

Technical Memorandum

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Project Name	RACER: Saginaw Nodular Industrial Land Site		
Subject	Data Evaluation Revisions Resulting from Updated Screening Criteria		

Executive Summary

This memorandum was prepared for Revitalizing Auto Communities Environmental Response (RACER) Trust's Saginaw Nodular Industrial Land (Site), located in Saginaw, Michigan. The Site is currently being addressed by the Resource Conservation and Recovery Act (RCRA) Hazardous Waste Cleanup Program (formerly the Corrective Action Program), with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

At the request of U.S. EPA, RACER is currently preparing a Revised Corrective Measures Proposal (CMP) to incorporate additional activities that have been conducted since the last submittal in 2021. In addition, a draft First Amended and Restated Declaration of Restrictive Covenant (Revised DRC) for a portion of the Site, which utilizes existing Site-wide data compared to the most current Michigan Department of Environment, Great Lakes and Energy (EGLE)¹ Act 451, Part 201 Generic Cleanup Criteria, was submitted to U.S. EPA for review on June 5, 2025. Throughout implementation of the RCRA Facility Investigation (RFI) at the Site, the screening criteria have been amended by EGLE on several occasions. Site-wide soil and groundwater analytical results were most recently rescreened using EGLE's 2013 Generic Cleanup Criteria dated December 31, 2013 (2013 Criteria) and additionally the EGLE proposed Draft 2017 Part 201 Generic Cleanup Criteria and Screening Levels (Draft 2017 Criteria). The current posting date for Part 201 Generic Cleanup Criteria for residential and nonresidential soil and groundwater is October 12, 2023 (2023 Criteria).

The RFI data evaluations provided the basis for recommendations in the draft CMP submitted in 2021. In particular, the soil evaluation relied upon the Draft 2017 Criteria (most notably for manganese and formaldehyde), which were ultimately not adopted by Michigan Legislature. This memorandum acknowledges that any data evaluation outcomes which relied upon the Draft 2017 Criteria should be viewed as not valid and have been reassessed in this memorandum.

This memorandum summarizes the differences between the 2013 Criteria and the 2023 Criteria and proceeds to rescreen the groundwater and existing (unexcavated) on-Site soil and sediment data in the context of

¹ EGLE was formerly known as the Michigan Department of Environmental Quality (MDEQ) so for ease of review in this document, EGLE is used throughout.

revising the CMP, finalizing the current draft DRC, and preparing additional DRCs for the remainder of the Site. The following conclusions are made:

- The differences in groundwater criteria do not impact the groundwater evaluations of the drinking water and groundwater-surface water interface pathways that have already been completed as part of the human health or ecological assessment(s). Therefore, the overall outcomes of the previous groundwater evaluations, which relied on the 2013 Criteria, remain unchanged, and no further action is recommended for the Site with respect to groundwater beyond recording a DRC.
- The differences in nonresidential soil criteria do not impact the evaluations of the direct contact pathway that have already been completed as part of the human health or ecological assessment(s); however, since the Draft 2017 Criteria for manganese and formaldehyde are not valid, specific soil locations with manganese and formaldehyde above 2023 Criteria will now be addressed in the Revised CMP by recommending either providing for a contaminated materials management plan and/or providing notifications of the exceedances in the Revised DRC.
- Sediment was previously evaluated in risk assessments from the position that the ponds and North Ditch would remain in place. However, the possibility of these water features being backfilled in the future and the area being used by humans has been identified, and therefore, sediment data was compared to 2023 Criteria. Exceedances of arsenic, lead, manganese, and formaldehyde are present in sediment. The Revised CMP currently under development will now address these exceedances by recommending either providing for a contaminated materials management plan, providing notifications of the exceedances in the Revised DRC, and/or requiring preparation and submittal of a plan to allow for human use of the Secondary Pond, Lagoon 5, and/or the North Ditch and require U.S. EPA or EGLE and RACER written approval prior to implementation..

This memorandum also provides a complete, current snapshot of Site-wide soil and sediment compared to most current 2023 Criteria.

1. Introduction

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, GHD has prepared this memorandum for RACER's Saginaw Nodular Industrial Land (Site), located in Saginaw, Michigan.

The Site is currently being addressed by the Resource Conservation and Recovery Act (RCRA) Hazardous Waste Cleanup Program (formerly the Corrective Action Program), with oversight under the U.S. Environmental Protection Agency (U.S. EPA). A final Corrective Measures Proposal (CMP) is being completed.

Analytical results from several different phases of the RCRA Facility Investigation (RFI) were screened against generic risk-based cleanup criteria developed by Michigan Department of Environment, Great Lakes and Energy (EGLE)² Act 451, Part 201 Generic Cleanup Criteria and Screening Levels. During implementation and following completion of investigation activities, these screening criteria have been amended by EGLE on several occasions. Site-wide soil and groundwater analytical results were most recently rescreened using EGLE's 2013 Generic Cleanup Criteria dated December 31, 2013 (henceforth referred to as 2013 Criteria) and additionally the EGLE proposed Draft 2017 Part 201 Generic Cleanup Criteria and Screening Levels (henceforth referred to as Draft 2017 Criteria). The Draft 2017 Criteria were ultimately not adopted by Michigan Legislature and therefore any data evaluation outcomes which relied upon them are no longer relevant.

The current posting date for Part 201 Generic Cleanup Criteria for residential and nonresidential soil and groundwater is October 12, 2023 (henceforth referred to as 2023 Criteria).

² EGLE was formerly known as the Michigan Department of Environmental Quality (MDEQ) so for ease of review in this document, EGLE is used throughout.

This memorandum:

- summarizes the previous data evaluations completed for the Site (Section 1.2),
- discusses the impacts to the previous data evaluations as a result of the updates to screening criteria over time (i.e., changes in the 2023 Criteria from the 2013 Criteria and Draft 2017 Criteria) (Section 2),
- rescreens Site-wide groundwater data for 2023 GSI Criteria for specific parameters (Section 3),
- rescreens the existing (unexcavated) on-Site soil and sediment data for 2023 Nonresidential Criteria (Section 4), and
- provides updated recommendations for revising the CMP and DRCs (Section 5).

The following figures, tables, and attachments are included:

Figure 4.1	IU H Summary of Exceedances in Secondary Pond and Lagoon Sediment
Figure 4.2	IU G South Summary of Exceedances in Soil
Figure 4.3	IU H Summary of Exceedances in Soil
Figure 4.4	IU I Summary of Exceedances in Soil
Table 2.1	Summary of Changes to Nonresidential Soil Screening Criteria Between 2013 and 2023
Table 2.2	Summary of Changes to Groundwater Screening Criteria Between 2013 and 2023
Table 3.1	Groundwater Locations Exceeding 2023 Groundwater Surface Water Interface Screening Criteria
Table 4.1	Sediment Locations Exceeding 2023 Nonresidential Soil Screening Criteria
Table 4.2	Soil Locations Exceeding 2023 Nonresidential Soil Screening Criteria
Attachment 1	Analytical Results Summary - Groundwater Compared to 2023 Groundwater Surface Water Interface Criteria for Select Parameters
Attachment 2	Analytical Results Summary – Sediment Compared to 2023 Nonresidential Criteria
Attachment 3	Analytical Results Summary – Soil Compared to 2023 Nonresidential Criteria

1.1 Background

The Site was part of a larger facility, formerly owned by General Motors Corporation (GMC), called the General Motors Powertrain Saginaw Metal Casting Operations (SMCO or Larger Facility). In 2009, GMC filed for Chapter 11 protection under U.S. Bankruptcy Code and was renamed Motors Liquidation Company (MLC). A smaller portion of the Larger Facility (i.e., this Site) remained the property of MLC, in its capacity as debtor in possession in the bankruptcy case. In 2011, responsibility for environmental remediation of the Site was transferred from MLC to RACER. Ownership of the Site was transferred to RACER Properties LLC, a wholly owned entity of RACER.

1.2 RFI Summary

In May 1995, the Larger Facility was placed under a RCRA Section 3008(h) Unilateral Administrative Order (UAO) which required GMC to complete specific requirements in order to evaluate environmental impacts at the Larger Facility. Multiple phases of investigation were completed under U.S. EPA approved work plans between 1998 and 2005. An RFI Report was submitted by GMC to the U.S. EPA in March 2007 covering the entire Larger Facility (i.e., prior to the July 10, 2009 property split) and utilized Michigan Act 451, Part 201 Generic Cleanup Criteria (June 2006).

On September 30, 2011, RACER entered into a new RCRA Section 3008(h) Performance Based Administrative Order on Consent, RCRA 05 2011 0023 (2011 Order), which solely covers the RACER Site.

Pursuant to the 2011 Order, RACER submitted Supplemental RFI Report for the Site in 2012. Since the completion of the 2007 RFI Report for the Larger Property, and prior to the submittal of 2012 Supplemental RFI Report for the Site, the Michigan Act 451, Part 201 Generic Cleanup Criteria were revised on March 25, 2011. The 2012 Supplemental RFI Report stated that rescreening against the March 25, 2011 criteria would not change the outcome as the criteria are used for screening purposes only. Quantitative risk assessments [Human Health Risk Assessment (HHRA) and Ecological Risk Assessment (ERA)] were completed as part of the 2007 Phase 1C RFI Report and these quantitative risk assessments were the basis for risk management decisions at that time.

Since the submission of the 2012 Supplemental RFI, additional characterization activities have been performed on-Site in consultation with U.S. EPA. The following is a list of the evaluations:

- In June 2011, additional characterization of the Secondary Pond (sediment and water) was completed for the purpose of obtaining an NPDES permit for the discharge of water, and if necessary, to evaluate remedial alternatives to address any issues identified.
- In July 2013, additional characterization of North Ditch surface water and sediments was completed to assess stormwater improvement alternatives.
- In March and April of 2015, additional delineation of PCB and manganese impacts in IU G were completed to support evaluating remediation alternatives.
- In 2016, additional characterization of the Secondary Pond was completed to support RCRA Corrective Action.
- In 2018, Site-wide soil and groundwater analytical results were rescreened using 2013 Criteria and Draft 2017 Criteria.
- In April 2018, sediment pore-water sampling was conducted in the Secondary Pond sediment to support evaluation of risks to benthic invertebrates.
- In December 2019, after identifying some visible surficial slag in IU I, an investigation was completed to evaluate the potential impacts and risks due to the presence of slag.
- In June 2021, at the request of U.S. EPA, two previous soil sample locations at the south end of IU-H were further delineated.
- From 2004 to 2020, annual CA 750 EI groundwater sampling events were conducted in accordance with the RCRA CA725 & CA750 EI Supporting Documentation dated September 17, 2003. Results from 2011 to 2020 were presented in a memorandum dated May 18, 2022 (GHD, 2022). EI monitoring was terminated with U.S. EPA approval in 2020. Annual groundwater sampling was re-initiated in 2022 and was related to the groundwater/surface water interface pathway evaluation and is ongoing.
- In 2023, the first round of groundwater sampling for per- and polyfluorinated substances (PFAS) and 1,4-dioxane was completed. There were no detections for 1,4-dioxane and therefore, no additional monitoring for 1,4-dioxane was completed. A second round of groundwater sampling for PFAS was completed in 2024 to confirm the results.

As part of the requirements of the 2011 Order, RACER is required to propose final corrective measures necessary to protect human health and the environment from all current and future unacceptable risks due to releases of hazardous waste or hazardous constituents at or from the Site (the "Final Corrective Measures Proposal"). The initial Draft CMP was submitted to U.S. EPA on April 1, 2013. The 2013 Draft CMP was later used as the basis for a Revised Draft CMP report, which was submitted to U.S. EPA on June 11, 2021. The 2021 Draft CMP was prepared at the request of U.S. EPA to incorporate additional activities that were conducted since the initial draft submission in 2013 and to update the proposed corrective measures, as necessary.

At the request of U.S. EPA, RACER is preparing a Revised CMP to incorporate additional activities that have been conducted since the last submittal in 2021 Draft CMP (discussed above).

1.2.1 2018 Rescreening Evaluations

As discussed above, Site-wide soil and groundwater analytical results were rescreened separately using EGLE's 2013 Criteria and additionally the EGLE's proposed Draft 2017 Criteria. These rescreening evaluations were presented to U.S. EPA in the Soil Evaluation memorandum dated April 20, 2018, and the Groundwater Evaluation memorandum dated October 15, 2018.

Groundwater

The conclusions of the 2018 groundwater rescreening evaluation did not rely on the Draft 2017 Criteria, however, the conclusions identified the need to perform additional sampling for select metals and continued monitoring for pH and ammonia. The additional groundwater sampling was completed during the 2018 and 2019 annual EI monitoring events and discussed in the 2019 CA 750 Environmental Indicator Annual Monitoring Results and Additional Monitoring Results letter dated January 17, 2020, which was accepted by U.S. EPA on January 22, 2020. The groundwater evaluation concluded that there are no Site-related concentrations in groundwater that represent a potential for significant exposure to on- or off-site receptors, and no further action was recommended for the Site with respect to groundwater beyond recording a DRC.

Soil

The conclusions of the 2018 soil rescreening evaluation relied on both the 2013 Criteria and the Draft 2017 Criteria. The U.S. EPA responded to the soil evaluation memorandum with comments dated August 31, 2018, and did not identify issues with this approach; the U.S. EPA also requested further delineation sampling at select locations in IU H and IU I. In accordance with U.S. EPA's request, additional delineation was conducted in IU H and IU I and the results were presented in letters dated September 2, 2021 (accepted by U.S. EPA on September 16, 2021) and March 10, 2020 (accepted by U.S. EPA on March 12, 2020). The results of these soil evaluations concluded that there are no Site-related soil concentrations that represent a potential for significant exposure to on- or off-site receptors. Therefore, no further action was recommended for the Site with respect to soil beyond recording a DRC, which included stipulations for PCBs and arsenic. Since the Draft 2017 Criteria were not adopted by the Michigan legislature, the exceedances of Draft 2017 Criteria discussed in the 2018 evaluation memorandums are no longer relevant. In particular, the 2018 soil evaluation discussed two parameters (manganese and formaldehyde) that exceeded the 2013 Criteria but did not exceed the Draft 2017 Criteria (as they were higher). The 2018 soil evaluation relied upon this to conclude that no further action is necessary for these parameters.

Given that the 2023 Criteria for these two parameters are the same as the 2013 Criteria, instead of no further action, the Revised DRCs will need to include a notification of these exceedances so they can be properly considered and managed should these locations be encountered.

2. Summary of Impacts Resulting from Changes to Screening Criteria

A comparison between the 2013 Criteria and the 2023 Criteria was completed to identify the concentration changes for specific contaminants for groundwater and nonresidential soil. The findings are presented on Tables 2.1 and 2.2, respectively. For simplicity, changes/updates to notations alone which describe sources for the criteria such as footnotes and methods (available in the EGLE Document *R 299.49 Footnotes for Generic Cleanup Criteria Tables*) are not presented.

As part of the final remedy proposed in the Revised CMP currently under development, a draft Revised DRC has been proposed and submitted to U.S. EPA for review. To ensure the Revised CMP and Revised DRC are comprehensive, it was necessary to verify that exceedances of the current 2023 Screening Criteria have been identified and properly addressed.

The purpose of this section is to present the differences between the 2013 Criteria and the 2023 Criteria and, how these changes impact the past data assessments.

2.1 Groundwater

As shown in Table 2.1, groundwater criteria changes were made to eleven parameters for residential drinking water, groundwater surface water interface (GSI), and PFAS parameters:

1. Drinking water parameters: the only changes between 2013 and 2023 were for asbestos and sodium; however, these amounted to minor corrections to typographical errors presented on the tables and no meaningful change to the actual values (i.e., sodium criteria changed from 2.3E+S ug/L to 2.3E+5 ug/L). Therefore, changes to criteria do not affect the outcome of the previous groundwater evaluation with respect to drinking water.
2. GSI parameters: value changes to the criteria were updated for 1,4-dioxane and eight other parameters (acetonitrile, bromomethane, carbon tetrachloride, total xylenes, aniline, bis(2-ethylhexyl)phthalate, phenanthrene, and formaldehyde).

Note that an evaluation of 1,4-dioxane was presented in the PFAS Initial Site Screening report (GHD, November 6, 2023) using the current 2023 Criteria, which concluded that no further action was required (no exceedances of criteria were detected).

3. PFAS parameters: seven PFAS parameters were added to the Part 201 criteria in 2023. Evaluations for PFAS were presented in the PFAS Initial Site Screening report (GHD, November 6, 2023) and the 2024 PFAS Results Summary report (GHD, March 20, 2025) using the current 2023 Criteria. It was concluded that PFAS concentrations at the Site have remained consistent with no noticeable upward trend, and that that these minor detections be managed by institutional controls (i.e., prohibit installation of water wells and use of groundwater) in the form of a DRC, which was a proposed corrective measure in the 2021 Draft CMP and will be a proposed corrective measure in the Revised CMP that is being prepared.

Therefore, these changes do not impact the drinking water exposure evaluation that has been completed as part of the human health or ecological assessment(s) with respect to drinking water. However, since eight GSI parameters had value changes between the 2013 Criteria and the 2023 Criteria, groundwater was screened against 2023 GSI Criteria (summarized in Section 3). The results of the re-screening will be used to determine if the overall outcomes of the groundwater evaluations which relied on the 2013 Criteria remain unchanged.

2.2 Soil

As shown in Table 2.2, nonresidential soil criteria changes were limited to six GSI Protection parameters (acetonitrile, bromomethane, carbon tetrachloride, xylenes, 1,4-dioxane, and formaldehyde).

The GSI evaluation is based on actual groundwater monitoring results and therefore, these changes pertaining to GSI protection criteria do not impact the GSI evaluation that was completed as part of the human health or ecological assessment(s). Therefore, the overall outcomes of the soil evaluations relying on the 2013 Criteria remain unchanged. However, since the conclusions from the 2018 soil evaluation for manganese and formaldehyde relied on the Draft 2017 Criteria, which were never promulgated, soil was screened against 2023 Nonresidential Criteria (summarized in Section 4).

Note that previous evaluations and corrective actions for PCBs have been subject to the Toxic Substances Control Act (TSCA). There has been no change to the TSCA criteria for PCBs and therefore previous data assessment conclusions related to PCBs remain unchanged.

3. Groundwater Rescreening for 2023 Criteria

The purpose of this section is to summarize the re-screening of the groundwater data to the 8 parameters (acetonitrile, bromomethane, carbon tetrachloride, total xylenes, aniline, bis(2-ethylhexyl)phthalate,

phenanthrene, and formaldehyde) that had value changes from the 2013 Criteria to the 2023 Criteria and to determine if the overall outcomes of the groundwater evaluations which relied on the 2013 Criteria remain unchanged. Drinking water at the Site is and will continue to be restricted and therefore a complete rescreening of all groundwater data for all 2023 Criteria is not necessary for the purposes of this memorandum.

Table 3.1 presents a summary of analytical results for groundwater samples collected in IU H, IU I, and IU G from the initiation of the RFI (November 1998) to the present that had exceedances of the 8 parameters that had value changes from the 2013 Criteria to the 2023 Criteria. All analytical results for these parameters are tabulated in Attachment 1.

IU H: There were no exceedances of the 2023 GSI criteria.

IU I: Consistent with previous groundwater evaluations, IU I groundwater data were screened against 2023 GSI Criteria (tabulated in Attachment 1), however, there are no surface water features in close proximity and therefore, no discussion has been provided on exceedances.

IU G: Phenanthrene exceeded the 2023 GSI criteria in one sample from temporary monitoring well TMW-04046 collected in 2002. This temporary well was located outside the RACER property, to the north of MW-04040, along Veterans Memorial Highway. As listed in Attachment 1, there have been no other detections of phenanthrene in any other samples at the Site.

Therefore, changes between the 2013 Criteria and the 2023 Criteria do not impact the overall outcomes of the groundwater evaluations which relied on the 2013 Criteria.

GSI has been addressed with the exception of the potential for a complete GSI pathway related to the on-site wetlands. The potential for impacts to the wetlands remains under consideration by U.S. EPA and EGLE.

4. Sediment and Soil Rescreening for 2023 Criteria

The purpose of this section is to present the status of all existing sediment and soil locations with data exceeding current 2023 Criteria, and to discuss how they should be addressed in the in the Revised CMP. The Revised DRC will identify contaminants of concern that remain in on-Site soil and sediment locations above the current Nonresidential 2023 Criteria.

On-Site soil locations and associated contaminants had previously been addressed in the 2018 Soil Evaluation rescreening activity which relied on the Draft 2017 Criteria for conclusions related to manganese and formaldehyde. Since the Draft 2017 Criteria were not adopted by the Michigan legislature, the soil locations and contaminants are addressed herein.

On-Site sediment within the ponds and North Ditch were addressed in the RFI and the risk assessments (Ecological Screening Assessment for Secondary Pond under Future Use Scenarios dated August 18, 2017, North Ditch Ecological Screening Assessment dated March 14, 2019, and the Updated North Ditch Ecological Screening Assessment dated February 12, 2020), which evaluated the ponds and North Ditch as remaining in place. However, the Revised CMP will now take into account the possibility of the water features being backfilled in the future and the area being used by humans. Therefore, sediment locations and contaminants exceeding 2023 Criteria are also addressed herein.

In order to provide a complete and final summary of the soil and sediment remaining on-Site which exceed the current of 2023 Criteria, existing data (from locations that have not been excavated) have been screened against:

- Nonresidential Direct Contact (DC)
- Nonresidential Soil Volatilization to Indoor Air Inhalation (SVIAH)
- Nonresidential Infinite Source Volatile Soil Inhalation (VSIC)
- Nonresidential Particulate Soil Inhalation (PSIC)

Soil and sediment data were not compared to drinking water protection or GSI protection criteria, as there is groundwater data available for the Site that has been used to evaluate and address the drinking water and GSI pathways. In addition, drinking water at the Site is prohibited by a deed restriction and will continue to be prohibited in the Revised DRC.

Soil and sediment PCB data were not compared to Part 201 criteria because PCBs at the Site have been subject to TSCA. There has been no change to the TSCA criteria for PCBs and therefore previous data assessment conclusions related to PCBs remain unchanged. Therefore, PCB data have not been reviewed and is not discussed as part of this memorandum.

