
SVOC	Perylene	198-55-0	8	8	100.0%	5.1E-01	1.1E+00	SS-5 (0-0.5 ft bgs)			NC	--	Yes	Detect But No Criterion	--	--	--	--	--
SVOC	Phenanthrene	85-01-8	8	8	100.0%	3.5E+00	9.1E+00	SS-5 (0-0.5 ft bgs)		4.6E+01	R5 ESL	0.2	No	HQ ≤ 1	--	--	--	--	0.2
SVOC	Phenol	108-95-2	23	3	13.0%	2.7E-02	3.2E-02	SS-2 (0-2 ft bgs)	7.3E-03	1.2E+02	R5 ESL	0.0003	No	HQ ≤ 1	--	--	--	--	0.0003
SVOC	Pyrene	129-00-0	8	8	100.0%	3.1E+00	7.4E+00	SS-5 (0-0.5 ft bgs)		7.9E+01	R5 ESL	0.09	No	HQ ≤ 1	--	--	--	--	0.09
PCB	PCBs (total)	1336-36-3	23	10	43.5%	4.9E-01	1.2E+00	SS-6 (0-0.5 ft bgs)	1.4E-02	3.3E-04	R5 ESL	4,000	Yes	HQ > 1	--	--	--	--	4,000
PCB	Aroclor-1254	11097-69-1	23	7	30.4%	1.6E-01	2.7E-01	SS-5 (0.5-2 ft bgs)	1.4E-02		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
PCB	Aroclor-1268	11100-14-4	23	8	34.8%	4.8E-01	1.2E+00	SS-6 (0-0.5 ft bgs)	1.3E-02		NC	--	Yes	Detect But No Criterion	--	--	--	--	--
INORG	Antimony	7440-36-0	23	23	100.0%	3.8E+01	5.1E+02	SS-5 (0-2 ft bgs)		2.7E-01	Mammalian SSL	2,000	Yes	HQ > 1	--	7	2,000	--	4,000
INORG	Arsenic	7440-38-2	23	23	100.0%	9.2E+00	4.0E+01	SS-5 (0-2 ft bgs)		1.8E+01	Plant SSL	2	Yes	HQ > 1	0.9	--	0.9	2	7
INORG	Barium	7440-39-3	23	23	100.0%	8.9E+02	3.9E+03	SS-5 (0-2 ft bgs)		3.3E+02	Invertebrate SSL	10	Yes	HQ > 1	--	10	2	--	4,000
INORG	Beryllium	7440-41-7	23	23	100.0%	4.4E-01	6.8E-01	SS-2 (0-2 ft bgs)		2.1E+01	Mammalian SSL	0.03	No	HQ ≤ 1	--	0.02	0.03	--	0.6
INORG	Cadmium	7440-43-9	23	23	100.0%	7.8E+00	5.8E+01	SS-6 (0-0.5 ft bgs)		3.6E-01	Mammalian SSL	200	Yes	HQ > 1	80	0.4	200	2	30,000
INORG	Chromium (total)	7440-47-3	23	23	100.0%	1.2E+02	7.5E+02	SS-5 (0-2 ft bgs)		4.0E-01	R5 ESL	2,000	Yes	HQ > 1	--	--	--	--	2,000
INORG	Cobalt	7440-48-4	23	23	100.0%	5.8E+00	1.1E+01	SS-5 (0.5-2 ft bgs)		1.3E+01	Plant SSL	0.8	No	HQ ≤ 1	0.09	--	0.05	0.8	80
INORG	Copper	7440-50-8	23	23	100.0%	6.1E+01	1.6E+02	SS-5 (0-2 ft bgs)		2.8E+01	Avian SSL	6	Yes	HQ > 1	6	2	3	2	30
INORG	Lead	7439-92-1	23	23	100.0%	1.1E+03	8.6E+03	SS-5 (0-2 ft bgs)		1.1E+01	Avian SSL	800	Yes	HQ > 1	800	5	200	70	200,000
INORG	Manganese	7439-96-5	23	23	100.0%	3.7E+02	6.8E+02	SS-5 (0-2 ft bgs)		2.2E+02	Plant SSL	3	Yes	HQ > 1	0.2	2	0.2	3	--
INORG	Mercury	7439-97-6	23	23	100.0%	5.5E+00	2.8E+01	SS-2 (0-0.5 ft bgs)		1.0E-01	R5 ESL	300	Yes	HQ > 1	--	--	--	--	300
INORG	Methyl mercury	22967-92-6	8	8	100.0%	8.1E-04	1.5E-03	SS-1 (0-0.5 ft bgs)		1.6E-03	R5 ESL	0.9	No	HQ ≤ 1	--	--	--	--	0.9
INORG	Nickel	7440-02-0	23	23	100.0%	1.8E+01	1.0E+02	SS-5 (0-2 ft bgs)		3.8E+01	Plant SSL	3	Yes	HQ > 1	0.5	0.4	0.8	3	8
INORG	Selenium	7782-49-2	23	23	100.0%	2.9E+00	1.5E+01	SS-6 (0-0.5 ft bgs)		5.2E-01	Plant SSL	30	Yes	HQ > 1	10	4	20	30	500
INORG	Silver	7440-22-4	23	23	100.0%	2.7E-01	1.3E+00	SS-5 (0-2 ft bgs)		4.2E+00	Avian SSL	0.3	No	HQ ≤ 1	0.3	--	0.09	0.002	0.3
INORG	Thallium	7440-28-0	23	23	100.0%	1.8E-01	2.4E-01	SS-5 (0-2 ft bgs)		5.7E-02	R5 ESL	4	Yes	HQ > 1	--	--	--	--	4
INORG	Vanadium	7440-62-2	23	22	95.7%	1.6E+01	2.4E+01	SS-9 (0.5-1.5 ft bgs)	3.7E-02	7.8E+00	Avian SSL	3	Yes	HQ > 1	3	--	0.09	--	10
INORG	Zinc	7440-66-6	23	23	100.0%	1.1E+03	5.6E+03	SS-5 (0-2 ft bgs)		4.6E+01	Avian SSL	100	Yes	HQ > 1	100	50	70	30	800

Notes:
Only chemicals detected in surface soil are included above.
bgs: below ground surface
ECO SSL: Ecological Soil Screening Level
ESC: Ecological Screening Criterion
ft: feet
HQ: hazard quotient
INORG: inorganic
mg/kg: milligram(s) per kilogram
MW: molecular weight
NC: no criterion
PAH: polycyclic aromatic hydrocarbon
PCB: polychlorinated biphenyl
PDIST: petroleum distillates
R5 ESL: USEPA Region 5 Ecological Screening Level
SVOC: semivolatile organic compound
VOC: volatile organic compound

