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Risk-Based Disposal Work Plan for PCB-Impacted Material (Former General Motors Saginaw Malleable Iron Facility)

Revitalizing Auto Communities Environmental Response Trust
Malleable Iron Industrial Land
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Section 1.0 Introduction

On behalf of Revitalizing Auto Communities Environmental Response Trust (RACER), Conestoga-Rovers & Associates, Inc. (CRA) have prepared this Risk-Based Disposal Work Plan for polychlorinated biphenyl (PCB) Impacted Material (Work Plan) found in the concrete floor slab and in soil beneath the concrete floor slab in the I27.7 Manhole Area of the former Saginaw Malleable Iron (SMI) Plant at the RACER Malleable Iron Industrial Land (Site) in Saginaw, Michigan. The Site has the United States Environmental Protection Agency (U.S. EPA) identification number MID 005 356 698.

This Work Plan was prepared in accordance with Title 40 of the Code of Federal Regulations, Part 761 (40 CFR 761) as a notification to the U.S. EPA of RACER's intent to implement a cleanup of the Site related PCB contamination under the risk based option set forth under 40 CFR 761.61(c). The proposed remedial activities include; removal and off-Site disposal of portions of the concrete floor slab with PCB concentrations greater than 10 milligrams per kilogram (mg/kg), removal and off-Site disposal of soil beneath the concrete floor slab in the I27.7 Manhole Area with PCB concentrations greater than 100 mg/kg to a pre-determined depth of 5 feet based on existing data or to the water table, whichever is shallower, bulkhead existing 10-inch sewer that transects the proposed I27.7 Manhole Area excavation, backfill of the soil excavation with clean backfill, replacement of all excavated concrete with 6 inches of concrete, placement of a 1-foot soil cover over the entire concrete floor slab, establish vegetation on the soil cover, and management of remaining concentrations by institutional controls.

The remainder of the Work Plan provides the following information:

- Nature of contamination including kinds of materials contaminated
- Procedures used to sample contaminated and adjacent areas and a site map showing PCB concentrations measured in all pre-cleanup characterization samples
- Location and extent of the PCB-impacted area
- Remedial plan for PCB impacts at the site including approach, schedule, and disposal facilities
- Written Certification as required by 40 CFR 761.61(a)(3)(E)

1.1 Site Location

The Site is located at 77 West Center Street in Saginaw, Michigan, consisting of approximately 150 acres along the Saginaw River and adjacent to the southern boundary of the City of

Saginaw. The former SMI Plant occupied an area of approximately 1 million square feet (23 acres), as shown on Figure 1.1.

1.2 Site History

In 1907 General Motors Corporation (GMC) initiated manufacturing operations consisting of casting and heat treating iron. The SMI Plant had historically used PCBs and PCB items in several applications including transformers, capacitors, switch gear, hydraulic systems, kiln seals, and fluorescent light ballasts. Releases of PCBs to the concrete occurred during those standard Plant operations.

Decommissioning and demolition of the SMI Plant was initiated in 2006 and was completed in December 2010. The concrete floor slab is all that remains following the demolition activities.

The Site is currently owned by RACER Properties LLC and operated by RACER. RACER was established and assumed the rights, title, and interest of Motors Liquidation Company in and to the Property pursuant to an Environmental Response Trust Consent Decree and Settlement Agreement (Settlement Agreement) entered by the U.S. Bankruptcy Court for the Southern District of New York on March 29, 2011, in the case of In re Motors Liquidation Company et al., Debtors, Case No. 09-50026 (REG), among the Debtors, the United States of America, certain states including the State of Michigan, the Saint Regis Mohawk Tribe, and EPLET, LLC, (not individually but solely in its representative capacity as Administrative Trustee of the Trust). RACER's objective is to implement remediation activities and position for redevelopment properties owned by the former GMC before its 2009 bankruptcy and not included in the bankruptcy sale to General Motors LLC.

1.3 Project Overview

The Site is currently the subject of a Consent Judgment executed between the Michigan Department of Environmental Quality (MDEQ), the Michigan Attorney General's (MAG's) Office, GMC, and Waste Management Inc. (WMI), and entered by the State of Michigan Circuit Court for Saginaw County on March 16, 1998, Case No. 98-22686-CE-2 (Consent Judgment). The nature and extent of environmental impacts at the Site have been evaluated through multiple investigations and is summarized in the Remedial Investigation (RI) Report (BBL, 2000), which was approved by MDEQ on July 5, 2001.

Following the approval of the RI report a Feasibility Study, including Human Health Evaluation Report and Ecological Risk Assessment Report (BBL, 2003) was completed and approved by MDEQ on November 18, 2003. In 2008 a Remedial Action Plan (RAP) (Arcadis) was completed and approved with conditions by MDEQ on February 27, 2009.

The following is a list of areas previously investigated with remedial actions that are completed or on-going at the Site:

- LNAPL Assessment and Remediation Area (on-going)
- Quench Pit Area (on-going)
- Former Underground Storage Tank (UST) #7 Area (completed)
- I27.7 Manhole Area (completed and on-going)
- Melting Department Area (completed)
- Previous Metal Feedstock Area (completed)
- Former CTC Parking Lot East of Plant (completed)
- Parking Lot North of Buffer Basin (completed)
- Former Railyard Area (completed)
- Queen Street Dump Area (completed)
- Saginaw River Boundary (completed)
- Type III Landfills (completed)
- Sewers (completed)

1.4 Site Sources and Characterization

The following section presents previous investigations and sample results related to PCBs in the concrete floor slab and in soil beneath the concrete floor slab.

1.4.1 Melting Department Area

Historical uses of PCBs in the former Melting Department Area portion of the SMI Plant included but are not limited to hydraulic oils, capacitors, and transformers. PCB use in the former Melting Department Area for the operation of induction and melting furnaces spanned over 5 years until PCB-containing hydraulic oil was replaced with non-PCB hydraulic oil in the early to mid-1970s. Figure 1.1 presents the location of the Former Melting Department Area.

GMC (previous owner) conducted a PCB investigation and remediation in the Melting Department Area between 1993 and 1996. The investigation involved identifying the extent of PCBs with bulk and wipe samples collected in each electrical room associated with the five furnaces. It is important to note that a portion of the Melting Department Area was located in the former basement of the former SMI Plant. As a result of the investigation, in areas where PCB concentrations from the lower depth intervals (i.e., concrete adjacent to underlying soil)

posed a potential migration threat, PCBs were excavated (soil and concrete). The areas where no potential migration threat was identified or where the exposure was considered low due to limited accessibility, were cleaned (removed bulk solids from floor, washed walls, and floor with high pressure water and low foaming non-ionic liquid alkaline cleaner), rinsed, and encapsulated. Confirmatory wipe, core, and soil samples were collected between December 1995 and December 1996. In a portion of the basement PCBs in concrete were left in place because of the risk to the structural integrity of the building if the PCB-impacted concrete was removed. PCBs in concrete were left in place and the basement was backfilled to the elevation of the main floor to contain the area. There were five separate areas (numbered 1 through 5) within the Melting Department Area that were comprised of the following components: capacitor room, control room, generator room, transformer room, hydraulic room, buss tunnel to pit, pit, and hall. The majority of PCBs in concrete left in place were located in the basement level (buss tunnel, buss tunnel to pit, and pit) within areas one and two. Seven surficial wall samples exhibiting concentrations ranging from 12 to 500 mg/kg and seven surficial floor samples exhibiting concentrations ranging from 14 mg/kg to 1,700 mg/kg were left in place within an approximate area of 120 feet by 60 feet. In addition three main floor concrete samples in Area 1 were left in place exhibiting concentrations ranging from 11 to 18 mg/kg. Figure 1.2 presents PCB results of the surficial concrete samples above 10 mg/kg in the Melting Department Area, as well as, the location of soil/concrete left in place with concentrations of PCBs above 10 mg/kg in the basement area of the Melting Department Area.

As part of the Melting Department Area remediation, hydraulic room #2 was investigated and found to be impacted with PCBs in concrete and soil. The concrete floor was removed and replaced and soil was removed to a depth of 5 feet and replaced with clean fill. Two verification samples were collected following the concrete and soil removal. One of the two verification results collected at a depth of 5 feet was above 10 mg/kg at 41 mg/kg (S1188). See Figure 1.3 for the location of soil verification sample S1188.

A report summarizing the work completed in the Melting Department Area entitled, "Melting Department Area Investigation and Remediation Report" was submitted to the MDEQ and U.S. EPA in April 1997.

1.4.2 I27.7 Manhole Area

In 1971, a transformer leaked oil in the I27.7 Manhole Area when it was dropped during installation. The accident resulted in the loss of transformer oils onto the plant floor. Based on discussions with plant personnel who were present at that time, the oil collected in a small area of exposed soil around a column where no concrete was present. The exposed soil was covered with concrete in 1972.

Two concrete cores were completed in this area on October 23, 1997. The results of the concrete analysis were non-detect (0.33 mg/kg) with the exception of the bottom portion of one of the concrete cores which reported total PCBs at 1.9 mg/kg. One sample was collected from the soil beneath each concrete core. The soil samples had detectable levels of total PCBs of 5.7 and 540 mg/kg. These results are consistent with the available information indicating that the concrete was placed after the spill.

A total of five soil borings were completed on January 16, 1998 and an additional six borings were advanced on April 14 and 15, 1998, in the I27.7 Manhole Area to assist in delineating the extent of PCB-impacted soil. Soil borings were advanced to depths ranging from 6.5 feet below surface (FBS) to 15 FBS.

PCB impacts in soil were further delineated horizontally and vertically to 1 mg/kg in the I27.7 Manhole Area between October 2013 and June 2014 through completion of 52 borings. Soil borings were advanced from 3 to 16 FBS, with an approximate spacing of 10 feet.

The results of the historical and more recent soil sampling are presented on Figure 1.3.

1.4.3 Plant Related Activity Investigations

Concrete floor slab samples were collected and analyzed for PCBs in various locations at the Plant between 1998 and 2003 to provide adequate and relevant due care information prior to executing various Plant activities. Plant activities included installing, replacing, and moving machinery as a part of manufacturing operations. A total of 515 concrete samples were analyzed for PCBs between 1998 and 2003 representing 337 sample locations. The following summarized the results:

- >50 mg/kg PCBs – 23 samples results (maximum concentration 106 mg/kg)
- >10 mg/kg and ≤50 mg/kg – 21 samples results
- ≤10 mg/kg – 471 sample results including 182 non-detects

The results for the plant related activity investigations that had concentrations above 10 mg/kg PCBs are presented on Figure 1.2.

1.4.4 Demolition and Additional Delineation Investigations

Plant decommissioning and demolition activities were initiated in 2006 and completed in December 2010. A Facility Environmental Assessment (FEA) was conducted between December 2006 and January 2007 and identified PCBs in the concrete floor slab. The FEA

included sampling areas of environmental interest including stained concrete floors. An additional sampling event was conducted between June 12 and June 25, 2007 to further investigate the PCB detections from the FEA. Various media were sampled and analyzed for PCBs including samples from walls and floors.

Various iterations of concrete delineation were conducted between February 2008 and October 2013 as the scope for what concrete to be removed was evaluated. Twelve samples contained PCB concentrations greater than 50 mg/kg. Thirty-seven samples contained PCB concentrations greater than 10 mg/kg and less than or equal to 50 mg/kg. Two hundred and thirty-three samples contained concentrations less than or equal to 10 mg/kg, including three samples reported as non-detect.

The results for the FEA samples collected of the concrete floor and the additional concrete delineation samples with concentrations above 10 mg/kg PCBs are presented on Figure 1.2.

During demolition, all discharges to the City of Saginaw sewer line that crosses the property were bulkheaded to eliminate any potential discharge to the City sewer. A process is in place to bulkhead the City of Saginaw sewer line prior to the line coming onto the Site and again prior to the line leaving the Site. The isolation of this sewer is expected to be completed in the summer of 2015. Figure 1.4 presents an overall figure of the former SMI Plant sewers and the locations of the bulkheads that were installed.

1.4.5 Investigation Summary

In summary, PCB concentrations in concrete greater than 50 mg/kg were reported in 35 samples. PCB concentrations in concrete greater than 10 mg/kg and less than or equal to 50 mg/kg were reported in 58 samples. Seven hundred and four samples contained concentrations of PCBs in concrete less than or equal to 10 mg/kg, including 185 samples reported as non-detect.

Figure 1.2 presents data boxes summarizing the locations where PCBs in concrete were reported greater than or equal to 10 mg/kg.

PCBs in soil in the I27.7 Manhole Area have been delineated to 1 mg/kg as presented on Figure 1.3.

The existing sampling results for the concrete floor slab and for the soil in the I27.7 Manhole Area were not collected in accordance with 40 Code of Federal Regulations (CFR) 761.265, however, sufficient data exists to complete the proposed remedial activities from a risk perspective. No further characterization of PCBs in concrete or soil is proposed for the purpose

of conducting the proposed remedial activities, with the exception of characterizing the concrete for disposal above the proposed soil excavation in the I27.7 Manhole Area as detailed in Section 2.1.6.1 and confirmation sampling for PCBs in soil from the floor of the I27.7 Manhole Area excavation at the depth the excavation will stop as detailed in Section 2.1.6.3.