4.1 Sediment Rescreening

Table 4.1 presents a summary of analytical results for sediment samples collected in IU H and IU G that exceeded the 2023 Criteria. The re-screening identified exceedances of the following parameters: arsenic, lead, manganese and formaldehyde. The sediment locations with contaminants exceeding 2023 Criteria are presented on Figure 4.1. For completeness, PCBs are also shown where TSCA levels are exceeded. The purpose of this figure is to present all existing locations exceeding current screening criteria regardless of how these locations were addressed in previous evaluations.

The following sections addresses arsenic, lead, manganese, and formaldehyde-impacted sediments remaining at the Site. All sediment analytical results for these parameters are presented in Attachment 2.

4.1.1 Arsenic

Results of one sediment sample at the Site reported arsenic above the Nonresidential Direct Contact criterion of 37 mg/kg in one location at a concentration of 47 mg/kg.

4.1.2 Lead

Results of sediment samples at the Site reported lead above the Nonresidential Direct Contact criterion of 900 mg/kg with concentrations ranging from 80 to 2,490 mg/kg.

4.1.3 Manganese

Results of sediment samples at the Site reported manganese above the Nonresidential PSIC of 1,500 mg/kg with concentrations ranging from 1,600 to 15,800 mg/kg.

4.1.4 Formaldehyde

Results of sediment samples at the Site reported formaldehyde above the Nonresidential Soil Volatilization to Indoor Air Inhalation criterion of 65 mg/kg and/or Nonresidential Infinite Source Volatile Soil Inhalation criterion of 43 mg/kg with concentrations ranging from 44 to 130 mg/kg.

4.1.5 Discussion

In the event that future use of the Site involves human use of the Secondary Pond, Lagoon 5, and/or the North Ditch areas, the proposed Revised DRC will provide notification of the exceedances so they can be properly considered and managed. Future human use of the Secondary Pond, Lagoon 5, and/or the North Ditch will require preparation and submittal of a plan for management of remaining impacts and will require U.S. EPA or EGLE and RACER written approval prior to implementation.

4.2 Soil Rescreening

Table 4.2 presents a summary of analytical results for soil samples that exceeded the 2023 Criteria. The re-screening identified exceedances of the following parameters: arsenic, manganese, and formaldehyde. The soil locations in IU G, IU H, and IU I with contaminants exceeding 2023 Criteria are presented on Figures 4.2,

4.3, and 4.4, respectively. For completeness, PCBs are also shown where TSCA levels are exceeded. The purpose of these figures is to present all existing locations exceeding current screening criteria regardless of how these locations were addressed in previous evaluations.

The following sections address arsenic, manganese, and formaldehyde-impacted soils remaining at the Site. All soil analytical results are presented in Attachment 3.

4.2.1 Arsenic

Results of one soil sample (EB-114) at the Site reported arsenic above the Nonresidential Direct Contact Criteria of 37 mg/kg at a concentration of 81 mg/kg at a depth of 4 to 5.5 feet below ground surface. The area surrounding this exceedance was excavated down to approximately 4 feet. The sample was addressed in the 2018 Soil Evaluation, which determined that as part of a Revised DRC, notification will be provided of this exceedance. The Revised CMP will maintain this conclusion and the Revised DRC will include a notification of this location.

4.2.2 Manganese

Results of soil samples at the Site reported manganese above the Nonresidential PSIC of 1,500 mg/kg at concentrations ranging from 1,560 mg/kg to 11,900 mg/kg:

- One sample at one location (in the vicinity of historical temporary monitoring well TMW-04127 in the Wetland Area) in IU G could not be replicated upon further delineation (results were an order of magnitude lower as shown in Table 2). The 2018 Soil Evaluation addressed this location and no further action was recommended for this area as the result could not be replicated. The Revised CMP will maintain this conclusion.
- Six samples are in the vicinity of the slag areas of IU I which were investigated utilizing incremental sampling. The Incremental Soil Sampling Results Summary dated March 10, 2020 utilized the 2013 Criteria for manganese (which is the same as the 2023 Criteria) at these locations and identified no ecological or human health risks were anticipated and no further action was recommended. The Revised CMP will maintain this conclusion.
- Seven samples at seven locations (within IU H, IU I, and IU G) are at elevations deeper than 2 feet below the ground surface and therefore do not currently pose a particulate inhalation risk but warrant notification of these exceedances in the Revised DRC. The Revised CMP will maintain this conclusion.
- Twenty-four samples at twenty-three soil locations (six locations in IU H, ten locations in IU I, and seven locations in IU G) are at elevations at or near the ground surface. The 2018 Soil Evaluation addressed these locations and no further action was recommended for these locations on the basis of utilizing the Draft 2017 Criteria. However, these locations exceed the 2023 Criteria and therefore, will be addressed in the Revised CMP and warrant notification of these exceedances in the Revised DRC.

It should be noted that no current manganese particulate inhalation risk is associated with the locations listed above because there is generally a good, vegetated cover and little to no vehicle or pedestrian traffic at those locations.

4.2.3 Formaldehyde

Results of 5 soil samples located in IU I reported formaldehyde above the Nonresidential Infinite Source Volatile Soil Inhalation Criteria (VSIC) of 43 mg/kg at concentrations ranging from 52 to 78 J mg/kg. The 2018 Soil Evaluation addressed these locations and no further action was recommended for these locations on the basis of utilizing the Draft 2017 Criteria. However, these locations exceed the 2023 Criteria and therefore will be addressed in the Revised CMP and warrant notification of these exceedances in the Revised DRC.

Table 4.2 also presents a calculation for the average concentration across the entire depth of the borehole at each location, using half the detection limit for non-detects. The average location results are all below 43 mg/kg

criteria and therefore there is no unacceptable current or future risk associated with these locations. However, a notification of these locations will be included the Revised DRC as a conservative measure.

4.2.4 Discussion

In order to account for the exceedances of Nonresidential 2023 Criteria remaining in soil, it is appropriate for the Revised DRC to include a notification of these exceedances so they can be properly considered and managed should these locations be redeveloped.

5. Conclusions and Recommendations

The most recent rescreening of groundwater and soil data utilized EGLE's 2013 Criteria. As of the date of this memorandum, the most current Part 201 criteria are EGLE's 2023 Criteria.

The soil and groundwater data rescreening evaluations completed in 2018 included both the 2013 Criteria and the Draft 2017 Criteria, however the Draft 2017 Criteria were ultimately not adopted by the Michigan legislature.

A comparison between the 2013 Criteria and 2023 Criteria identified that the screening level concentration changes for groundwater and nonresidential soil are limited to GSI, PFAS, and GSI Protection criteria.

The overall outcomes of the previous groundwater evaluation (no further action recommended for the Site with respect to groundwater beyond recording a DRC) are not changed, with reasoning described below:

- The conclusions of the groundwater evaluation did not rely on the Draft 2017 Criteria and drinking water criteria values did not change between 2013 and 2023; therefore, further rescreening for groundwater criteria against drinking water criteria is not necessary. In addition, drinking water at the Site is and will be prohibited by a deed restriction.
- Changes in GSI criteria resulted in only one exceedance of phenanthrene in one sample at one temporary monitoring well location; this parameter was not detected in any other groundwater samples at the Site.
- 1,4-dioxane has been previously evaluated and did not exceed the 2023 Criteria.
- PFAS in groundwater have been previously compared to the 2023 Criteria and U.S. EPA Maximum Contaminant Levels, with concentrations at the Site remaining consistent with no noticeable upward trend. Therefore, groundwater use at the Site will continue to be prohibited by the Revised DRC.
- There may be a potential for a complete GSI pathway related to the on-Site wetlands, but not to the Saginaw River. The potential for impacts to the wetlands remains under consideration by U.S. EPA and EGLE.

The overall outcomes of the previous soil evaluation (no further action recommended for the Site with respect to soil beyond recording a DRC including stipulations for PCBs and arsenic) have changed as follows:

- The conclusions of the 2018 soil evaluation relied on both the 2013 Criteria and the Draft 2017 Criteria, and therefore, additional examination of these data using the 2023 Nonresidential Soil Criteria was appropriate. For the locations identified in Section 4.2, it is recommended that exceedances of the 2023 Criteria for arsenic, manganese, and formaldehyde be addressed in the Revised CMP by recommending either providing for a contaminated materials management plan and/or providing notifications of these exceedances in the Revised DRC.
- Sediment was previously evaluated in risk assessments from the position that the ponds and North Ditch would remain in place. However, the Revised CMP will now take into account the possibility of the water features being backfilled in the future and the area being used by humans. Therefore, additional examination of these data using the 2023 Nonresidential Soil Criteria was appropriate. For the locations identified in Section 4.1, it is recommended that exceedances of 2023 Criteria arsenic, lead, manganese, and formaldehyde be addressed in the Revised CMP and warrant notification of these exceedances in the Revised DRC. Future human use of the Secondary Pond, Lagoon 5, and/or the North Ditch will require

preparation and submittal of a plan for management of remaining impacts and will require U.S. EPA or EGLE and RACER written approval prior to implementation

- PCBs at the Site have been subject to TSCA. There has been no change to the TSCA criteria for PCBs, and therefore, previous data assessment conclusions related to PCBs remain unchanged. PCBs will continue to be addressed in the Revised CMP and warrant notification in the Revised DRC.

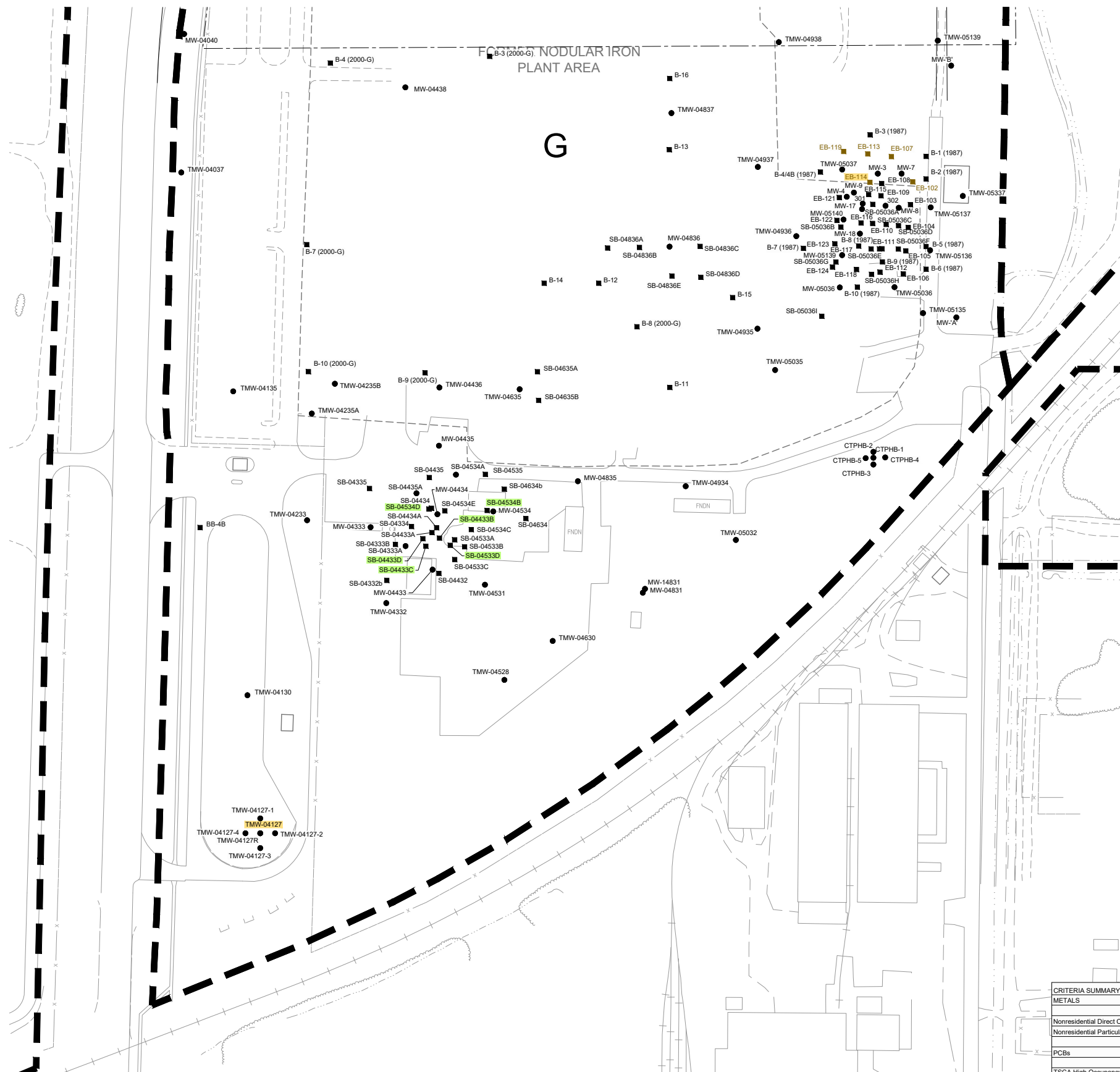
Concentrations of arsenic, lead, manganese, and formaldehyde remain in soil and sediment at the Site above 2023 Criteria and PCBs remain in soil and sediment above various TSCA levels. PCBs have been addressed pursuant to TSCA requirements in the IMs and will be addressed similarly in the Revised CMP. While some of the locations exceeding for metals and formaldehyde in soil previously required no further action based on the 2018 re-evaluation, the Revised CMP currently under development will now address these exceedances by recommending either providing for a contaminated materials management plan, providing notifications of the exceedances in the Revised DRC, and/or requiring preparation and submittal of a plan to allow for human use of the Secondary Pond, Lagoon 5, and/or the North Ditch and require U.S. EPA or EGLE and RACER written approval prior to implementation.

Regards



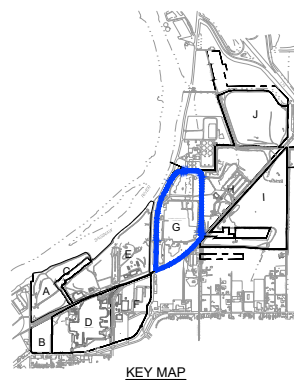
John-Eric Pardys
Project Director

Figures



LEGEND
A--- INVESTIGATIVE UNIT BOUNDARY AND IDENTIFIER
● MONITORING WELL LOCATION
■ SOIL BORING LOCATION
■ SOIL BORING LOCATION - HISTORICAL
■ EXCEEDANCE OF 2023 EGLE CRITERIA FOR ARSENIC AND/OR MANGANESE
■ EXCEEDANCE OF TSCA PCB LEVELS

NOTES:
1) THIS FIGURE HIGHLIGHTS THE EXCEEDANCES OF ALL SOIL DATA SCREENED AGAINST THE OCTOBER 2023 EGLE NONRESIDENTIAL PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS, WITH THE FOLLOWING EXCEPTIONS:
- EXCEEDANCES OF NONRESIDENTIAL DRINKING WATER PROTECTION CRITERIA ARE NOT HIGHLIGHTED ON THIS FIGURE, AS DRINKING WATER AT THE SITE WILL BE RESTRICTED.
- SOIL DATA WERE NOT SCREENED AGAINST THE GROUNDWATER SURFACE WATER INTERFACE PROTECTION CRITERIA, AS THERE IS GROUNDWATER DATA AVAILABLE FOR THE SITE.



CRITERIA SUMMARY		
METALS	Arsenic (mg/kg)	Manganese (mg/kg)
Nonresidential Direct Contact	37	no exceedances
Nonresidential Particulate Soil Inhalation	no exceedances	1500
PCBs	TOTAL PCBs (mg/kg)	
TSCA High Occupancy With Controls	>1ppm but ≤10ppm	
TSCA Low Occupancy With No Controls	>1ppm but ≤25ppm	

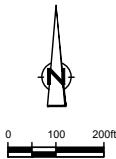
SCALE VERIFICATION
THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

RACER NODULAR IRON INDUSTRIAL LAND
SAGINAW, MICHIGAN
INVESTIGATIVE UNIT G - SOUTH
SUMMARY OF EXCEEDANCES IN SOIL

Source Reference:

Project Manager: J.P.	Reviewed By: J.G.	Date: August 2025
Scale: 1" = 120'	Project N°: 11208041	Report N°: MEMO 10 Drawing N°: Figure 4.2

CRITERIA SUMMARY	
METALS	Manganese
	(mg/kg)
Nonresidential Particulate Soil Inhalation	1500
GENERAL CHEMISTRY	Formaldehyde
	(mg/kg)
Nonresidential Soil Volatilization to Indoor Air Inhalation	65
Nonresidential Infinite Source Volatile Soil Inhalation	43

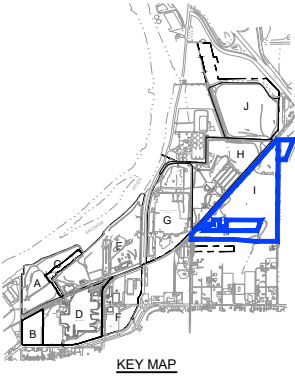


- LEGEND**
- A--- INVESTIGATIVE UNIT BOUNDARY AND IDENTIFIER
 - MONITORING WELL LOCATION
 - SOIL BORING LOCATION
 - SAMPLE LOCATION - NO REPORTED DATA
 - GM LLC PROPERTY BOUNDARY
 - EXCEEDS 2023 EGLE SOIL SCREENING CRITERIA FOR MANGANESE
 - EXCEEDS 2023 EGLE SOIL SCREENING CRITERIA FOR FORMALDEHYDE

NOTES:

1) THIS FIGURE HIGHLIGHTS THE EXCEEDANCES OF ALL SOIL DATA SCREENED AGAINST THE OCTOBER 2023 EGLE NONRESIDENTIAL PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS, WITH THE FOLLOWING EXCEPTIONS:

- EXCEEDANCES OF NONRESIDENTIAL DRINKING WATER PROTECTION CRITERIA ARE NOT HIGHLIGHTED ON THIS FIGURE, AS DRINKING WATER AT THE SITE WILL BE RESTRICTED.
- SOIL DATA WERE NOT SCREENED AGAINST THE GROUNDWATER SURFACE WATER INTERFACE PROTECTION CRITERIA, AS THERE IS GROUNDWATER DATA AVAILABLE FOR THE SITE.



KEY MAP

SCALE VERIFICATION

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

RACER NODULAR IRON INDUSTRIAL LAND

SAGINAW, MICHIGAN

INVESTIGATIVE UNIT I
SUMMARY OF EXCEEDANCES IN SOIL



Source Reference:			
TOPO - SANBORN, 1996			
Project Manager:	Reviewed By:	Date:	
J.P.	J.G.	August 2025	
Scale:	Project N°:	Report N°:	Drawing N°:
1" = 120'	11208041	MEMO 10	Figure 4.4

Tables

Table 2.1

**Summary of Changes to Groundwater Screening Criteria
Between 2013 and 2023
Part 201 Generic Cleanup Criteria and Screening Levels / Part 213 Risk Based Screening Levels**

Date	Hazardous Substance	Chemical Abstract Service Number	Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flamability and Explosivity Screening Level
2013	Acetonitrile	75058	140	400	NA	24000000	45000000	200000000	21000000
2023	Acetonitrile	75058	140	400	13,000 (X)	24000000	45000000	200000000	21000000
2013	Aniline	62533	53	220	4	NLV	NLV	36000000	NA
2023	Aniline	62533	53	220	4.0 (M); 3.0	NLV	NLV	36000000	NA
2013	Asbestos (BB)	1332214	7.0E MFL (A)	7.0E MFL (A)	NA	NLV	NLV	NA	NA
2023	Asbestos (BB)	1332214	7.0 MFL (A)	7.0 MFL (A)	NA	NLV	NLV	NA	NA
2013	bis(2-Ethylhexyl)phthalate	117817	6.0 (A)	6.0 (A)	25	NLV	NLV	340	NA
2023	bis(2-Ethylhexyl)phthalate	117817	6.0 (A)	6.0 (A)	14	NLV	NLV	340	NA
2013	Bromomethane	74839	10	29	35	4000	9000	14500000	ID
2023	Bromomethane	74839	10	29	5.0 (M); 4.2	4000	9000	14500000	ID
2013	Carbon tetrachloride	56235	5.0 (A)	5.0 (A)	45 (X)	370	2400	793000	ID
2023	Carbon tetrachloride	56235	5.0 (A)	5.0 (A)	38 (X)	370	2400	793000	ID
2013	1,4-Dioxane (I)	123911	7.2	350	2,800 (X)	NLV	NLV	900000000	140000000
2023	1,4-Dioxane (I)	123911	7.2 (II)	350	280 (X)	NLV	NLV	900000000	140000000
2013	Formaldehyde	50000	1300	3800	120	63000	360000	550000000	ID
2023	Formaldehyde	50000	1300	3800	180	63000	360000	550000000	ID

Table 2.1

**Summary of Changes to Groundwater Screening Criteria
Between 2013 and 2023
Part 201 Generic Cleanup Criteria and Screening Levels / Part 213 Risk Based Screening Levels**

Date	Hazardous Substance	Chemical Abstract Service Number	Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Volatization to Indoor Air Inhalation Criteria	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flamability and Explosivity Screening Level
2013	Phenanthrene	85018	52	150	2.0 (M); 1.4	1,000 (S)	1,000 (S)	1000	ID
2023	Phenanthrene	85018	52	150	2.0 (M); 1.7	1,000 (S)	1,000 (S)	1000	ID
2013	Sodium	17341252	2.3E+S(HH)	350000	NA	NLV	NLV	NA	ID
2023	Sodium	17341252	2.3E+5(HH)	350000	NA	NLV	NLV	NA	ID
2013	Xylenes (I)	1330207	280 (E)	280 (E)	41	1.9E+5 (S)	1.9E+5 (S)	186000	70000
2023	Xylenes (I)	1330207	280 (E)	280 (E)	49	1.9E+5 (S)	1.9E+5 (S)	186000	70000
New Parameters									
2023	Hexafluoropropylene oxide dimer acid	13252136	0.37 (A)	0.37 (A)	NA	ID	ID	NA	NA
2023	Perfluorobutane sulfonic acid	375735	0.42 (A)	0.42 (A)	670 (X)	ID	ID	NA	NA
2023	Perfluorohexane sulfonic acid	355464	0.051 (A)	0.051 (A)	0.21 (X)	ID	ID	NA	NA
2023	Perfluorohexanoic acid	307244	400 (A)	400 (A)	NA	ID	ID	NA	NA
2023	Perfluorononanoic acid	375951	0.006 (A)	0.006 (A)	0.03 (X)	ID	ID	NA	NA
2023	Perfluorooctanoic acid (DD)	335671	0.008 (A)	0.008 (A)	0.17 (X)	ID	ID	9500000	NA
2023	Perfluorooctane sulfonic acid (DD)	1763231	0.016 (A)	0.016 (A)	0.012 (X)	NLV	NLV	3.1	NA

Notes:

41 Denotes changed criteria value between 2013 and 2023.

(1) Only substances whose criteria have changed or the substance has been added to the table since 2013 are listed in this table.