HQ formatting	
0.2	≤ 1
2	≥1 - 10
20	≥10 - 100
200	≥100

Attachment F1
Federal and State Threatened and Endangered Species Search Results

Attachment F1

Federal and State Threatened and Endangered Species Search Results

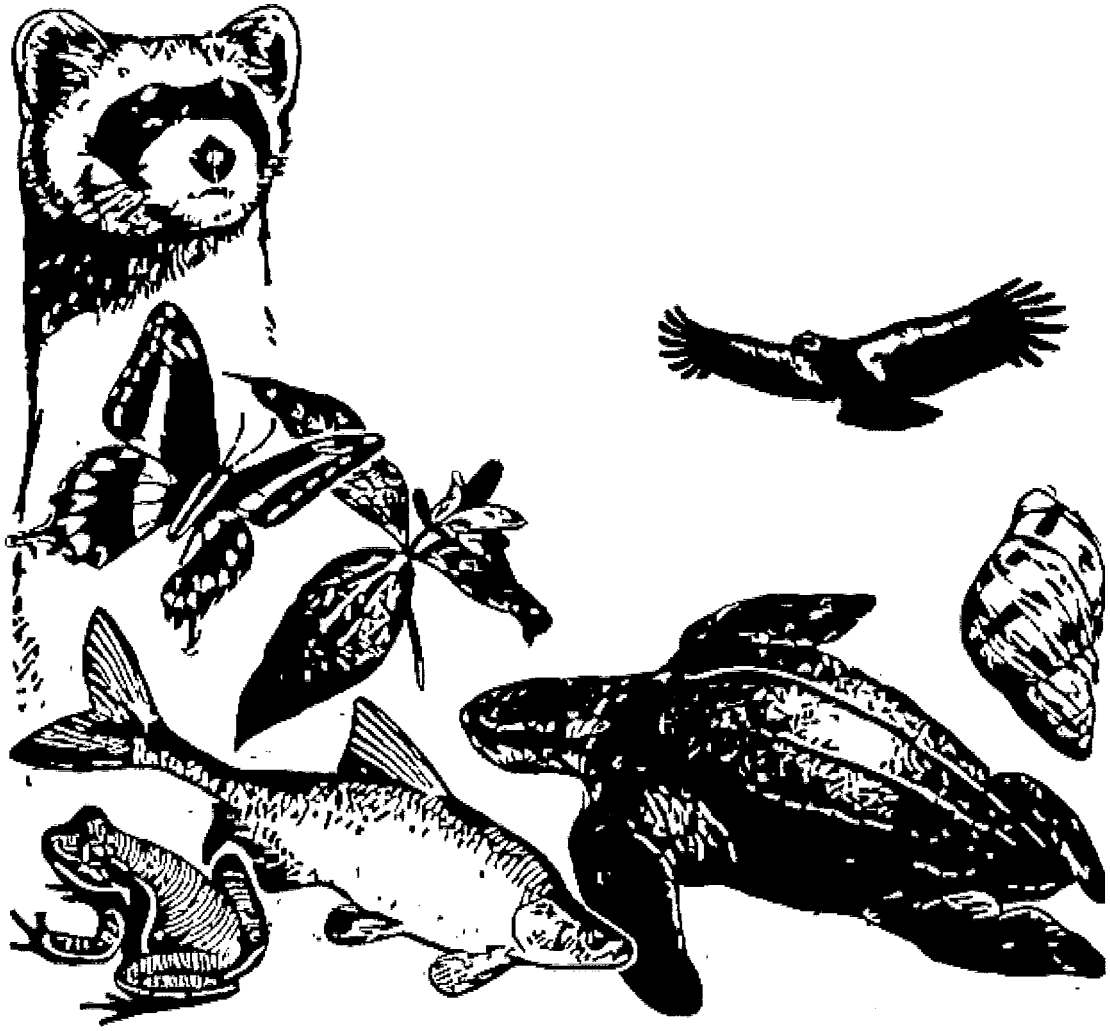
U.S. Fish & Wildlife Service

GM Janesville

IPaC Trust Resources Report

Generated April 26, 2016 02:22 PM MDT, IPaC v3.0.2

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (https://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

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U.S. Fish & Wildlife Service

IPaC Trust Resources Report

NAME

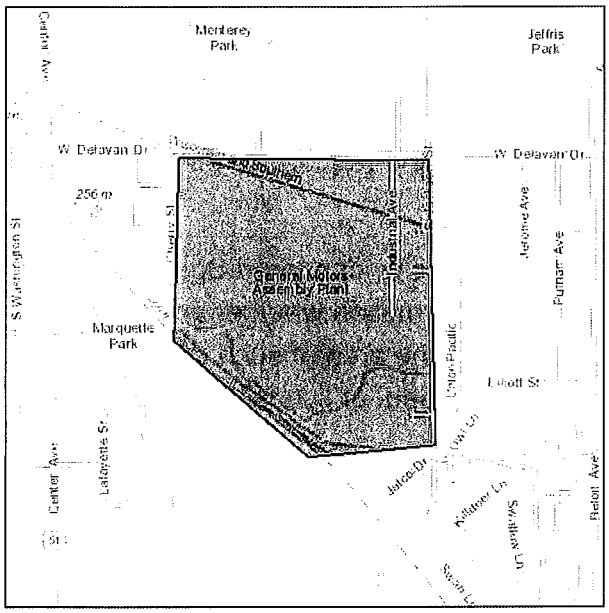
GM Janesville

LOCATION

Rock County, Wisconsin

IPAC LINK

https://ecos.fws.gov/ipac/project/LVVFN-FKENN-H2DPK-VUVFG-SAG7CA



U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

Green Bay Ecological Services Field Office
2661 Scott Tower Drive
New Franken, WI 54229-9565
(920) 866-1717

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Birds

Whooping Crane Grus americana — Experimental Population, Non-Essential

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B003

Flowering Plants

Eastern Prairie Fringed Orchid Platanthera leucophaea — Threatened

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q2GG

Prairie Bush-clover Lespedeza leptostachya — Threatened

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q2CB

Mammals

Northern Long-eared Bat Myotis septentrionalis — Threatened

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A0JE

Reptiles

Eastern Massasauga (=rattlesnake) Sistrurus catenatus — Proposed Threatened

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=C03P

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

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1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
  http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php

The following species of migratory birds could potentially be affected by activities in this location:

American Bittern Botaurus lentiginosus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F3

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Black Tern Chlidonias niger — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B09F

Black-billed Cuckoo Coccyzus erythropthalmus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HI

Blue-winged Warbler Vermivora pinus — Bird of conservation concern
Season: Breeding

Bobolink Dolichonyx oryzivorus — Bird of conservation concern
Season: Breeding

Brown Thrasher Toxostoma rufum — Bird of conservation concern
Season: Breeding

Cerulean Warbler Dendroica cerulea — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B09I

Common Tern Sterna hirundo — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B09G

Dickcissel Spiza americana — Bird of conservation concern
Season: Breeding

Henslow's Sparrow Ammodramus henslowii — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B09D

Kentucky Warbler Oporornis formosus — Bird of conservation concern
Season: Breeding

Least Bittern Ixobrychus exilis
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B092

Loggerhead Shrike Lanius ludovicianus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FY

Marsh Wren Cistothorus palustris — Bird of conservation concern
Season: Breeding

Peregrine Falcon Falco peregrinus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Pied-billed Grebe Podilymbus podiceps — Bird of conservation concern
Season: Breeding

Prothonotary Warbler Protonotaria citrea — Bird of conservation concern
Season: Breeding

Red-headed Woodpecker Melanerpes erythrocephalus — Bird of conservation concern
Year-round

Rusty Blackbird Euphagus carolinus — Bird of conservation concern
Season: Wintering

Short-eared Owl Asio flammeus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Upland Sandpiper Bartramia longicauda — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HC

Willow Flycatcher Empidonax traillii — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F6

Wood Thrush Hylocichla mustelina — Bird of conservation concern
Season: Breeding

Wildlife refuges and fish hatcheries

There are no refuges or fish hatcheries in this location

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

There are no wetlands in this location

Attachment 1. Rock County, Wisconsin Listed Threatened and Endangered Species and Critical Habitats