1.5 Applicable Regulations

The proposed remedial activities involve excavation and off-Site disposal of PCB-impacted concrete and soil, as well as, import of fill material. This section describes regulations as they apply to the proposed remedial activities and include regulations related to waste characterization and cleanup.

1.5.1 Toxic Substances Control Act Evaluation

Based on the information presented in Section 1.2, the dates which PCBs were released onto the concrete floor slab during standard operations at the Plant are unknown and according to 40 CFR 761.50(b)(3)(ii)(B) require disposal in accordance with 761.61.

Based on the information presented in Section 1.4, PCBs were released into soil in the I27.7 Manhole Area prior to April 18, 1978 and according to 40 CFR 761.50(b)(3)(i)(A) are presumed not to present an unreasonable risk of injury to health or the environment unless the U.S. EPA Regional Administrator makes a finding that that such a risk exists. PCBs are present at significant levels in soils in the I27.7 Manhole Area.

Based on review of the regulations including 40 CFR 761.50(b)(3)(i) and the age of the release to soil, the proposed remedial activities for soil may not need to comply with 40 CFR 761.61 (although the disposal of any waste material does) unless the U.S. EPA Regional Administrator makes a finding that an unreasonable risk exists. Regardless of whether the U.S. EPA Regional Administrator makes a finding that an unreasonable risk exists, the proposal is to excavate impacted soil with PCBs greater than 100 mg/kg in the I27.7 Manhole Area.

Any excavated soil or concrete material with pre-excavation PCB concentrations greater than 50 mg/kg will be disposed at a Toxic Substances Control Act (TSCA) permitted facility. The disposal facility for soils and concrete with PCB concentrations below 50 mg/kg is not required to be a TSCA permitted facility. The proposed disposal facilities are presented in Section 2.1.7.

The proposed remedial activities will address any risk posed by PCBs at the Site and will result in conditions that are protective of human health and the environment.

The baseline cleanup levels for the proposed remedial activities are two cleanup levels defined under 40 CFR 761.3 which state,

Low Occupancy - Any area where PCB remediation waste has been disposed of on-site and where occupancy for any individual not wearing dermal and respiratory protection for a calendar year is: …less than 335 hours (an average of 6.7 hours per week) for bulk PCB remediation waste.

High Occupancy – Any area where PCB remediation waste has been disposed of on-site and where occupancy for any individual not wearing dermal and respiratory protection for a calendar year is: 840 hours or more (an average of 16.8 hours or more per week) for non-porous surfaces and 335 hours or more (an average of 6.7 hours or more per week) for bulk PCB remediation waste.

The Low Occupancy Area clean-up standards are defined in 40 CFR 761.61(a)(4)(i)(B) as,

(1) The cleanup level for bulk PCB remediation waste in low occupancy areas is ≤25 ppm …
(2) Bulk PCB remediation wastes may remain at a cleanup site at concentrations >25 ppm and ≤50 ppm if the site is secured by a fence and marked with a sign including the ML mark.
(3) Bulk PCB remediation wastes may remain at a cleanup site at concentrations >25 ppm and ≤100 ppm if the site is covered with a cap meeting the requirements of paragraphs (a)(7) and (a)(8) of this section.

The High Occupancy Area clean-up standards are defined in 40 CFR 761.61(a)(4)(i)(A) as,

The cleanup level for bulk PCB remediation waste in high occupancy areas is ≤1 ppm without further conditions. High occupancy areas where bulk PCB remediation waste remains at concentrations >1ppm and ≤10 ppm shall be covered with a cap meeting the requirements of paragraphs (a)(7) and (a)(8) of this section.

1.6 Proposed End-Use

To identify the potential risks associated with the Site, the end-use must be contemplated to identify potential exposures. RACER plans to sell the property for non-residential use and passive recreational use is being considered.

1.7 Site Geology

Overburden at the Site is approximately 86 feet thick and is comprised generally of (in descending order): fill materials, glaciolacustrine silts and clays, a sand unit which becomes

coarser with depth, glaciolacustrine silty clay, and glacial till. The Site lies over bedrock units in the central part of the Michigan basin, the shallowest of which consists of Pennsylvanian age bedrock of the Grand River and Saginaw Formations

Soil is proposed to be excavated in the I27.7 Manhole Area. As presented in Section 1.4.2, 52 borings were completed in the I27.7 Manhole Area to further delineate PCB impacts. Borings were advanced to a maximum of 15 FBS. In general, the borings identified that there was a layer of foundry sand underlain by a layer of clay.

1.8 Site Hydrogeology

Shallow groundwater exists in an unconfined condition in the fill or silty clay units and the depth to groundwater varies from 2 to 10 FBS. The fill/sand units, which pinch out toward the west, act as primary pathways for groundwater flow. The underlying silty clay unit acts as a local flow boundary or lower confining unit. The bedrock aquifer is confined by the continuous lower silty clay. Groundwater flow is controlled on a Regional scale by the Saginaw River, which acts as a discharge point for overburden water.

Section 2.0 Proposed Remedial Activity

The proposed remedial activities include; removal and off-Site disposal of portions of the concrete floor slab with PCB concentrations greater than 10 mg/kg, removal and off-Site disposal of soil beneath the concrete floor slab in the I27.7 Manhole Area with PCB concentrations greater than 100 mg/kg to a pre-determined depth of 5 feet based on existing data or to the water table, whichever is shallower, bulkhead existing 10-inch sewer that transects the proposed I27.7 Manhole Area excavation, backfill of the soil excavation with clean backfill, replacement of all excavated concrete with 6 inches of concrete, placement of a 1-foot soil cover over the entire concrete floor slab, establish vegetation on the soil cover, and management of remaining concentrations by institutional controls.

2.1 Scope of Work

The following sections describe the activities related to on-Site work to be conducted under this Work Plan:

2.1.1 Prepare Health and Safety Plan
2.1.2 Contractor Procurement
2.1.3 Pre Mobilization Activities
2.1.4 Mobilization/Site Preparation

2.1.5 Concrete Floor Slab Removal Activities
2.1.6 I27.7 Manhole Area Soil and Concrete Removal Activities
2.1.7 Transportation and Off-Site Disposal
2.1.8 Cover
2.1.9 Housekeeping
2.1.10 Legal Survey/Deed Restrictions
2.1.11 Site Restoration and Demobilization
2.1.12 Reporting/Documentation Preparation

2.1.1 Prepare Health and Safety Plan

To ensure that all on-Site personnel are properly protected from potential exposure to Site-related constituents, a Site-specific Health and Safety Plan (HASP) will be prepared by the contractor. A Site health and safety officer will complete a hazard analysis for all activities. The hazard analysis will identify the potential hazards, evaluate the level of personal protective equipment that will be used during the remedial activities, and describe the personnel decontamination procedures required to control any potential personal exposures during implementation of this Work Plan.

The HASP will be prepared and implemented consistent with Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120.

2.1.2 Contractor Procurement

A qualified, OSHA trained remedial contractor will be procured for the removal and disposal of the PCB-impacted material. The remedial contractor will be responsible for the construction and removal of all temporary facilities (including a decontamination area, staging area, and support trailers); PCB-impacted material removal, transportation, and disposal; backfilling; and Site restoration.

2.1.3 Pre-Mobilization Activities

Prior to mobilization, all areas in which removal activities are required will be marked based on previous sampling locations. In addition, applicable permits (i.e., erosion control, City of Saginaw Industrial sewer discharge permit, and flood plain) will be obtained and administration and sanitary facilities will be constructed prior to the work being initiated.

2.1.4 Mobilization/Site Preparation

Upon mobilization of the contractor to the Site, the contractor will prepare the Site by establishing security controls; designating the exclusion, contaminant reduction, and support

zones by installing a temporary orange safety fence or caution tape, with warning signs, as necessary; construction of a decontamination facility; and set-up of excavation water storage and treatment system.

2.1.4.1 Decontamination Facility

A decontamination pad will be constructed with a 20-millimeter plastic liner and plywood. It will be 20 feet by 30 feet wide and constructed to accommodate the largest piece of equipment (hydraulic excavator). The pad will be constructed by laying geotextile over an approved location at the Site and over temporary berms. Berms will be constructed with straw bales on the side and wood on the ends. The wood can be removed to allow equipment to move in and out. A sump will be constructed in the lowest part of the pad. The liner will be laid over the geotextile. Plywood will be used on top of the liner to prevent tracked equipment from damaging the liner.

When equipment is moved from areas with PCBs greater than 50 mg/kg areas with PCBs less than 50 mg/kg an additional steam pressure wash in accordance with TSCA decontamination procedures will occur. The steam pressure wash will be completed with equipment resting on plywood in the PCB area. The relatively small volume of wash water will be collected and added to the excavation water storage and treatment system.

When equipment needs to be removed from the Site or to handle clean soils, it will first be mechanically cleaned and scraped to remove all visible soil. Then, in the decontamination pad, the equipment will be pressure steam washed in accordance with TSCA decontamination procedures. The water collected will be managed in the on-Site water storage and treatment system.

2.1.4.2 Excavation Water Collection

The proposed work associated with removal of portions concrete slab will not involve storm water collection and treatment as every attempt will be made to schedule the work during a period of no rain. In the event there is a rainfall event, water that falls on areas where the soil beneath the concrete floor slab is exposed will be allowed to infiltrate. Once the soil is dry again, the replacement 6-inch concrete cover can be installed.

The proposed work associated with the removal of PCB-impacted soil in the I27.7 Manhole Area is to proceed to a predetermined depth of 5 feet or to the water table, whichever is shallowest. As the proposed remedial activities progresses to the removal of the TSCA impacted soils, a sump will be constructed in the excavation to allow for perched water or storm water to be pumped from the excavation and placed in storage. As further detailed in Section 2.1.6.2, once

the predetermined depth of 5 feet or water table is reached in the excavation, the excavation may extend deeper if water infiltrating into the excavation can be reasonably managed. As work progresses, it may be necessary to add or move the sump location for removal of water.

2.1.4.3 Water Storage and Treatment

Water removed from the excavation and decontamination areas will be pumped to one or more frac tank(s), which will be used to store water recovered from the excavation.

Water will either be treated through a temporary water treatment system for permitted discharge to the City sewer or containerized, characterized, and disposed of off Site. The temporary water treatment system will consist of a sand filter followed by a carbon vessel for polishing. The temporary treatment system will operate on gravity. Treated water will be collected in frac tank(s) and will be sampled in accordance with a City Industrial use sewer discharge permit to be obtained. Upon receipt of favorable results, treated water will be discharged to the City sewer, otherwise the water will be re-treated and re-tested until the water meets City permit discharge limits.

2.1.5 Concrete Floor Slab Removal Activities

2.1.5.1 Additional Concrete Characterization

No further characterization of PCBs in concrete is proposed to define the removal of concrete floor slab, with the exception of characterization of the concrete floor slab above the I27.7 Manhole Area for purposes of proper disposal, as detailed in Section 2.1.6.1.

2.1.5.2 PCB-Impacted Concrete Removal/Excavation

For areas of the concrete floor slab that have PCBs concentrations in concrete greater than 10 mg/kg, the proposal is targeted removal of the concrete floor slab. PCBs in the concrete floor slab have been horizontally delineated to 10 mg/kg. Figures 2.1, 2.2, 2.3, and 2.4 present the areas of proposed concrete floor slab removal. Areas of the concrete floor slab on the figures highlighted in magenta will be excavated and disposed of as TSCA (>50 parts mg/kg PCBs) waste and areas of the concrete floor slab highlighted in cyan will be excavated and disposed of as non-TSCA (<50 mg/kg PCBs) waste. The limits of each excavation will be marked in the field prior to excavation (see Section 2.1.3). No verification sampling is proposed since the removal limits were determined using the nearest samples, which are closely spaced (approximately 10 to 20 feet apart), reporting below 50 mg/kg or 10 mg/kg, as applicable. The entire thickness of concrete floor slab for each of the areas of concrete highlighted on Figures 2.1, 2.2, 2.3, and 2.4 will be disposed of.

Excavated concrete and soil will be transferred directly into haul trucks or roll off boxes that will be lined with polyethylene sheeting. The polyethylene sheeting will also be draped over the side of the roll off box/haul truck to prevent contact with the soil during transfer from the excavation.

2.1.5.3 Restoration

Areas where concrete will be excavated will be restored with 6 inches of concrete.

2.1.6 I27.7 Manhole Area Soil and Concrete Removal Activities

2.1.6.1 Additional Soil and Concrete Characterization

No further characterization of PCBs in soil is proposed to define the removal of soil in the I27.7 Manhole Area.

Characterization of the concrete floor slab above the proposed I27.7 Manhole Area is required for disposal purposes. As identified in Section 1.4.2, concrete samples were previously collected in 1997 in the I27.7 Manhole Area which reported PCBs less than 10 mg/kg. These results are consistent with the available information indicating that the concrete was placed after the spill. To confirm previous results, one concrete sample is proposed to characterize approximately 80 tons of concrete for disposal. The concrete sample will be analyzed for PCBs, TCLP Metals, and TCLP VOCs as required by the disposal facility. The location of the proposed core is biased to the highest concentration of PCBs found in soil most recently at borehole BH16-13. Additional step-out concrete cores will be completed at the locations identified on Figure 2.5 and submitted for analysis of PCBs on hold pending the results of the initial sample. If the initial sample reports PCBs greater than 10 mg/kg PCBs the additional step-out concrete cores will be analyzed. Based on the concrete floor slab sample results, the concrete will be disposed of at one of the disposal facilities identified in Section 2.1.7.