(2) Changes in notations only are not presented.

(3) Values are presented in microgram per liter (ug/L).

(4) Notations (A through X) are available on the EGLE Cleanup Criteria Requirements for Response Activity website:

<https://www.michigan.gov/egle/about/organization/remediation-and-redevelopment/remediation-and-investigation/cleanup-criteria>

Table 2.2

**Summary of Changes To Nonresidential Soil Screening Criteria
Between 2013 and 2023
Part 201 Generic Cleanup Criteria and Screening Levels / Part 213 Risk Based Screening Levels**

Date	Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Groundwater Protection			Indoor Air	Ambient Air (Y) (C)				Contact	Csat
				Residential Drinking Water Protection Criteria	Nonresidential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels
2013	Acetonitrile	75058	NA	2800	8000	NA	8800000	1900000	1900000	2200000	1800000000	14000000	22000000
2023	Acetonitrile	75058	NA	2800	8000	260000	8800000	1900000	1900000	2200000	1800000000	14000000	22000000
2013	Bromomethane	74839	NA	200	580	700	1600	13000	57000	140000	150000000	1000000	2200000
2023	Bromomethane	74839	NA	200	580	100	1600	13000	57000	140000	150000000	1000000	2200000
2013	Carbon tetrachloride	56235	NA	100	100	900 (X)	990	12000	34000	79000	170000000	4.4E+5 (C)	390000
2023	Carbon tetrachloride	56235	NA	100	100	760 (X)	990	12000	34000	79000	170000000	4.4E+5 (C)	390000
2013	1,4-Dioxane (I)	123911	NA	1700	7000	56,000 (X)	NLV	NLV	NLV	NLV	710000000	2400000	97000000
2023	1,4-Dioxane (I)	123911	NA	1700	7000	5,600 (X)	NLV	NLV	NLV	NLV	710000000	2400000	97000000
2013	Formaldehyde	50000	NA	26000	76000	2400	65000	43000	69000	150000	260000000	1.3E+8 (C)	60000000
2023	Formaldehyde	50000	NA	26000	76000	3600	65000	43000	69000	150000	260000000	1.3E+8 (C)	60000000
2013	Xylenes (I)	1330207	NA	5600	5600	820	1.2E+7 (C)	54000000	65000000	130000000	1.3E+11	1.0E+9 (C,D)	150000
2023	Xylenes (I)	1330207	NA	5600	5600	980	1.2E+7 (C)	54000000	65000000	130000000	1.3E+11	1.0E+9 (C,D)	150000

Notes:

700 Denotes changed criteria value between 2013 and 2023.

(1) Only substances whose criteria have changed are listed in this table.

(2) Changes in notations only are not presented.

(3) Values are presented in microgram per kilogram (ug/kg).

(4) Notations (C through X) are available on the EGLE Cleanup Criteria Requirements for Response Activity website:

<https://www.michigan.gov/egle/about/organization/remediation-and-redevelopment/remediation-and-investigation/cleanup-criteria>

Table 3.1

**Groundwater Locations Exceeding 2023 EGLE Part 201 Groundwater Surface Water Interface Criteria
for Select Parameters
RACER Nodular Industrial Land
Saginaw, MI**

IU	Sample Location	Sample ID	Sample Date	Acetonitrile mg/L	Bromomethane mg/L	Carbon tetrachloride mg/L	Xylenes (total) mg/L	Aniline mg/L	bis(2-Ethylhexyl)phthalate mg/L	Phenanthrene mg/L	1,4-Dioxane mg/L	Formaldehyde mg/L
Groundwater Surface Water Interface (GSI):				13	0.005	0.038	0.049	0.004	0.014	0.002	0.28	0.18
G	TMW-04046	H70104	12/19/2002	-	0.0005 U	0.0002 U	-	-	0.0096 U	0.0056 J	-	-
G	TMW-04046A	M-2-0532	1/24/2005	-	0.0005 U	0.0005 U	-	-	-	-	-	-
G	TMW-04046A	M-2-0533Q	1/24/2005	(Duplicate)	-	0.0005 U	0.0005 U	-	-	-	-	-
I	MW-07959	M30028	12/4/1998	0.005 U	0.0005 U	0.0005 U	-	-	0.01 U	0.01 U	-	R
I	MW-07959	M10205	7/12/2000	-	0.0005 U	0.0005 U	-	-	0.01 U	0.01 U	-	0.27
I	MW-07959	M50010	12/20/2001	-	-	-	-	-	0.0097 U	0.0097 U	-	-
I	MW-07959	M-2-0519	1/19/2005	-	-	-	-	-	0.0096 U	0.0096 U	-	-

Notes:

Data presented from the initiation of the RFI (November 1998)

U Not detected at the associated reporting limit.

J Estimated concentration.

R Rejected.

Table 4.1

**Sediment Locations Exceeding 2023 EGLE Part 201 Nonresidential Soil Screening Criteria
RACER Nodular Industrial Land
Saginaw, MI**

					Arsenic	Lead	Lead (SEM)	Manganese	Formaldehyde	
IU	Sample Location	Sample ID	Sample Date	Sample Depth	Result mg/kg	Result mg/kg	Result mg/kg	Result mg/kg	Result mg/kg	
Nonresidential Direct Contact (DC)					a	37	900	900	90,000	130,000
Nonresidential Soil Volatilization to Indoor Air Inhalation (SVIAH)					b	-	-	-	-	65
Nonresidential Infinite Source Volatile Soil Inhalation (VSIC)					c	-	-	-	-	43
Nonresidential Particulate Soil Inhalation (PSIC)					d	910	44,000	44,000	1,500	260,000
H	H1	S00003	11/17/1998	-	22	1580 ^a	1950 J ^a	5330 J ^d		-
H	H1	S00004	11/17/1998	-	(Duplicate)	23	1690 ^a	1830 J ^a	5470 J ^d	-
H	H2	S00005	11/17/1998	-		31	1800 ^a	2490 J ^a	15800 J ^d	-
H	H3	S00001	11/16/1998	-		9	289	309	3070 J ^d	-
H	H3	S00002	11/16/1998	-	(Duplicate)	9	290	300	2810 J ^d	-
H	H4	S00006	11/17/1998	-		47 ^a	1800 ^a	2430 J ^a	6960 J ^d	-
H	H5	S00016	11/19/1998	-		14	675 J	332 J	3140 ^d	-
H	H5	S00017	11/19/1998	-	(Duplicate)	9	395 J	289	2320 ^d	-
H	H7	S00020	11/19/1998	-		11	246 J	221	2150 ^d	-
H	H8-05	B70536	3/29/2005	(0-1) ft BGS	-		699	-	11100 ^d	-
H	H9-05	B70537	3/29/2005	(0-1) ft BGS	-		765	-	4030 ^d	-
H	H10-05	B70538	3/29/2005	(0-1) ft BGS	-		104	-	1900 ^d	-
H	H11-05	B70539	3/29/2005	(0-1) ft BGS	-		785	-	5800 ^d	-
H	SD-217-11	S-58502-062811-SH-217	6/28/2011	-	12		1000 ^a	-	5400 ^d	-
H	SD-218-11	S-58502-062811-SH-218	6/28/2011	-	15		1200 ^a	-	9900 ^d	-
H	SD-219-11	S-58502-062811-SH-219	6/28/2011	-	9.6		340	-	3700 ^d	-
H	SD-220-11	S-58502-062811-SH-220	6/28/2011	-	19 U		550	-	3400 ^d	-
H	SD-235-11	S-58502-063011-SH-235	6/30/2011	-	19		900	-	4900 ^d	-
H	SD-237-11	S-58502-063011-SH-237	6/30/2011	-	14		840	-	4800 ^d	-
H	SD-238-11	S-58502-063011-SH-238	6/30/2011	-	14		760	-	4500 ^d	-
H	SD-239-11	S-58502-063011-SH-239	6/30/2011	-	5.0		120	-	1300	-
H	SD-239-11	S-58502-063011-SH-240	6/30/2011	-	(Duplicate)	6.1	140	-	1600 ^d	-
H	SD-241-11	S-58502-063011-SH-241	6/30/2011	-	9.8		370	-	6900 ^d	-
H	SED-328-13	S-58502-071713-SSH-328	7/17/2013	(0-3) ft BGS	17		65 J	33	3500 ^d	-
H	SED-334-16	S-58502-031716-SSH-1628	3/17/2016	-	R		860	-	-	82 ^{bc}
H	SED-335-16	S-58502-031716-SSH-1630	3/17/2016	-	R		790	-	-	110 ^{bc}
H	SED-336-16	S-58502-031716-SSH-1629	3/17/2016	-	1.1 J		710	-	-	120 ^{bc}
H	SED-341-16	S-58502-032416-SSH-1639	3/24/2016	-	-		280	-	-	46 ^c
H	SED-346-16	S-58502-031716-SSH-1627	3/17/2016	-	R		1500 ^a	-	-	97 ^{bc}
H	SED-351-16	S-58502-031716-SSH-1625	3/17/2016	-	R		510	-	-	84 ^{bc}
H	SED-353-16	S-58502-031716-SSH-1626	3/17/2016	-	2.0 J		760	-	-	64 ^c

Table 4.1

**Sediment Locations Exceeding 2023 EGLE Part 201 Nonresidential Soil Screening Criteria
RACER Nodular Industrial Land
Saginaw, MI**

					Arsenic	Lead	Lead (SEM)	Manganese	Formaldehyde	
IU	Sample Location	Sample ID	Sample Date	Sample Depth	Result mg/kg	Result mg/kg	Result mg/kg	Result mg/kg	Result mg/kg	
Nonresidential Direct Contact (DC)					a	37	900	900	90,000	130,000
Nonresidential Soil Volatilization to Indoor Air Inhalation (SVIAH)					b	-	-	-	-	65
Nonresidential Infinite Source Volatile Soil Inhalation (VSIC)					c	-	-	-	-	43
Nonresidential Particulate Soil Inhalation (PSIC)					d	910	44,000	44,000	1,500	260,000
H	SS-06	S-58502-050316-SSH-SS06A	5/3/2016	(0-1.75) ft BGS	36	1300 ^a	-	4400 ^d	50 ^c	
H	SS-07	S-58502-050316-SSH-SS07A	5/3/2016	(0-0.67) ft BGS	13	770	-	6300 ^d	83 ^{bc}	
H	SS-07	S-58502-050316-SSH-SS07B	5/3/2016	(0.67-4.75) ft BGS	13	780	-	6800 ^d	57 ^c	
H	SS-09	S-58502-050316-SSH-SS09A	5/3/2016	(0-0.83) ft BGS	8.2	380	-	2200 ^d	55 ^c	
H	SS-09	S-58502-050316-SSH-SS09B	5/3/2016	(0.83-3.08) ft BGS	12	420	-	3800 ^d	91 ^{bc}	
H	SS-10	S-58502-050316-SSH-SS10A	5/3/2016	(0-1.08) ft BGS	7.5	120	-	1100	30	
H	SS-10	S-58502-050316-SSH-SS10B	5/3/2016	(1.08-4.83) ft BGS	7.0	270	-	2900 ^d	75 ^{bc}	
H	SS-11	S-58502-050316-SSH-SS11A	5/3/2016	(0-2.17) ft BGS	18	700	-	7800 ^d	98 ^{bc}	
H	SS-13	S-58502-050316-SSH-SS13A	5/3/2016	(0-2.5) ft BGS	24	1500 ^a	-	8000 ^d	130 ^{bc}	
H	SS-13	S-58502-050316-SSH-SS13B	5/3/2016	(2.5-4.5) ft BGS	11	380	-	4000 ^d	68 ^{bc}	
H	SS-20	S-58502-050416-SSH-SS20A	5/4/2016	(0-1.75) ft BGS	20	1400 ^a	-	4900 ^d	140 J ^{bc}	
H	SS-20	S-58502-050416-SSH-SS20B	5/4/2016	(1.75-2.75) ft BGS	9.8	200	-	2600 ^d	6.7 J	
H	SS-23	S-58502-050416-SSH-SS23A	5/4/2016	(0-2.5) ft BGS	4.4	1400 ^a	-	8500 ^d	120 J ^{bc}	
H	SS-24	S-58502-050416-SSH-SS24A	5/4/2016	(0-2.67) ft BGS	11	1100 ^a	-	3800 ^d	130 J ^{bc}	
H	SS-25	S-58502-050516-SSH-SS25A	5/5/2016	(0-2.17) ft BGS	19	930 ^a	-	2600 ^d	53 J ^c	
H	SS-26	S-58502-050516-SSH-SS26A	5/5/2016	(0-2.33) ft BGS	28	1400 ^a	-	6700 ^d	78 J ^{bc}	
H	SS-27	S-58502-050516-SSH-SS27A	5/5/2016	(1.17-3.08) ft BGS	18	1100 ^a	-	4800 ^d	66 J ^{bc}	
H	SS-27	S-58502-050516-SSH-SS27B	5/5/2016	(3.08-4.42) ft BGS	16	710	-	6500 ^d	70 J ^{bc}	
H	SS-28	S-58502-050516-SSH-SS28A	5/5/2016	(0.83-4.5) ft BGS	17	850	-	4500 ^d	84 J ^{bc}	
H	SS-28	S-58502-050516-SSH-SS28B	5/5/2016	(0.83-4.5) ft BGS (Duplicate)	17	1200 ^a	-	5200 ^d	42 J	
H	SS-29	S-58502-050516-SSH-SS29A	5/5/2016	(0-2.67) ft BGS	16	740	-	4000 ^d	72 J ^{bc}	
H	SS-30	S-58502-050516-SSH-SS30A	5/5/2016	(0-2) ft BGS	18	840	-	3400 ^d	170 J ^{bc}	
H	SS-34	S-58502-050616-SSH-SS34A	5/6/2016	(1-3.33) ft BGS	20	1200 ^a	-	5800 ^d	53 J ^c	
H	SS-35	S-58502-050616-SSH-SS35A	5/6/2016	(1.17-3.5) ft BGS	19	740	-	5500 ^d	51 J ^c	
H	SS-36	S-58502-050616-SSH-SS36A	5/6/2016	(0.25-4.33) ft BGS	19	780	-	6000 ^d	44 J ^c	
H	SS-37	S-58502-050616-SSH-SS37B	5/6/2016	(2-3.75) ft BGS	13	800	-	4500 ^d	46 J ^c	
H	SS-38	S-58502-050616-SSH-SS38A	5/6/2016	(0.83-4.67) ft BGS	17	730	-	7000 ^d	90 J ^{bc}	
H	SS-38	S-58502-050616-SSH-SS38B	5/6/2016	(0.83-4.67) ft BGS (Duplicate)	19	1300 ^a	-	6000 ^d	73 J ^{bc}	
H	SS-39	S-58502-050616-SSH-SS39	5/6/2016	(0.25-2.75) ft BGS	16	980 ^a	-	5400 ^d	41 J	

Notes:

SEM - simultaneously extracted metals, utilized in the "Ecological Screening Assessment for Secondary Pond Under Future Use Scenarios" dated August 18, 2017.

U - Not detected at the associated reporting limit.

J - Estimated concentration.

R - Rejected value.

Table 4.2

**Soil Locations Exceeding 2023 EGLE Part 201 Nonresidential Soil Screening Criteria
RACER Nodular Industrial Land
Saginaw, MI**

IU	Sample Location	Sample ID	Sample Date	Sample Depth	Status	Arsenic Result mg/kg	Manganese Result mg/kg	Manganese Exceedance Comment	Formaldehyde Result mg/kg	Formaldehyde Location Average mg/kg
					Nonresidential Direct Contact (DC)	<i>a</i>	37	90,000	130,000	
					Nonresidential Soil Volatilization to Indoor Air Inhalation (SVIAH)	<i>b</i>	-	-	65	
					Nonresidential Infinite Source Volatile Soil Inhalation (VSIC)	<i>c</i>	-	-	43	
					Nonresidential Particulate Soil Inhalation (PSIC)	<i>d</i>	910	1,500	260,000	
H	MW-05443	B00035	9/16/1998	(0-2) ft BGS	Unexcavated	2	1560 J ^d		-	
H	MW-05443	B00036	9/16/1998	(4-6) ft BGS	Unexcavated	3	1280 J		-	
H	MW-05443	B00037	9/16/1998	(20-22) ft BGS	Unexcavated	3	233 J		-	
H	MW-06656-NOT_LOCATED	B00054	9/18/1998	(0-2) ft BGS	Unexcavated	3	2790 ^d		-	
H	MW-06656-NOT_LOCATED	B00055	9/18/1998	(6-8) ft BGS	Unexcavated	3	254 J		-	
H	MW-06656-NOT_LOCATED	B00056	9/18/1998	(14-16) ft BGS	Unexcavated	4	451 J		-	
H	MW-06656-NOT_LOCATED	B00057	9/18/1998	(14-16) ft BGS	Unexcavated (Duplicate)	4	236 J		-	
H	MW-17661	B00100	9/29/1998	(0-2) ft BGS	Unexcavated	4	3380 ^d		-	
H	MW-17661	B00101	9/29/1998	(4-6) ft BGS	Unexcavated	4	252		-	
H	MW-17661	B00102	9/29/1998	(16-18) ft BGS	Unexcavated	2	242		-	
H	SB-05540	B10298	6/12/2000	(0-2) ft BGS	Unexcavated	1.6 J	1960 ^d		10 UJ	
H	SB-05540	B10299	6/12/2000	(2-4) ft BGS	Unexcavated	1.9 J	214		10 UJ	
H	SB-05542	B10300	6/12/2000	(0-2) ft BGS	Unexcavated	0.9 J	3340 ^d		10 UJ	
H	SB-05542	B20257	6/13/2000	(2-4) ft BGS	Unexcavated	1.9 J	324		21	
H	SB-05542	B20258	6/13/2000	(4-6) ft BGS	Unexcavated	5.5	719		-	
H	SO-320-13	S-58502-071713-SSH-320	7/17/2013	(5-6) ft BGS	Unexcavated	10	1600 ^d		-	
I	MW-06939	B10033	9/22/1998	(0-2) ft BGS	Unexcavated	4 J	1170 J		10 UJ	38
I	MW-06939	B10034	9/22/1998	(2-4) ft BGS	Unexcavated	1 J	855 J		56 J ^c	
I	MW-06939	B10035	9/22/1998	(6-8) ft BGS	Unexcavated	2 J	145 J		52 J ^c	
I	MW-06951	B00064	9/21/1998	(0-2) ft BGS	Unexcavated	1	1670 ^d		10 UJ	37
I	MW-06951	B00065	9/21/1998	(4-6) ft BGS	Unexcavated	2	685		78 J ^{bc}	
I	MW-06951	B00066	9/21/1998	(8-10) ft BGS	Unexcavated	5	697		29 J	
I	MW-07959	B10040	9/22/1998	(0-2) ft BGS	Unexcavated	2	626 J		10 UJ	
I	MW-07959	B10041	9/22/1998	(4-6) ft BGS	Unexcavated	3	613 J		10 UJ	
I	MW-07959	B10042	9/22/1998	(6-10) ft BGS	Unexcavated	2	811 J		10 UJ	
I	MW-07959	B10043	9/22/1998	(6-10) ft BGS	Unexcavated (Duplicate)	2	188 J		10 UJ	
I	MW-07959	B10044	9/22/1998	(10-12) ft BGS	Unexcavated	6	3230 ^d	deep	14 J	
I	MW-07959	B10045	9/22/1998	(32-34) ft BGS	Unexcavated	3	232		10 UJ	
I	MW-96939	B20231	5/31/2000	(0-2) ft BGS	Unexcavated	1.3 J	2370 ^d		10 UJ	
I	MW-96939	B20232	5/31/2000	(2-4) ft BGS	Unexcavated	7.1	195		1 J	
I	MW-96939	B20233	5/31/2000	(18-20) ft BGS	Unexcavated	1.8 J	52.4		2 J	
I	MW-96939	B20243	6/5/2000	(60-62) ft BGS	Unexcavated	5	343 J		8 J	
I	MW-96939	B20244	6/5/2000	(74-76) ft BGS	Unexcavated	7.2	415 J		9 J	

Table 4.2

**Soil Locations Exceeding 2023 EGLE Part 201 Nonresidential Soil Screening Criteria
RACER Nodular Industrial Land
Saginaw, MI**