Scientific Name	Common Name	WI status	Federal status	Group
Dry cliff	Dry Cliff	NA		Geological Features/Primary Communities
Moist cliff	Moist Cliff	NA		Geological Features/Primary Communities
Lake--hard bog	Lake--Hard Bog	NA		Lakes
Riverine Lake/Pond	Riverine Lake/Pond	NA		Lakes
Chlidonias niger	Black Tern	END		Rare Birds
Lanius ludovicianus	Loggerhead Shrike	END		Rare Birds
Setophaga dominica	Yellow-Throated Warbler	END		Rare Birds
Chondestes grammacus	Lark Sparrow	SC/M		Rare Birds
Colinus virginianus	Northern Bobwhite	SC/M		Rare Birds
Nycticorax nycticorax	Black-Crowned Night-Heron	SC/M		Rare Birds
Protonotaria citrea	Prothonotary Warbler	SC/M		Rare Birds
Xanthocephalus xanthocephalus	Yellow-Headed Blackbird	SC/M		Rare Birds
Ammodramus henslowii	Henslow's Sparrow	THR		Rare Birds
Buteo lineatus	Red-Shouldered Hawk	THR		Rare Birds
Empidonax virescens	Acadian Flycatcher	THR		Rare Birds
Nyctanassa violacea	Yellow-Crowned Night-Heron	THR		Rare Birds
Setophaga cerulea	Cerulean Warbler	THR		Rare Birds
Setophaga citrina	Hooded Warbler	THR		Rare Birds
Chlosyne gorgone	Gorgone Checker Spot	SC/N		Rare Butterflies and Moths
Schinia lucens	Leadplant Flower Moth	SC/N		Rare Butterflies and Moths
Hetaerina titia	Dark Rubyspot	SC/N		Rare Dragonflies and Damselflies
Erimystax x-punctatus	Gravel Chub	END		Rare Fishes
Fundulus dispar	Starhead Topminnow	END		Rare Fishes
Hybopsis amnis	Pallid Shiner	END		Rare Fishes
Anguilla rostrata	American Eel	SC/N		Rare Fishes
Etheostoma asprigene	Mud Darter	SC/N		Rare Fishes
Etheostoma microperca	Least Darter	SC/N		Rare Fishes
Macrhybopsis storeriana	Silver Chub	SC/N		Rare Fishes
Notropis texanus	Weed Shiner	SC/N		Rare Fishes
Opsopoeodus emiliae	Pugnose Minnow	SC/N		Rare Fishes
Ictiobus niger	Black Buffalo	THR		Rare Fishes
Lythrurus umbratilis	Redfin Shiner	THR		Rare Fishes
Moxostoma carinatum	River Redhorse	THR		Rare Fishes
Notropis anogenus	Pugnose Shiner	THR		Rare Fishes
Notropis nubilus	Ozark Minnow	THR		Rare Fishes
Microtus ochrogaster	Prairie Vole	SC/N		Rare Mammals
Reithrodontomys megalotis	Western Harvest Mouse	SC/N		Rare Mammals
Spermophilus franklinii	Franklin's Ground Squirrel	SC/N		Rare Mammals
Brachycercus ojibwe	Ojibwe Small Square-Gilled Mayfly	SC/N		Rare Mayflies
Cercobrachys fox	Fox Small Square-Gilled Mayfly	SC/N		Rare Mayflies
Cercobrachys lilliei	Wisconsin Small Square-Gilled Mayfly	SC/N		Rare Mayflies
Cercobrachys winnebago	Winnebago Small Square-Gilled Mayfly	SC/N		Rare Mayflies
Homoeoneuria ammophila	A Brush-Legged Mayfly	SC/N		Rare Mayflies
Pentagenia vittigera	A Common Burrower Mayfly	SC/N		Rare Mayflies
Cyclonaias tuberculata	Purple Wartyback	END		Rare Mussels and Clams
Villosa iris	Rainbow Shell	END		Rare Mussels and Clams
Alasmidonta marginata	Elktoe	SC/P		Rare Mussels and Clams
Quadrula metanevra	Monkeyface	THR		Rare Mussels and Clams
Venustaconcha ellipsiformis	Ellipse	THR		Rare Mussels and Clams
Asclepias purpurascens	Purple Milkweed	END		Rare Plants
Camassia scilloides	Wild Hyacinth	END		Rare Plants
Diarrhena obovata	Beak Grass	END		Rare Plants
Lespedeza leptostachya	Prairie Bush-Clover	END	LT	Rare Plants
Platanthera leucophaea	Prairie White-Fringed Orchid	END	LT	Rare Plants
Polygala incarnata	Pink Milkwort	END		Rare Plants
Prenanthes aspera	Rough Rattlesnake-Root	END		Rare Plants
Prenanthes crepidinea	Nodding Rattlesnake-Root	END		Rare Plants
Ruellia humilis	Hairy Wild-Petunia	END		Rare Plants
Scutellaria parvula var. parvula	Small Skullcap	END		Rare Plants
Agastache nepetoides	Yellow Giant Hyssop	SC		Rare Plants
Agrimonia parviflora	Swamp Agrimony	SC		Rare Plants
Arabis shortii	Short's Rock-Cress	SC		Rare Plants
Arnoglossum plantagineum	Prairie Indian-Plantain	SC		Rare Plants
Artemisia dracunculus	Dragon Wormwood	SC		Rare Plants

Attachment 1. Rock County, Wisconsin Listed Threatened and Endangered Species and Critical Habitats

Scientific Name	Common Name	WI status	Federal status	Group
Calylophus serrulatus	Yellow Evening Primrose	SC		Rare Plants
Carex festucacea	Fescue Sedge	SC		Rare Plants
Carex livida var. radicaulis	Livid Sedge	SC		Rare Plants
Carex suberecta	Prairie Straw Sedge	SC		Rare Plants
Chaerophyllum procumbens	Spreading Chervil	SC		Rare Plants
Cuscuta glomerata	Rope Dodder	SC		Rare Plants
Eleocharis compressa	Flat-Stemmed Spike-Rush	SC		Rare Plants
Equisetum palustre	Marsh Horsetail	SC		Rare Plants
Euphorbia commutata	Wood Spurge	SC		Rare Plants
Houstonia caerulea	Azure Bluets	SC		Rare Plants
Juncus marginatus	Grassleaf Rush	SC		Rare Plants
Lespedeza violacea	Violet Bush-Clover	SC		Rare Plants
Melica nitens	Three-Flowered Melic Grass	SC		Rare Plants
Myosotis laxa	Small Forget-Me-Not	SC		Rare Plants
Nothocalais cuspidata	Prairie False-Dandelion	SC		Rare Plants
Nuphar advena	Yellow Water Lily	SC		Rare Plants
Penstemon hirsutus	Hairy Beardtongue	SC		Rare Plants
Platanus occidentalis	Sycamore	SC		Rare Plants
Ptelea trifoliata	Wafer-Ash	SC		Rare Plants
Rhus aromatica	Fragrant Sumac	SC		Rare Plants
Salix sericea	Silky Willow	SC		Rare Plants
Schoenoplectus heterochaetus	Slender Bulrush	SC		Rare Plants
Silene nivea	Snowy Campion	SC		Rare Plants
Thalictrum revolutum	Waxleaf Meadowrue	SC		Rare Plants
Thaspium trifoliatum var. flavum	Purple Meadow-Parsnip	SC		Rare Plants
Verbena simplex	Narrow-Leaved Vervain	SC		Rare Plants
Viburnum prunifolium	Smooth Black-Haw	SC		Rare Plants
Adoxa moschatellina	Musk-Root	THR		Rare Plants
Agalinis gattingeri	Roundstem Foxglove	THR		Rare Plants
Asclepias lanuginosa	Woolly Milkweed	THR		Rare Plants
Asclepias sullivantii	Prairie Milkweed	THR		Rare Plants
Besseya bullii	Kitten Tails	THR		Rare Plants
Cirsium hillii	Hill's Thistle	THR		Rare Plants
Cypripedium candidum	Small White Lady's-Slipper	THR		Rare Plants
Echinacea pallida	Pale Purple Coneflower	THR		Rare Plants
Eurybia furcata	Forked Aster	THR		Rare Plants
Hypericum sphaerocarpum	Round-Fruited St. John's Wort	THR		Rare Plants
Polytaenia nuttallii	Prairie Parsley	THR		Rare Plants
Regina septemvittata	Queensnake	END		Rare Reptiles
Sistrurus catenatus catenatus	Eastern Massasauga	END	C	Rare Reptiles
Terrapene ornata	Ornate Box Turtle	END		Rare Reptiles
Emydoidea blandingii	Blanding's Turtle	SC/H		Rare Reptiles
Oak opening	Oak Opening	NA		Savannas/Woodlands
Open bog	Open Bog	NA		Shrub Communities
Shrub-carr	Shrub-Carr	NA		Shrub Communities
Springs and spring runs, hard	Springs and Spring Runs, Hard	NA		Springs and Streams
Southern dry forest	Southern Dry Forest	NA		Upland Forests
Southern dry-mesic forest	Southern Dry-Mesic Forest	NA		Upland Forests
Southern mesic forest	Southern Mesic Forest	NA		Upland Forests
Dry prairie	Dry Prairie	NA		Upland Herbaceous Communities
Dry-mesic prairie	Dry-Mesic Prairie	NA		Upland Herbaceous Communities
Mesic prairie	Mesic Prairie	NA		Upland Herbaceous Communities
Floodplain forest	Floodplain Forest	NA		Wetland Forests
Northern wet forest	Northern Wet Forest	NA		Wetland Forests
Emergent marsh	Emergent Marsh	NA		Wetland Herbaceous Communities

Attachment 1. Rock County, Wisconsin Listed Threatened and Endangered Species and Critical Habitats

Scientific Name	Common Name	WI status	Federal status	Group
Southern sedge meadow	Southern Sedge Meadow	NA		Wetland Herbaceous Communities
Wet prairie	Wet Prairie	NA		Wetland Herbaceous Communities
Wet-mesic prairie	Wet-Mesic Prairie	NA		Wetland Herbaceous Communities

Source: http://dnr.wi.gov/topic/NHI/Data.asp?tool=county&mode=detail&county=54&sort=category&order=asc

WI Status: Protection category designated by the Wisconsin DNR. END = Endangered; THR = Threatened; SC = Special Concern; WDNR and federal regulations regarding Special Concern species range from full protection to no protection. The current categories and their respective levels of protection are as follows: SC/P = protected wild animal; SC/N = no laws regulating use, possession, or harvesting; SC/H = take regulated by establishment of open closed seasons; SC/FL = federally protected as endangered or threatened, but not so designated by WDNR; SC/M = fully protected by federal and state laws under the Migratory Bird Act; NA = not applicable.