2.1.6.2 PCB-Impacted Soil Removal

For the I27.7 Manhole Area, the proposal is to remove soil with PCB impacts greater than 100 mg/kg. PCBs in soil have been horizontally and vertically delineated to 1 mg/kg in the I27.7 Manhole Area. Prior to initiating the removal of PCB-impacted soil, the concrete slab above the PCB-impacted soil will be characterized as detailed in Section 2.1.6.1.
Figure 2.5 presents the areas of proposed soil removal. The excavation of soil will be completed to a predetermined depth of 5 feet or until the water table, whichever is shallower. The excavation may extend deeper if water infiltrating into the excavation can be reasonably managed. Areas on the figure highlighted in magenta will be excavated and disposed of as TSCA (>50 mg/kg PCBs) waste. The proposed excavation of PCB-impacted soil is all expected to

be disposed of as TSCA waste. The limits of each excavation will be marked in the field prior to excavation (see Section 2.1.3).

Excavated concrete and soil will be transferred directly into haul trucks or roll off boxes that will be lined with polyethylene sheeting. The polyethylene sheeting will also be draped over the side of the roll off box/haul truck to prevent contact with the soil during transfer from the excavation.

2.1.6.3 Excavation Bottom Confirmation Soil Sampling

Confirmation sampling for PCBs in soil is proposed from the bottom of the I27.7 Manhole Area excavation at the depth the excavation is terminated. The purpose of this confirmation soil sampling is to complement the existing I27.7 Manhole Area soil boring investigation results to document the concentrations of PCBs that will remain following the excavation. The soil will be sampled in accordance with 40 CFR 761.265 and composited in accordance with 40 CFR 761.289. Figure 2.5 presents the proposed confirmation sampling for the floor of the I27.7 Manhole Area excavation.

2.1.6.4 Sewer Bulkhead

The 10-inch sewer that transects the proposed I27.7 Manhole Area excavation will be bulkheaded in accordance with the City of Saginaw recommended approach in order to reduce the potential for PCB-impacted soil to migrate. The location of the bulkhead is identified on Figure 2.5. It is noted that the sewer line into which the 10-inch sewer discharges approximately 250 feet downgradient was bulkheaded as part of the decommissioning and demolition activities.

2.1.6.5 Backfilling and Compaction

Prior to backfilling, a demarcation fabric will be placed at the bottom of the excavation to separate the impacted material and clean fill. The bottom and sides of the I27.7 Manhole Area excavation will be surveyed to document the limits of excavations. The I27.7 Manhole Area excavation will be backfilled with acceptable material obtained from on Site or a clean, inert fill obtained from off Site, and 6 inches of concrete at the ground surface. As the fill is placed into the excavation, a dozer or excavator will spread the fill in approximate 1-foot lifts and the fill will be compacted by a roller or other suitable compactor to match adjacent material.

A possible source of on-Site fill is the remaining sand from the buffer basin which was decommissioned along with the Plant between 2007 and 2010. The source of the clean fill is clay from the RACER owned Saginaw Nodular Industrial Land in Saginaw, Michigan. The proposed fill is designated as clean since the clay pile located on the Saginaw Nodular Industrial

Land was created by excavating native clay to construct the former GMC and now GM LLC Landfill (immediately north of the clay pile). If it is determined that using on-site material for fill is desirable, MDEQ will be provided with details regarding the material prior to use.

2.1.7 Transportation and Off-Site Disposal

Disposal will be required for three waste streams: PCB remediation waste containing PCBs greater than or equal to 50 mg/kg, PCB-impacted waste containing PCBs less than 50 mg/kg, and wastewater. PCB remediation waste will be disposed of in accordance with 40 CFR 761.61 PCB Remediation Waste.

PCB Remediation Waste Containing PCBs Greater Than or Equal to 50 mg/kg

This PCB remediation waste will include excavated concrete and soil containing PCBs at concentrations greater than or equal to 50 mg/kg. Prior to leaving the Site, the haul trucks and roll off boxes will be secured with tarps. Manifests will be prepared and will accompany the loads in accordance with 40 CFR 761 Subpart K PCB Waste Disposal Records and Reports.

The following disposal facility is proposed to be used to dispose of TSCA waste (PCBs greater than or equal to 50 mg/kg):

Wayne Disposal, Inc. Site #2 Landfill
49350 N. I-94 Service Drive, Belleville, MI 48111
EPA ID# MID 00072483

PCB-impacted Waste Containing PCBs Less Than 50 mg/kg

This PCB-impacted waste will include concrete containing PCBs at concentrations less than 50 mg/kg, non-liquid cleaning materials (e.g., rags), and personal protective equipment at any concentration generated during the implementation of the remedial activities. Prior to leaving the Site, the haul trucks and roll off boxes will be secured with tarps. The waste will be disposed of at a municipal landfill consistent with 40 CFR 761.61(a)(5)(v) Cleanup Wastes.

The following disposal facility is proposed to be used to dispose of non-TSCA waste (PCBs less than 50 mg/kg):

Peoples Landfill – Birch Run
4143 Rathburn Road, Birch Run, MI 48415
Permit No. 38-3406998

Wastewater

Water will be generated during decontamination and soil excavation activities. The water will be containerized in frac tank(s) and pending the volume of water generated, will either be treated as specified in Section 2.1.4.3, characterized, and discharged to the City sanitary sewer or characterized and disposed of off-Site at the following facility.

Venice Park
9356 Lennon Road, Lennon, MI 48449
EPA ID# MID 980701130

If a disposal facility is proposed for use other than the facilities listed above, details for the disposal facility will be provided to MDEQ and U.S. EPA for review and approval.

2.1.8 Soil Cover

The intent of constructing the cover is to provide a barrier from contact with the remaining PCBs in the concrete floor slab and precipitation from directly falling on the slab. The cover will also allow a future owner to more readily convert any portion of the slab (currently to be restricted to low occupancy) with PCB impacts less than 10 mg/kg to high occupancy use. The future owner could maintain the existing cover and/or install and maintain an alternate cover compliant with 40 CFR 761.61(a)(7 and 8).

A 1-foot soil cover consisting of 10 inches of acceptable fill and 2 inches of topsoil will be placed over the entire concrete floor slab. The proposed soil cover material (clay from the RACER Saginaw Nodular Industrial Land) was previously tested for permeability, sieve, liquid limit, and plasticity index parameters as specified in 40 CFR 761.61(a)(7). The results of the analysis were compared to the required limits specified in 40 CFR 761.75(b)(1)(ii) through (b)(1)(v) and summarized in Table 2.1, which indicated that most parameters met the limits. It is noted that other acceptable fill material, such as clean soils from elsewhere at the Site, may be used for the cover. MDEQ will be provided information for alternate cover material if clay from the Nodular site is not used.

The soil cover will be seeded in order to establish a vegetative cover.

2.1.9 Housekeeping

Good housekeeping practices including maintaining clean surfaces for access and haul routes and monitoring and maintenance of storm water controls will be completed daily, as needed. Trucks used for transport to disposal facilities will not be allowed in the exclusion zone, but will

be loaded adjacent to the exclusion zone. Workers will keep loading and work areas free of soil, mud and debris to avoid tracking of material. Water will be used to control dust.

2.1.10 Legal Survey/Deed Restrictions

A legal survey and description of the entire concrete floor slab, as well as sub-areas of the slab where impacts greater than 100 mg/kg remain in soil or concrete below the ground surface will be completed for the purpose of establishing deed restrictions in accordance with 40 CFR 761.61(a)(8). The deed restrictions will be completed in the form of a Declaration of Restrictive Covenant which will include the following:

- That the land has been used for PCB remediation waste disposal and is restricted to use as a low occupancy area [40 CFR 761.61(a)(8)(i)(A)(1)]
- The applicable cleanup levels left at the site inside the fence, and/or under the cap [40 CFR 761.61(a)(8) (i)(A)(3)]

Figure 2.6 presents the approximate areas where deed restrictions will be placed on the concrete slab.

2.1.11 Site Restoration and Demobilization

The contractor will remove any remaining temporary fencing, the decontamination pad, equipment, and other materials and supplies brought onto the Site for the remedial activities.

2.1.12 Reporting/Document Preparation

Upon the completion of the PCB-impacted material removal, a Summary Report will be prepared in general accordance with 40 CFR 761.61(a)(9) to present a summary of the remedial activities. The report will summarize the work completed, milestone dates, final survey information, a summary of field observations, quantities of materials removed and imported, and the certificates of disposal for the PCB Remediation Waste.

Section 3.0 PCB Remedial Activities Protective of Human Health and the Environment

3.1 Melting Department Area

For the Melting Department Area, a review of the locations with PCB concentrations remaining that are greater than 100 mg/kg was completed. The locations with PCBs remaining above 100 mg/kg are summarized below:

- Power Supply 2, specifically part of the Pit 2 and the buss tunnel to Pit 2 which are located in the former basement of the building 15 to 20 feet below the floor slab: C161A [1,700 mg/kg], C163C [130 mg/kg], C165A [710 mg/kg], C171A [350 mg/kg], C173A [230 mg/kg], C175A [500 mg/kg], C179B [1,400 mg/kg], and C179C [1,100 mg/kg]
- Power Supply 5, specifically part of the buss tunnel to Pit 5 which is located in the form basement of the building 15 to 20 feet below the floor slab: C191A (130 mg/kg)

The elevated PCB concentrations from these locations were addressed in the Melting Department Area Investigation and Remediation Report submitted to U.S. EPA. In April 1997, as a part of remediation, the basements in the Melting Department Area, which included the Pits and the buss tunnel to the Pits, were filled with flowable fill (approximately 20 feet thick) and capped with 6 inches of concrete. This remedy preserved the structural integrity of the building and by the floor encapsulation, effectively eliminated the workers contact with remaining PCBs. The Melting Department Area Investigation and Remediation Report summarized the work and was submitted to U.S. EPA in April 1997. At this time, the PCBs remaining at depth under the concrete slab do not pose an unacceptable risk and, therefore it is proposed to leave these PCBs in place.

3.2 Proposed Remedial Activities

Following the completion of the proposed remedial activities in the I27.7 Manhole Area (soil removal and restoration), PCB concentrations remaining in soil above 100 mg/kg will be covered by a thickness of clean fill yet to be determined, 6 inches of concrete, and an additional 1-foot of clean fill. In addition, deed restrictions in the form of a Declaration of Restrictive Covenant will be placed as specified in Section 2.1.10 to inform future owners that the Site was used for disposal of PCB remediation waste, is restricted to low occupancy use, and to identify the concentrations of PCBs that remain on Site. With the proposed remedial activities associated with the I27.7 Manhole Area (i.e., removal of impacted soil to the water table of 5 FBS, whichever is shallower, backfilling the excavation with clean fill, installing a 6-inch concrete surface over the backfill, and placing a 1-foot thick soil cover over the concrete), PCBs

remaining at depth under the concrete slab do not pose an unacceptable risk and, therefore, it is proposed to leave those PCBs in place.

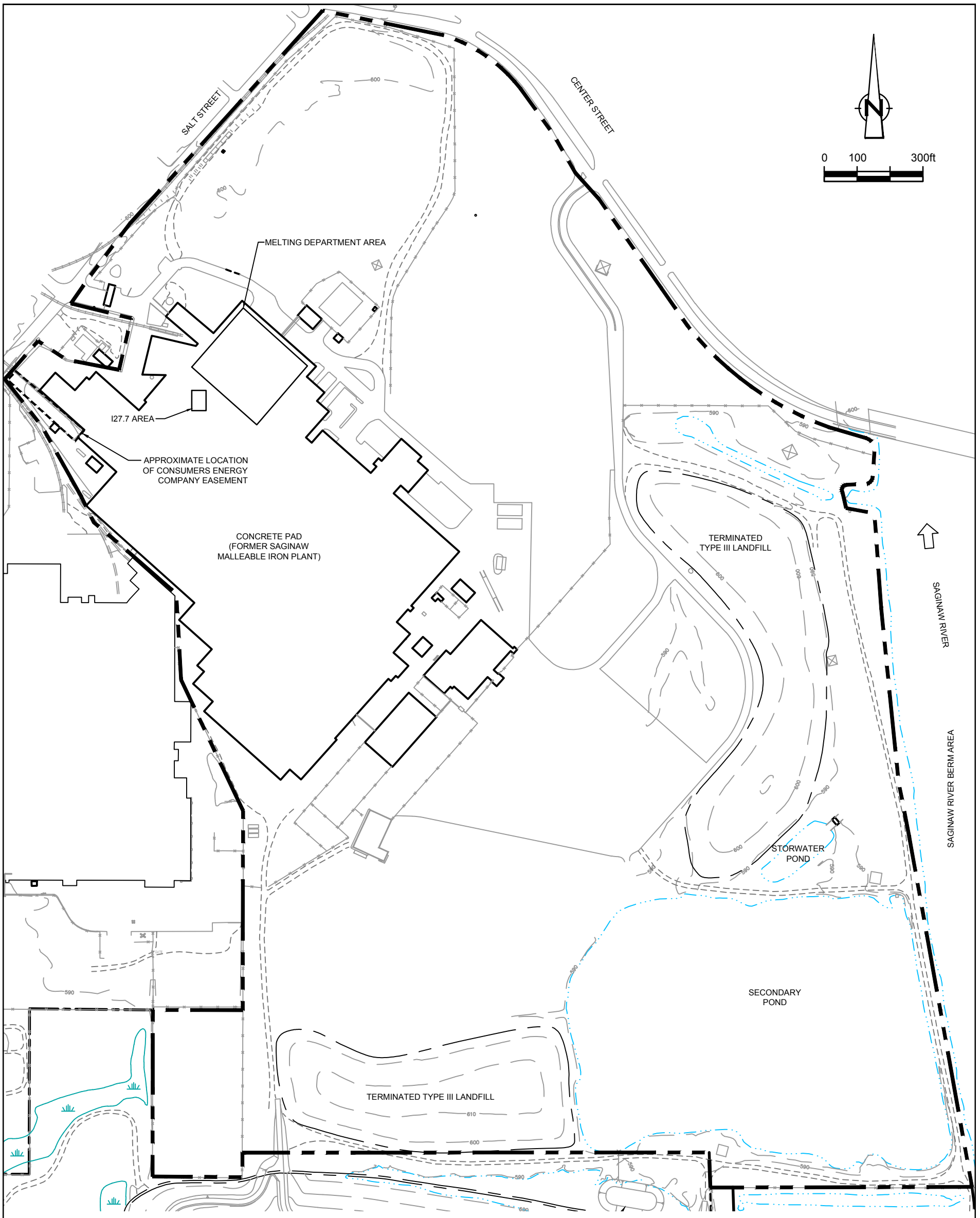
Following the completion of the proposed PCB-impacted concrete floor slab removal activities, PCB concentrations remaining in concrete will be below 10 mg/kg and will be covered with 1-foot of clean fill. In addition, a deed restriction will restrict use on the concrete floor slab to TSCA low occupancy. With the proposed activities associated with the concrete floor slab, PCBs remaining in the concrete floor slab do not pose an unacceptable risk.