IU	Sample Location	Sample ID	Sample Date	Sample Depth	Status	Arsenic Result mg/kg	Manganese Result mg/kg	Manganese Exceedance Comment	Formaldehyde Result mg/kg	Formaldehyde Location Average mg/kg
					Nonresidential Direct Contact (DC)	<i>a</i>	37	90,000	130,000	
					Nonresidential Soil Volatilization to Indoor Air Inhalation (SVIAH)	<i>b</i>	-	-	65	
					Nonresidential Infinite Source Volatile Soil Inhalation (VSIC)	<i>c</i>	-	-	43	
					Nonresidential Particulate Soil Inhalation (PSIC)	<i>d</i>	910	1,500	260,000	
I	SB-001-05	B-4-0535	1/14/2005	(1-3) ft BGS	Unexcavated	0.8 J	3300 J ^d		-	
I	SB-001-05	B-4-0536Q	1/14/2005	(1-3) ft BGS	Unexcavated (Duplicate)	1.2 J	1880 J ^d		-	
I	SB-002-05	B-4-0537	1/14/2005	(1-3) ft BGS	Unexcavated	1.2	11900 J ^d		-	
I	SB-004-05	B-4-0533	1/14/2005	(1-3) ft BGS	Unexcavated	1.3	1640 J ^d		-	
I	SB-005-05	B-4-0530	1/14/2005	(1-3) ft BGS	Unexcavated	1.1 J	3010 J ^d		-	
I	SB-006-05	B-4-0534	1/14/2005	(1-3) ft BGS	Unexcavated	1.0 J	3030 J ^d		-	
I	SB-011-05	B-4-0538	1/14/2005	(1-3) ft BGS	Unexcavated	1.0 J	5000 J ^d		-	
I	SB-013-05	B-4-0532	1/14/2005	(1-3) ft BGS	Unexcavated	0.7 J	3450 J ^d		-	
I	SB-014-05	B-4-0531	1/14/2005	(1-3) ft BGS	Unexcavated	0.6 J	3910 J ^d		-	
I	SB-06949	B50104	12/11/2002	(0-2) ft BGS	Unexcavated	-	-		11 U	16
I	SB-06949	B50105	12/11/2002	(3-5) ft BGS	Unexcavated	-	-		17	
I	SB-06949	B50106	12/11/2002	(5-7) ft BGS	Unexcavated	-	-		52 ^c	
I	SB-06949	B50107Q	12/11/2002	(5-7) ft BGS	Unexcavated (Duplicate)	-	-		20	
I	SB-06949	B50108	12/11/2002	(7-9) ft BGS	Unexcavated	-	-		6.4	
I	SB-07043 (16 ft Pile)	B20264	6/21/2000	(22-24) ft BGS	Unexcavated	0.7 J	5180 ^d	deep	10 U	
I	SB-07151	B50113	12/11/2002	(0-2) ft BGS	Unexcavated	-	-		12 U	19
I	SB-07151	B50114Q	12/11/2002	(0-2) ft BGS	Unexcavated (Duplicate)	-	-		12 U	
I	SB-07151	B50115	12/11/2002	(3-5) ft BGS	Unexcavated	-	-		61 ^c	
I	SB-07151	B50116	12/11/2002	(5-7) ft BGS	Unexcavated	-	-		14	
I	SB-07151	B50117	12/11/2002	(7-9) ft BGS	Unexcavated	-	-		4	
I	Slag Area 1– Sample1	S-58502-121119-SSH-6219	12/11/2019	(0-6) in	Unexcavated	1.7	4200 ^d	slag area	-	
I	Slag Area 1– Sample2	S-58502-121119-SSH-6319	12/11/2019	(0-6) in	Unexcavated	1.5	3500 ^d	slag area	-	
I	Slag Area 1– Sample3	S-58502-121119-SSH-6419	12/11/2019	(0-6) in	Unexcavated	1.9	4200 ^d	slag area	-	
I	Slag Area 2– Sample1	S-58502-121119-SSH-6619	12/11/2019	(0-6) in	Unexcavated	4.3	1700 ^d	slag area	-	
I	Slag Area 2– Sample1	S-58502-121119-SSH-6619 DUP	12/11/2019	(0-6) in	Unexcavated (Duplicate)	4.5	1700 ^d	slag area	-	
I	Slag Area 2– Sample3	S-58502-121119-SSH-6819	12/11/2019	(0-6) in	Unexcavated	4.1	1600 ^d	slag area	-	
G	B11 (1998)	B11	2/6/1998	(3-4) ft BGS	Unexcavated	12	11400 ^d	deep	-	
G	B12 (1998)	B12	2/6/1998	(3-4) ft BGS	Unexcavated	7	9600 ^d	deep	-	
G	B-103/TMW-103	S-17075-020304-CA-113	2/3/2004	(0-1) ft BGS	Unexcavated	1.2	2600 ^d		-	
G	B-113	14	2/2/2004	-	Unexcavated	5.5	4000 ^d		-	
G	B-113	S-17075-020204-CA-108	2/2/2004	(1-2.5) ft BGS	Unexcavated	4.5	2980 J ^d		-	
G	B-121	08	2/2/2004	-	Unexcavated	0.98	1700 ^d		-	
G	B-121	S-17075-020204-CA-106	2/2/2004	(1.5-2.5) ft BGS	Unexcavated	1.9	2040 J ^d		-	

Table 4.2

Soil Locations Exceeding 2023 EGLE Part 201 Nonresidential Soil Screening Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU	Sample Location	Sample ID	Sample Date	Sample Depth	Status	Arsenic Result mg/kg	Manganese Result mg/kg	Manganese Exceedance Comment	Formaldehyde Result mg/kg	Formaldehyde Location Average mg/kg
					Nonresidential Direct Contact (DC)	<i>a</i> 37	90,000		130,000	
					Nonresidential Soil Volatilization to Indoor Air Inhalation (SVIAH)	<i>b</i> -	-		65	
					Nonresidential Infinite Source Volatile Soil Inhalation (VSIC)	<i>c</i> -	-		43	
					Nonresidential Particulate Soil Inhalation (PSIC)	<i>d</i> 910	1,500		260,000	
G	EB-114	EB-114b	9/1/1987	(0-2) ft BGS	excavated	11	-		-	
G	EB-114	EB-114b	9/1/1987	(4-5.5) ft BGS	Unknown	81 ^a	-		-	
G	EB-114	EB-114	9/1/1987	(9-11) ft BGS	Unknown	6.4	-		-	
G	MW-04250-ABANDONED	B00021	9/15/1998	(0-2) ft BGS	Unexcavated	3	523 J		-	
G	MW-04250-ABANDONED	B00022	9/15/1998	(0-2) ft BGS	Unexcavated (Duplicate)	3	614 J		-	
G	MW-04250-ABANDONED	B00023	9/15/1998	(4-6) ft BGS	Unexcavated	13	9860 J ^d	deep	-	
G	MW-04250-ABANDONED	B00024	9/15/1998	(12-14) ft BGS	Unexcavated	6	407 J		-	
G	MW-04757	B10036	9/22/1998	(0-2) ft BGS	Unexcavated	4 J	1570 J ^d		-	
G	MW-04757	B10037	9/22/1998	(2-6) ft BGS	Unexcavated	2 J	242 J		-	
G	MW-04757	B10038	9/22/1998	(2-6) ft BGS	Unexcavated (Duplicate)	5 J	554 J		-	
G	MW-04757	B10039	9/22/1998	(10-12) ft BGS	Unexcavated	5	211 J		-	
G	SB-1	SB-1	6/2/1998	(2-3) ft BGS	Unexcavated	6	2320 ^d	deep	-	
G	SB-2	SB-2	6/3/1998	(2-3) ft BGS	Unknown	5	1810 ^d	deep	-	
G	SS-1	SS-1	6/3/1998	(0-1) in BTS	Unknown	4	1980 ^d		-	
G	TMW-04127	B80204	3/6/2003	(0-2) ft BGS	Unexcavated	1.4	1580 J ^d	not replicated	-	
G	TMW-04127	B80205	3/6/2003	(2-4) ft BGS	Unexcavated	1.4	901 J		-	
G	TMW-04127	B80206Q	3/6/2003	(2-4) ft BGS	Unexcavated (Duplicate)	1.4	825 J		-	
G	TMW-04127	B80207	3/6/2003	(8-10) ft BGS	Unexcavated	1.6	77.2 J		-	

Notes:

Formaldehyde location average calculated as the average concentration across the entire depth of the borehole, using half the detection limit value for nondetects.

U - Not detected at the associated reporting limit.

J - Estimated concentration.

Attachments

Attachment 1

Analytical Results Summary
Groundwater Compared to 2023 Groundwater Surface Water Interface Criteria For Select Parameters
RACER Nodular Industrial Land
Saginaw, MI

			G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	
Sample Location:			MW-1-ABANDONED	MW-1-ABANDONED	MW-1-ABANDONED	MW-3	MW-3	MW-8-ABANDONED	MW-8-ABANDONED	MW-8-ABANDONED	MW-8R	MW-14-ABANDONED	MW-17	MW-17	MW-17	MW-17	MW-18	MW-18	MW-04040	MW-04040	MW-04040
Sample ID:			30	W-17075-020504-CA-121	W-17075-020504-CA-122	M30222	M30223Q	M30224	W70102	M-6-0509	GW-11208041-071023-BW-003	GW-121994-SSH-107	M30225	W70103	W70108Q	M-2-0505	M30226	M-2-0507	M10004	M20217	32
Sample Date:			2/5/2004	2/5/2004	2/5/2004	8/7/2000	8/7/2000	8/7/2000	12/19/2002	1/14/2005	7/10/2023	12/19/1994	8/7/2000	12/19/2002	12/19/2002	1/14/2005	8/7/2000	1/17/2005	11/18/1998	8/2/2000	2/5/2004
Parameters	Units	Groundwater																			
01VOAs		Interface Criteria																			
Acetonitrile	mg/L	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R	-	-
Bromomethane (Methyl bromide)	mg/L	0.005	0.001 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 UJ	-	-	0.0005 U	0.0005 U	0.0005 U	0.0005 UJ	0.0005 U	0.0005 UJ	0.0005 UJ	0.0005 U	0.001 U
Carbon tetrachloride	mg/L	0.038	0.001 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0002 U	0.0005 U	-	-	0.0005 U	0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 UJ	0.0005 U	0.001 U
Xylenes (total)	mg/L	0.049	0.003 U	0.002 U	0.002 U	-	-	-	-	-	-	0.003 U	-	-	-	-	-	-	-	-	0.003 U
02SVOAs																					
Aniline	mg/L	0.004	0.005 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.014	0.005 U	0.005 U	0.005 U	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01 U	0.01 U	0.005 U
Phenanthrene	mg/L	0.002	0.005 U	0.005 U	0.005 U	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01 U	0.01 U	0.005 U
02SVOAsSIM																					
1,4-Dioxane	mg/L	0.28	-	-	-	-	-	-	-	-	0.0052	-	-	-	-	-	-	-	-	-	-
13Wet																					
Formaldehyde	mg/L	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05 U	-

Footnotes:
Data presented from the initiation of the RFI (November 1998)
U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
R Rejected.

Analytical Results Summary
Groundwater Compared to 2023 Groundwater Surface Water Interface Criteria For Select Parameters
RACER Nodular Industrial Land
Saginaw, MI

IU:		G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Sample Location:		MW-04040	MW-04250-ABANDONED	MW-04250-ABANDONED	MW-04250-ABANDONED	MW-04333	MW-04333	MW-04336	MW-04433	MW-04434-ABANDONED	MW-04434-ABANDONED	MW-04434-ABANDONED	MW-04434-ABANDONED	MW-04435	MW-04435	MW-04438R
Sample ID:		W-17075-020504-CA-123	M30029	M30030	M30205	M20240	M20241Q	GW-11208041-071123-BW-005	M30220	M30032	M20228	M50013	M50543	M10217	M50542	GW-11208041-071123-BW-004
Sample Date:		2/5/2004	12/4/1998	12/4/1998 (Duplicate)	7/18/2000	8/1/2000	8/1/2000 (Duplicate)	7/11/2023	8/1/2000	12/7/1998	7/24/2000	1/15/2002	3/28/2005	7/31/2000	3/28/2005	7/11/2023
Parameters	Units															
01VOAs																
Acetonitrile	mg/L	-	0.005 U	0.005 U	-	-	-	-	-	0.005 U	-	-	-	-	-	-
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.0005 U	0.0005 UJ	0.0005 U	0.0005 U	0.0005 U	-	0.0005 U	0.0005 UJ	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00047 J	-
Carbon tetrachloride	mg/L	0.001 U	0.0005 U	0.0005 UJ	0.0005 U	0.0005 U	0.0005 U	-	0.0005 U	0.0005 UJ	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	-
Xylenes (total)	mg/L	0.002 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02SVOAs																
Aniline	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-	0.01 U	0.01 U	0.01 U	0.0097 U	-	0.01 U	-	-
Phenanthrene	mg/L	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-	0.01 U	0.01 U	0.01 U	0.0097 U	-	0.01 U	-	-
02SVOAsSIM																
1,4-Dioxane	mg/L	-	-	-	-	-	-	0.0041	-	-	-	-	-	-	-	0.0002 U
13Wet																
Formaldehyde	mg/L	-	-	-	0.05 U	0.05 U	0.05 U	-	0.05 U	-	0.05 U	-	-	0.05 U	-	-

Footnotes:

Data presented from the initiation of the RFI (No

U Not detected at the associated reporting

J Estimated concentration.

UJ Not detected; associated reporting limit

R Rejected.

Analytical Results Summary
Groundwater Compared to 2023 Groundwater Surface Water Interface Criteria For Select Parameters
RACER Nodular Industrial Land
Saginaw, MI

IU:		G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Sample Location:		MW-04534	MW-04757	MW-04757	MW-04831-ABANDONED	MW-04831-ABANDONED	MW-04835-ABANDONED	MW-04835-ABANDONED	MW-04836-ABANDONED	MW-04854	MW-04854	MW-04864	MW-04864	MW-05036-ABANDONED	MW-05036-ABANDONED	MW-05036R	MW-05038
Sample ID:		M30219	M20001	M20215	M30023	M20224	M60015	M90129	M10218	M30031	M20216	M20003	M30206	M30024	M10208	GW-11208041-071123-BW-006	GW-11208041-071023-BW-001
Sample Date:		7/31/2000	11/16/1998	7/18/2000	12/3/1998	7/26/2000	12/17/2001	12/19/2002	8/2/2000	12/4/1998	7/18/2000	11/16/1998	7/18/2000	12/3/1998	8/2/2000	7/11/2023	7/10/2023
Parameters	Units																
01VOAs																	
Acetonitrile	mg/L	-	R	-	0.005 U	-	-	-	-	0.005 U	-	R	-	0.005 U	-	-	-
Bromomethane (Methyl bromide)	mg/L	0.0005 U	0.0005 UJ	0.0005 U	0.0005 U	0.0005 UJ	-	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 UJ	0.0005 U	0.0005 U	0.0005 U	-	-
Carbon tetrachloride	mg/L	0.0005 U	0.0005 UJ	0.0005 U	0.0005 U	0.0005 U	-	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 UJ	0.0005 U	0.0005 U	0.0005 U	-	-
Xylenes (total)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02SVOAs																	
Aniline	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0096 U	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-	-
Phenanthrene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0096 U	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-	-
02SVOAsSIM																	
1,4-Dioxane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00052	0.0039
13Wet																	
Formaldehyde	mg/L	0.05 U	-	0.05 U	-	0.05 U	0.05 U	-	-	-	0.05 U	-	0.05 U	-	0.05 U	-	-

Footnotes:

Data presented from the initiation of the RFI (No

U Not detected at the associated reporting

J Estimated concentration.

UJ Not detected; associated reporting limit

R Rejected.

Analytical Results Summary
Groundwater Compared to 2023 Groundwater Surface Water Interface Criteria For Select Parameters
RACER Nodular Industrial Land
Saginaw, MI

IU:		G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Sample Location:		MW-05038	MW-05038	MW-05452	MW-14831	MW-14831	MW-14831	SB-04333a	SB-04433a	SB-04435a	SB-04534a	TMW-04046	TMW-04046A	TMW-04046A	TMW-04127	TMW-04130	TMW-04135	TMW-04233	TMW-04235	TMW-04436	TMW-04436	TMW-04528	TMW-04531
Sample ID:		GW-11208041-071023-BW-002	GW-11208041-081823-BW-005	GW-11208041-081823-BW-004	M10032	M20234	M20235Q	H10013	H10012	H10014	H10011	H70104	M-2-0532	M-2-0533Q	H10201	H10200	H10202	H60020	M60012	H60013	H60019Q	H30201	H30202
Sample Date:		7/10/2023 (Duplicate)	8/18/2023	8/18/2023	12/2/1998	7/28/2000	7/28/2000 (Duplicate)	6/21/2000	6/21/2000	6/21/2000	6/21/2000	12/19/2002	1/24/2005	1/24/2005 (Duplicate)	3/7/2003	3/7/2003	3/7/2003	12/18/2001	12/14/2001	12/17/2001	12/17/2001 (Duplicate)	3/8/2003	3/8/2003
Parameters	Units																						
01VOAs																							
Acetonitrile	mg/L	-	-	-	0.005 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	mg/L	-	-	-	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U
Carbon tetrachloride	mg/L	-	-	-	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0002 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U
Xylenes (total)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02SVOAs																							
Aniline	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	-	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0096 U	-	-	0.005 U	0.005 U	0.005 U	-	-	-	-	0.005 U	0.005 U
Phenanthrene	mg/L	-	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0056 J	-	-	0.005 U	0.005 U	0.005 U	-	-	-	-	0.005 U	0.005 U
02SVOAsSIM																							
1,4-Dioxane	mg/L	0.0041	0.0028	0.00096	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13Wet																							
Formaldehyde	mg/L	-	-	-	-	0.05 U	0.05 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

Data presented from the initiation of the RFI (No

U Not detected at the associated reporting

J Estimated concentration.

UJ Not detected; associated reporting limit

R Rejected.

Analytical Results Summary
Groundwater Compared to 2023 Groundwater Surface Water Interface Criteria For Select Parameters
RACER Nodular Industrial Land
Saginaw, MI

IU:		G	G	G	G	G	G	G	G	G	G	H	H	H	H	H	H	H	H	H	H	
Sample Location:		TMW-04632	TMW-04635	TMW-05032	TMW-05032	TMW-05035	TMW-05035	TMW-103	TMW-107	TMW-120	TMW-128	MW-05443	MW-05443	MW-05443	MW-05443	MW-15457	MW-15457	MW-15964	MW-15964	MW-16357	MW-16357	MW-16357
Sample ID:		H60014	H10203	H30200	H30200Q	H10204	H10204Q	W-17075-020404-CA-117	W-17075-020504-CA-119	W-17075-020404-CA-118	W-17075-020404-CA-116	M20004	M10207	W-17075-020504-CA-120	GW-11208041-081823-BW-001	M20002	M30200	M30019	M10215	M10003	M20213	M20214Q
Sample Date:		12/17/2001	3/7/2003	3/8/2003	3/8/2003	3/7/2003	3/7/2003	2/4/2004	2/5/2004	2/4/2004	2/4/2004	11/16/1998	7/14/2000	2/5/2004	8/18/2023	11/16/1998	7/13/2000	11/30/1998	7/26/2000	11/17/1998	7/18/2000	7/18/2000
					(Duplicate)		(Duplicate)															(Duplicate)
Parameters	Units																					
01VOAs																						
Acetonitrile	mg/L	-	-	-	-	-	-	-	-	-	-	R	-	-	-	-	R	-	R	-	-	-
Bromomethane (Methyl bromide)	mg/L	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 UJ	0.0005 U	0.001 U	-	0.0005 UJ	0.0005 U	0.0005 U	0.0005 U	0.0005 UJ	0.0005 U	0.0005 U
Carbon tetrachloride	mg/L	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 UJ	0.0005 U	0.001 U	-	0.0005 UJ	0.0005 U	0.0005 U	0.0005 U	0.0005 UJ	0.0005 U	0.0005 U
Xylenes (total)	mg/L	-	-	-	-	-	-	0.002 U	0.002 U	0.002 U	0.002 U	-	-	0.002 U	-	-	-	-	-	-	-	-
02SVOAs																						
Aniline	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	-	0.005 U	0.01 U	0.01 U	0.012	0.005 U	0.005 U	0.25 U	0.0059	0.005 U	0.01 U	0.01 U	0.005 U	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Phenanthrene	mg/L	-	0.005 U	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U	0.25 U	0.005 U	0.005 U	0.01 U	0.01 U	0.005 U	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
02SVOAsSIM																						
1,4-Dioxane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0023	-	-	-	-	-	-	-
13Wet																						
Formaldehyde	mg/L	-	-	-	-	-	-	-	-	-	-	-	0.05	-	-	-	0.05 U	-	0.056	-	0.05 U	0.05 U

Footnotes:

Data presented from the initiation of the RFI (No

U Not detected at the associated reporting

J Estimated concentration.

UJ Not detected; associated reporting limit

R Rejected.

Attachment 1

Analytical Results Summary

Groundwater Compared to 2023 Groundwater Surface Water Interface Criteria For Select Parameters

RACER Nodular Industrial Land

Saginaw, MI

		H	H	H	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I		
Sample Location:		MW-17661	MW-17661	MW-17661	MW-06445	MW-06445	MW-06939	MW-06939	MW-06951	MW-06951	MW-06951	MW-07245	MW-07245	MW-07245	MW-07245	MW-07245	MW-07959	MW-07959	MW-07959	MW-07959	MW-96939	MW-96939	TMW-07257	TMW-07457	TMW-07459	TMW-07957	TMW-07962	
Sample ID:		M30047	M10206	M-2-0506	M30026	M20200	M30027	M20231	M30025	M10204	M-2-0516	M10005	M10005-Q	M10006	M20201	M20202Q	M30028	M10205	M50010	M-2-0519	M20246	M20247Q	H50006	H50007	H50008	H50009	H50011	
Sample Date:		12/28/1998	7/14/2000	1/17/2005	12/3/1998	7/12/2000	12/4/1998	7/27/2000	12/3/1998	7/12/2000	1/19/2005	11/18/1998	11/18/1998	11/18/1998	7/12/2000	7/12/2000	12/4/1998	7/12/2000	12/20/2001	1/19/2005	8/4/2000	8/4/2000	12/20/2001	12/20/2001	12/20/2001	12/20/2001	12/20/2001	
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Footnotes:

Data presented from the initiation of the RFI (No

U Not detected at the associated reporting

J Estimated concentration.

UJ Not detected; associated reporting limit

R Rejected.