Federal Status: Current federal protection status designated by the U.S. Fish and Wildlife Service indicating the biological status of a species in Wisconsin. LE = listed endangered; LT = listed threatened; PE = proposed for listed as endangered; NEP = nonessential experimental population(s) in part of its range; C = candidate for future listing; CH = Critical Habitat; SOC = Species of Concern; HPR = High Potential Range.

Attachment F2
Narcosis Model Calculations

Attachment F2

Narcosis Model Calculations

Attachment F2. Narcosis Model Calculations

As part of the refined screening evaluation for chemicals in Rock River sediment, cumulative exposure and potential toxicity to benthic invertebrates is assessed for chemicals characterized by a nonspecific narcotic mode of action. Polycyclic aromatic hydrocarbons (PAHs) are the primary chemical class of narcotic toxicants, and a detailed analysis of PAH-related risks to benthic invertebrates is presented in Appendix G. In addition, certain other hydrocarbons and related compounds[1] are identified as requiring a refined screening evaluation, either because the maximum detected concentration exceeds a conservative screening value, or – in most cases – because a screening value is lacking. These chemicals include the following:

- Eight volatile organic compounds (VOCs): acetone, cumene, cyclohexane, methyl acetate, methylcyclohexane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and total xylenes
- Two semivolatile organic compounds (SVOCs): 1,1-biphenyl and dibenzofuran

This appendix presents the assessment of these compounds using a cumulative narcosis model, consistent with United States Environmental Protection Agency (U.S. EPA) methods (U.S. EPA 2008).

For all of the compounds listed above except acetone, the maximum concentrations in surface sediment (0 to 6 inch depth interval) are reported from location SS-4. Acetone was not detected in this sediment sample. Therefore, for screening purposes, we present a cumulative risk estimate for location SS-4 sediment, followed by a separate evaluation of potential risk due to acetone.

Cumulative Exposures, Location SS-4

Concentrations of non-ionic substances measured in surface sediment sample SS-4 were screened against equilibrium partitioning sediment benchmarks (ESBs) to assess potential effects on benthic organisms. This approach was chosen because it accounts for the influence of chemical-specific and site-specific sediment characteristics on the bioavailability of chemicals. As described by U.S. EPA (2008), a narcosis model was used to calculate secondary chronic toxicity values (SVCs) applicable to chemical concentrations in sediment porewater. The SCVs were then used to calculate ESBs applicable to concentrations in whole sediment. Inputs to this analysis included:

- Chemical-specific parameters: molecular weight, octanol-water partition coefficient (K_{ow}), and organic carbon-water partition coefficient (K_{oc})
- Sediment-specific parameters: total organic carbon and solids content

The molecular weight, K_{ow} and K_{oc} for each chemical were obtained from U.S. EPA's Estimation Programs Interface (EPI) Suite™ model (U.S. EPA 2016). Where multiple K_{oc} values were presented, values obtained through the molecular connectivity index method were used.

[1] Acetone, methyl acetate, and dibenzofuran are not hydrocarbons, because in addition to hydrogen and carbon, their structures contain oxygen. However, like hydrocarbons, they are expected to exert toxicity (if any) through a nonspecific narcotic mode of action.

The narcosis model analysis included the following steps. First, SCVs were calculated for each chemical using the Di Toro et al. (2000) narcosis equation (Equation 1). As presented by U.S. EPA (2008), this equation includes a term for chemical class-specific correction values, but that term was not necessary for this evaluation because no applicable halogenated compounds were identified as requiring refined screening. Second, ESBs were calculated from the SCVs using the Fuchsman (2003) modified equilibrium partitioning equation (Equation 2). Third, toxic units (TUs) were calculated for each chemical by dividing the concentrations measured in sediment by the ESB (Equation 3), and then summed to yield a total TU (sum-TU) for the sample. If the sum-TU is less than 1, then toxicity to benthic invertebrates is not expected due to the chemicals included in the model.

The applicable equations are shown below.

Equation 1:

$$logSCV_n = \log(6.94) - 0.945 \cdot \log(K_{ow})$$

SCV_n: narcosis based SVC for a given chemical (mmol/L)
K_{ow}: octanol-water partition coefficient

Equation 2:

$$ESB_{Tier2DRY\ WT} = SCV\left[(f_{oc}K_{oc}) + \left((1 - f_{solids}) \div f_{solids}\right)\right] \times 0.001$$

$ESB_{Tier2DRY\ WT}$: equilibrium partitioning benchmark (mg chemical/kg dry weight sediment)
SCV: narcosis based SCV for a given chemical (µg/L)
K_{oc}: organic carbon-water partition coefficient (L/kg)
f_{oc}: fraction of organic carbon in sediment
f_{solids}: fraction of sediment present as solids
0.001: units conversion factor

Equation 3:

$$TU = \frac{C_{sed}}{ESB_{Tier2DRY\ WT}}$$

TU: toxic unit for a given chemical (unitless)
C_{sed}: concentration of chemical in sediment (mg/kg dry weight)

The results of the narcosis model are shown in Table F2-1. The calculation resulted in a sum-TU of 0.96 for sample SS-4. Methylcyclohexane and 1,2,4-trimethylbenzene concentrations made the greatest contribution to the sum-TU (0.44 and 0.27 TU, respectively). Cumene, cyclohexane, methyl acetate, 1,3,5-trimethylbenzene, total xylenes, 1,1-biphenyl and dibenzofuran made only minor contributions (<0.1 TU each). As described in Appendix F, the sum-TU for PAHs in sample SS-4 was 2.2. Based on these results, the non-PAH hydrocarbons included in this analysis are not expected to be a primary cause of toxicity to benthic invertebrates in Rock River sediments. However, they could contribute, along with PAHs, to total narcotic exposures at a level exceeding the sum-TU threshold of 1.

Acetone

Acetone is a common laboratory contaminant, and therefore concentrations reported herein may not be reflective of actual acetone concentrations in Rock River sediments. Acetone was not detected in surface sediment sample SS-4; however it was detected in other samples. We calculated a TU for acetone in surface sediment sample SS-5, where the maximum concentration of acetone was reported, using the methodology described above. The results of the narcosis model for acetone in surface sediment sample SS-5 are shown in Table F2-2. The TU calculated for SS-5 is 0.0004. Thus, regardless of whether acetone was a laboratory contaminant or is present in the Rock River sediments, it is not toxic at the levels reported.

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Attachment F3
Estimates of Total PCB Concentrations in Fish

Attachment F3

Estimates of Total PCB Concentrations in Fish

Attachment F3. Estimates of Total PCB Concentrations in Fish

Polychlorinated biphenyls (PCBs) tend to bioaccumulate in fish and can potentially pose a risk to wildlife that consume those fish. This appendix presents modeled estimates of PCB concentrations in Rock River fish. For screening purposes, fish tissue PCB concentrations were estimated using a simple biota-sediment accumulation factor (BSAF) approach.