Section 4.0 Certification

The certification statement required under 40 CFR 761.61(a)(3)(E) is provided in Appendix A.

Section 5.0 Schedule

Pending U.S. EPA approval of the proposed work, a contractor will be procured to complete the work and applicable permits will be obtained. The work will be initiated as soon as practicable.



LEGEND

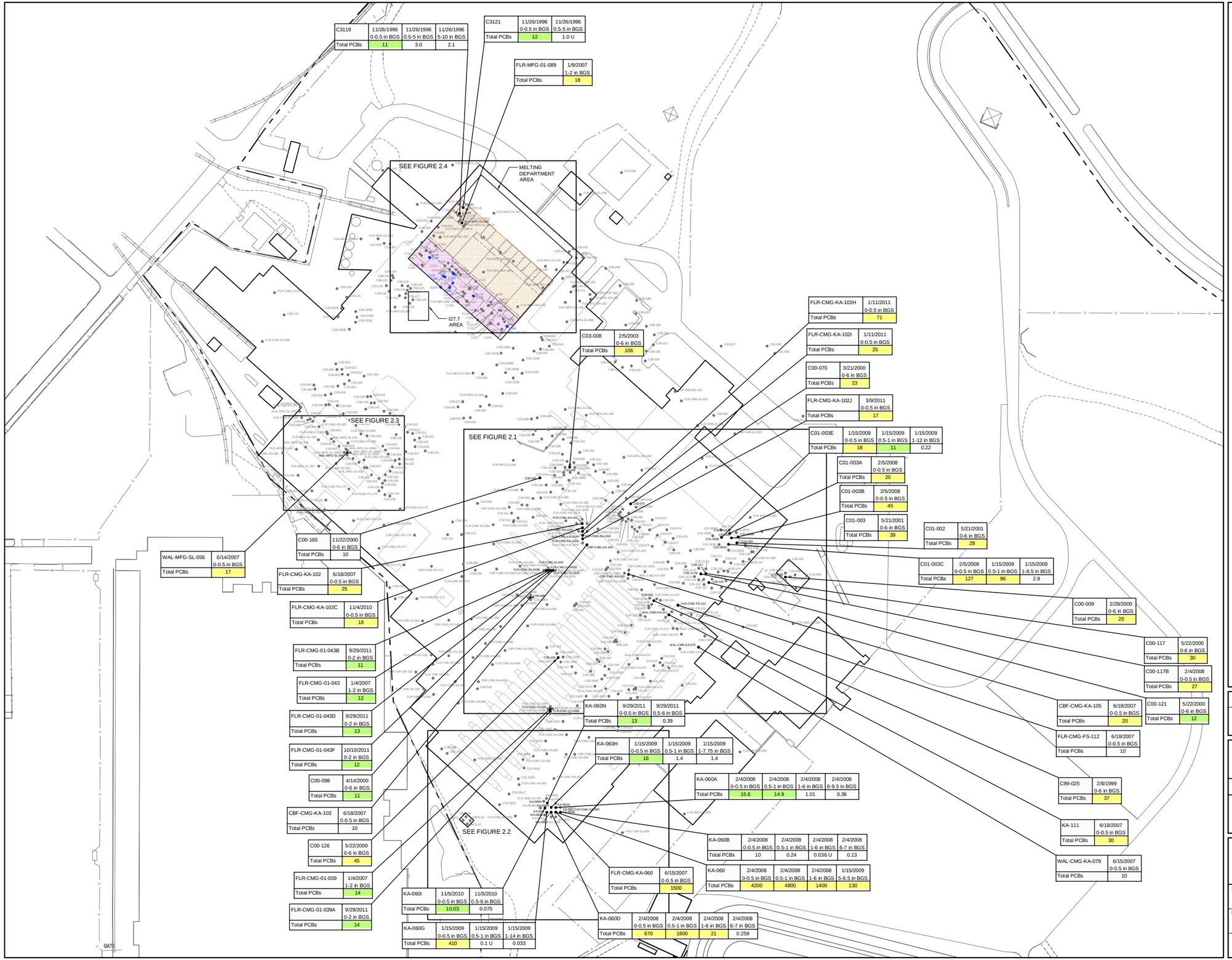
- RACER MALLEABLE IRON INDUSTRIAL LAND PROPERTY LINE (APPROX.)
- UNPAVED ROAD
- 620 GROUND SURFACE ELEVATION CONTOUR (10 FT INTERVAL)
- FENCE LINE

NOTE:
THIS DRAWING HAS BEEN PREPARED
UTILIZING THE BEST AVAILABLE INFORMATION.

figure 1.1

SITE PLAN
RACER MALLEABLE IRON INDUSTRIAL LAND
Saginaw, Michigan

07878-T01(023)GN-WA001 MAR 25/2015



N

0 50 100ft

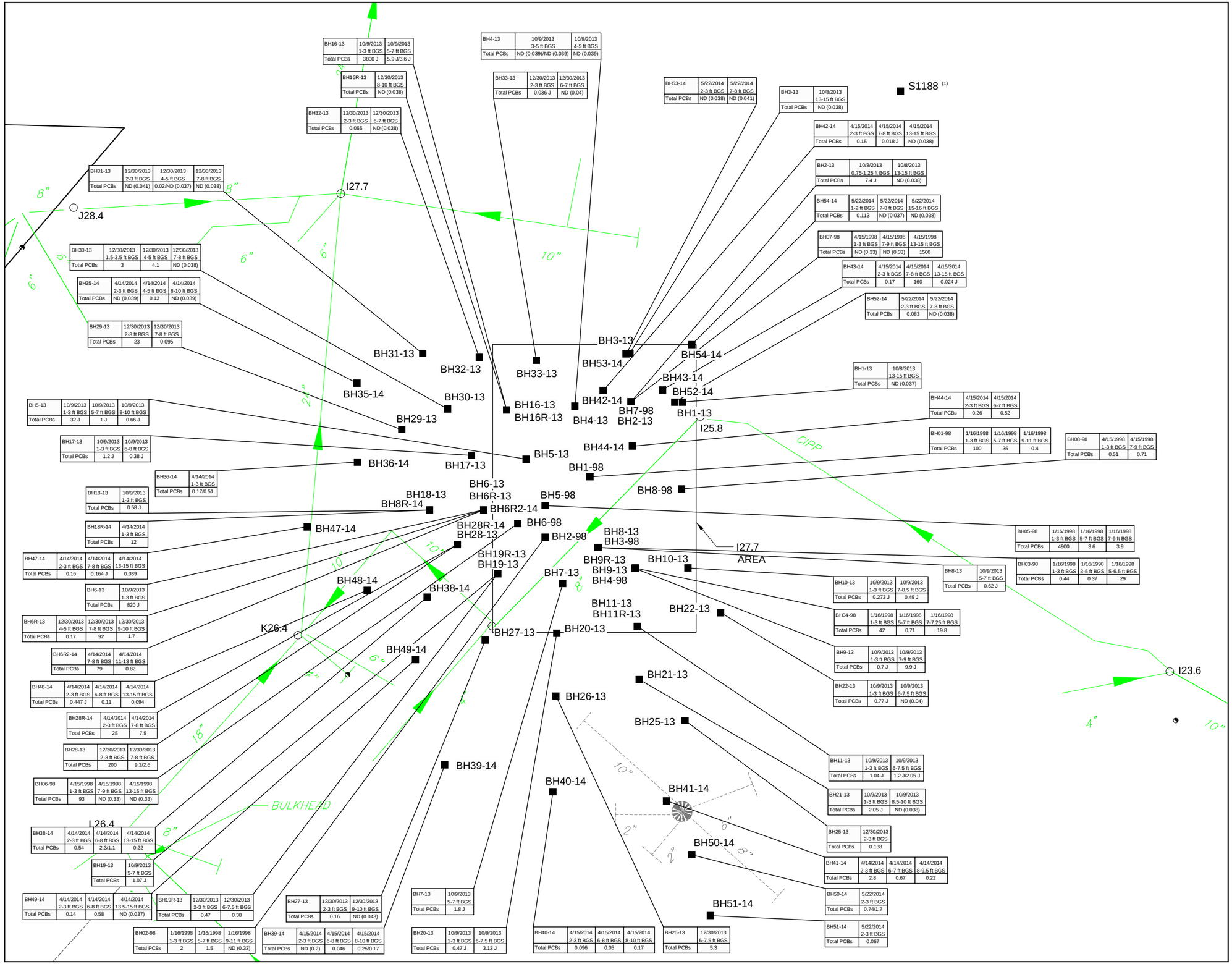
LEGEND

- RACER MALLEABLE IRON INDUSTRIAL LAND PROPERTY LINE (APPROX.)
- BUILDING OUTLINE
- FENCE LINE
- CONCRETE FLOOR SAMPLE LOCATION (≥10 mg/kg PCB)
- CONCRETE FLOOR/BASEMENT WALL SAMPLE LOCATION (<10 mg/kg PCB)
- DENOTES BASEMENT LEVEL SAMPLE LEFT IN PLACE THAT IS ABOVE 10 mg/kg PCBs
- PREVIOUSLY REMEDIATED
- BASEMENT AREA PREVIOUSLY REMEDIATED AS DESCRIBED IN THE MELTING DEPARTMENT AREA INVESTIGATION REPORT (APRIL 1997). BASEMENT AREAS WERE FILLED WITH FLOWABLE FILL AND CAPPED WITH 6" OF CONCRETE

C01-002 | 5/21/2001 (0-6) in BGS
Total PCBs | 28

- SAMPLE LOCATION
- SAMPLE DATE
- SAMPLE DEPTH BELOW GROUND SURFACE
- RESULT (mg/kg)
- PARAMETER

- >10 mg/kg PCB
- ≥16 mg/kg PCB



BH16-13	10/9/2013 1-3 ft BGS	10/9/2013 5-7 ft BGS
Total PCBs	3800 J	5.9 J/3.6 J

BH16R-13	12/30/2013 8-10 ft BGS
Total PCBs	ND (0.036)

BH32-13	12/30/2013 2-3 ft BGS	12/30/2013 6-7 ft BGS
Total PCBs	0.065	ND (0.038)

BH31-13	12/30/2013 2-3 ft BGS	12/30/2013 4-5 ft BGS	12/30/2013 7-8 ft BGS
Total PCBs	ND (0.041)	0.02/ND (0.037)	ND (0.038)

BH30-13	12/30/2013 1.5-3.5 ft BGS	12/30/2013 4-5 ft BGS	12/30/2013 7-8 ft BGS
Total PCBs	3	4.1	ND (0.038)

BH35-14	4/14/2014 2-3 ft BGS	4/14/2014 4-5 ft BGS	4/14/2014 8-10 ft BGS
Total PCBs	ND (0.039)	0.13	ND (0.039)

BH29-13	12/30/2013 2-3 ft BGS	12/30/2013 7-8 ft BGS
Total PCBs	23	0.095

BH5-13	10/9/2013 1-3 ft BGS	10/9/2013 5-7 ft BGS	10/9/2013 9-10 ft BGS
Total PCBs	32 J	1 J	0.66 J

BH17-13	10/9/2013 1-3 ft BGS	10/9/2013 6-8 ft BGS
Total PCBs	1.2 J	0.38 J

BH36-14	4/14/2014 1-3 ft BGS
Total PCBs	0.17/0.51

BH18-13	10/9/2013 1-3 ft BGS
Total PCBs	0.58 J

BH18R-14	4/14/2014 1-3 ft BGS
Total PCBs	12

BH47-14	4/14/2014 2-3 ft BGS	4/14/2014 7-8 ft BGS	4/14/2014 13-15 ft BGS
Total PCBs	0.16	0.164 J	0.039