Attachment 2

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

Sample Location:						G, H	G, H	G, H	H	H	H	H	H	H	H	H	H	H	H	H		
Sample ID:						SP1	SP2	SP3	H1	H1	H2	H3	H3	H4	H5	H5	H7	H8-05	H9-05	H10-05	H11-05	
Sample Date:						S-58502-092316-SSH-SP1	S-58502-092316-SSH-SP2	S-58502-092316-SSH-SP3	S00003	S00004	S00005	S00001	S00002	S00006	S00016	S00017	S00020	B70536	B70537	B70538	B70539	
Sample Depth:						9/23/2016	9/23/2016	9/23/2016	11/17/1998	11/17/1998	11/17/1998	11/16/1998	11/16/1998	11/17/1998	11/19/1998	11/19/1998	11/19/1998	3/29/2005	3/29/2005	3/29/2005	3/29/2005	
Excavat_status						(0-1) ft BGS	(0-1) ft BGS	(0-1) ft BGS	-	-	-	-	-	-	-	-	-	(0-1) ft BGS	(0-1) ft BGS	(0-1) ft BGS	(0-1) ft BGS	
		2023 EGLE Part 201				Unexcavated	Unexcavated	Unexcavated	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		Nonresidential Direct Contact	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation				(Duplicate)			(Duplicate)			(Duplicate)							
Parameters	Units	a	b	c	d																	
VOAs																						
1,1,1-Trichloroethane	mg/kg	1000000	460	4500	29000000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,1,2,2-Tetrachloroethane	mg/kg	240	23	34	68000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,1,2-Trichloroethane	mg/kg	840	24	57	250000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,1-Dichloroethane	mg/kg	87000	430	2500	15000000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,1-Dichloroethene	mg/kg	660	0.33	3.7	78000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,2,4-Trichlorobenzene	mg/kg	5800	18000	34000	11000000	0.75 U	0.92 U	0.92 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	20	1.2	0.9	700	0.75 U	0.92 U	0.92 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.43	3.6	5.8	18000	0.75 U	0.92 U	0.92 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,2-Dichlorobenzene	mg/kg	63000	20000	46000	44000000	0.3 U	0.37 U	0.37 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,2-Dichloroethane	mg/kg	420	11	21	150000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,2-Dichloropropane	mg/kg	660	7.4	30	120000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,3-Dichlorobenzene	mg/kg	660	48	94	88000	0.3 U	0.37 U	0.37 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,4-Dichlorobenzene	mg/kg	1900	100	260	570000	0.3 U	0.37 U	0.37 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	700000	99000	35000	29000000	2.2 U	2.8 U	2.8 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
2-Hexanone	mg/kg	100000	1800	1300	1200000	7.5 U	9.2 U	9.2 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	180000	69000	53000	60000000	7.5 U	9.2 U	9.2 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Acetone	mg/kg	73000	540000	160000	170000000	2.2 U	2.8 U	2.8 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzene	mg/kg	840	8.4	45	470000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bromodichloromethane	mg/kg	490	6.4	31	110000	0.3 U	0.37 U	0.37 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bromoform	mg/kg	3800	770	3100	3600000	0.3 U	0.37 U	0.37 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bromomethane (Methyl bromide)	mg/kg	1000	1.6	13	150000	0.75 U	0.92 U	0.92 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Carbon disulfide	mg/kg	43000	140	1600	21000000	0.75 U	0.92 U	0.92 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Carbon tetrachloride	mg/kg	440	0.99	12	170000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chlorobenzene	mg/kg	14000	220	920	2100000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chloroethane	mg/kg	12000	5300	36000	290000000	0.75 U	0.92 U	0.92 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chloroform (Trichloromethane)	mg/kg	5500	38	150	1600000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chloromethane (Methyl chloride)	mg/kg	7400	10	120	2600000	0.75 U	0.92 U	0.92 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
cis-1,2-Dichloroethene	mg/kg	8000	41	210	1000000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
cis-1,3-Dichloropropene	mg/kg					0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cyclohexane	mg/kg					3.6 U	4.4 U	4.4 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dibromochloromethane	mg/kg	500	21	80	160000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dichlorodifluoromethane (CFC-12)	mg/kg	170000	1700	63000	1500000000	0.3 U	0.37 U	0.37 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ethylbenzene	mg/kg	71000	460	2400	13000000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Isopropyl benzene	mg/kg	80000	730	2000	2600000	0.75 U	0.92 U	0.92 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Methyl acetate	mg/kg					3.6 U	4.4 U	4.4 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Methyl cyclohexane	mg/kg					3.6 U	4.4 U	4.4 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Methyl tert butyl ether (MTBE)	mg/kg	7100	18000	30000	88000000	0.75 U	0.92 U	0.92 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Methylene chloride	mg/kg	5800	240	700	8300000	0.75 U	0.92 U	0.92 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Styrene	mg/kg	1900	1300	3300	6900000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tetrachloroethene	mg/kg	930	21	210	1200000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Toluene	mg/kg	160000	610	3300	12000000	0.3 U	0.37 U	0.37 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
trans-1,2-Dichloroethene	mg/kg	12000	43	330	2100000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
trans-1,3-Dichloropropene	mg/kg					0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Trichloroethene	mg/kg	660	1.9	14	59000	0.15 U	0.18 U	0.18 U	-	-	-	-	-	-	-	-	-	-	-	-	-	
Trichlorofluoromethane (CFC-11)	mg/kg	260000	5100	110000	1700000000	0.3 U	0.37 U	0.37 U	-	-	-	-	-	-	-	-	-	-	-	-	-	

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:

Sample Location:

Sample ID:

Sample Date:

Sample Depth:

Excavat_status

2023 EGLE Part 201						G, H SP1	G, H SP2	G, H SP3	H H1	H H1	H H2	H H3	H H3	H H4	H H5	H H5	H H7	H H8-05	H H9-05	H H10-05	H H11-05
						S-58502-092316-SSH-SP1	S-58502-092316-SSH-SP2	S-58502-092316-SSH-SP3	S00003	S00004	S00005	S00001	S00002	S00006	S00016	S00017	S00020	B70536	B70537	B70538	B70539
						9/23/2016	9/23/2016	9/23/2016	11/17/1998	11/17/1998	11/17/1998	11/16/1998	11/16/1998	11/17/1998	11/19/1998	11/19/1998	11/19/1998	3/29/2005	3/29/2005	3/29/2005	3/29/2005
						(0-1) ft BGS	(0-1) ft BGS	(0-1) ft BGS	-	-	-	-	-	-	-	-	-	(0-1) ft BGS	(0-1) ft BGS	(0-1) ft BGS	(0-1) ft BGS
						Unexcavated	Unexcavated	Unexcavated	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
									(Duplicate)	(Duplicate)	(Duplicate)	(Duplicate)	(Duplicate)	(Duplicate)	(Duplicate)	(Duplicate)	(Duplicate)	(Duplicate)	(Duplicate)	(Duplicate)	(Duplicate)
Parameters	Units	a	b	c	d																
2,6-Dichlorophenol	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
2,6-Dinitrotoluene	mg/kg					0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
2-Acetylaminofluorene	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
2-Chloronaphthalene	mg/kg	180000				0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
2-Chlorophenol	mg/kg	4500	800	1100	530000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
2-Methylnaphthalene	mg/kg	26000	4900	1800	290000	0.63	0.65	2.1	-	-	-	-	-	-	1.5 U	0.9 U	1.4	-	-	-	-
2-Methylphenol	mg/kg	36000			2900000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
2-Naphthylamine	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
2-Nitroaniline	mg/kg					0.42 U	0.46 U	1.1 U	-	-	-	-	-	-	10 U	6 U	8 U	-	-	-	-
2-Nitrophenol	mg/kg	2000				0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
2-Toluidine	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
3&4-Methylphenol	mg/kg	36000			2900000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg	30			8200	3.4 U	3.7 U	9.2 U	-	-	-	-	-	-	10 U	6 U	8 U	-	-	-	-
3,3-Dimethylbenzidine	mg/kg					-	-	-	-	-	-	-	-	-	10 U	6 U	8 U	-	-	-	-
3-Methylcholanthrene	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
3-Nitroaniline	mg/kg					0.42 U	0.46 U	1.1 U	-	-	-	-	-	-	10 U	6 U	8 U	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	260			59000	0.31 U	0.34 U	0.86 U	-	-	-	-	-	-	10 U	6 U	8 U	-	-	-	-
4-Aminobiphenyl	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
4-Bromophenyl phenyl ether	mg/kg					0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	15000				0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
4-Chloroaniline	mg/kg					0.42 U	0.46 U	1.1 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg					0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
4-Dimethylaminoazobenzene	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
4-Nitroaniline	mg/kg					0.42 U	0.46 U	1.1 U	-	-	-	-	-	-	10 U	6 U	8 U	-	-	-	-
4-Nitrophenol	mg/kg					0.69 U	0.75 U	1.9 U	-	-	-	-	-	-	10 U	6 U	8 U	-	-	-	-
5-Nitro-2-toluidine	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
7,12-Dimethylbenz(a)anthracene	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Acenaphthene	mg/kg	130000	350000	97000	6200000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Acenaphthylene	mg/kg	5200	3000	2700	1000000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Acetophenone	mg/kg	150000	210000	52000	14000000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Anthracene	mg/kg	730000	1000000	1600000	29000000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Atrazine	mg/kg	330				0.084 U	0.091 U	0.23 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzaldehyde	mg/kg					0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg	80				0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.4	-	-	-	-
Benzo(a)pyrene	mg/kg	8			1900	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.6	-	-	-	-
Benzo(b)fluoranthene	mg/kg	80				0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	2.1	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	7000			350000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Benzo(k)fluoranthene	mg/kg	800				0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.6	-	-	-	-
Benzyl alcohol	mg/kg	320000			15000000	-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg					0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg					0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg	58	44	13	12000	0.17 U	0.18 U	0.46 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	12000			890000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	5.8	-	-	-	-
Butyl benzylphthalate (BBP)	mg/kg	120000			21000000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Caprolactam	mg/kg	310000			290000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	mg/kg	2400			78000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzilate	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Chrysene	mg/kg	8000				0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	2.2	-	-	-	-
Diallate	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	8				0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Dibenzofuran	mg/kg				2900	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Diethyl phthalate	mg/kg	550000			1500000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Dimethoate	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Dimethyl phthalate	mg/kg	1000000			1500000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg	87000			1500000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	20000			14000000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Dinoseb	mg/kg	390			120000	-	-	-	-	-	-	-	-	-	5 U	3 U	4 U	-	-	-	-
Diphenylamine	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Disulfoton	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Ethyl methanesulfonate	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Ethyl parathion	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Famphur	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Fluoranthene	mg/kg	130000	1000000	890000	4100000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	3.1	-	-	-	-
Fluorene	mg/kg	87000	1000000	150000	4100000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Hexachlorobenzene	mg/kg	37	220	56	8500	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Hexachlorobutadiene	mg/kg	470	710	460	180000	0.084 U	0.091 U	0.23 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	6700	56	60	5900	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Hexachloroethane	mg/kg	730	79	660	100000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:		2023 EGLE Part 201				G, H SP1	G, H SP2	G, H SP3	H H1	H H1	H H2	H H3	H H3	H H4	H H5	H H5	H H7	H H8-05	H H9-05	H H10-05	H H11-05
Sample Location:						S-58502-092316-SSH-SP1	S-58502-092316-SSH-SP2	S-58502-092316-SSH-SP3	S00003	S00004	S00005	S00001	S00002	S00006	S00016	S00017	S00020	B70536	B70537	B70538	B70539
Sample ID:						9/23/2016	9/23/2016	9/23/2016	11/17/1998	11/17/1998	11/17/1998	11/16/1998	11/16/1998	11/17/1998	11/19/1998	11/19/1998	11/19/1998	3/29/2005	3/29/2005	3/29/2005	3/29/2005
Sample Date:						(0-1) ft BGS	(0-1) ft BGS	(0-1) ft BGS	-	-	-	-	-	-	-	-	-	(0-1) ft BGS	(0-1) ft BGS	(0-1) ft BGS	(0-1) ft BGS
Sample Depth:						Unexcavated	Unexcavated	Unexcavated	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Excavat_status										(Duplicate)			(Duplicate)		(Duplicate)						
		Nonresidential Direct Contact	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation																
Parameters	Units	a	b	c	d																
Hexachloropropene	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	80				0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Isodrin	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Isophorone	mg/kg	22000			8200000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Isosafrole	mg/kg					-	-	-	-	-	-	-	-	-	10 U	6 U	8 U	-	-	-	-
Kepone	mg/kg					-	-	-	-	-	-	-	-	-	20 U	12 U	16 U	-	-	-	-
Methapyrilene	mg/kg					-	-	-	-	-	-	-	-	-	20 U	12 U	16 U	-	-	-	-
Methyl methanesulfonate	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Methyl parathion	mg/kg	180				-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Naphthalene	mg/kg	52000	470	350	88000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2	-	-	-	-
Nitrobenzene	mg/kg	340	170	64	21000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
N-Nitrosodiethylamine	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
N-Nitrosodimethylamine	mg/kg					-	-	-	-	-	-	-	-	-	10 U	6 U	8 U	-	-	-	-
N-Nitrosodi-n-butylamine	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg	5.4			2000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
N-Nitrosodiphenylamine	mg/kg	7800			2800000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
N-Nitrosomethylethylamine	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
N-Nitrosopiperidine	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
N-Nitrosopyrrolidine	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Pentachlorobenzene	mg/kg	930				-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Pentachloronitrobenzene	mg/kg	5500	220	280	150000	-	-	-	-	-	-	-	-	-	10 U	6 U	8 U	-	-	-	-
Pentachlorophenol	mg/kg	320			130000	0.31 U	0.34 U	0.86 U	-	-	-	-	-	-	10 U	6 U	8 U	-	-	-	-
Phenacetin	mg/kg					-	-	-	-	-	-	-	-	-	10 U	6 U	8 U	-	-	-	-
Phenanthrene	mg/kg	5200	5100	190	2900	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	2.5	-	-	-	-
Phenol	mg/kg	230000			18000000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Phorate	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
p-Phenylenediamine	mg/kg					-	-	-	-	-	-	-	-	-	1.5 UJ	0.9 UJ	1.2 UJ	-	-	-	-
Pronamide	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Pyrene	mg/kg	84000	1000000	780000	2900000	0.55 U	0.6 U	1.5 U	-	-	-	-	-	-	1.5 U	0.9 U	4.7	-	-	-	-
Safrole	mg/kg					-	-	-	-	-	-	-	-	-	1.5 U	0.9 U	1.2 U	-	-	-	-
Thionazin (O,O-diethyl-O-2-pyrazinyl phosphorothioate)	mg/kg					-	-	-	-	-	-	-	-	-	10 U	6 U	8 U	-	-	-	-
Metals																					
Aluminum	mg/kg	370000				18000	26000	17000	11900	12500	19800	14900	13800	17700	12700	8490	14900	-	-	-	-
Antimony	mg/kg	670			5900	6.9 B	5.5 B	34 B	10 U	12	23	10 U	10 U	43	10 U	10 U	10 U	-	-	-	-
Arsenic	mg/kg	37			910	13 / 5.0	5.3 / 13	0.70 U / 39 ^a	22	23	31	9	9	47 ^a	14	9	11	-	-	-	-
Barium	mg/kg	130000			150000	160	300	160	171	171	259	102	97	207	132	100	141	-	-	-	-
Beryllium	mg/kg	1600			590	1.5	2.7	1.3	1	2	2	1	1 U	2	1	1 U	1	-	-	-	-
Cadmium	mg/kg	2100			2200	8.2 / 7.7	8.7 / 7.5	24 / 14	22	22	28	2	2	28	2	1	2	-	-	-	-
Cadmium	umol/g					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/kg					65000	82000	41000	40100 J	45300 J	108000 J	97600 J	81400 J	86900 J	127000	104000	83300	-	-	-	-
Cation exchange capacity	meq/100g					-	-	-	202	162	225	-	-	123	-	-	-	-	-	-	-
Chromium	mg/kg	1000000			150000	87 F1 / 90	140 / 72	68 / 98	97	113	105	58	57	111	62	42	64	-	-	-	-
Cobalt	mg/kg	9000			5900	5.9	5.5	12	7	7	8	8	7	12	7	4	7	-	-	-	-
Copper	mg/kg	73000			59000	61 / 100	110 / 75	290 / 1.8 U	249	274	323	88	87	382	80	53	96	-	-	-	-
Copper	umol/g					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/kg	580000				36000	44000	25000	34500	40100	34500	32100	31400	29100	40200	27700	46400	-	-	-	-
Lead	mg/kg	900			44000	750 / 630	900 / 790	1300 ^a / 1100 ^a	1580 ^a	1690 ^a	1800 ^a	289	290	1800 ^a	675 J	395 J	246 J	699	765	104	785
Lead	umol/g					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	1000000			2900000	7500	9700	8900	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/kg	90000			1500	6900 ^d	8900 ^d	4100 ^d	5330 J ^d	5470 J ^d	15800 J ^d	3070 J ^d	2810 J ^d	6960 J ^d	3140 ^d	2320 ^d	2150 ^d	11100 ^d	4030 ^d	1900 ^d	5800 ^d
Mercury	mg/kg	580	89	62	8800	0.32 / 0.010 U	0.011 U / 0.58	0.014 U / 0.26	0.2	0.2 U	0.2	0.2 U	0.2 U	0.3	0.2 U	0.2 U	0.2 U	-	-	-	-
Mercury	umol/g					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	150000			16000	19 / 29	19 / 26	48 / 24	38	42	43	29	29	53	28	17	26	-	-	-	-
Nickel	umol/g	150000			16000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/kg					1700	2400	1900	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	9600			59000	4.7 F1	5.7	14	7 J	7 J	9 J	2 UJ	2 J	17 J	2 J	5 J	2 J	-	-	-	-
Silver	mg/kg	9000			2900	2.0 / 6.5 U	2.9 U / 2.8	5.0 / 1.8 U	5	5	6	2 U	2 U	6	2 U	2 U	2	-	-	-	-
Sodium	mg/kg	1000000			1200	1600	1600	1300	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	130			5900	2.4	2.0	10	3	3	5	1 U	1 U	14	1 U	1 U	1 U	-	-	-	-
Tin	mg/kg					-	-	-	129	141	170	39	30	152	35	20	17	-	-	-	-
Vanadium	mg/kg	5500				24	23	47	32 J	36 J	45 J	29 J	27 J	94 J	22	14	24	-	-	-	-
Zinc	mg/kg	630000				3400 / 3400	3700 / 2800	8500 / 9500	17900 J	21800 J	21800 J	1850 J	1870 J	25700 J	11600	7260	3930	-	-	-	-
Zinc	umol/g					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[illegible]

Parameters	Units
VOAs	
1,1,1-Trichloroethane	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
1,1,2,2-Tetrachloroethane	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
1,1,2-Trichloroethane	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
1,1-Dichloroethane	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
1,1-Dichloroethene	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
1,2,4-Trichlorobenzene	mg/kg - - - - - - - - - - - - - - - - - - 0.72 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg - - - - - - - - - - - - - - - - - - 0.72 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg - - - - - - - - - - - - - - - - - - 0.72 U
1,2-Dichlorobenzene	mg/kg - - - - - - - - - - - - - - - - - - 0.29 U
1,2-Dichloroethane	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
1,2-Dichloropropane	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
1,3-Dichlorobenzene	mg/kg - - - - - - - - - - - - - - - - - - 0.29 U
1,4-Dichlorobenzene	mg/kg - - - - - - - - - - - - - - - - - - 0.29 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg - - - - - - - - - - - - - - - - - - 2.2 U
2-Hexanone	mg/kg - - - - - - - - - - - - - - - - - - 7.2 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg - - - - - - - - - - - - - - - - - - 7.2 U
Acetone	mg/kg - - - - - - - - - - - - - - - - - - 2.2 U
Benzene	mg/kg - - - - - - - - - - - - - - - - - - 0.32
Bromodichloromethane	mg/kg - - - - - - - - - - - - - - - - - - 0.29 U
Bromoform	mg/kg - - - - - - - - - - - - - - - - - - 0.29 U
Bromomethane (Methyl bromide)	mg/kg - - - - - - - - - - - - - - - - - - 0.72 U
Carbon disulfide	mg/kg - - - - - - - - - - - - - - - - - - 0.72 U
Carbon tetrachloride	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
Chlorobenzene	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
Chloroethane	mg/kg - - - - - - - - - - - - - - - - - - 0.72 U
Chloroform (Trichloromethane)	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
Chloromethane (Methyl chloride)	mg/kg - - - - - - - - - - - - - - - - - - 0.72 U
cis-1,2-Dichloroethene	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
cis-1,3-Dichloropropene	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
Cyclohexane	mg/kg - - - - - - - - - - - - - - - - - - 3.4 U
Dibromochloromethane	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
Dichlorodifluoromethane (CFC-12)	mg/kg - - - - - - - - - - - - - - - - - - 0.29 U
Ethylbenzene	mg/kg - - - - - - - - - - - - - - - - - - 0.14
Isopropyl benzene	mg/kg - - - - - - - - - - - - - - - - - - 0.72 U
Methyl acetate	mg/kg - - - - - - - - - - - - - - - - - - 3.4 U
Methyl cyclohexane	mg/kg - - - - - - - - - - - - - - - - - - 3.4 U
Methyl tert butyl ether (MTBE)	mg/kg - - - - - - - - - - - - - - - - - - 0.72 U
Methylene chloride	mg/kg - - - - - - - - - - - - - - - - - - 0.72 U
Styrene	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
Tetrachloroethene	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
Toluene	mg/kg - - - - - - - - - - - - - - - - - - 0.41
trans-1,2-Dichloroethene	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
trans-1,3-Dichloropropene	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
Trichloroethene	mg/kg - - - - - - - - - - - - - - - - - - 0.14 U
Trichlorofluoromethane (CFC-11)	mg/kg - - - - - - - - - - - - - - - - - - 0.29 U
Trifluorotrichloroethane (CFC-113)	mg/kg - - - - - - - - - - - - - - - - - - 0.72 U
Vinyl chloride	mg/kg - - - - - - - - - - - - - - - - - - 0.11 U
Xylenes (total)	mg/kg - - - - - - - - - - - - - - - - - - 0.43 U

[illegible]

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H	H	H
Sample Location:	SD-217-11	SD-218-11	SD-219-11	SD-220-11	SD-235-11	SD-237-11	SD-238-11	SD-239-11	SD-239-11	SD-241-11	SED-328-13	SED-334-16
Sample ID:	S-58502-062811-SH-217	S-58502-062811-SH-218	S-58502-062811-SH-219	S-58502-062811-SH-220	S-58502-063011-SH-235	S-58502-063011-SH-237	S-58502-063011-SH-238	S-58502-063011-SH-239	S-58502-063011-SH-240	S-58502-063011-SH-241	S-58502-071713-SSH-328	S-58502-031716-SSH-1628
Sample Date:	6/28/2011	6/28/2011	6/28/2011	6/28/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	7/17/2013	3/17/2016
Sample Depth:	-	-	-	-	-	-	-	-	-	-	(0-3) ft BGS	-
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate)