For hydrophobic organic compounds, BSAFs are generally determined according to the following equation:

$$BSAF = \frac{PCB_{fish}/f_{lipid}}{PCB_{sed}/f_{TOC}}$$

PCB_{fish}: total PCB concentration in fish (mg/kg wet weight)
PCB_{sed}: total PCB concentration in sediment (mg/kg dry weight)
f_{TOC}: fraction total organic carbon in sediment
f_{lipid}: fraction lipid in fish

Rearranging terms, total PCB concentrations in fish are estimated as follows:

$$PCB_{fish} = (BSAF)\left(\frac{PCB_{sed}}{f_{TOC}}\right)(f_{lipid})$$

BSAFs were identified from a food web study conducted on the Sheboygan River (Burzynski 2000). The BSAF data used in this assessment are summarized in Table F3-1. The Burzynski study included measurements of total PCB concentrations in sediment and whole fish, in particular white suckers (*Catostomus commersonii*) and smallmouth bass (*Micropterus dolomieu*). These species also occur in the Rock River (Wisconsin Department of Natural Resources 2016). Because the Sheboygan River data indicated that BSAFs depend to some degree on sediment PCB concentrations, we averaged BSAFs from two segments of the Sheboygan River with sediment total PCB concentrations that were most similar to those reported from the Rock River. The average BSAFs and lipid content for each fish species are presented in Table F3-2.

The range of PCB concentrations estimated in fish was based on the maximum measured concentration of total PCBs, on an organic carbon-normalized basis (22.43 µg/gOC).

Total PCB concentrations were predicted on a whole-body basis and extrapolated to a fillet basis using conversion equations from Bevelhimer et al. (1997). The Bevelhimer et al. (1997) conversion equation for black bass was applied to the smallmouth bass, and the conversion equation for catfish was applied to the white sucker. The conversion equations are shown below.

Bass: $C_f = C_{wb}/2.3$

Catfish: $C_f = e^{\frac{lnC_{wb} - 0.21}{0.8}}$

C_f: Concentration in fillet
C_{wb}: Concentration in whole body

Estimates of total PCB concentrations in white sucker and smallmouth bass are shown in Table F3-3. On a whole-body basis, predicted total PCB concentrations are 1.6 mg/kg wet weight in white sucker and 4.3 mg/kg wet weight in smallmouth bass. On a fillet basis, predicted total PCB concentrations are 1.4 mg/kg wet weight in white sucker and 1.9 mg/kg wet weight in smallmouth bass.

While total PCB fish tissue concentrations were estimated in this assessment, actual concentrations of PCBs in fish may differ from those estimated here, due to various sources of uncertainty. Key uncertainties include the movement patterns of fish relative to the spatial distribution of PCBs in sediment, site-specific bioavailability of PCBs in sediment, site-specific lipid content in fish, and site-specific food web structure. In particular, the sediment PCB concentrations used to estimate fish tissue PCB concentrations in this analysis are highly conservative, because they represent a small area relative to the area of aquatic habitat likely used by fish.

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Attachment F4
Methylmercury Bioaccumulation Model

Attachment F4

Methylmercury Bioaccumulation Model

Attachment F4: Methylmercury Bioaccumulation Model

Introduction

Potential ecological and human health risks due to mercury are generally related to mercury's tendency to biomagnify through the food web. Mercury exists in sediment in both inorganic and organic forms, with methylmercury being the most toxic and most bioaccumulative form. The site-specific methylation and bioaccumulation potential of mercury are dependent on an array of physical, chemical, and biological factors (Driscoll et al. 2007, Hsu-Kim et al. 2013, Ward et al. 2010), such that predicting fish tissue mercury concentrations with generic biota-sediment accumulation factors would be excessively uncertain.

Sediment collected in 2015 from the Rock River in Janesville, Wisconsin reportedly contained elevated concentrations of total mercury in some samples (Inter-Fluve 2015). Therefore, to facilitate interpretation of potential mercury bioaccumulation, surface sediment samples collected from the same area in March 2016 were analyzed for both total mercury and methylmercury. Based on the resulting data, this appendix presents a model to estimate bioaccumulation of methylmercury from Rock River sediment into fish.

Fish are primarily exposed to methylmercury through the ingestion of prey that have accumulated methylmercury from sediment and water. For this assessment, we estimated a range of methylmercury concentrations in fish tissue using a hybrid of the bioaccumulation and food web models of Grapentine et al. (2005) and Hope (2003). The estimated range reflects characteristics specific to the Rock River, including methylmercury concentrations in sediment, water temperature, fish species, and food web structure. The inputs and underlying algorithms used in the model are presented below and are followed by a discussion of the results.

Methylmercury Concentrations in Sediment

Two exposure scenarios were developed based on the sediment chemistry data collected in 2016, as follows:

- Scenario 1 is based on the maximum measured concentration of methylmercury, 0.0015 milligrams per kilogram (mg/kg).
- Scenario 2 is based on the mean measured concentration of methylmercury (0.00081 mg/kg).

Methylmercury Concentrations in Surface Water

A site-specific concentration of methylmercury in surface water was unavailable. Therefore, a mean concentration of methylmercury in United States of America (U.S.) streams was used in the model (1.9×10^{-07} milligrams per liter, Scudder et al. 2009). The dataset includes a range of streams across regional and national gradients and land use types (e.g., agricultural, forested, urbanized, mined, etc) thought to influence mercury loadings and methylation potentials and represents samples collected during low flow conditions.

Surface Water Temperature

A water temperature of 12° Celsius was used in the model. Consistent with Hope (2003), this estimate is an average of the available daily temperature observations collected from the USGS gauge located approximately 46 miles downstream of Janesville in Byron, Illinois (data available from 2015 to 2016) and from the United States Geological Survey (USGS) gauge located approximately 7 miles upstream of Janesville in Afton, Wisconsin (data available from 1978 to 1983). A sensitivity analysis indicated that the model was relatively insensitive to modest (± 5°C) variations in temperature.

Fish Species

Three species of fish were selected to represent facultative diets within the food web. The species were among those collected from the Rock River near Janesville as part of Wisconsin Department of Natural Resources' (WDNR's) fish monitoring program (Wisconsin Department of Natural Resources 2016). The representative species used in this assessment were: white sucker (*Catostomus commersonii*), smallmouth bass (*Micropterus dolomieu*), and channel catfish (*Ictalurus punctatus*). These species represent different feeding guilds within the food web. White suckers and channel catfish are bottom feeders; white suckers consume primarily benthic invertebrates, whereas the diet of channel catfish includes a larger proportion of fish. Smallmouth bass and channel catfish are both omnivores with a relatively high proportion of fish in the diet, but unlike smallmouth bass, the fish consumed by channel catfish tend to be benthically coupled.

The common lengths of adult fish were estimated based on size at maturity, and juvenile fish were defined in the model as half the adult length. Species-specific lengths and additional biometric parameters were obtained from Froese and Pauly (2016) and are presented in Table F4-1.

Table F4-2 lists the dietary preferences of the various organisms representing a simplified version of the primary components of the food web, which were selected from Hope (2003), Grapentine et al. (2005), and Froese and Pauly (2016). Estimates of methylmercury bioaccumulation factors and elimination rates were taken from Grapentine et al. (2005), Hope (2003), and the United States Environmental Protection Agency (U.S. EPA) (1997), and the equations therein, and are presented in Table F4-3. A range of bioaccumulation values were identified for each model compartment. Rather than using the mean or geometric mean, a conservative approach was used to select each bioaccumulation factor used in the model. If two or fewer values were identified the maximum was used; otherwise the 70th percentile was used.