BH6-13	10/9/2013 1-3 ft BGS
Total PCBs	820 J

BH6R-13	12/30/2013 4-5 ft BGS	12/30/2013 7-8 ft BGS	12/30/2013 9-10 ft BGS
Total PCBs	0.17	92	1.7

BH6R2-14	4/14/2014 7-8 ft BGS	4/14/2014 11-13 ft BGS
Total PCBs	79	0.82

BH48-14	4/14/2014 2-3 ft BGS	4/14/2014 6-8 ft BGS	4/14/2014 13-15 ft BGS
Total PCBs	0.447 J	0.11	0.094

BH28R-14	4/14/2014 2-3 ft BGS	4/14/2014 7-8 ft BGS
Total PCBs	25	7.5

BH28-13	12/30/2013 2-3 ft BGS	12/30/2013 7-8 ft BGS
Total PCBs	200	9.2/2.6

BH06-98	4/15/1998 1-3 ft BGS	4/15/1998 7-9 ft BGS	4/15/1998 13-15 ft BGS
Total PCBs	93	ND (0.33)	ND (0.33)

BH38-14	4/14/2014 2-3 ft BGS	4/14/2014 6-8 ft BGS	4/14/2014 13-15 ft BGS
Total PCBs	0.54	2.3/1.1	0.22

BH19-13	10/9/2013 5-7 ft BGS
Total PCBs	1.07 J

BH49-14	4/14/2014 2-3 ft BGS	4/14/2014 6-8 ft BGS	4/14/2014 13.5-15 ft BGS
Total PCBs	0.14	0.58	ND (0.037)

BH19R-13	12/30/2013 2-3 ft BGS	12/30/2013 6-7.5 ft BGS
Total PCBs	0.47	0.38

BH02-98	1/16/1998 1-3 ft BGS	1/16/1998 5-7 ft BGS	1/16/1998 9-11 ft BGS
Total PCBs	2	1.5	ND (0.33)

BH27-13	12/30/2013 2-3 ft BGS	12/30/2013 9-10 ft BGS
Total PCBs	0.16	ND (0.043)

BH39-14	4/15/2014 2-3 ft BGS	4/15/2014 6-8 ft BGS	4/15/2014 8-10 ft BGS
Total PCBs	ND (0.2)	0.046	0.25/0.17

BH7-13	10/9/2013 5-7 ft BGS
Total PCBs	1.8 J

BH20-13	10/9/2013 1-3 ft BGS	10/9/2013 6-7.5 ft BGS
Total PCBs	0.47 J	3.13 J

BH40-14	4/15/2014 2-3 ft BGS	4/15/2014 6-8 ft BGS	4/15/2014 8-10 ft BGS
Total PCBs	0.096	0.05	0.17

BH26-13	12/30/2013 6-7.5 ft BGS
Total PCBs	5.3

BH4-13	10/9/2013 3-5 ft BGS	10/9/2013 4-5 ft BGS
Total PCBs	ND (0.039)/ND (0.039)	ND (0.039)

BH33-13	12/30/2013 2-3 ft BGS	12/30/2013 6-7 ft BGS
Total PCBs	0.036 J	ND (0.04)

BH53-14	5/22/2014 2-3 ft BGS	5/22/2014 7-8 ft BGS
Total PCBs	ND (0.038)	ND (0.041)

BH3-13	10/8/2013 13-15 ft BGS
Total PCBs	ND (0.038)

S1188 (1)

BH42-14	4/15/2014 2-3 ft BGS	4/15/2014 7-8 ft BGS	4/15/2014 13-15 ft BGS
Total PCBs	0.15	0.018 J	ND (0.038)

BH2-13	10/8/2013 0.75-1.25 ft BGS	10/8/2013 13-15 ft BGS
Total PCBs	7.4 J	ND (0.038)

BH54-14	5/22/2014 1-2 ft BGS	5/22/2014 7-8 ft BGS	5/22/2014 15-16 ft BGS
Total PCBs	0.113	ND (0.037)	ND (0.038)

BH07-98	4/15/1998 1-3 ft BGS	4/15/1998 7-9 ft BGS	4/15/1998 13-15 ft BGS
Total PCBs	ND (0.33)	ND (0.33)	1500

BH43-14	4/15/2014 2-3 ft BGS	4/15/2014 7-8 ft BGS	4/15/2014 13-15 ft BGS
Total PCBs	0.17	160	0.024 J

BH52-14	5/22/2014 2-3 ft BGS	5/22/2014 7-8 ft BGS
Total PCBs	0.083	ND (0.038)

BH1-13	10/8/2013 13-15 ft BGS
Total PCBs	ND (0.037)

BH44-14	4/15/2014 2-3 ft BGS	4/15/2014 6-7 BGS
Total PCBs	0.26	0.52

BH01-98	1/16/1998 1-3 ft BGS	1/16/1998 5-7 ft BGS	1/16/1998 9-11 ft BGS
Total PCBs	100	35	0.4

BH08-98	4/15/1998 1-3 ft BGS	4/15/1998 7-9 ft BGS
Total PCBs	0.51	0.71

BH05-98	1/16/1998 1-3 ft BGS	1/16/1998 5-7 ft BGS	1/16/1998 7-9 ft BGS
Total PCBs	4900	3.6	3.9

BH03-98	1/16/1998 1-3 ft BGS	1/16/1998 3-5 ft BGS	1/16/1998 5-6.5 ft BGS
Total PCBs	0.44	0.37	29

BH8-13	10/9/2013 5-7 ft BGS
Total PCBs	0.62 J

BH10-13	10/9/2013 1-3 ft BGS	10/9/2013 7-8.5 ft BGS
Total PCBs	0.273 J	0.49 J

BH04-98	1/16/1998 1-3 ft BGS	1/16/1998 5-7 ft BGS	1/16/1998 7-7.25 ft BGS
Total PCBs	42	0.71	19.8

BH9-13	10/9/2013 1-3 ft BGS	10/9/2013 7-9 ft BGS
Total PCBs	0.7 J	9.9 J

BH22-13	10/9/2013 1-3 ft BGS	10/9/2013 6-7.5 ft BGS
Total PCBs	0.77 J	ND (0.04)

BH11-13	10/9/2013 1-3 ft BGS	10/9/2013 6-7.5 ft BGS
Total PCBs	1.04 J	1.2 J/2.05 J

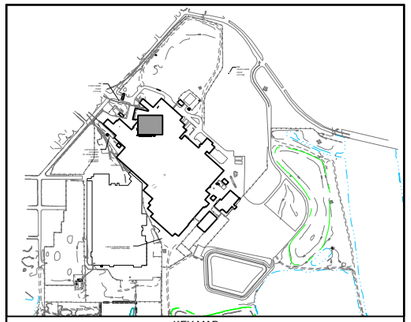
BH21-13	10/9/2013 1-3 ft BGS	10/9/2013 8.5-10 ft BGS
Total PCBs	2.05 J	ND (0.038)

BH25-13	12/30/2013 2-3 ft BGS
Total PCBs	0.138

BH41-14	4/14/2014 2-3 ft BGS	4/14/2014 6-7 ft BGS	4/14/2014 8-9.5 ft BGS
Total PCBs	2.8	0.67	0.22

BH50-14	5/22/2014 2-3 ft BGS
Total PCBs	0.74/1.7

BH51-14	5/22/2014 2-3 ft BGS
Total PCBs	0.067



KEY MAP

N

0 5 10ft

LEGEND

BH1-98 ■ SOIL BORING LOCATION

BRANCH SEWERS TO CITY - SANITARY, STORM AND PROCESS

ABANDONED SEWER LINES

(1) LOCATED IN HYDRAULIC ROOM #2 IN THE MELTING DEPARTMENT AREA

BH1-13	10/8/2013	SAMPLE LOCATION
	13-15 ft BGS	SAMPLE LOCATION
Total PCBs	ND (0.037)	SAMPLE DEPTH
		RESULT (mg/kg)
		PARAMETER

NOTE:
THIS DRAWING HAS BEEN PREPARED UTILIZING ALL AVAILABLE INFORMATION, HOWEVER UTILITY LOCATIONS SHOULD BE FIELD VERIFIED BEFORE COMPLETING ANY INTRUSIVE ACTIVITIES.

SCALE VERIFICATION

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

REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE (RACER) MALLEABLE IRON INDUSTRIAL LAND

SAGINAW, MICHIGAN

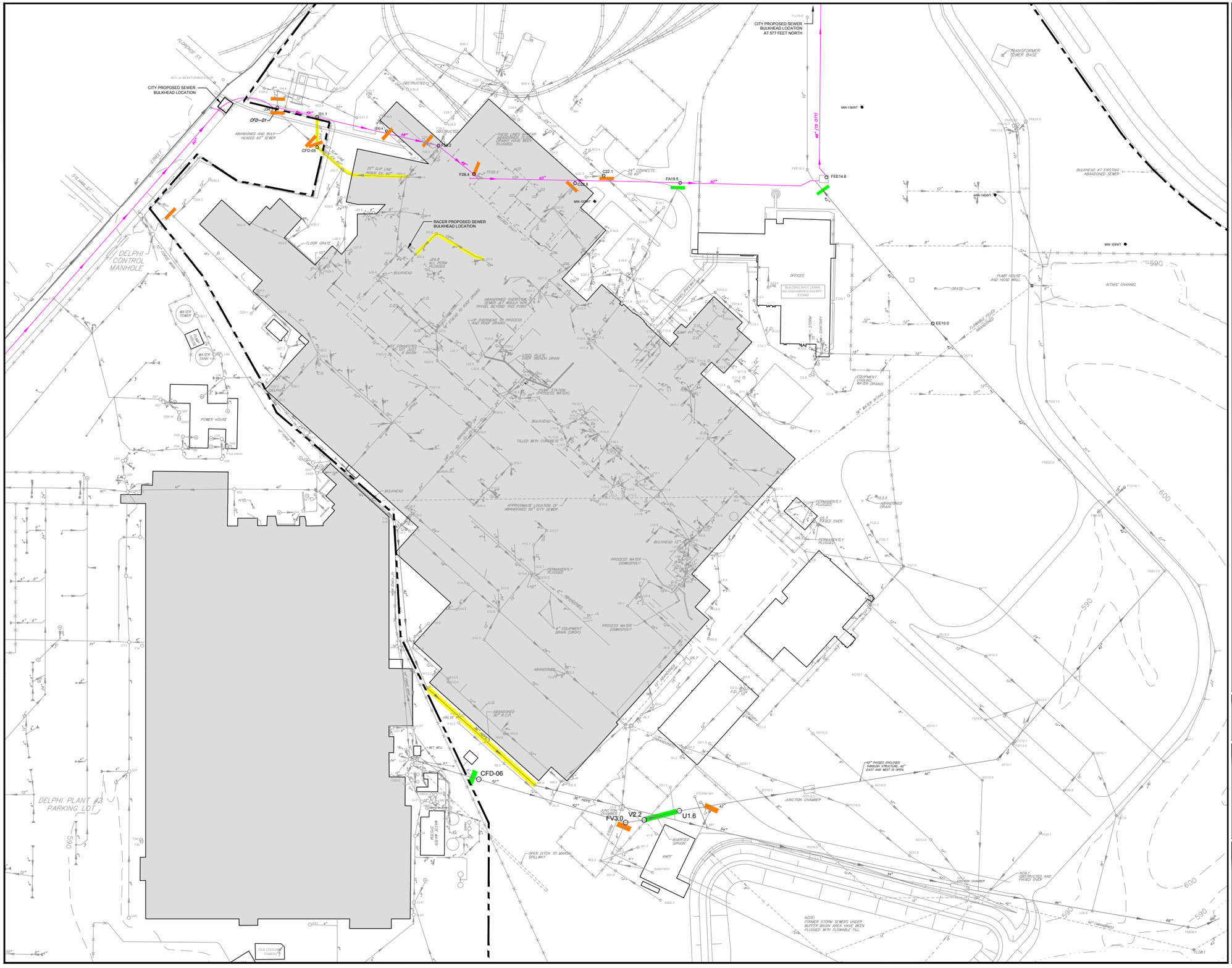
I27.7 MANHOLE AREA SOIL INVESTIGATIVE LOCATIONS

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
MRT	JEP	MARCH 2015	
Scale: 1:10	Project N°: 07878-T01	Report N°: 023	Drawing N°: figure 1.3

07878-T01(023)GN-WA003 MAR 18/2015



0 50 100ft

LEGEND

- RACER MALLEABLE IRON INDUSTRIAL LAND PROPERTY LINE (APPROX.)
- BUILDING OUTLINE
- FENCE LINE
- MAIN SEWER TO CITY - SANITARY, STORM AND PROCESS
- INTERNAL SITE SEWER
- ABANDONED SEWER LINE
- OVERHEAD SEWER LINE
- BULKHEAD/ABANDONMENT COMPLETED BY CRA
- BULKHEAD COMPLETED BY NORTH AMERICA DISMANTLING CORPORATION
- SEWER SLEEVE INSTALLED (1998)
- CONCRETE FLOOR SLAB
- GROUND SURFACE ELEVATION CONTOUR (10 FT INTERVAL)
- MANHOLE
- CATCHBASIN
- CIPP CURE IN PLACE PIPE
- MW-105WT MONITORING WELL LOCATION