Parameters	Units											
2,6-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
2-Acetylaminofluorene	mg/kg	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
2-Chlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
2-Methylnaphthalene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
2-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
2-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-	3.3 U
2-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
2-Toluidine	mg/kg	-	-	-	-	-	-	-	-	-	-	-
3&4-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	5.6
3,3'-Dichlorobenzidine	mg/kg	-	-	-	-	-	-	-	-	-	-	27 U
3,3-Dimethylbenzidine	mg/kg	-	-	-	-	-	-	-	-	-	-	-
3-Methylcholanthrene	mg/kg	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-	3.3 U
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	2.5 U
4-Aminobiphenyl	mg/kg	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
4-Chloro-3-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
4-Chloroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-	3.3 U
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
4-Dimethylaminoazobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-	3.3 U
4-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	5.5 U
5-Nitro-2-toluidine	mg/kg	-	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Acenaphthylene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Acetophenone	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Atrazine	mg/kg	-	-	-	-	-	-	-	-	-	-	0.67 U
Benzaldehyde	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Benzo(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Benzo(a)pyrene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Benzo(b)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Benzo(k)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Benzyl alcohol	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
bis(2-Chloroethyl)ether	mg/kg	-	-	-	-	-	-	-	-	-	-	1.3 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Caprolactam	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Carbazole	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Chlorobenzilate	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Chrysene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Diallate	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Dibenzofuran	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Diethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Dimethoate	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Dimethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Dinoseb	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Diphenylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Disulfoton	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Ethyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Ethyl parathion	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Famphur	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Fluorene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Hexachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Hexachlorobutadiene	mg/kg	-	-	-	-	-	-	-	-	-	-	0.67 U
Hexachlorocyclopentadiene	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U
Hexachloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-	4.4 U

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:													
Sample Location:	H	H	H	H	H	H	H	H	H	H	H	H	H
Sample ID:	SD-217-11	SD-218-11	SD-219-11	SD-220-11	SD-235-11	SD-237-11	SD-238-11	SD-239-11	SD-239-11	SD-239-11	SD-241-11	SED-328-13	SED-334-16
Sample Date:	S-58502-062811-SH-217	S-58502-062811-SH-218	S-58502-062811-SH-219	S-58502-062811-SH-220	S-58502-063011-SH-235	S-58502-063011-SH-237	S-58502-063011-SH-238	S-58502-063011-SH-239	S-58502-063011-SH-240	S-58502-063011-SH-241	S-58502-071713-SSH-328	S-58502-031716-SSH-1628	
Sample Depth:	6/28/2011	6/28/2011	6/28/2011	6/28/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	7/17/2013	3/17/2016
Excavat_status	-	-	-	-	-	-	-	-	-	-	-	(0-3) ft BGS	-
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate)

Parameters	Units
Hexachloropropene	mg/kg
Indeno(1,2,3-cd)pyrene	mg/kg
Isodrin	mg/kg
Isophorone	mg/kg
Isosafrole	mg/kg
Kepone	mg/kg
Methapyrilene	mg/kg
Methyl methanesulfonate	mg/kg
Methyl parathion	mg/kg
Naphthalene	mg/kg
Nitrobenzene	mg/kg
N-Nitrosodiethylamine	mg/kg
N-Nitrosodimethylamine	mg/kg
N-Nitrosodi-n-butylamine	mg/kg
N-Nitrosodi-n-propylamine	mg/kg
N-Nitrosodiphenylamine	mg/kg
N-Nitrosomethylethylamine	mg/kg
N-Nitrosopiperidine	mg/kg
N-Nitrosopyrrolidine	mg/kg
Pentachlorobenzene	mg/kg
Pentachloronitrobenzene	mg/kg
Pentachlorophenol	mg/kg
Phenacetin	mg/kg
Phenanthrene	mg/kg
Phenol	mg/kg
Phorate	mg/kg
p-Phenylenediamine	mg/kg
Pronamide	mg/kg
Pyrene	mg/kg
Safrole	mg/kg
Thionazin (O,O-diethyl-O-2-pyrazinyl phosphorothioate)	mg/kg

Metals

Aluminum	mg/kg	-	-	-	-	-	-	-	-	-	-	8600	-
Antimony	mg/kg	3.2	5.8	1.7	38 U	5.1 J	3.2 J	3.2 J	0.77 J	0.87 J	3.5 J	1.3 J	-
Arsenic	mg/kg	12	15	9.6	19 U	19	14	14	5.0	6.1	9.8	17	R
Barium	mg/kg	150	220	140	140	130	130	140	74	81	280	110	-
Beryllium	mg/kg	1.1	1.3	0.79	0.62	1.7	1.9	1.8	0.25 U	0.93	2.6	0.90	-
Cadmium	mg/kg	6.9	9.3	3.0	4.4	5.9	6.0	5.2	0.72	0.67	2.0	0.83 U	6.4
Cadmium	umol/g	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	38000 J	-
Cation exchange capacity	meq/100g	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	130	170	110	92	130	130	110	39	47	130	190	76
Cobalt	mg/kg	6.9	8.4	6.3	9.4	6.2	7.7	8.4	5.3	5.8	5.2	9.4	-
Copper	mg/kg	110	160	77	90	120	130	120	30	34	67	120	R
Copper	umol/g	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/kg	-	-	-	-	-	-	-	-	-	-	180000	-
Lead	mg/kg	1000 ^a	1200 ^d	340	550	900	840	760	120	140	370	65 J	860
Lead	umol/g	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	5300	-
Manganese	mg/kg	5400 ^d	9900 ^d	3700 ^d	3400 ^d	4900 ^d	4800 ^d	4500 ^d	1300	1600 ^d	6900 ^d	3500 ^d	-
Mercury	mg/kg	0.072 J	0.083 J	0.035 J	0.057 J	0.17	0.14	0.14	0.048 J	0.040 J	0.15	0.10 U	0.012 U
Mercury	umol/g	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	31	38	28	35	45	46	43	19	22	24	100	23
Nickel	umol/g	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	480 J	-
Selenium	mg/kg	3.3	5.1	2.3	38 U	3.3	3.1	2.9	0.84	0.89	3.1	1.7	-
Silver	mg/kg	1.9	2.8	0.78	19 U	2.9	2.3	1.9	0.59	0.78	1.3	0.14 J	R
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	300	-
Thallium	mg/kg	0.83 J	0.93 J	0.38 J	19 U	5.0 J	18 U	19 U	0.17 J	0.23	0.86	0.067 J	-
Tin	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/kg	19	33	20	31	16	22	27	18	20	17	11	-
Zinc	mg/kg	6900	5900	2100	13000	41000	26000	21000	1500	980	2100	1100	5400
Zinc	umol/g	-	-	-	-	-	-	-	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

[illegible]

(Duplicate)

Parameters		Units											
MetalsSEM													
Cadmium	mg/kg	-	-	-	-	-	-	-	-	-	-	2.6 U	-
Cadmium	umol/g	0.066	0.053	0.015	0.016	0.051	0.045	0.052	0.0060	0.0067	0.016	-	-
Copper	mg/kg	-	-	-	-	-	-	-	-	-	-	140	-
Copper	umol/g	1.0	1.1	0.25	0.57	1.3	1.2	1.3	0.31	0.30	0.025	-	-
Lead	mg/kg	-	-	-	-	-	-	-	-	-	-	33	-
Lead	umol/g	6.4	5.7	1.5	1.5	4.3	3.5	4.2	0.50	0.54	1.8	-	-
Mercury	mg/kg	-	-	-	-	-	-	-	-	-	-	0.026 U	-
Mercury	umol/g	0.000062 U	0.000062 U	0.000062 U	0.000062 U	0.000062 U	0.000062 U	0.000062 U	0.000062 U	0.000062 U	0.000062 U	-	-
Nickel	mg/kg	-	-	-	-	-	-	-	-	-	-	76	-
Nickel	umol/g	0.41	0.45	0.30	0.24	0.47	0.39	0.43	0.20	0.20	0.26	-	-
Simultaneously extracted metals (SEM)	umol/g	100	70	26	90	380	280	320	15	22	24	-	-
Simultaneously extracted metals (SEM)/Acid-volatile sulfide ratio (AVS)	none	5.3	3.6	2.6	8.8	8.8	7.6	5.4	3.6	3.6	1.3	0.86	0.96
Sulfide	umol/g	19	19	9.9	10	43	37	60	4.1	6.2	19	-	-
Zinc	mg/kg	-	-	-	-	-	-	-	-	-	-	740	-
Zinc	umol/g	94	62	24	88	370	270	310	14	21	22	-	-
PCBs(1)													
Aroclor-1016 (PCB-1016)	mg/kg	0.55 U	0.61 U	0.57 U	0.69 U	0.81 U	0.67 U	0.75 U	0.42 U	4.1 U	5.5 U	0.7 U	0.34 U
Aroclor-1221 (PCB-1221)	mg/kg	0.55 U	0.61 U	0.57 U	0.69 U	0.81 U	0.67 U	0.75 U	0.42 U	4.1 U	5.5 U	0.7 U	0.34 U
Aroclor-1232 (PCB-1232)	mg/kg	0.55 U	0.61 U	0.57 U	0.69 U	0.81 U	0.67 U	0.75 U	0.42 U	4.1 U	5.5 U	0.7 U	0.34 U
Aroclor-1242 (PCB-1242)	mg/kg	0.55 U	0.28 J	0.33 J	0.69 U	0.81 U	0.1 J	0.75 U	0.2 J	2.6 J	4.2 J	0.7 U	0.66
Aroclor-1248 (PCB-1248)	mg/kg	0.057 J	0.61 U	0.57 U	0.17 J	0.074 J	0.67 U	0.75 U	0.42 U	4.1 U	5.5 U	0.7 U	0.34 U
Aroclor-1254 (PCB-1254)	mg/kg	0.55 U	0.61 U	0.57 U	0.69 U	0.81 U	0.068 J	0.75 U	0.42 U	0.7 J	0.99 J	0.7 U	0.34 U
Aroclor-1260 (PCB-1260)	mg/kg	0.55 U	0.61 U	0.57 U	0.69 U	0.81 U	0.67 U	0.75 U	0.42 U	4.1 U	5.5 U	0.7 U	0.34 U
Aroclor-1262 (PCB-1262)	mg/kg	0.55 U	0.61 U	0.57 U	0.69 U	0.81 U	0.67 U	0.75 U	0.42 U	4.1 U	5.5 U	0.7 U	-
Aroclor-1268 (PCB-1268)	mg/kg	0.55 U	0.61 U	0.57 U	0.69 U	0.81 U	0.67 U	0.75 U	0.42 U	4.1 U	5.5 U	0.7 U	-
Total PCBs	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-
Wet													
Ammonia	mg/kg	51	110	26	35	64	82	47	85	65	61	120	-
Ammonia-N	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (total)	mg/kg	1.7	1.1	1.5	1.1 J	4.1	2.0	2.5	0.78 U	0.74 U	3.5	4.5	-
Formaldehyde	mg/kg	-	-	-	-	-	-	-	-	-	-	-	82 ^{bc}
Nitrate (as N)	mg/kg	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.1 U	5.0 U	5.0 U	5.0 U	5.0 U	660 U	-
Nitrite (as N)	mg/kg	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.15 J	5.0 U	5.0 U	5.0 U	5.0 U	-	-
Orthophosphate	mg/kg	4.5 J	3.3 J	4.0 J	2.5 J	6.4	3.8 J	2.7 J	4.3 J	2.7 J	1.7 J	-	-
pH, lab	s.u.	9.84 J	9.50 J	9.87 J	8.83 J	8.65	8.71	8.77	8.48	8.36	8.70	7.53 J	-
Sulfide	mg/kg	-	-	-	-	-	-	-	-	-	-	550	3000
Sulfide	umol/g	-	-	-	-	-	-	-	-	-	-	-	-
Sulfide (acid volatile)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	%	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/kg	66000	68000	89000	47000	44000 J	37000 J	37000 J	32000 J	20000 J	57000 J	91000	-
Total solids	%	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U	Not detected at the associated reporting limit.
J	Estimated concentration.
UJ	Not detected; associated reporting limit is estimated.
R	Rejected.
B	Not detected substantially above level reported in the lab or field blanks.
(1)	PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H	H
Sample Location:	SED-335-16	SED-336-16	SED-341-16	SED-346-16	SED-351-16	SED-353-16	SS-06	SS-07	SS-07	SS-09	SS-09
Sample ID:	S-58502-031716-SSH-1630	S-58502-031716-SSH-1629	S-58502-032416-SSH-1639	S-58502-031716-SSH-1627	S-58502-031716-SSH-1625	S-58502-031716-SSH-1626	S-58502-050316-SSH-SS06A	S-58502-050316-SSH-SS07A	S-58502-050316-SSH-SS07B	S-58502-050316-SSH-SS09A	S-58502-050316-SSH-SS09B
Sample Date:	3/17/2016	3/17/2016	3/24/2016	3/17/2016	3/17/2016	3/17/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016
Sample Depth:	-	-	-	-	-	-	(0-1.75) ft BGS	(0-0.67) ft BGS	(0.67-4.75) ft BGS	(0-0.83) ft BGS	(0.83-3.08) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

Parameters	Units										
VOAs											
1,1,1-Trichloroethane	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
1,1,2-Trichloroethane	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
1,1-Dichloroethane	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
1,1-Dichloroethene	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.74 U	1 U	0.42 U	0.82 U	0.68 U	1.1 U	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.74 U	1 U	0.42 U	0.82 U	0.68 U	1.1 U	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.74 U	1 U	0.42 U	0.82 U	0.68 U	1.1 U	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.29 U	0.4 U	0.17 U	0.33 U	0.27 U	0.45 U	-	-	-	-
1,2-Dichloroethane	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
1,2-Dichloropropane	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.29 U	0.4 U	0.17 U	0.33 U	0.27 U	0.45 U	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.29 U	0.4 U	0.17 U	0.33 U	0.27 U	0.45 U	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	2.2 U	3 U	1.3 U	2.4 U	2 U	3.4 U	-	-	-	-
2-Hexanone	mg/kg	7.4 U	10 U	4.2 U	8.2 U	6.8 U	11 U	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	7.4 U	10 U	4.2 U	8.2 U	6.8 U	11 U	-	-	-	-
Acetone	mg/kg	2.2 U	3 U	1.3 U	2.4 U	2 U	3.4 U	-	-	-	-
Benzene	mg/kg	0.46	0.2 U	0.085 U	0.16 U	0.28	0.22 U	-	-	-	-
Bromodichloromethane	mg/kg	0.29 U	0.4 U	0.17 U	0.33 U	0.27 U	0.45 U	-	-	-	-
Bromoform	mg/kg	0.29 U	0.4 U	0.17 U	0.33 U	0.27 U	0.45 U	-	-	-	-
Bromomethane (Methyl bromide)	mg/kg	0.74 U	1 U	0.42 U	0.82 U	0.68 U	1.1 U	-	-	-	-
Carbon disulfide	mg/kg	0.74 U	1 U	0.42 U	0.82 U	0.68 U	1.1 U	-	-	-	-
Carbon tetrachloride	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
Chlorobenzene	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
Chloroethane	mg/kg	0.74 U	1 U	0.42 U	0.82 U	0.68 U	1.1 U	-	-	-	-
Chloroform (Trichloromethane)	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	0.74 U	1 U	0.42 U	0.82 U	0.68 U	1.1 U	-	-	-	-
cis-1,2-Dichloroethene	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
cis-1,3-Dichloropropene	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
Cyclohexane	mg/kg	3.5 U	4.8 U	2 U	3.9 U	3.2 U	5.4 U	-	-	-	-
Dibromochloromethane	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg	0.29 U	0.4 U	0.17 U	0.33 U	0.27 U	0.45 U	-	-	-	-
Ethylbenzene	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.17	0.22 U	-	-	-	-
Isopropyl benzene	mg/kg	0.74 U	1 U	0.42 U	0.82 U	0.68 U	1.1 U	-	-	-	-
Methyl acetate	mg/kg	3.5 U	4.8 U	2 U	3.9 U	3.2 U	5.4 U	-	-	-	-
Methyl cyclohexane	mg/kg	3.5 U	4.8 U	2 U	3.9 U	3.2 U	5.4 U	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg	0.74 U	1 U	0.42 U	0.82 U	0.68 U	1.1 U	-	-	-	-
Methylene chloride	mg/kg	0.74 U	1 U	0.42 U	0.82 U	0.68 U	1.1 U	-	-	-	-
Styrene	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
Tetrachloroethene	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
Toluene	mg/kg	0.55	0.4 U	0.17 U	0.33 U	0.32	0.45 U	-	-	-	-
trans-1,2-Dichloroethene	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
trans-1,3-Dichloropropene	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
Trichloroethene	mg/kg	0.15 U	0.2 U	0.085 U	0.16 U	0.14 U	0.22 U	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg	0.29 U	0.4 U	0.17 U	0.33 U	0.27 U	0.45 U	-	-	-	-
Trifluorotrichloroethane (CFC-113)	mg/kg	0.74 U	1 U	0.42 U	0.82 U	0.68 U	1.1 U	-	-	-	-
Vinyl chloride	mg/kg	0.12 U	0.16 U	0.068 U	0.13 U	0.11 U	0.18 U	-	-	-	-
Xylenes (total)	mg/kg	0.44 U	0.6 U	0.25 U	0.49 U	0.41 U	0.67 U	-	-	-	-
SVOAs											
0,0,0-Triethylphosphorothioate	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2,4,5-Tetrachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,3,5-Trinitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,4-Naphthoquinone	mg/kg	-	-	-	-	-	-	-	-	-	-
1-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
2,3,4,6-Tetrachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
2,4-Dichlorophenol	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
2,4-Dimethylphenol	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
2,4-Dinitrophenol	mg/kg	3.4 U	1.2 U	0.84 U	1.4 U	0.31 U	0.8 U	-	-	-	-
2,4-Dinitrotoluene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H	H
Sample Location:	SED-335-16	SED-336-16	SED-341-16	SED-346-16	SED-351-16	SED-353-16	SS-06	SS-07	SS-07	SS-09	SS-09
Sample ID:	S-58502-031716-SSH-1630	S-58502-031716-SSH-1629	S-58502-032416-SSH-1639	S-58502-031716-SSH-1627	S-58502-031716-SSH-1625	S-58502-031716-SSH-1626	S-58502-050316-SSH-SS06A	S-58502-050316-SSH-SS07A	S-58502-050316-SSH-SS07B	S-58502-050316-SSH-SS09A	S-58502-050316-SSH-SS09B
Sample Date:	3/17/2016	3/17/2016	3/24/2016	3/17/2016	3/17/2016	3/17/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016
Sample Depth:	-	-	-	-	-	-	(0-1.75) ft BGS	(0-0.67) ft BGS	(0.67-4.75) ft BGS	(0-0.83) ft BGS	(0.83-3.08) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