Model Algorithms

The food web model algorithms are based on bioaccumulation factors (i.e., BCFs, BSAFs, BMFs) and the fraction of equilibrium attained at the time of consumption (fE) (Hope 2003). Based on Hope (2003), the concentrations of methylmercury in the various food web components were calculated as follows:

Bioaccumulation Equations:

$$C_1 = BCF \cdot C_{sw}$$

$$C_2 = BSAF \cdot C_{sed}$$

$$C_3 = BMF \cdot C_{prey} \cdot f_E$$

where:

C_1 = concentration in plankton (mg/kg)
C_2 = concentration in sediment invertebrates (mg/kg)
C_3 = concentration in wildlife tissue (mg/kg)
C_{sw} = concentration in surface water (mg/L)
C_{sed} = concentration in sediment (mg/kg)
C_{prey} = modeled concentration in prey, weighted by the fraction of the diet (mg/kg)
f_E = fraction of equilibrium attained at the time of consumption (unitless)

Fraction of Equilibrium Equation:

$$f_E = 1 - \exp(-k_2 \cdot (t \cdot 365))$$

Where:

t = average age at time of consumption (years)
k_2 = elimination rate

Biometric Equations:

$$t = -ln\left(1 - (L/L_\infty)\right)/K$$

$$k_2 = e\exp(c \cdot T - d \cdot \ln(BW) + e - f)$$

$$BW = a \cdot L^b$$

Where:

L = length in of fish centimeters (Table F4-1)
L_∞ = maximum length (cm, Froese and Pauly 2016, Table F4-1)
K = species specific coefficient (Froese and Pauly 2016, Table F4-1)
c = temperature coefficient (0.066, Hope 2003)
T = water temperature (12º C)
d = body weight coefficient (0.20, Hope 2003)
e = acute/chronic exposure value (0.73, Hope 2003)
f = constant (6.56, Hope 2003)
a = species specific coefficient (Froese and Pauly 2016, Table F4-1)
b = species specific coefficient (Froese and Pauly 2016, Table F4-1)

The age at the time of consumption was determined based on the von Bertalanffy growth function (Froese and Pauly 2016). The values applied for L_∞ are shown in Table F4-1.

Methylmercury concentrations were calculated on a whole-body basis and converted to methylmercury concentrations in fillets using Equation 4 from Peterson et al. (2005).

Whole Body to Fillet Conversion:

$$C_f = 10\text{^}\frac{log\ C_{wb} + 0.2712}{0.9005}$$

Where:

C_f = Mercury concentration in skin-off fillet (mg/kg)
C_{wb} = Mercury concentration in whole body (mg/kg)

Model Results

Modeled methylmercury concentrations in adult and juvenile white sucker, smallmouth bass, and channel catfish are shown in Table F4-4. Methylmercury concentrations in young of year are also presented for benthivorous and planktivorous young of year fish. On a whole-body basis, predicted methylmercury concentrations range from 0.011 to 0.039 mg/kg in adult fish, from 0.0066 to 0.019 mg/kg in juvenile fish, and from 0.0012 to 0.0088 mg/kg in young of year fish. On a fillet basis, methylmercury concentrations range from 0.013 to 0.055 mg/kg in adult fish, from 0.0076 to 0.025 mg/kg in juvenile fish, and from 0.0011 to 0.011 mg/kg in young of year fish.

These predictions are similar to concentrations of mercury measured in fish collected at locations in the Rock River near Janesville. Table F4-5 shows the average total mercury concentrations measured in fish fillets collected from the nearest upstream and nearest downstream locations sampled by the WDNR. The WDNR samples were collected to represent fish potentially consumed by humans and are assumed to represent adult fish. The downstream location was approximately 2 kilometers downstream of the General Motors LLC (GM) Janesville facility. The average mercury concentrations in the fish species of interest range from 0.0486 to 0.1175 mg/kg for skin-off fillets, which typically have higher Hg concentrations than skin-on fillets due to dilution of the tissue Hg by the skin which is lower in Hg. Although those fish were analyzed for total mercury, greater than 90% of the mercury measured in fish tissue exists as methylmercury (U.S. EPA 1997). Given the small sample size for measured fish, uncertainties associated with the ratio of methylmercury to total mercury in those fish, and differences between skin-on and skin-off fillets, the measured data are reasonably comparable to the model predictions.

The methylmercury bioaccumulation model presented here indicates that mercury concentrations in fish living in the Rock River near the GM Janesville facility are not expected to be elevated compared to conditions further upstream and downstream. This prediction reflects the finding that, despite elevated total mercury concentrations in some samples, methylmercury concentrations in sediment are not particularly elevated. River impoundments can be mercury methylation hot spots (Bodaly et al. 2004), due to biogeochemical effects of the inundation of

fresh organic matter during reservoir creation, as well as water level fluctuations. However, the Monterey Dam was installed in 1855 and is not actively managed to control water levels, such that the specific conditions associated with elevated mercury methylation potential are not present. Additionally, sediment-associated mercury may be much less bioavailable to methylating microorganisms than aqueous-phase mercury originating from upstream sources (Orihel et al., 2007; Southworth et al., 2002). Thus, the observation of relatively low methylmercury concentrations in sediment, despite elevated total mercury concentrations in some samples, is consistent with site characteristics and factors known to influence mercury methylation potential. The fish tissue mercury concentrations estimated here will inform the human health and ecological risk analyses for Rock River sediments.

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Appendix G
Equilibrium Sediment Benchmark (ESB) Methods and Results (provided by Exponent)

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APPENDIX G

Equilibrium Sediment Benchmark (ESB) Methods and Results for March 2016 Sediment Samples

Rock River
Janesville, Wisconsin
GM Janesville Assembly Plant

ESB Methods and Results

1.0 ESB Background

U.S. EPA (2003) published Equilibrium Sediment Benchmarks (ESBs) for polycyclic aromatic hydrocarbon (PAH) mixtures and developed a site-specific ESB approach (U.S. EPA 2012) that can be used to estimate the bioavailability and toxicity of sediment-associated PAHs to benthic (bottom-dwelling) aquatic organisms. To develop the ESBs, EPA used a data set on the acute toxicity of PAHs in water-only exposures to estimate a final chronic value (FCV) of 2.24 μmol PAH/g lipid, which is expected to be protective of 95% of the species tested (U.S. EPA 2003, Di Toro and McGrath 2000, Di Toro et al. 2000). Under the assumptions of equilibrium partitioning, the FCV is used to estimate the corresponding critical concentrations of individual PAHs in other phases (e.g., sediment organic carbon and pore water). The ESB approach calculates a toxic unit (TU) for each PAH as the concentration of the PAH in the site sediment (or pore water) divided by the FCV for that PAH. If the sum of the TUs for the individual PAHs (sum-TU) in the sediment or pore water is ≤ 1.0, the concentration of the mixture of PAHs in the sediment is considered to be protective of benthic organisms from chronic effects. If the sum-TU is ≥ 1.0, sensitive benthic organisms may be unacceptably affected and additional assessment may be required.

Previous studies have demonstrated that ESBs are useful in identifying PAH concentrations in sediment samples that are not likely to be toxic to invertebrates (Kane Driscoll et al. 2003, 2004; Kreitinger et al. 2007). However, U.S. EPA recognizes that a comparison of concentrations of PAHs in bulk sediment to FCVs as described above may be overprotective at some sites if the characteristics of the sediment or of the PAHs reduce the partitioning of PAHs into pore water, thereby reducing bioavailability and toxicity. For example, several studies have demonstrated that partitioning of PAHs cannot always be explained by standard models of equilibrium partitioning to sediment organic carbon (McGroddy and Farrington 1995, Maruya et al. 1996). Additional studies suggest that PAHs that are occluded in or partitioned to forms of pyrogenic carbon are not available for partitioning (Gustafsson et al. 1997, Buchelli and Gustafsson 2000, Accardi-Dey and Gschwend 2002). The presence of pyrogenic carbonaceous particles in sediment (collectively termed black carbon) has been shown to limit bioaccumulation of PAHs in sediment by benthic invertebrates (Vinturella et al. 2004, Rust et al. 2004), which is likely to result in reduced toxicity.

The EPA bioavailability procedure assumes that the bioavailable concentration in sediment can be reasonably measured or estimated from the "freely-dissolved" chemical in pore water (U.S. EPA 2012). The freely dissolved concentration of PAHs in pore water can be estimated using two models. The one-phase model assumes that PAHs are associated with the fraction of total organic carbon (f_{OC}) in sediment, and no distinction is made concerning the types of organic carbon present in the sediment. The two-phase model assumes that PAHs are associated with two types of organic carbon including the fraction of pyrogenic carbon referred to as black carbon (f_{BC}) in sediment and the fraction of non-pyrogenic organic carbon (f_{NPOC}), which includes "natural" organic carbon, such as plant material. The affinity of PAHs for black carbon is much greater than for non-pyrogenic carbon, and this difference in affinity is accounted for in

the two-phase model. A third approach to calculating sum-TUs is the pore water method, which is used to directly measure PAH concentrations in pore water. Pore water can be generated in several ways, including centrifugation of sediments and the use of passive samplers (U.S. EPA 2012).[1]

U.S. EPA (2003, 2012) defines total PAHs as comprising, at a minimum, the 34 PAHs that were measured in the EPA Environmental Monitoring and Assessment Program (U.S. EPA 1996). This definition is used because few databases are available that have measured a greater number of PAHs and because the use of fewer PAHs could underestimate the total toxicity of the PAH mixture.