SCALE VERIFICATION

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

REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE (RACER) MALLEABLE IRON INDUSTRIAL LAND

SAGINAW, MICHIGAN

SEWER BULKHEAD LOCATIONS

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
MRT	JEP	MARCH 2015	
Scale: 1:100	Project N°: 07878-T01	Report N°: 023	Drawing N°: figure 1.4

07878-T01(023)GN-WA010 MAR 24/2015

C00-165	11/22/2000
	0-6 in BGS
Total PCBs	10

C03-008	2/5/2003
	0-6 in BGS
Total PCBs	106

C00-070	3/21/2000
	0-6 in BGS
Total PCBs	23

C01-003E	1/15/2009	1/15/2009	1/15/2009
	0-0.5 in BGS	0.5-1 in BGS	1-12 in BGS
Total PCBs	18	11	0.22

C01-003	5/21/2001
	0-6 in BGS
Total PCBs	39

C01-003A	2/5/2008
	0-0.5 in BGS
Total PCBs	20

C01-003B	2/5/2008
	0-0.5 in BGS
Total PCBs	45

C01-002	5/21/2001
	0-6 in BGS
Total PCBs	28

FLR-CMG-KA-102C	11/4/2010
	0-0.5 in BGS
Total PCBs	18

FLR-CMG-KA-102H	1/11/2011
	0-0.5 in BGS
Total PCBs	71

FLR-CMG-KA-102I	1/11/2011
	0-0.5 in BGS
Total PCBs	25

FLR-CMG-KA-102J	3/9/2011
	0-0.5 in BGS
Total PCBs	17

FLR-CMG-KA-102	6/18/2007
	0-0.5 in BGS
Total PCBs	25

C01-003C	2/5/2008	1/15/2009	1/15/2009
	0-0.5 in BGS	0.5-1 in BGS	1-8.5 in BGS
Total PCBs	127	96	2.9

CBF-CMG-KA-103	6/18/2007
	0-0.5 in BGS
Total PCBs	10

C00-117	5/22/2000
	0-6 in BGS
Total PCBs	30

FLR-CMG-01-043B	9/29/2011
	0-2 in BGS
Total PCBs	11

FLR-CMG-01-043	1/4/2007
	1-2 in BGS
Total PCBs	12

FLR-CMG-01-043F	10/10/2011
	0-2 in BGS
Total PCBs	12

FLR-CMG-01-043D	9/29/2011
	0-2 in BGS
Total PCBs	13

C00-009	2/29/2000
	0-6 in BGS
Total PCBs	20

C00-098	4/14/2000
	0-6 in BGS
Total PCBs	11

C00-117B	2/4/2008
	0-0.5 in BGS
Total PCBs	27

C00-121	5/22/2000
	0-6 in BGS
Total PCBs	12

CBF-CMG-KA-105	6/18/2007
	0-0.5 in BGS
Total PCBs	20

FLR-CMG-FS-112	6/18/2007
	0-0.5 in BGS
Total PCBs	10

C99-025	2/8/1999
	0-6 in BGS
Total PCBs	37

KA-111	6/18/2007
	0-0.5 in BGS
Total PCBs	30

WAL-CMG-KA-079	6/15/2007
	0-0.5 in BGS
Total PCBs	10

C00-126	5/22/2000
	0-6 in BGS
Total PCBs	45

FLR-CMG-01-039	1/4/2007
	1-2 in BGS
Total PCBs	14

FLR-CMG-01-039A	9/29/2011
	0-2 in BGS
Total PCBs	14

0 10 30ft

LEGEND

- RACER MALLEABLE IRON INDUSTRIAL LAND PROPERTY LINE (APPROX.)
- BUILDING OUTLINE
- FENCE LINE
- CONCRETE FLOOR SAMPLE LOCATION (≥10 mg/kg PCB)
- CONCRETE FLOOR/BASEMENT WALL SAMPLE LOCATION (<10 mg/kg PCB)
- SAMPLE LOCATION
- SAMPLE DATE
- SAMPLE DEPTH BELOW GROUND SURFACE
- RESULT (mg/kg)
- PARAMETER
- >10 mg/kg PCB
- ≥16 mg/kg PCB
- PROPOSED EXCAVATION LIMITS
- CONCRETE SLAB TO BE REMOVED AND DISPOSED OF AS NON-TSCA WASTE
- CONCRETE SLAB TO BE REMOVED AND DISPOSED OF AS TSCA WASTE

C01-002	5/21/2001
	(0-6) in BGS
Total PCBs	28

SCALE VERIFICATION

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

REVITIALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE (RACER) MALLEABLE IRON INDUSTRIAL LAND

SAGINAW, MICHIGAN

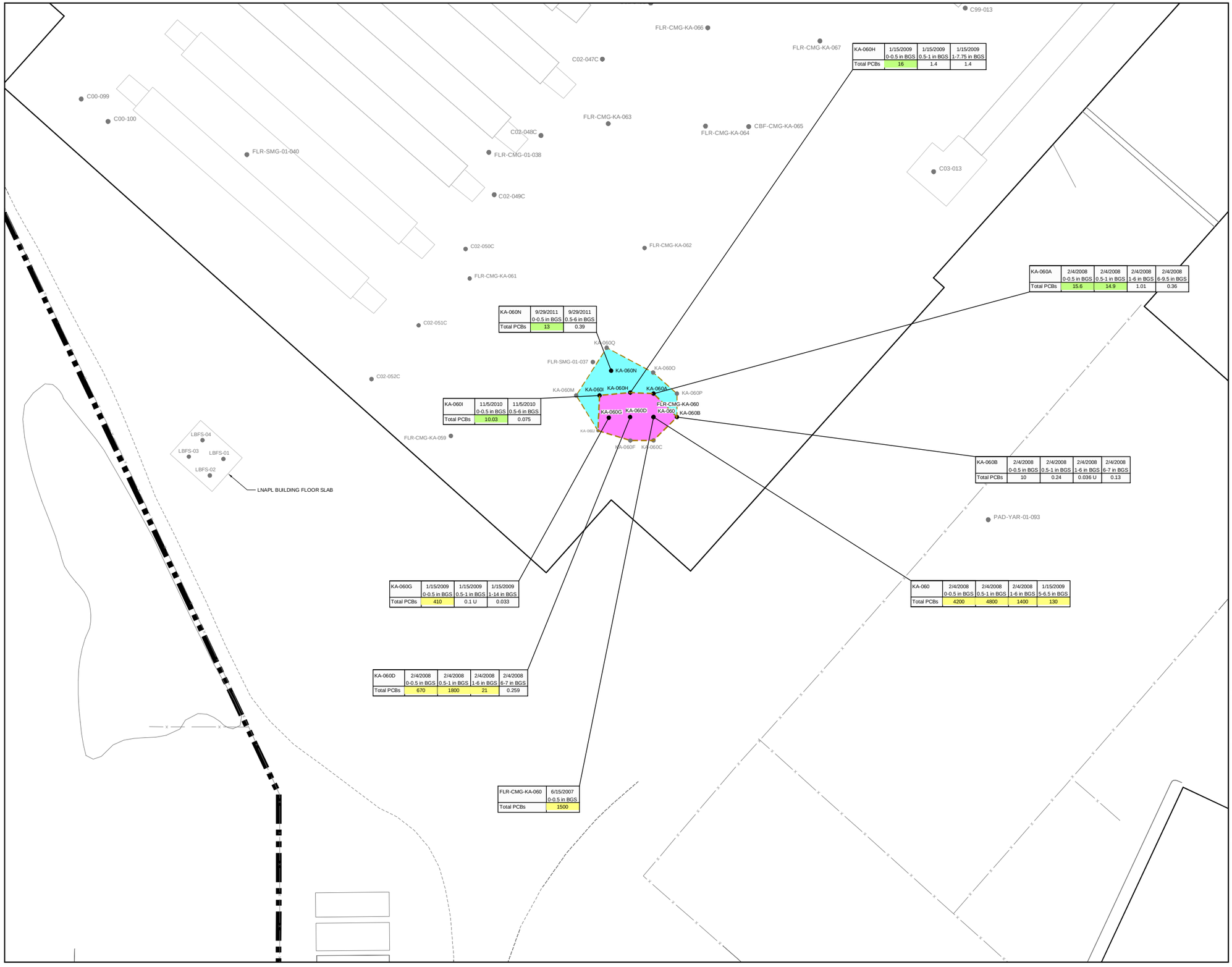
PROPOSED CONCRETE SLAB REMOVAL

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
MRT	JEP	MARCH 2015	
Scale: 1"=30'	Project N°: 07878-T01	Report N°: 023	Drawing N°: figure 2.1

07878-T01(023)GN-WA004 MAR 18/2015



KA-060H	1/15/2009 0-0.5 in BGS	1/15/2009 0.5-1 in BGS	1/15/2009 1-7.75 in BGS
Total PCBs	16	1.4	1.4

KA-060N	9/29/2011 0-0.5 in BGS	9/29/2011 0.5-6 in BGS
Total PCBs	13	0.39

KA-060A	2/4/2008 0-0.5 in BGS	2/4/2008 0.5-1 in BGS	2/4/2008 1-6 in BGS	2/4/2008 6-9.5 in BGS
Total PCBs	15.6	14.9	1.01	0.36

KA-060I	11/5/2010 0-0.5 in BGS	11/5/2010 0.5-6 in BGS
Total PCBs	10.03	0.075

KA-060B	2/4/2008 0-0.5 in BGS	2/4/2008 0.5-1 in BGS	2/4/2008 1-6 in BGS	2/4/2008 6-7 in BGS
Total PCBs	10	0.24	0.036 U	0.13

KA-060G	1/15/2009 0-0.5 in BGS	1/15/2009 0.5-1 in BGS	1/15/2009 1-14 in BGS
Total PCBs	410	0.1 U	0.033

KA-060	2/4/2008 0-0.5 in BGS	2/4/2008 0.5-1 in BGS	2/4/2008 1-6 in BGS	1/15/2009 5-6.5 in BGS
Total PCBs	4200	4800	1400	130

KA-060D	2/4/2008 0-0.5 in BGS	2/4/2008 0.5-1 in BGS	2/4/2008 1-6 in BGS	2/4/2008 6-7 in BGS
Total PCBs	670	1800	21	0.259

FLR-CMG-KA-060	6/15/2007 0-0.5 in BGS
Total PCBs	1500

0 10 20ft

LEGEND

- RACER MALLEABLE IRON INDUSTRIAL LAND PROPERTY LINE (APPROX.)
- BUILDING OUTLINE
- FENCE LINE
- CONCRETE FLOOR SAMPLE LOCATION (≥10 mg/kg PCB)
- CONCRETE FLOOR/BASEMENT WALL SAMPLE LOCATION (<10 mg/kg PCB)

C01-002	5/21/2001
	(0-6) in BGS
Total PCBs	28

- SAMPLE LOCATION
- SAMPLE DATE
- SAMPLE DEPTH BELOW GROUND SURFACE
- RESULT (mg/kg)
- PARAMETER
- >10 mg/kg PCB
- ≥16 mg/kg PCB
- PROPOSED EXCAVATION LIMITS
- CONCRETE SLAB TO BE REMOVED AND DISPOSED OF AS NON-TSCA WASTE
- CONCRETE SLAB TO BE REMOVED AND DISPOSED OF AS TSCA WASTE