Parameters	Units										
2,6-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
2-Acetylaminofluorene	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
2-Chlorophenol	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
2-Methylnaphthalene	mg/kg	5.9 U	2.5	1.5 U	2.4 U	1.6	1.7	-	-	-	-
2-Methylphenol	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.66	1.4 U	-	-	-	-
2-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	mg/kg	4.5 U	1.6 U	1.1 U	1.8 U	0.41 U	1.1 U	-	-	-	-
2-Nitrophenol	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
2-Toluidine	mg/kg	-	-	-	-	-	-	-	-	-	-
3&4-Methylphenol	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.65	1.4 U	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg	36 U	12 U	8.9 U	15 U	3.3 U	8.5 U	-	-	-	-
3,3-Dimethylbenzidine	mg/kg	-	-	-	-	-	-	-	-	-	-
3-Methylcholanthrene	mg/kg	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	mg/kg	4.5 U	1.6 U	1.1 U	1.8 U	0.41 U	1.1 U	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	3.4 U	1.2 U	0.84 U	1.4 U	0.31 U	0.8 U	-	-	-	-
4-Aminobiphenyl	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
4-Chloroaniline	mg/kg	4.5 U	1.6 U	1.1 U	1.8 U	0.41 U	1.1 U	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
4-Dimethylaminoazobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	mg/kg	4.5 U	1.6 U	1.1 U	1.8 U	0.41 U	1.1 U	-	-	-	-
4-Nitrophenol	mg/kg	7.4 U	2.6 U	1.8 U	3 U	0.67 U	1.8 U	-	-	-	-
5-Nitro-2-toluidine	mg/kg	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-
Acenaphthene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Acenaphthylene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Acetophenone	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Anthracene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Atrazine	mg/kg	0.9 U	0.31 U	0.22 U	0.37 U	0.082 U	0.21 U	-	-	-	-
Benzaldehyde	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Benzo(a)anthracene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Benzo(a)pyrene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Benzo(b)fluoranthene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Benzo(k)fluoranthene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Benzyl alcohol	mg/kg	-	-	-	-	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg	1.8 U	0.62 U	0.45 U	0.73 U	0.16 U	0.43 U	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.63	1.4 U	-	-	-	-
Butyl benzylphthalate (BBP)	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Caprolactam	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Carbazole	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Chlorobenzilate	mg/kg	-	-	-	-	-	-	-	-	-	-
Chrysene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Diallate	mg/kg	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Dibenzofuran	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Diethyl phthalate	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Dimethoate	mg/kg	-	-	-	-	-	-	-	-	-	-
Dimethyl phthalate	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Dinoseb	mg/kg	-	-	-	-	-	-	-	-	-	-
Diphenylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
Disulfoton	mg/kg	-	-	-	-	-	-	-	-	-	-
Ethyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-	-
Ethyl parathion	mg/kg	-	-	-	-	-	-	-	-	-	-
Famphur	mg/kg	-	-	-	-	-	-	-	-	-	-
Fluoranthene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	1.1	1.4 U	-	-	-	-
Fluorene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.56	1.4 U	-	-	-	-
Hexachlorobenzene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Hexachlorobutadiene	mg/kg	0.9 U	0.31 U	0.22 U	0.37 U	0.082 U	0.21 U	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-
Hexachloroethane	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:		H	H	H	H	H	H	H	H	H	H	H
Sample Location:		SED-335-16	SED-336-16	SED-341-16	SED-346-16	SED-351-16	SED-353-16	SS-06	SS-07	SS-07	SS-09	SS-09
Sample ID:		S-58502-031716-SSH-1630	S-58502-031716-SSH-1629	S-58502-032416-SSH-1639	S-58502-031716-SSH-1627	S-58502-031716-SSH-1625	S-58502-031716-SSH-1626	S-58502-050316-SSH-SS06A	S-58502-050316-SSH-SS07A	S-58502-050316-SSH-SS07B	S-58502-050316-SSH-SS09A	S-58502-050316-SSH-SS09B
Sample Date:		3/17/2016	3/17/2016	3/24/2016	3/17/2016	3/17/2016	3/17/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016
Sample Depth:		-	-	-	-	-	-	(0-1.75) ft BGS	(0-0.67) ft BGS	(0.67-4.75) ft BGS	(0-0.83) ft BGS	(0.83-3.08) ft BGS
Excavat_status		Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
Parameters	Units											
Hexachloropropene	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-	-
Isodrin	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Isophorone	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-	-
Isosafrole	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Kepone	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Methapyrilene	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Methyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Methyl parathion	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	1	1.4 U	-	-	-	-	-
Nitrobenzene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-	-
N-Nitrosodiethylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-butylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.54 U	1.4 U	-	-	-	-	-
N-Nitrosomethylethylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosopiperidine	mg/kg	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosopyrrolidine	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Pentachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Pentachloronitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	mg/kg	3.4 U	1.2 U	0.84 U	1.4 U	0.31 U	0.8 U	-	-	-	-	-
Phenacetin	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	1.3	1.4 U	-	-	-	-	-
Phenol	mg/kg	11	2.6	1.5 U	2.4 U	1.3	1.4 U	-	-	-	-	-
Phorate	mg/kg	-	-	-	-	-	-	-	-	-	-	-
p-Phenylenediamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Pronamide	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Pyrene	mg/kg	5.9 U	2 U	1.5 U	2.4 U	0.97	1.4 U	-	-	-	-	-
Safrole	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Thionazin (O,O-diethyl-O-2-pyrazinyl phosphorothioate)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Metals												
Aluminum	mg/kg	-	-	-	-	-	-	14000	20000	22000	13000	20000
Antimony	mg/kg	-	-	-	-	-	-	22	3.5	3.2	2.3	2.9
Arsenic	mg/kg	R	1.1 J	-	R	R	2.0 J	36	13	13	8.2	12
Barium	mg/kg	-	-	-	-	-	-	140	150	150	81	89
Beryllium	mg/kg	-	-	-	-	-	-	1.2	1.7	1.8	1.1	1.5
Cadmium	mg/kg	7.1	8.9	1.5	20	5.0	7.1	17	5.4	5.3	2.2	3.1
Cadmium	umol/g	-	-	0.013	-	-	-	-	-	-	-	-
Calcium	mg/kg	-	-	-	-	-	-	51000 J	38000 J	29000 J	21000 J	23000 J
Cation exchange capacity	meq/100g	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	72	70	-	72	97	90	110	110	130	71	130
Cobalt	mg/kg	-	-	-	-	-	-	8.8	5.4	5.5	3.9	7.5
Copper	mg/kg	R	R	19 J	R	13 J	R	350	96	100	57	97
Copper	umol/g	-	-	0.30	-	-	-	-	-	-	-	-
Iron	mg/kg	-	-	-	-	-	-	42000	55000	63000	39000	70000
Lead	mg/kg	790	710	280	1500 ^a	510	760	1300 ^a	770	780	380	420
Lead	umol/g	-	-	1.4	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	8800	9200	8600	4800	7700
Manganese	mg/kg	-	-	-	-	-	-	4400 ^d	6300 ^d	6800 ^d	2200 ^d	3800 ^d
Mercury	mg/kg	0.012 U	0.015 U	0.0082 U	0.027 U	0.012 U	0.018 U	0.13 U	0.33	0.076 U	0.11 U	0.075 U
Mercury	umol/g	-	-	0.000041 U	-	-	-	-	-	-	-	-
Nickel	mg/kg	22	27	13	34	25	22	38	28	29	23	46
Nickel	umol/g	-	-	0.23	-	-	-	-	-	-	-	-
Potassium	mg/kg	-	-	-	-	-	-	1700	2500	3100	1200	1900
Selenium	mg/kg	-	-	-	-	-	-	20	7.6	7.4	4.9	6.8
Silver	mg/kg	R	R	-	R	R	R	3.9	2.4	2.5	0.83	1.3
Sodium	mg/kg	-	-	-	-	-	-	1300	1200	1200	940	1200
Thallium	mg/kg	-	-	-	-	-	-	9.3	1.1	0.98	0.45	0.66
Tin	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/kg	-	-	-	-	-	-	53	18	19	14	19
Zinc	mg/kg	7200	8000	910	19000	3600	7700	24000	3900	3300	1800	3100
Zinc	umol/g	-	-	14	-	-	-	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H	H
Sample Location:	SED-335-16	SED-336-16	SED-341-16	SED-346-16	SED-351-16	SED-353-16	SS-06	SS-07	SS-07	SS-09	SS-09
Sample ID:	S-58502-031716-SSH-1630	S-58502-031716-SSH-1629	S-58502-032416-SSH-1639	S-58502-031716-SSH-1627	S-58502-031716-SSH-1625	S-58502-031716-SSH-1626	S-58502-050316-SSH-SS06A	S-58502-050316-SSH-SS07A	S-58502-050316-SSH-SS07B	S-58502-050316-SSH-SS09A	S-58502-050316-SSH-SS09B
Sample Date:	3/17/2016	3/17/2016	3/24/2016	3/17/2016	3/17/2016	3/17/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016
Sample Depth:	-	-	-	-	-	-	(0-1.75) ft BGS	(0-0.67) ft BGS	(0.67-4.75) ft BGS	(0-0.83) ft BGS	(0.83-3.08) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

Parameters		Units										
MetalsSEM												
Cadmium	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Cadmium	umol/g	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Copper	umol/g	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Lead	umol/g	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Mercury	umol/g	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Nickel	umol/g	-	-	-	-	-	-	-	-	-	-	-
Simultaneously extracted metals (SEM)	umol/g	-	-	-	-	-	-	-	-	-	-	-
Simultaneously extracted metals (SEM)/Acid-volatile sulfide ratio (AVS)	none	1.2	1.1	0.59	0.54	2.7	1.4	-	-	-	-	-
Sulfide	umol/g	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Zinc	umol/g	-	-	-	-	-	-	-	-	-	-	-
PCBs(1)												
Aroclor-1016 (PCB-1016)	mg/kg	0.075 U	0.086 U	0.047 U	1.5 U	0.066 U	0.088 U	1.1 U	0.69 U	0.33 U	0.89 U	0.065 U
Aroclor-1221 (PCB-1221)	mg/kg	0.075 U	0.086 U	0.047 U	1.5 U	0.066 U	0.088 U	1.1 U	0.69 U	0.33 U	0.89 U	0.065 U
Aroclor-1232 (PCB-1232)	mg/kg	0.075 U	0.086 U	0.047 U	1.5 U	0.066 U	0.088 U	1.1 U	0.69 U	0.33 U	0.89 U	0.065 U
Aroclor-1242 (PCB-1242)	mg/kg	0.35	0.2	0.38	7.6	0.34	0.36	1.1 U	2.6	2.9	0.89 U	0.086
Aroclor-1248 (PCB-1248)	mg/kg	0.075 U	0.086 U	0.047 U	1.5 U	0.066 U	0.088 U	1.1 U	0.69 U	0.33 U	0.89 U	0.065 U
Aroclor-1254 (PCB-1254)	mg/kg	0.075 U	0.086 U	0.13	1.5 U	0.075	0.16	1.1 U	0.69 U	0.62	0.89 U	0.075
Aroclor-1260 (PCB-1260)	mg/kg	0.075 U	0.086 U	0.047 U	1.5 U	0.066 U	0.088 U	1.1 U	0.69 U	0.33 U	0.89 U	0.065 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/kg	-	-	-	-	-	-	720	230	95 U	150	97 U
Cyanide (total)	mg/kg	-	-	-	-	-	-	8.2 U	1.7	1.4	1.5 U	1.0 U
Formaldehyde	mg/kg	110 ^{bc}	120 ^{bc}	46 ^c	97 ^{bc}	84 ^{bc}	64 ^c	50 ^c	83 ^{bc}	57 ^c	55 ^c	91 ^{bc}
Nitrate (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Orthophosphate	mg/kg	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-
Sulfide	mg/kg	3000	3900	860	18000	740	2900	-	-	-	-	-
Sulfide	umol/g	-	-	27	-	-	-	-	-	-	-	-
Sulfide (acid volatile)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	%	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/kg	-	-	-	-	-	-	100000	-	-	-	-
Total solids	%	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

R Rejected.

B Not detected substantially above level reported in the lab or field blanks.

(1) PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-10	SS-10	SS-11	SS-12	SS-12	SS-13	SS-13	SS-15	SS-15	SS-16
Sample ID:	S-58502-050316-SSH-SS10A	S-58502-050316-SSH-SS10B	S-58502-050316-SSH-SS11A	S-58502-050316-SSH-SS12A	S-58502-050316-SSH-SS12B	S-58502-050316-SSH-SS13A	S-58502-050316-SSH-SS13B	S-58502-050316-SSH-SS15A	S-58502-050316-SSH-SS15B	S-58502-050416-SSH-SS16A
Sample Date:	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/4/2016
Sample Depth:	(0-1.08) ft BGS	(1.08-4.83) ft BGS	(0-2.17) ft BGS	(0-1) ft BGS	(1-3.67) ft BGS	(0-2.5) ft BGS	(2.5-4.5) ft BGS	(0-2.25) ft BGS	(2.25-2.83) ft BGS	(0-1.42) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

Parameters	Units									
VOAs										
1,1,1-Trichloroethane	mg/kg	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	mg/kg	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	mg/kg	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/kg	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	-	-	-	-	-	-	-	-	-
2-Hexanone	mg/kg	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	-	-	-	-	-	-	-	-	-
Acetone	mg/kg	-	-	-	-	-	-	-	-	-
Benzene	mg/kg	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/kg	-	-	-	-	-	-	-	-	-
Bromoform	mg/kg	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	mg/kg	-	-	-	-	-	-	-	-	-
Carbon disulfide	mg/kg	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/kg	-	-	-	-	-	-	-	-	-
Chlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
Chloroethane	mg/kg	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	mg/kg	-	-	-	-	-	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-	-	-	-
Cyclohexane	mg/kg	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/kg	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/kg	-	-	-	-	-	-	-	-	-
Isopropyl benzene	mg/kg	-	-	-	-	-	-	-	-	-
Methyl acetate	mg/kg	-	-	-	-	-	-	-	-	-
Methyl cyclohexane	mg/kg	-	-	-	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg	-	-	-	-	-	-	-	-	-
Methylene chloride	mg/kg	-	-	-	-	-	-	-	-	-
Styrene	mg/kg	-	-	-	-	-	-	-	-	-
Tetrachloroethene	mg/kg	-	-	-	-	-	-	-	-	-
Toluene	mg/kg	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-	-	-	-
Trichloroethene	mg/kg	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg	-	-	-	-	-	-	-	-	-
Trifluorotrichloroethane (CFC-113)	mg/kg	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/kg	-	-	-	-	-	-	-	-	-
Xylenes (total)	mg/kg	-	-	-	-	-	-	-	-	-
SVOAs										
0,0,0-Triethylphosphorothioate	mg/kg	-	-	-	-	-	-	-	-	-
1,2,4,5-Tetrachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,3,5-Trinitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,4-Naphthoquinone	mg/kg	-	-	-	-	-	-	-	-	-
1-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	-	-	-	-	-	-	-	-	-
2,3,4,6-Tetrachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	mg/kg	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	-	-	-	-	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-10	SS-10	SS-11	SS-12	SS-12	SS-13	SS-13	SS-15	SS-15	SS-16
Sample ID:	S-58502-050316-SSH-SS10A	S-58502-050316-SSH-SS10B	S-58502-050316-SSH-SS11A	S-58502-050316-SSH-SS12A	S-58502-050316-SSH-SS12B	S-58502-050316-SSH-SS13A	S-58502-050316-SSH-SS13B	S-58502-050316-SSH-SS15A	S-58502-050316-SSH-SS15B	S-58502-050416-SSH-SS16A
Sample Date:	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/4/2016
Sample Depth:	(0-1.08) ft BGS	(1.08-4.83) ft BGS	(0-2.17) ft BGS	(0-1) ft BGS	(1-3.67) ft BGS	(0-2.5) ft BGS	(2.5-4.5) ft BGS	(0-2.25) ft BGS	(2.25-2.83) ft BGS	(0-1.42) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

Parameters	Units									
2,6-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	-	-	-	-	-	-	-	-	-
2-Acetylaminofluorene	mg/kg	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	mg/kg	-	-	-	-	-	-	-	-	-
2-Chlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	mg/kg	-	-	-	-	-	-	-	-	-
2-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-
2-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-
2-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-
2-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-
2-Toluidine	mg/kg	-	-	-	-	-	-	-	-	-
3&4-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg	-	-	-	-	-	-	-	-	-
3,3-Dimethylbenzidine	mg/kg	-	-	-	-	-	-	-	-	-
3-Methylcholanthrene	mg/kg	-	-	-	-	-	-	-	-	-
3-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-
4-Aminobiphenyl	mg/kg	-	-	-	-	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-
4-Chloroaniline	mg/kg	-	-	-	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-
4-Dimethylaminoazobenzene	mg/kg	-	-	-	-	-	-	-	-	-
4-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-
4-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-
5-Nitro-2-toluidine	mg/kg	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-
Acenaphthene	mg/kg	-	-	-	-	-	-	-	-	-
Acenaphthylene	mg/kg	-	-	-	-	-	-	-	-	-
Acetophenone	mg/kg	-	-	-	-	-	-	-	-	-
Anthracene	mg/kg	-	-	-	-	-	-	-	-	-
Atrazine	mg/kg	-	-	-	-	-	-	-	-	-
Benzaldehyde	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-
Benzyl alcohol	mg/kg	-	-	-	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg	-	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	-	-	-	-	-	-
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	-	-	-	-	-	-
Caprolactam	mg/kg	-	-	-	-	-	-	-	-	-
Carbazole	mg/kg	-	-	-	-	-	-	-	-	-
Chlorobenzilate	mg/kg	-	-	-	-	-	-	-	-	-
Chrysene	mg/kg	-	-	-	-	-	-	-	-	-
Diallyate	mg/kg	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	-	-	-	-	-	-	-	-	-
Dibenzofuran	mg/kg	-	-	-	-	-	-	-	-	-
Diethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-
Dimethoate	mg/kg	-	-	-	-	-	-	-	-	-
Dimethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	-	-	-	-	-	-
Dinoseb	mg/kg	-	-	-	-	-	-	-	-	-
Diphenylamine	mg/kg	-	-	-	-	-	-	-	-	-
Disulfoton	mg/kg	-	-	-	-	-	-	-	-	-
Ethyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-
Ethyl parathion	mg/kg	-	-	-	-	-	-	-	-	-
Famphur	mg/kg	-	-	-	-	-	-	-	-	-
Fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-
Fluorene	mg/kg	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	-	-	-	-	-	-	-	-	-
Hexachloroethane	mg/kg	-	-	-	-	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-10	SS-10	SS-11	SS-12	SS-12	SS-13	SS-13	SS-15	SS-15	SS-16
Sample ID:	S-58502-050316-SSH-SS10A	S-58502-050316-SSH-SS10B	S-58502-050316-SSH-SS11A	S-58502-050316-SSH-SS12A	S-58502-050316-SSH-SS12B	S-58502-050316-SSH-SS13A	S-58502-050316-SSH-SS13B	S-58502-050316-SSH-SS15A	S-58502-050316-SSH-SS15B	S-58502-050416-SSH-SS16A
Sample Date:	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/4/2016
Sample Depth:	(0-1.08) ft BGS	(1.08-4.83) ft BGS	(0-2.17) ft BGS	(0-1) ft BGS	(1-3.67) ft BGS	(0-2.5) ft BGS	(2.5-4.5) ft BGS	(0-2.25) ft BGS	(2.25-2.83) ft BGS	(0-1.42) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

Parameters	Units									
Hexachloropropene	mg/kg	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	-	-	-	-	-	-
Isodrin	mg/kg	-	-	-	-	-	-	-	-	-
Isophorone	mg/kg	-	-	-	-	-	-	-	-	-
Isosafrole	mg/kg	-	-	-	-	-	-	-	-	-
Kepone	mg/kg	-	-	-	-	-	-	-	-	-
Methapyrilene	mg/kg	-	-	-	-	-	-	-	-	-
Methyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-
Methyl parathion	mg/kg	-	-	-	-	-	-	-	-	-
Naphthalene	mg/kg	-	-	-	-	-	-	-	-	-
Nitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodiethylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-butylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosomethylethylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosopiperidine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosopyrrolidine	mg/kg	-	-	-	-	-	-	-	-	-
Pentachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
Pentachloronitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-
Pentachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
Phenacetin	mg/kg	-	-	-	-	-	-	-	-	-
Phenanthrene	mg/kg	-	-	-	-	-	-	-	-	-
Phenol	mg/kg	-	-	-	-	-	-	-	-	-
Phorate	mg/kg	-	-	-	-	-	-	-	-	-
p-Phenylenediamine	mg/kg	-	-	-	-	-	-	-	-	-
Pronamide	mg/kg	-	-	-	-	-	-	-	-	-
Pyrene	mg/kg	-	-	-	-	-	-	-	-	-
Safrole	mg/kg	-	-	-	-	-	-	-	-	-
Thionazin (O,O-diethyl-O-2-pyrazinyl phosphorothioate)	mg/kg	-	-	-	-	-	-	-	-	-

Metals										
Aluminum	mg/kg	7300	14000	28000	-	-	18000	18000	21000	32000
Antimony	mg/kg	3.2	1.5	4.6	-	-	7.7	2.2	3.9	5.0
Arsenic	mg/kg	7.5	7.0	18	-	-	24	11	12	20
Barium	mg/kg	50	86	190	-	-	150	100	150	210
Beryllium	mg/kg	0.56	0.95	2.2	-	-	1.5	1.3	1.3	2.2
Cadmium	mg/kg	5.3	1.9	5.1	-	-	12	2.5	2.5	3.8
Cadmium	umol/g	-	-	-	-	-	-	-	-	-
Calcium	mg/kg	14000 J	23000 J	38000 J	-	-	59000 J	26000 J	24000 J	37000 J
Cation exchange capacity	meq/100g	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	43	83	170	-	-	150	100	130	190
Cobalt	mg/kg	2.2	4.0	8.9	-	-	8.1	5.4	5.6	9.9
Copper	mg/kg	41	62	130	-	-	220	78	85	140
Copper	umol/g	-	-	-	-	-	-	-	-	-
Iron	mg/kg	20000	42000	79000	-	-	69000	58000	53000	90000
Lead	mg/kg	120	270	700	-	-	1500 ^a	380	370	660
Lead	umol/g	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	2300	5400	10000	-	-	10000	7200	8000	13000
Manganese	mg/kg	1100	2900 ^d	7800 ^d	-	-	8000 ^d	4000 ^d	4900 ^d	9400 ^d
Mercury	mg/kg	0.061 U	0.061 U	0.12 U	-	-	0.19 U	0.068 U	0.085 U	0.13 U
Mercury	umol/g	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	12	24	47	-	-	47	33	31	54
Nickel	umol/g	-	-	-	-	-	-	-	-	-
Potassium	mg/kg	660 U	1400	1800	-	-	1700	2100	1600	2400
Selenium	mg/kg	2.9	4.2	10	-	-	9.2	6.0	7.6	12
Silver	mg/kg	0.34	0.88	2.9	-	-	3.8	1.1	1.9	3.0
Sodium	mg/kg	130 U	930	1000	-	-	1100	930	900	1200
Thallium	mg/kg	0.96	0.40	1.1	-	-	1.6	0.51	0.90	1.2
Tin	mg/kg	-	-	-	-	-	-	-	-	-
Vanadium	mg/kg	11	15	29	-	-	28	17	19	28
Zinc	mg/kg	1100	1200	8100	-	-	33000	2100	2500	3100
Zinc	umol/g	-	-	-	-	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-10	SS-10	SS-11	SS-12	SS-12	SS-13	SS-13	SS-15	SS-15	SS-16
Sample ID:	S-58502-050316-SSH-SS10A	S-58502-050316-SSH-SS10B	S-58502-050316-SSH-SS11A	S-58502-050316-SSH-SS12A	S-58502-050316-SSH-SS12B	S-58502-050316-SSH-SS13A	S-58502-050316-SSH-SS13B	S-58502-050316-SSH-SS15A	S-58502-050316-SSH-SS15B	S-58502-050416-SSH-SS16A
Sample Date:	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/4/2016
Sample Depth:	(0-1.08) ft BGS	(1.08-4.83) ft BGS	(0-2.17) ft BGS	(0-1) ft BGS	(1-3.67) ft BGS	(0-2.5) ft BGS	(2.5-4.5) ft BGS	(0-2.25) ft BGS	(2.25-2.83) ft BGS	(0-1.42) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

Parameters	Units										
MetalsSEM											
Cadmium	mg/kg	-	-	-	-	-	-	-	-	-	-
Cadmium	umol/g	-	-	-	-	-	-	-	-	-	-
Copper	mg/kg	-	-	-	-	-	-	-	-	-	-
Copper	umol/g	-	-	-	-	-	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-	-	-	-	-	-
Lead	umol/g	-	-	-	-	-	-	-	-	-	-
Mercury	mg/kg	-	-	-	-	-	-	-	-	-	-
Mercury	umol/g	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-	-	-	-	-	-
Nickel	umol/g	-	-	-	-	-	-	-	-	-	-
Simultaneously extracted metals (SEM)	umol/g	-	-	-	-	-	-	-	-	-	-
Simultaneously extracted metals (SEM)/Acid-volatile sulfide ratio (AVS)	none	-	-	-	-	-	-	-	-	-	-
Sulfide	umol/g	-	-	-	-	-	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-	-	-	-	-	-
Zinc	umol/g	-	-	-	-	-	-	-	-	-	-
PCBs(1)											
Aroclor-1016 (PCB-1016)	mg/kg	0.058 U	0.056 U	0.49 U	1.2 U	12 U	0.68 U	0.61 U	12 U	4.6 U	0.53 U
Aroclor-1221 (PCB-1221)	mg/kg	0.058 U	0.056 U	0.49 U	1.2 U	12 U	0.68 U	0.61 U	12 U	4.6 U	0.53 U
Aroclor-1232 (PCB-1232)	mg/kg	0.058 U	0.056 U	0.49 U	1.2 U	12 U	0.68 U	0.61 U	12 U	4.6 U	0.53 U
Aroclor-1242 (PCB-1242)	mg/kg	0.089	0.27	2.7	1.2 U	39	0.68 U	3.2	56	42	0.53 U
Aroclor-1248 (PCB-1248)	mg/kg	0.058 U	0.056 U	0.49 U	1.2 U	12 U	2.6	0.61 U	12 U	4.6 U	1.1
Aroclor-1254 (PCB-1254)	mg/kg	0.058 U	0.12	0.97	1.2 U	12 U	0.68 U	0.61 U	12 U	6	0.53 U
Aroclor-1260 (PCB-1260)	mg/kg	0.058 U	0.056 U	0.49 U	1.2 U	12 U	0.68 U	0.61 U	12 U	4.6 U	0.53 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	-	-	-	-	-	-	-	-	-	-
Wet											
Ammonia	mg/kg	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/kg	84 U	82 U	480	-	-	620	91 U	250	370	-
Cyanide (total)	mg/kg	0.87 U	0.88 U	13	-	-	2.0 U	1.9	2.6	1.4	-
Formaldehyde	mg/kg	30	75 ^{bc}	98 ^{bc}	-	-	130 ^{bc}	68 ^{bc}	50 ^c	71 ^{bc}	-
Nitrate (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-
Orthophosphate	mg/kg	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-
Sulfide	mg/kg	-	-	-	-	-	-	-	-	-	-
Sulfide	umol/g	-	-	-	-	-	-	-	-	-	-
Sulfide (acid volatile)	mg/kg	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	%	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/kg	14000	17000	-	-	-	52000	140000	35000	63000	-
Total solids	%	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

R Rejected.