1.1 One-Phase Model for Calculating Sum-TU

In this approach, a one-phase model is used to estimate the freely dissolved concentrations of each PAH in pore water using the following relationship:

$$\frac{C_S}{C_W} = f_{OC} \times K_{OC}$$

where:

C_S = concentration of each PAH in sediment (μg/kg dry wt)

C_W = concentration of truly dissolved PAH in pore water (μg/L)

f_{OC} = weight fraction of total organic carbon (TOC) (kg organic carbon/ kg dry wt)

K_{OC} = organic carbon-water partition coefficient (L/kg).

The equation is rearranged and used to solve for C_W.

$$C_W = \frac{C_S}{f_{OC} \times K_{OC}}$$

C_W for each PAH is divided by its corresponding FCV (from U.S. EPA 2003) to calculate a toxic unit.

[1] The March 2016 data set contained data sufficient to run the one-phase and two-phase models, but not the pore-water ESB approach.

1.2 Two-Phase Model for Calculating Sum-TU

In this approach, a two-phase model is used to estimate the freely dissolved concentrations of each PAH in pore water using the following relationship:

$$\frac{C_S}{C_W} = (f_{NPOC} \times K_{OC}) + (f_{BC} \times K_{BC} \times C_W^{n-1})$$

where:

C_S	=	concentration of each PAH in sediment (µg/kg dry wt)
C_W	=	concentration of truly dissolved PAH in pore water (µg/L)
f_{NPOC}	=	weight fraction of non-pyrogenic organic carbon in sediment (kg non-pyrogenic organic carbon/kg dry wt, calculated from the difference between TOC and black carbon)
K_{OC}	=	organic carbon to pore water distribution coefficient (L/kg)
f_{BC}	=	weight fraction of black carbon in sediment (kg black carbon/kg dry wt)
K_{BC}	=	black carbon to pore water partition coefficient (L/kg)
n	=	Freundlich exponent, which accounts for nonlinear sorption behavior (n=0.6) (Accardi-Dey and Gschwend 2002).

An iterative approach is used to solve for C_W.

$$C_W = \frac{C_S}{(f_{OC} \times K_{OC}) + (f_{BC} \times K_{BC} \times C_W^{n-1})}$$

C_W for each PAH is divided by its corresponding FCV to calculate a toxic unit.

Because black carbon distribution coefficients, K_{BC}, were not available for all 34 PAHs used in the ESB approach, a regression relationship was used to develop these values (Kane Driscoll and Burgess 2007, U.S. EPA 2012).

In both models, the estimated pore water concentration of each PAH, C_W, is compared to the available limit of water solubility for that PAH. If C_W is less than the limit of water solubility, then C_W is divided by the corresponding FCV to calculate a toxic unit for that PAH. If C_W exceeds the available limit of water solubility, then the limit of water solubility is divided by the corresponding FCV to calculate a toxic unit for that PAH. According to EPA guidance (2012), if the sum-TU for 34 PAHs is ≤ 1.0, the concentration of the mixture of PAHs in the sediment is considered to be protective of benthic organisms from chronic effects, and no further evaluation is needed.

2.0 Results and Discussion

An evaluation of the March 2016 sediment data was performed using the ESB method to estimate whether the sediment samples would be predicted to be toxic based on the sediment

PAH concentrations in each sample. Data representing the sediment surface (top six inches) were used in the ESB models, because this zone is the area of most biological activity; deeper sediment zones have considerably less biological activity due to presumed anoxic conditions. For each of the 2016 surface sediment samples, results for 34 individual PAH results, TOC, and black carbon were reported. The samples were located upstream and downstream of the stormwater discharge location for the GM Janesville Assembly Plant (Figure 1). These data were validated by GHD. All samples contained detectable concentrations of 34 PAHs, TOC, and black carbon (Table 1). No field duplicates were taken on the surface sediment samples due to insufficient sediment sample volume to accommodate all primary sample analyses and duplicate analyses.

The results of the ESB models are presented in Table 2. The one-phase model, which accounts for adsorption of PAHs only to TOC, resulted in sum-TUs greater than 1.0 for four of the eight sediment samples (Table 2). These sediment samples are SS-4, SS-5, SS-6, and SS-7, which are located downstream of the stormwater discharge location (Figure 1). The sum-TUs for these four samples ranged from 1.2 (SS-7) to 2.3 (SS-6). Using the two-phase model, which accounts for adsorption of PAHs to both TOC and black carbon, calculated sum-TUs were less than 1.0 for all eight sediment samples (Table 2).

Studies show that the one-phase model overestimates toxicity for some sediment samples (i.e., identifies samples with a sum-TU>1.0 as toxic when they are not) (Kane Driscoll and Burgess 2007, Hawthorne et al. 2007) but performs well at identifying samples that are not toxic samples (i.e., all samples with a sum-TU<1.0 are not toxic) (see Figure 2, McDonough et al. 2010). McDonough et al. (2010) compared the three ESB approaches (one-phase, two-phase, and pore water) using a large multi-site data set comprised of 192 sediment samples from 12 sites around the U.S. The sediment samples were matched pairs of sediment chemistry and corresponding toxicity test results with *Hyalella azteca*.[2] As illustrated in Figure 2, most samples with a sum-TU $\leq$ 7.0 based on the one-phase model were not toxic in sediment toxicity tests with *H. azteca*. These results indicate that concentrations of PAHs in samples collected for the current study would not be toxic to *H. azteca*, since sum-TUs based on the one-phase model are less than 7.0 (Table 2). Further, although McDonough et al. (2010) found that the two-phase model may incorrectly identify toxic samples as nontoxic (Figure 3), their data indicates that the two-phase model is good at predicting when a toxic sample is toxic (e.g., identifies fewer samples as toxic that are actually nontoxic; Figure 3). Therefore, results from the two-phase model indicate that concentrations of PAHs in samples collected for the current study would not be toxic to *H. azteca*, since the sum-TUs based on the two-phase model are less than 1.0 (Table 2). Thus, taken together, the one-phase and two-phase models are useful for initial sediment investigations and can be used to balance the potential bias in the one- and two-phase models.

Future evaluations of sediment toxicity, if needed, should consider directly measuring concentrations of PAHs in pore water using passive samplers, which has been shown to be a better predictor of sediment PAH toxicity than concentrations of PAHs predicted using the one-phase and two-phase ESB models (McDonough et al. 2010). As shown in Figure 4, the pore

[2] *H. azteca* is a freshwater amphipod crustacean commonly used in sediment toxicity testing to assess risk from PAHs and other contaminants in sediment at contaminated sites, including many in Wisconsin. *H. azteca* is considered more sensitive to sediment contaminants than other taxa such as chironomid (midge) larva is therefore an environmentally conservative indicator.

water method correctly identified 100% of the toxic samples as toxic and 71% of the nontoxic samples as nontoxic in the data set presented by McDonough et al. (2010). Thus, the pore water method is a more accurate predictor of toxicity to benthic invertebrates.

3.0 References

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Figure 1. Sediment sample locations in the Rock River, Janesville, Wisconsin

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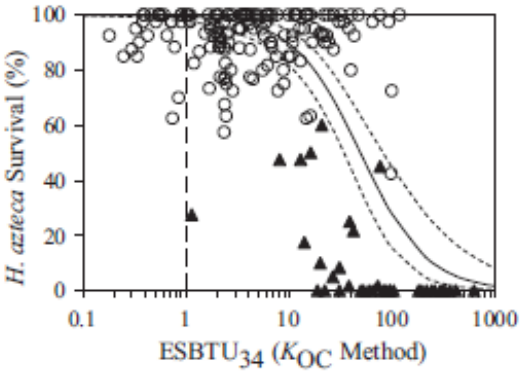

Figure 2. Survival of a benthic organism (*H. azteca*) compared to the one-phase ESB sum-TUs calculated from bulk sediment and TOC measurements. Closed triangles are toxic samples; open circles are nontoxic samples. Hatched vertical line denotes the ESB sum-TU criterion of 1.0. A binary logistic regression and 95% confidence intervals are shown. This figure shows that the one-phase ESB model is sensitive and good at predicting when a toxic sample is toxic but not good at predicting when a nontoxic sample may be nontoxic. Figure was taken from McDonough et al. (2010).