SCALE VERIFICATION

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

REVITIALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE (RACER) MALLEABLE IRON INDUSTRIAL LAND

SAGINAW, MICHIGAN

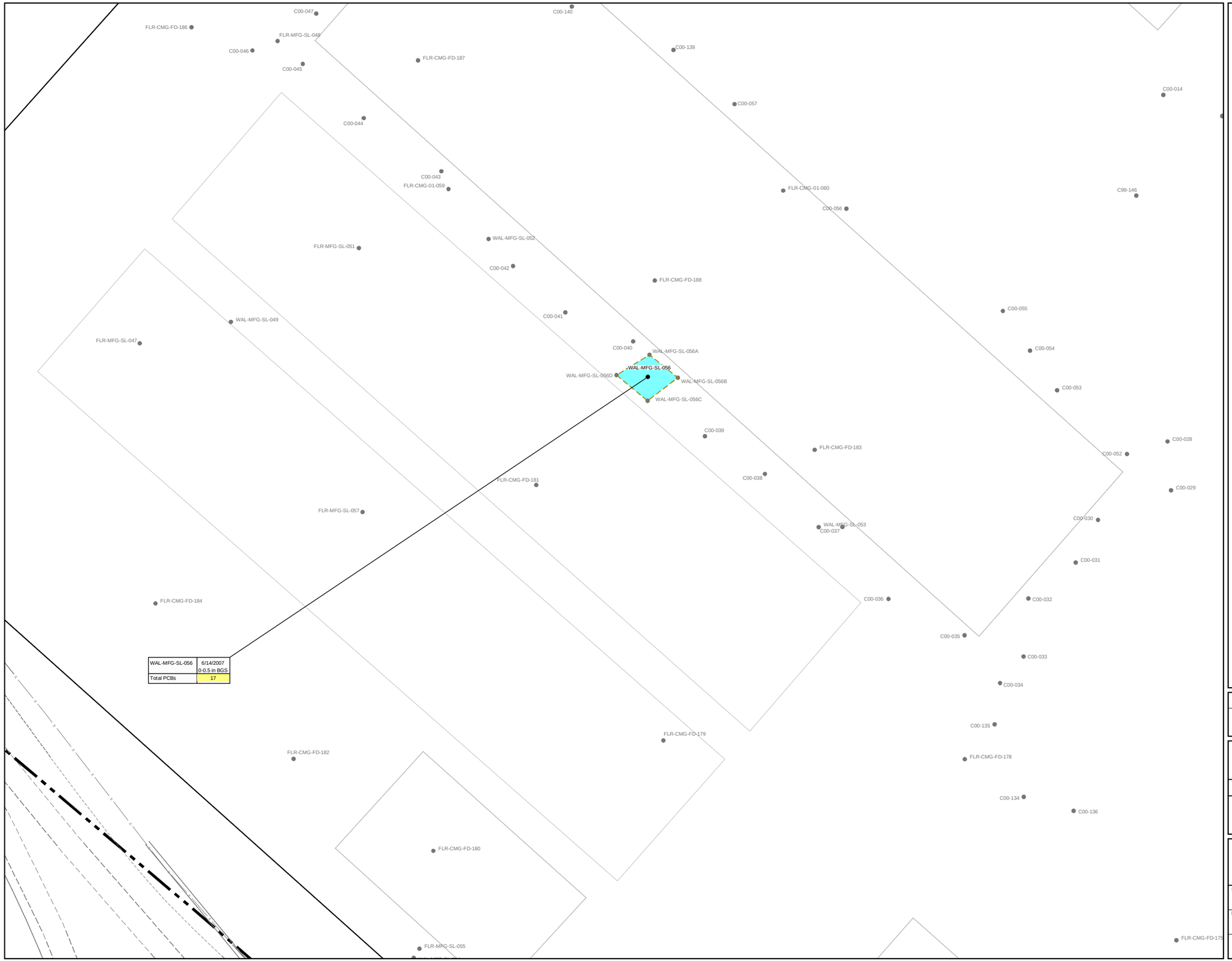
PROPOSED CONCRETE SLAB REMOVAL

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
MRT	JEP	MARCH 2015	
Scale: 1"=20'	Project N°: 07878-T01	Report N°: 023	Drawing N°: figure 2.2

07878-T01(023)GN-WA005 MAR 18/2015



SCALE VERIFICATION

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

REVITIALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE (RACER) MALLEABLE IRON INDUSTRIAL LAND

SAGINAW, MICHIGAN

PROPOSED CONCRETE SLAB REMOVAL

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
MRT	JEP	MARCH 2015	
Scale: 1"=10'	Project N°: 07878-T01	Report N°: 023	Drawing N°: figure 2.3

07878-T01(023)GN-WA006 MAR 18/2015

MELTING DEPARTMENT AREA

C3121	11/26/1996 0-0.5 in BGS	11/26/1996 0.5-5 in BGS
Total PCBs	12	1.0 U

C3119	11/26/1996 0-0.5 in BGS	11/26/1996 0.5-5 in BGS	11/26/1996 5-10 in BGS
Total PCBs	11	3.0	2.1

FLR-MFG-01-089	1/9/2007 1-2 in BGS
Total PCBs	18

I27.7 AREA

LEGEND

- RACER MALLEABLE IRON INDUSTRIAL LAND PROPERTY LINE (APPROX.)
- BUILDING OUTLINE
- FENCE LINE
- CONCRETE FLOOR SAMPLE LOCATION (≥10 mg/kg PCB)
- CONCRETE FLOOR/BASEMENT WALL SAMPLE LOCATION (<10 mg/kg PCB)
- DENOTES BASEMENT LEVEL SAMPLE LEFT IN PLACE THAT IS ABOVE 10 mg/kg PCBs
- PREVIOUSLY REMEDIATED
- BASEMENT AREA PREVIOUSLY REMEDIATED AS DESCRIBED IN THE MELTING DEPARTMENT AREA INVESTIGATION REPORT (APRIL 1997). BASEMENT AREAS WERE FILLED WITH FLOWABLE FILL AND CAPPED WITH 6" OF CONCRETE

C01-002	5/21/2001 (0-6) in BGS
Total PCBs	28

- SAMPLE LOCATION
- SAMPLE DATE
- SAMPLE DEPTH BELOW GROUND SURFACE
- RESULT (mg/kg)
- PARAMETER
- >10 mg/kg PCB
- ≥16 mg/kg PCB
- PROPOSED EXCAVATION LIMITS
- CONCRETE SLAB TO BE REMOVED AND DISPOSED OF AS NON-TSCA WASTE

0 10 20ft

SCALE VERIFICATION

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

REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE (RACER) MALLEABLE IRON INDUSTRIAL LAND

SAGINAW, MICHIGAN

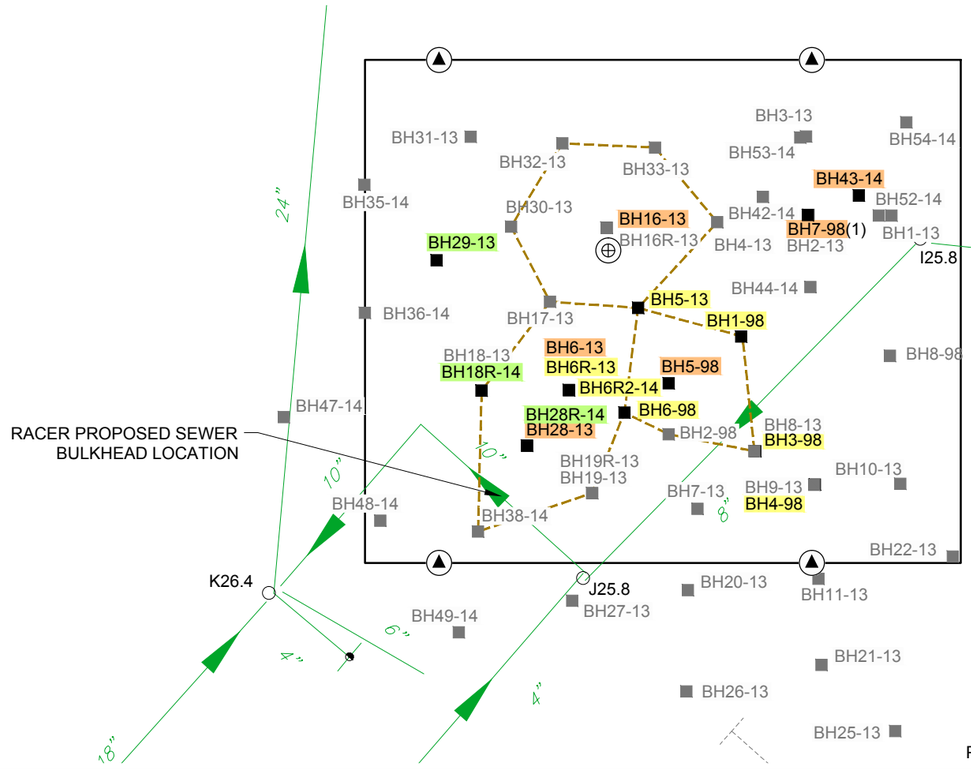
MELTING DEPARTMENT AREA PROPOSED CONCRETE SLAB REMOVAL

CONESTOGA-ROVERS & ASSOCIATES

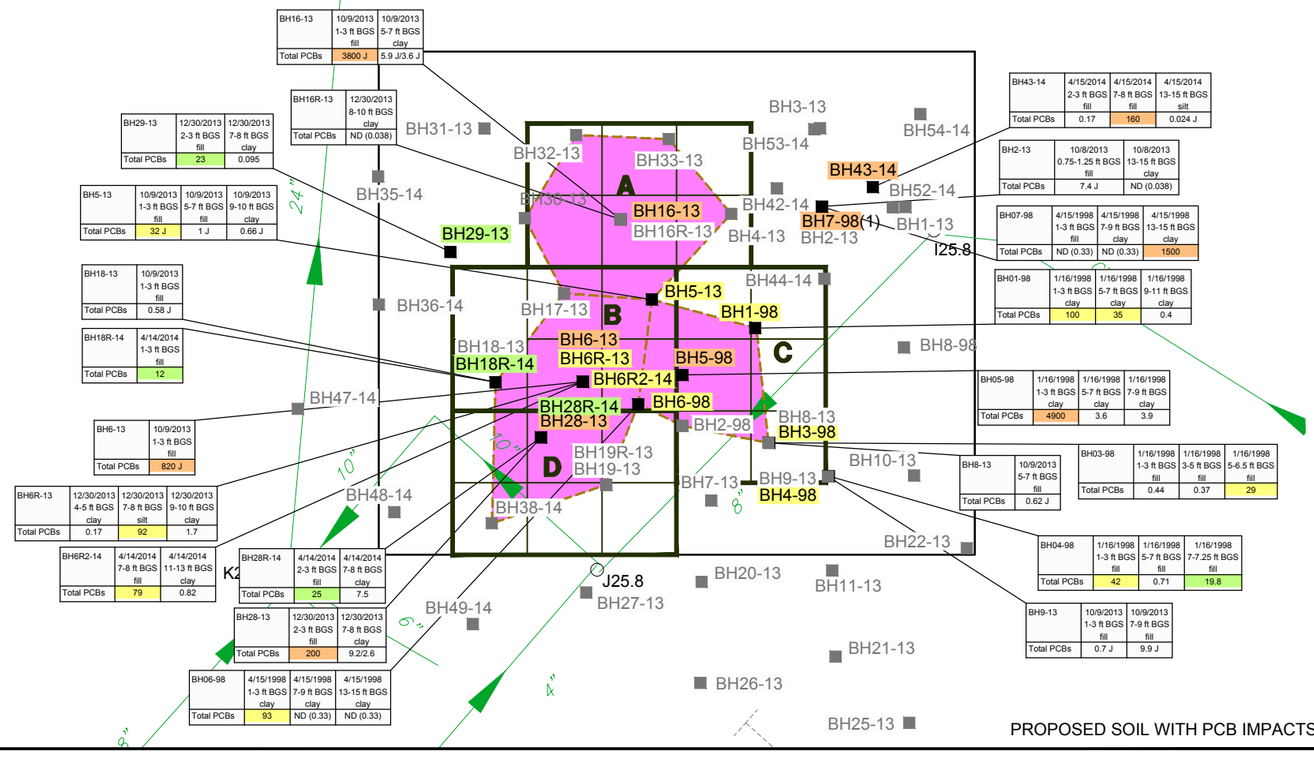
Source Reference:

Project Manager:	Reviewed By:	Date:	
MRT	JEP	MARCH 2015	
Scale: 1"=20'	Project N°: 07878-T01	Report N°: 023	Drawing N°: figure 2.4

07878-T01(023)GN-WA007 MAR 18/2015



PROPOSED CONCRETE FLOOR SLAB CHARACTERIZATION AND REMOVAL



BH16-13	10/9/2013 1-3 ft BGS fill	10/9/2013 5-7 ft BGS clay
Total PCBs	3800 J	5.9 J/3.6 J

BH16R-13	12/30/2013 8-10 ft BGS clay	
Total PCBs	ND (0.038)	

BH29-13	12/30/2013 2-3 ft BGS fill	12/30/2013 7-8 ft BGS clay	
Total PCBs	23	0.095	

BH5-13	10/9/2013 1-3 ft BGS fill	10/9/2013 5-7 ft BGS fill	10/9/2013 9-10 ft BGS clay	
Total PCBs	32 J	1 J	0.66 J	

BH18-13	10/9/2013 1-3 ft BGS fill	
Total PCBs	0.58 J	

BH18R-14	4/14/2014 1-3 ft BGS fill	
Total PCBs	12	

BH6-13	10/9/2013 1-3 ft BGS fill	
Total PCBs	820 J	

BH6R-13	12/30/2013 4-5 ft BGS clay	12/30/2013 7-8 ft BGS silt	12/30/2013 9-10 ft BGS clay	
Total PCBs	0.17	92	1.7	

BH6R2-14	4/14/2014 7-8 ft BGS fill	4/14/2014 11-13 ft BGS clay	
Total PCBs	79	0.82	

BH28R-14	4/14/2014 2-3 ft BGS fill	4/14/2014 7-8 ft BGS clay	
Total PCBs	25	7.5	

BH28-13	12/30/2013 2-3 ft BGS fill	12/30/2013 7-8 ft BGS clay	
Total PCBs	200	9.2/2.6	

BH06-98	4/15/1998 1-3 ft BGS clay	4/15/1998 7-9 ft BGS clay	4/15/1998 13-15 ft BGS clay
Total PCBs	93	ND (0.33)	ND (0.33)

BH43-14	4/15/2014 2-3 ft BGS fill	4/15/2014 7-8 ft BGS fill	4/15/2014 13-15 ft BGS silt
Total PCBs	0.17	160	0.024 J

BH2-13	10/8/2013 0.75-1.25 ft BGS fill	10/8/2013 13-15 ft BGS clay
Total PCBs	7.4 J	ND (0.038)

BH07-98	4/15/1998 1-3 ft BGS fill	4/15/1998 7-9 ft BGS clay	4/15/1998 13-15 ft BGS clay
Total PCBs	ND (0.33)	ND (0.33)	1500

BH01-98	1/16/1998 1-3 ft BGS clay	1/16/1998 5-7 ft BGS clay	1/16/1998 9-11 ft BGS clay
Total PCBs	100	35	0.4

BH05-98	1/16/1998 1-3 ft BGS clay	1/16/1998 5-7 ft BGS clay	1/16/1998 7-9 ft BGS clay
Total PCBs	4900	3.6	3.9

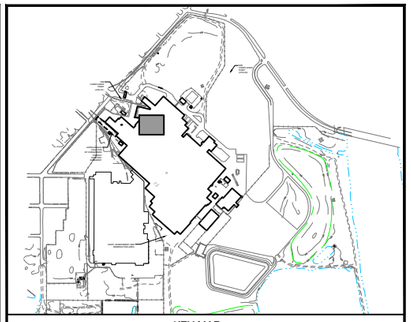
BH8-13	10/9/2013 5-7 ft BGS fill	
Total PCBs	0.62 J	

BH03-98	1/16/1998 1-3 ft BGS fill	1/16/1998 3-5 ft BGS fill	1/16/1998 5-6.5 ft BGS fill	
Total PCBs	0.44	0.37	29	

BH04-98	1/16/1998 1-3 ft BGS fill	1/16/1998 5-7 ft BGS fill	1/16/1998 7-7.25 ft BGS fill
Total PCBs	42	0.71	19.8

BH9-13	10/9/2013 1-3 ft BGS fill	10/9/2013 7-9 ft BGS fill
Total PCBs	0.7 J	9.9 J

PROPOSED SOIL WITH PCB IMPACTS GREATER THAN 100 mg/kg REMOVAL



KEY MAP

LEGEND

0 5 10ft

- BH1-98 — SOIL BORING LOCATION (LESS THAN 10 ppm PCBs)
- BH1-98 — SOIL BORING LOCATION (LESS THAN 25 ppm PCBs BUT GREATER THAN 10ppm PCBs)
- BH1-98 — SOIL BORING LOCATION (LESS THAN 100 ppm PCBs BUT GREATER THAN 25 ppm PCBs)
- BH1-98 — SOIL BORING LOCATION (GREATER THAN 100 ppm PCBs)
- PROPOSED CONCRETE CORE SAMPLE TO BE ANALYZED FOR PCBs, TCLP METALS, AND TCLP VOCs
- PROPOSED CONCRETE CORE TO BE PLACED ON HOLD PENDING PCB RESULTS OF CONCRETE CORE
- BRANCH SEWERS TO CITY - SANITARY, STORM AND PROCESS
- ABANDONED SEWER LINES
- AREA WHERE COVER (MIN. 6" OF CONCRETE) IS TO BE MAINTAINED
- PROPOSED EXCAVATION LIMITS
- 3m BY 3m GRID USED TO VERIFY SOIL PCB CONCENTRATIONS TO REMAIN IN PLACE IN SOIL. SAMPLES WILL BE COLLECTED FROM EACH GRID AND COMPOSITED WITH THE OTHER GRID SAMPLES WITHIN THE QUADRANT IDENTIFIED BY A LETTER ("A").
- MATERIAL TO BE REMOVED AND DISPOSED OF AS TSCA WASTE

(1) THE HISTORICAL SOURCE OF THE PCBS IDENTIFIED IN THE I27.7 AREA WAS A TRANSFORMER THAT WAS DROPPED AND LEAKED OIL WITH PCBS TO THE GROUND SURFACE. IT SEEMS UNLIKELY THAT PCBS WOULD HAVE MIGRATED THROUGH 10 FEET OF CLAY AT BH7-98 AND BE FOUND AT A CONCENTRATION OF 1,500 mg/kg WHEN THERE WAS NO DETECTION OF PCBS IN THE SHALLOWER SAMPLES. THEREFORE, NO EXCAVATION IS PROPOSED TO REMOVE THE PCBS IN SOIL AT 13-15 FT BGS AT BH7-98 GIVEN THAT THE MORE RECENT RESULTS FROM THE SAMPLES COLLECTED AT BORING (BH2-13) WHICH WAS ADVANCED IN THE VICINITY OF BH7-98, WERE LESS THAN 10 mg/kg.

BH1-13	10/8/2013 13-15 ft BGS clay	— SAMPLE LOCATION — SAMPLE LOCATION — SAMPLE DEPTH — SOIL TYPE
Total PCBs	ND (0.037)	— RESULT (mg/kg)
		— PARAMETER

Proposed TSCA Soil Removal		
Excavation Depth (ft. bgs.)	Area (sq. ft.)	Volume of Material (cu. ft.)
0-5	1095	5475

NOTE:
THIS DRAWING HAS BEEN PREPARED UTILIZING ALL AVAILABLE INFORMATION, HOWEVER UTILITY LOCATIONS SHOULD BE FIELD VERIFIED BEFORE COMPLETING ANY INTRUSIVE ACTIVITIES.

SCALE VERIFICATION

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

REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE (RACER)
MALLEABLE IRON INDUSTRIAL LAND
SAGINAW, MICHIGAN

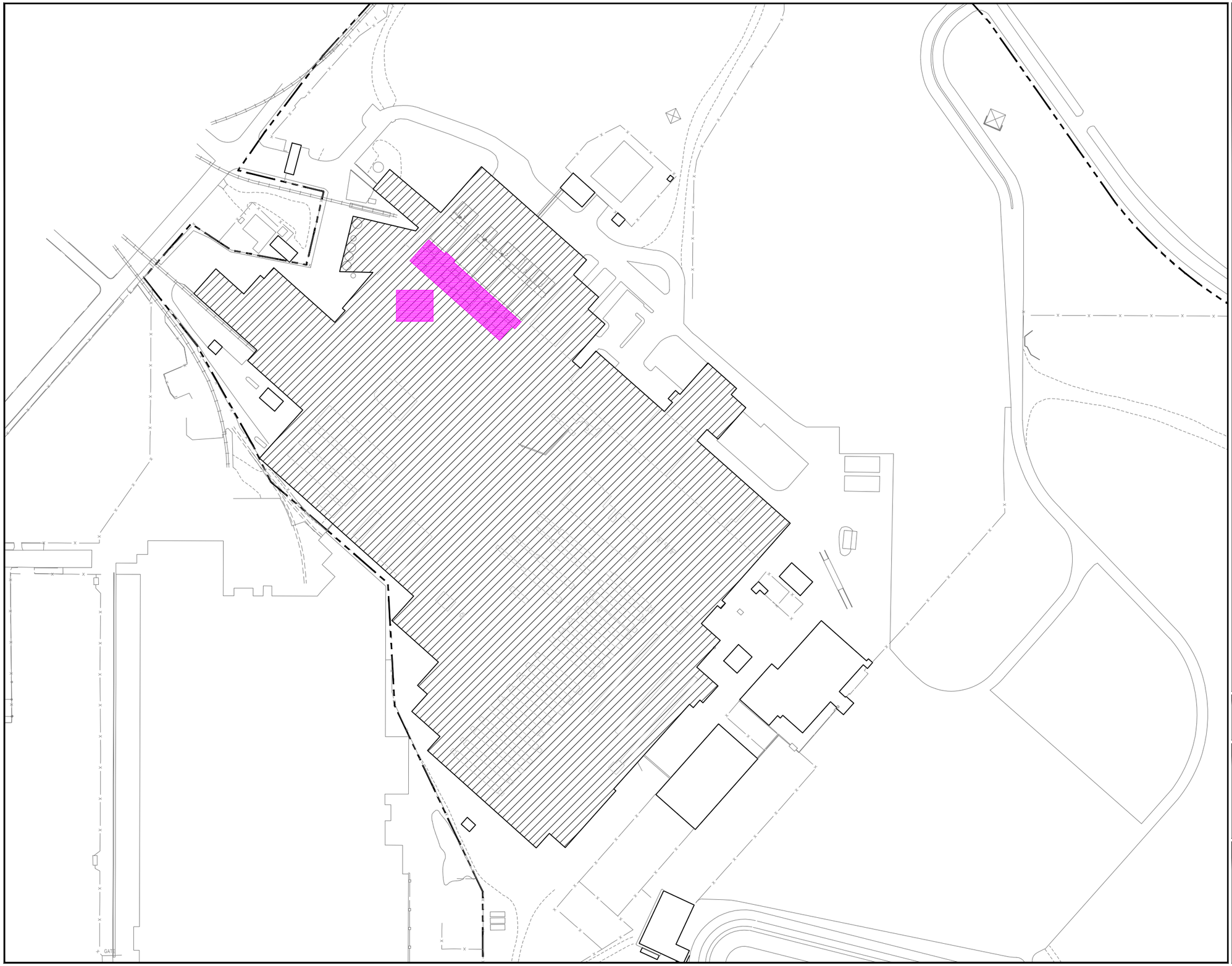
REMOVAL OF PCB IMPACTED SOIL AND CONCRETE IN THE I27.7 MANHOLE AREA

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
MRT	JEP	MARCH 2015	
Scale: 1:10	Project Nº: 07878-T01	Report Nº: 023	Drawing Nº: figure 2.5

07878-T01(023)GN-WA008 MAY 7/2015



0 50 100ft

LEGEND

RACER MALLEABLE IRON INDUSTRIAL LAND PROPERTY LINE (APPROX.)

BUILDING OUTLINE

FENCE LINE

PROPOSED RESTRICTIONS LIMITING USE TO LOW OCCUPANCY

PROPOSED NOTICE TO BE INCLUDED ON DEED TO IDENTIFY THAT PCBS ABOVE 100 ppm EXIST IN THIS AREA

SCALE VERIFICATION

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

REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE (RACER) MALLEABLE IRON INDUSTRIAL LAND

SAGINAW, MICHIGAN

PROPOSED DEED RESTRICTIONS FOR AREAS OF THE CONCRETE FLOOR SLAB

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
MRT	JEP	MARCH 2015	
Scale: 1:100	Project No: 07878-T01	Report No: 023	Drawing No: figure 2.6

07878-T01(023)GN-WA009 MAR 24/2015

TABLE 2.1
SUMMARY OF GEOTECHNICAL LABORATORY TEST RESULTS
FROM SAGINAW NODULAR INDUSTRIAL LAND CLAY PILE
MALLEABLE IRON INDUSTRIAL LANDS
SAGINAW, MICHIGAN

Sample ID (As Received)	*Date Sample Received*	*Sample Number*	*Labotary Number*	*Particle Size Distribution*					*As Received Moisture Content (%)*	*Atterberg Limits (%)*			*Standard Proctor*			*Remolded Permeability*			
				% Gravel	*% Sand*	*% Silt*	*% Passing NO. 200 Mesh*	*% Clay (<0.002 mm)*		*Liquid Limit (LL)*	*Plastic Limit (%)*	*Plasticity Index (%)*	*Maximum Dry Density (kg/m^3)*	*Maximum Dry Density (lbs/ft^3)*	*Optimum Moisture (%)*	*Maximum Dry Density (lbs/ft^3)*	*Compaction (%)*	*Moisture Content (%)*	*Permeability (cm/sec)*
Clay Liner Specifications				-	-	-	***>30***	-	-	***>30***	-	***>15***	-	-	-	-	-	-	1.0E-07
CL1	7-Nov-13	1	WLA 344-1	4	29	38	67	29	12	29	12	17	1914	119	13.2	113	95	14.8	1.4E-08
CL2	7-Nov-13	2	WLA 344-2	2	31	39	67	28	11	28	11	17	1942	121	12.6	115	95	14.6	2.4E-08
CL3	7-Nov-13	3	WLA 344-3	4	37	36	59	23	21	28	12	16	1885	118	13.0	112	95	15.3	2.2E-08
CL4	7-Nov-13	4	WLA 344-4	5	37	35	58	23	11	21	10	11	1919	120	13.1	114	95	15.0	2.6E-08
CL5	7-Nov-13	5	WLA 344-5	4	38	36	58	22	12	21	11	10	1948	122	11.8	116	96	14.2	1.9E-08
CL6	7-Nov-13	6	WLA 344-6	2	29	40	69	29	13	24	12	12	1911	119	13.1	113	95	14.4	2.9E-08
			Average Value:	4	34	37	63	26	13	25	11	14	1920	120	12.8	114	95	14.7	2.2E-08

Appendix A

Certification

Pursuant to 40 CFR761.61(a)(3)(i)(E), all sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination related to the investigation and cleanup activities specified in the Work Plan will be maintained in the following location and accessible for inspection by U.S. EPA:

- Conestoga-Rovers & Associates, Inc.
  Attn: Michael Tomka, P.E.
  14496 Sheldon Road, Suite 200
  Plymouth, Michigan 48170

RACER Trust has retained Conestoga-Rovers & Associates, Inc. (CRA). CRA, as the Engineer, represents RACER Trust and will act as the party implementing the cleanup plan in accordance with 40 CFR 761.61. Effective July 1, 2015, CRA will be officially changing its name to "GHD Services Inc." The personnel and office location identified on this certification will remain the same.

Owner Representative Signature

May 8, 2015
Date

David Favero, Deputy Cleanup Manager - Michigan
Owner Representative Printed Name

500 Woodward Avenue, Suite 1510, Detroit, Michigan 48226
Address of Owner