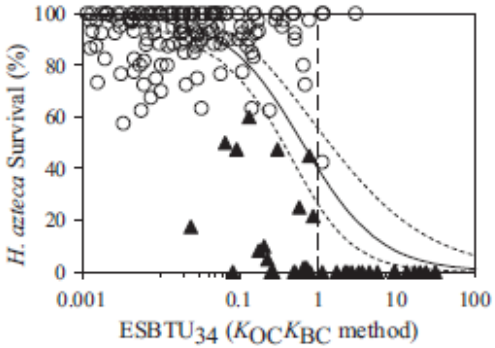

Figure 3. Survival of *H.azteca* compared to the two-phase ESB sum-TUs calculated from bulk sediment and TOC and black carbon measurements. Closed triangles are toxic samples; open circles are nontoxic samples. Hatched vertical line denotes the ESB sum-TU criterion of 1.0. A binary logistic regression and 95% confidence intervals are shown. This figure shows that the two-phase ESB model is good at predicting when a nontoxic sample is nontoxic but not always good at predicting when a toxic sample is toxic. Figure was taken from McDonough et al. (2010).

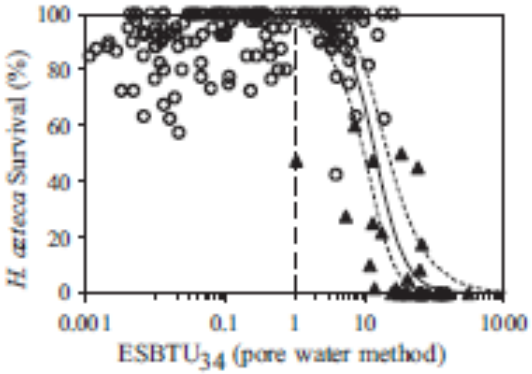

Figure 4. Survival of *H. azteca* compared to the pore water ESB sum-TUs calculated from pore water generated by solid-phase microextraction (SPME). Closed triangles are toxic samples; open circles are nontoxic samples. Hatched vertical line denotes the ESB sum-TU criterion of 1.0. A binary logistic regression and 95% confidence intervals are shown. This figure shows that the pore water ESB model is good at predicting when a toxic sample is toxic and better at predicting when a nontoxic sample is nontoxic than the one- or two-phase models. Figure was taken from McDonough et al. (2010).

Table 1. PAH, TOC, and black carbon results for the surface sediment samples, Rock River, Janesville, Wisconsin

Station: / Sample ID:	SS-1 SE-031016-JN-021~0	SS-2 SE-031016-JN-014~0	SS-3 SE-031016-JN-018~0	SS-4 SE-030916-JN-007~0	SS-5 SE-031016-JN-011~0	SS-6 SE-030916-JN-001~0	SS-7 SE-030916-JN-004~0	SS-9 SE-031016-JN-024~0
PAH (µg/kg)								
Acenaphthene	40.8	24.8	124	512	994	381	237	413
Acenaphthylene	87.3	89.1	71	277	131	131	168	144
Anthracene	178	106	321	1100	2160	924	995	968
Benzo(a)anthracene	396	212	570	1470	3760	1410	1960	1860
Benzo(a)pyrene	440	251	530	1210	3510	1080	1730	1610
Benzo(b)fluoranthene	335	200	488	1180	2990	1360	1780	1680
Benzo(e)pyrene	258	158	367	981	2210	926	1300	1210
Benzo(g,h,i)perylene	240	152	313	707	1870	708	1100	1080
Benzo(j)fluoranthene/Benzo(k)fluoranthene	349	196	442	1100	3140	970	1480	1380
C1-Benzo(a)anthracenes/chrysenes	169	149	622	3470	1730	1730	2500	2180
C1-Fluoranthenes/Pyrenes	356	224	860	3800	3190	2630	3550	3320
C1-Fluorenes	27	23.9	138	1270	392	960	1110	893
C1-Naphthalenes	18.9	22.6	180	4110	897	1220	805	204
C1-Phenanthrenes/Anthracenes	218	181	992	6580	2980	6150	4980	4900
C2-Benzo(a)anthracenes/chrysenes	73.7	96.1	552	3760	1210	2480	2650	2550
C2-Fluorenes	32.3	51.5	406	4270	904	3160	3850	2660
C2-Naphthalenes	40.8	53.9	749	7490	1400	3590	1760	2420
C2-Phenanthrenes/Anthracenes	111	174	1710	14000	3360	10600	11000	8950
C3-Benzo(a)anthracenes/chrysenes	34.7	64.1	426	2890	911	1990	2040	1940
C3-Fluorenes	58.4	92.1	665	7940	1850	4500	6360	4780
C3-Naphthalenes	38.6	51.5	826	7620	1380	4110	3410	3700
C3-Phenanthrenes/Anthracenes	56.9	135	1730	15700	2990	9080	11900	9450
C4-Benzo(a)anthracenes/chrysenes	25.4	43.8	324	2080	540	1160	1780	1440
C4-Naphthalenes	22.8	58.9	503	6920	1380	4390	3950	3880
C4-Phenanthrenes/Anthracenes	32.7	81.6	1010	8690	1890	4740	6170	6060

Table 1 (cont.)

Station: / Sample ID:	SS-1 SE-031016-JN-021~0	SS-2 SE-031016-JN-014~0	SS-3 SE-031016-JN-018~0	SS-4 SE-030916-JN-007~0	SS-5 SE-031016-JN-011~0	SS-6 SE-030916-JN-001~0	SS-7 SE-030916-JN-004~0	SS-9 SE-031016-JN-024~0
Chrysene/Triphenylene	433	252	761	2760	4220	2370	3060	2820
Dibenz(a,h)anthracene	66.7	44.7	92.9	222	572	195	292	258
Fluoranthene	879	445	1250	3200	9630	4220	4930	4790
Fluorene	51.8	28.9	136	876	1310	837	506	596
Indeno(1,2,3-cd)pyrene	227	141	295	637	1810	612	951	924
Naphthalene	20.3	23.6	332	1870	1230	489	370	240
Perylene	201	280	221	402	1060	575	681	684
Phenanthrene	478	309	1090	3940	9090	5670	2660	4780
Pyrene	756	403	1130	3290	7370	3240	4450	4180
TOC (mg/kg)	46300	71900	46100	80700	78800	53500	109000	131000
Black carbon (mg/kg)	21000	13600	11400	27900	9240	12100	16100	9200

Notes:
PAH—Polycyclic aromatic hydrocarbon
TOC—Total organic carbon

Table 2. The results of the one-phase and two-phase ESB Models with March 2016 Rock River sediment samples

Sample ID	Total 34-PAHs in Sediment (µg/Kg)	TOC (%)	Black Carbon (%)	Sum ESB TUs One-Phase Sediment Model (TOC)	Sum ESB TUs Two-Phase Sediment Model (TOC, BC)
SS-1	6,753	4.6	2.1	0.2	0.002
SS-2	4,819	7.2	1.4	0.1	0.002
SS-3	20,227	4.6	1.1	0.6	0.02
SS-4	126,324	8.1	2.8	**2.2**	0.1
SS-5	84,061	7.9	0.9	**1.5**	0.3
SS-6	88,588	5.4	1.2	**2.3**	0.2
SS-7	96,465	10.9	1.6	**1.2**	0.2
SS-9	88,944	13.1	0.9	0.9	0.2

Notes:
ESB—Equilibrium sediment benchmark
TU—Toxic unit
TOC—Total organic carbon
BC—Black carbon
Bold TUs are greater than 1.0

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