B Not detected substantially above level reported in the lab or field blanks.

(1) PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:											
Sample Location:	H	H	H	H	H	H	H	H	H	H	H
	SS-16	SS-19	SS-19	SS-20	SS-20	SS-23	SS-24	SS-25	SS-26	SS-27	
Sample ID:	S-58502-050416-SSH-SS16B	S-58502-050416-SSH-SS19A	S-58502-050416-SSH-SS19B	S-58502-050416-SSH-SS20A	S-58502-050416-SSH-SS20B	S-58502-050416-SSH-SS23A	S-58502-050416-SSH-SS24A	S-58502-050516-SSH-SS25A	S-58502-050516-SSH-SS26A	S-58502-050516-SSH-SS27A	
Sample Date:	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/5/2016	5/5/2016	5/5/2016	
Sample Depth:	(2.17-3.42) ft BGS	(0.33-0.83) ft BGS	(0.83-4.67) ft BGS	(0-1.75) ft BGS	(1.75-2.75) ft BGS	(0-2.5) ft BGS	(0-2.67) ft BGS	(0-2.17) ft BGS	(0-2.33) ft BGS	(1.17-3.08) ft BGS	
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	

Parameters	Units										
VOAs											
1,1,1-Trichloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/kg	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Hexanone	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	-	-	-	-	-	-	-	-	-	-
Acetone	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzene	mg/kg	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/kg	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/kg	-	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	mg/kg	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	mg/kg	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/kg	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	mg/kg	-	-	-	-	-	-	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-	-	-	-	-
Cyclohexane	mg/kg	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/kg	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
Isopropyl benzene	mg/kg	-	-	-	-	-	-	-	-	-	-
Methyl acetate	mg/kg	-	-	-	-	-	-	-	-	-	-
Methyl cyclohexane	mg/kg	-	-	-	-	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg	-	-	-	-	-	-	-	-	-	-
Methylene chloride	mg/kg	-	-	-	-	-	-	-	-	-	-
Styrene	mg/kg	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-
Toluene	mg/kg	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-	-	-	-	-
Trichloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg	-	-	-	-	-	-	-	-	-	-
Trifluorotrichloroethane (CFC-113)	mg/kg	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/kg	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	mg/kg	-	-	-	-	-	-	-	-	-	-
SVOAs											
0,0,0-Triethylphosphorothioate	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2,4,5-Tetrachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,3,5-Trinitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,4-Naphthoquinone	mg/kg	-	-	-	-	-	-	-	-	-	-
1-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	-	-	-	-	-	-	-	-	-	-
2,3,4,6-Tetrachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	-	-	-	-	-	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-16	SS-19	SS-19	SS-20	SS-20	SS-23	SS-24	SS-25	SS-26	SS-27
Sample ID:	S-58502-050416-SSH-SS16B	S-58502-050416-SSH-SS19A	S-58502-050416-SSH-SS19B	S-58502-050416-SSH-SS20A	S-58502-050416-SSH-SS20B	S-58502-050416-SSH-SS23A	S-58502-050416-SSH-SS24A	S-58502-050516-SSH-SS25A	S-58502-050516-SSH-SS26A	S-58502-050516-SSH-SS27A
Sample Date:	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/5/2016	5/5/2016	5/5/2016
Sample Depth:	(2.17-3.42) ft BGS	(0.33-0.83) ft BGS	(0.83-4.67) ft BGS	(0-1.75) ft BGS	(1.75-2.75) ft BGS	(0-2.5) ft BGS	(0-2.67) ft BGS	(0-2.17) ft BGS	(0-2.33) ft BGS	(1.17-3.08) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

Parameters	Units									
2,6-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	-	-	-	-	-	-	-	-	-
2-Acetylaminofluorene	mg/kg	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	mg/kg	-	-	-	-	-	-	-	-	-
2-Chlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	mg/kg	-	-	-	-	-	-	-	-	-
2-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-
2-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-
2-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-
2-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-
2-Toluidine	mg/kg	-	-	-	-	-	-	-	-	-
3&4-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg	-	-	-	-	-	-	-	-	-
3,3-Dimethylbenzidine	mg/kg	-	-	-	-	-	-	-	-	-
3-Methylcholanthrene	mg/kg	-	-	-	-	-	-	-	-	-
3-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-
4-Aminobiphenyl	mg/kg	-	-	-	-	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-
4-Chloroaniline	mg/kg	-	-	-	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-
4-Dimethylaminoazobenzene	mg/kg	-	-	-	-	-	-	-	-	-
4-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-
4-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-
5-Nitro-2-toluidine	mg/kg	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-
Acenaphthene	mg/kg	-	-	-	-	-	-	-	-	-
Acenaphthylene	mg/kg	-	-	-	-	-	-	-	-	-
Acetophenone	mg/kg	-	-	-	-	-	-	-	-	-
Anthracene	mg/kg	-	-	-	-	-	-	-	-	-
Atrazine	mg/kg	-	-	-	-	-	-	-	-	-
Benzaldehyde	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-
Benzyl alcohol	mg/kg	-	-	-	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg	-	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	-	-	-	-	-	-
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	-	-	-	-	-	-
Caprolactam	mg/kg	-	-	-	-	-	-	-	-	-
Carbazole	mg/kg	-	-	-	-	-	-	-	-	-
Chlorobenzilate	mg/kg	-	-	-	-	-	-	-	-	-
Chrysene	mg/kg	-	-	-	-	-	-	-	-	-
Diallyate	mg/kg	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	-	-	-	-	-	-	-	-	-
Dibenzofuran	mg/kg	-	-	-	-	-	-	-	-	-
Diethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-
Dimethoate	mg/kg	-	-	-	-	-	-	-	-	-
Dimethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	-	-	-	-	-	-
Dinoseb	mg/kg	-	-	-	-	-	-	-	-	-
Diphenylamine	mg/kg	-	-	-	-	-	-	-	-	-
Disulfoton	mg/kg	-	-	-	-	-	-	-	-	-
Ethyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-
Ethyl parathion	mg/kg	-	-	-	-	-	-	-	-	-
Famphur	mg/kg	-	-	-	-	-	-	-	-	-
Fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-
Fluorene	mg/kg	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	-	-	-	-	-	-	-	-	-
Hexachloroethane	mg/kg	-	-	-	-	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-16	SS-19	SS-19	SS-20	SS-20	SS-23	SS-24	SS-25	SS-26	SS-27
Sample ID:	S-58502-050416-SSH-SS16B	S-58502-050416-SSH-SS19A	S-58502-050416-SSH-SS19B	S-58502-050416-SSH-SS20A	S-58502-050416-SSH-SS20B	S-58502-050416-SSH-SS23A	S-58502-050416-SSH-SS24A	S-58502-050516-SSH-SS25A	S-58502-050516-SSH-SS26A	S-58502-050516-SSH-SS27A
Sample Date:	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/5/2016	5/5/2016	5/5/2016
Sample Depth:	(2.17-3.42) ft BGS	(0.33-0.83) ft BGS	(0.83-4.67) ft BGS	(0-1.75) ft BGS	(1.75-2.75) ft BGS	(0-2.5) ft BGS	(0-2.67) ft BGS	(0-2.17) ft BGS	(0-2.33) ft BGS	(1.17-3.08) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

Parameters	Units									
Hexachloropropene	mg/kg	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	-	-	-	-	-	-
Isodrin	mg/kg	-	-	-	-	-	-	-	-	-
Isophorone	mg/kg	-	-	-	-	-	-	-	-	-
Isosafrole	mg/kg	-	-	-	-	-	-	-	-	-
Kepone	mg/kg	-	-	-	-	-	-	-	-	-
Methapyrilene	mg/kg	-	-	-	-	-	-	-	-	-
Methyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-
Methyl parathion	mg/kg	-	-	-	-	-	-	-	-	-
Naphthalene	mg/kg	-	-	-	-	-	-	-	-	-
Nitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodiethylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-butylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosomethylethylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosopiperidine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosopyrrolidine	mg/kg	-	-	-	-	-	-	-	-	-
Pentachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
Pentachloronitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-
Pentachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
Phenacetin	mg/kg	-	-	-	-	-	-	-	-	-
Phenanthrene	mg/kg	-	-	-	-	-	-	-	-	-
Phenol	mg/kg	-	-	-	-	-	-	-	-	-
Phorate	mg/kg	-	-	-	-	-	-	-	-	-
p-Phenylenediamine	mg/kg	-	-	-	-	-	-	-	-	-
Pronamide	mg/kg	-	-	-	-	-	-	-	-	-
Pyrene	mg/kg	-	-	-	-	-	-	-	-	-
Safrole	mg/kg	-	-	-	-	-	-	-	-	-
Thionazin (O,O-diethyl-O-2-pyrazinyl phosphorothioate)	mg/kg	-	-	-	-	-	-	-	-	-

Metals										
Aluminum	mg/kg	-	-	-	14000	16000	22000	12000	10000	19000
Antimony	mg/kg	-	-	-	8.6 J	1.3 J	0.63 UJ	0.47 J	7.9	13000
Arsenic	mg/kg	-	-	-	20	9.8	4.4	11	19	7.2
Barium	mg/kg	-	-	-	120	93	170	87	84	18
Beryllium	mg/kg	-	-	-	1.6	0.97	2.7	0.99	0.97	110
Cadmium	mg/kg	-	-	-	11	1.1	13	9.8	11	1.3
Cadmium	umol/g	-	-	-	-	-	-	-	-	11
Calcium	mg/kg	-	-	-	45000 J	44000 J	51000 J	46000 J	32000	-
Cation exchange capacity	meq/100g	-	-	-	-	-	-	-	-	43000
Chromium	mg/kg	-	-	-	130	65	180	110	94	-
Cobalt	mg/kg	-	-	-	6.0	4.9	8.1	5.2	6.1	120
Copper	mg/kg	-	-	-	190	46	210	190	150	6.9
Copper	umol/g	-	-	-	-	-	-	-	-	160
Iron	mg/kg	-	-	-	61000	31000	90000	45000	39000	-
Lead	mg/kg	-	-	-	1400 ^a	200	1400 ^a	1100 ^a	930 ^a	69000
Lead	umol/g	-	-	-	-	-	-	-	-	56000
Magnesium	mg/kg	-	-	-	8400	11000	14000	7400	5900	-
Manganese	mg/kg	-	-	-	4900 ^d	2600 ^d	8500 ^d	3800 ^d	2600 ^d	12000
Mercury	mg/kg	-	-	-	0.14 U	0.057 U	0.15 U	0.11 U	0.10 U	8100
Mercury	umol/g	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	-	-	-	42	23	60	36	34	-
Nickel	umol/g	-	-	-	-	-	-	-	-	41
Potassium	mg/kg	-	-	-	1300	1600	1800	1300	1200	-
Selenium	mg/kg	-	-	-	8.8	4.3	1.9	6.6	8.7	1400
Silver	mg/kg	-	-	-	3.4	0.77	0.35	0.25	2.6	7.0
Sodium	mg/kg	-	-	-	1100	77 U	1200	960	870	3.0
Thallium	mg/kg	-	-	-	1.6	0.40	0.31 U	0.32	2.4	860
Tin	mg/kg	-	-	-	-	-	-	-	-	1.5
Vanadium	mg/kg	-	-	-	21	17	29	24	22	-
Zinc	mg/kg	-	-	-	31000	920	39000	24000	19000	35
Zinc	umol/g	-	-	-	-	-	-	-	-	26000

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-16	SS-19	SS-19	SS-20	SS-20	SS-23	SS-24	SS-25	SS-26	SS-27
Sample ID:	S-58502-050416-SSH-SS16B	S-58502-050416-SSH-SS19A	S-58502-050416-SSH-SS19B	S-58502-050416-SSH-SS20A	S-58502-050416-SSH-SS20B	S-58502-050416-SSH-SS23A	S-58502-050416-SSH-SS24A	S-58502-050516-SSH-SS25A	S-58502-050516-SSH-SS26A	S-58502-050516-SSH-SS27A
Sample Date:	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/5/2016	5/5/2016	5/5/2016
Sample Depth:	(2.17-3.42) ft BGS	(0.33-0.83) ft BGS	(0.83-4.67) ft BGS	(0-1.75) ft BGS	(1.75-2.75) ft BGS	(0-2.5) ft BGS	(0-2.67) ft BGS	(0-2.17) ft BGS	(0-2.33) ft BGS	(1.17-3.08) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

Parameters	Units									
MetalsSEM										
Cadmium	mg/kg	-	-	-	-	-	-	-	-	-
Cadmium	umol/g	-	-	-	-	-	-	-	-	-
Copper	mg/kg	-	-	-	-	-	-	-	-	-
Copper	umol/g	-	-	-	-	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-	-	-	-	-
Lead	umol/g	-	-	-	-	-	-	-	-	-
Mercury	mg/kg	-	-	-	-	-	-	-	-	-
Mercury	umol/g	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-	-	-	-	-
Nickel	umol/g	-	-	-	-	-	-	-	-	-
Simultaneously extracted metals (SEM)	umol/g	-	-	-	-	-	-	-	-	-
Simultaneously extracted metals (SEM)/Acid-volatile sulfide ratio (AVS)	none	-	-	-	-	-	-	-	-	-
Sulfide	umol/g	-	-	-	-	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-	-	-	-	-
Zinc	umol/g	-	-	-	-	-	-	-	-	-
PCBs(1)										
Aroclor-1016 (PCB-1016)	mg/kg	5.4 U	7.1 U	12 U	0.67 U	0.9 U	0.66 U	0.5 U	0.096 U	0.14 U
Aroclor-1221 (PCB-1221)	mg/kg	5.4 U	7.1 U	12 U	0.67 U	0.9 U	0.66 U	0.5 U	0.096 U	0.14 U
Aroclor-1232 (PCB-1232)	mg/kg	5.4 U	7.1 U	12 U	0.67 U	0.9 U	0.66 U	0.5 U	0.096 U	0.14 U
Aroclor-1242 (PCB-1242)	mg/kg	5.4 U	27	110	0.67 U	4.4	0.66 U	0.5 U	0.37	0.54
Aroclor-1248 (PCB-1248)	mg/kg	38	7.1 U	12 U	1.3	0.9 U	1.6	1	0.096 U	0.14 U
Aroclor-1254 (PCB-1254)	mg/kg	5.4 U	7.1 U	12 U	0.67 U	0.9 U	0.66 U	0.5 U	0.11	0.14 U
Aroclor-1260 (PCB-1260)	mg/kg	5.4 U	7.1 U	12 U	0.67 U	0.9 U	0.66 U	0.5 U	0.096 U	0.14 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	-	-	-	-	-	-	-	-	-
Wet										
Ammonia	mg/kg	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/kg	-	-	-	600	150	560	330	700	1000
Cyanide (total)	mg/kg	-	-	-	18 J	0.70 U	32 J	13 J	42 J	55 J
Formaldehyde	mg/kg	-	-	-	140 J ^{bc}	6.7 J	120 J ^{bc}	130 J ^{bc}	53 J ^c	78 J ^{bc}
Nitrate (as N)	mg/kg	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/kg	-	-	-	-	-	-	-	-	-
Orthophosphate	mg/kg	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-
Sulfide	mg/kg	-	-	-	-	-	-	-	-	-
Sulfide	umol/g	-	-	-	-	-	-	-	-	-
Sulfide (acid volatile)	mg/kg	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	%	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/kg	-	-	-	-	-	48000	-	38000	-
Total solids	%	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

R Rejected.

B Not detected substantially above level reported in the lab or field blanks.

(1) PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-27	SS-28	SS-28	SS-29	SS-30	SS-34	SS-35	SS-36	SS-37	SS-37
Sample ID:	S-58502-050516-SSH-SS27B	S-58502-050516-SSH-SS28A	S-58502-050516-SSH-SS28B	S-58502-050516-SSH-SS29A	S-58502-050516-SSH-SS30A	S-58502-050616-SSH-SS34A	S-58502-050616-SSH-SS35A	S-58502-050616-SSH-SS36A	S-58502-050616-SSH-SS37A	S-58502-050616-SSH-SS37B
Sample Date:	5/5/2016	5/5/2016	5/5/2016	5/5/2016	5/5/2016	5/6/2016	5/6/2016	5/6/2016	5/6/2016	5/6/2016
Sample Depth:	(3.08-4.42) ft BGS	(0.83-4.5) ft BGS	(0.83-4.5) ft BGS	(0-2.67) ft BGS	(0-2) ft BGS	(1-3.33) ft BGS	(1.17-3.5) ft BGS	(0.25-4.33) ft BGS	(0.67-2) ft BGS	(2-3.75) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate)

Parameters	Units									
VOAs										
1,1,1-Trichloroethane	mg/kg	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	mg/kg	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	mg/kg	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/kg	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	-	-	-	-	-	-	-	-	-
2-Hexanone	mg/kg	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	-	-	-	-	-	-	-	-	-
Acetone	mg/kg	-	-	-	-	-	-	-	-	-
Benzene	mg/kg	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/kg	-	-	-	-	-	-	-	-	-
Bromoform	mg/kg	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	mg/kg	-	-	-	-	-	-	-	-	-
Carbon disulfide	mg/kg	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/kg	-	-	-	-	-	-	-	-	-
Chlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
Chloroethane	mg/kg	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	mg/kg	-	-	-	-	-	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-	-	-	-
Cyclohexane	mg/kg	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/kg	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/kg	-	-	-	-	-	-	-	-	-
Isopropyl benzene	mg/kg	-	-	-	-	-	-	-	-	-
Methyl acetate	mg/kg	-	-	-	-	-	-	-	-	-
Methyl cyclohexane	mg/kg	-	-	-	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg	-	-	-	-	-	-	-	-	-
Methylene chloride	mg/kg	-	-	-	-	-	-	-	-	-
Styrene	mg/kg	-	-	-	-	-	-	-	-	-
Tetrachloroethene	mg/kg	-	-	-	-	-	-	-	-	-
Toluene	mg/kg	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-	-	-	-
Trichloroethene	mg/kg	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg	-	-	-	-	-	-	-	-	-
Trifluorotrichloroethane (CFC-113)	mg/kg	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/kg	-	-	-	-	-	-	-	-	-
Xylenes (total)	mg/kg	-	-	-	-	-	-	-	-	-
SVOAs										
0,0,0-Triethylphosphorothioate	mg/kg	-	-	-	-	-	-	-	-	-
1,2,4,5-Tetrachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,3,5-Trinitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-
1,4-Naphthoquinone	mg/kg	-	-	-	-	-	-	-	-	-
1-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	-	-	-	-	-	-	-	-	-
2,3,4,6-Tetrachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	mg/kg	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	-	-	-	-	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-27	SS-28	SS-28	SS-29	SS-30	SS-34	SS-35	SS-36	SS-37	SS-37
Sample ID:	S-58502-050516-SSH-SS27B	S-58502-050516-SSH-SS28A	S-58502-050516-SSH-SS28B	S-58502-050516-SSH-SS29A	S-58502-050516-SSH-SS30A	S-58502-050616-SSH-SS34A	S-58502-050616-SSH-SS35A	S-58502-050616-SSH-SS36A	S-58502-050616-SSH-SS37A	S-58502-050616-SSH-SS37B
Sample Date:	5/5/2016	5/5/2016	5/5/2016	5/5/2016	5/5/2016	5/6/2016	5/6/2016	5/6/2016	5/6/2016	5/6/2016
Sample Depth:	(3.08-4.42) ft BGS	(0.83-4.5) ft BGS	(0.83-4.5) ft BGS	(0-2.67) ft BGS	(0-2) ft BGS	(1-3.33) ft BGS	(1.17-3.5) ft BGS	(0.25-4.33) ft BGS	(0.67-2) ft BGS	(2-3.75) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate)

Parameters	Units									
2,6-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	-	-	-	-	-	-	-	-	-
2-Acetylaminofluorene	mg/kg	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	mg/kg	-	-	-	-	-	-	-	-	-
2-Chlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	mg/kg	-	-	-	-	-	-	-	-	-
2-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-
2-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-
2-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-
2-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-
2-Toluidine	mg/kg	-	-	-	-	-	-	-	-	-
3&4-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg	-	-	-	-	-	-	-	-	-
3,3-Dimethylbenzidine	mg/kg	-	-	-	-	-	-	-	-	-
3-Methylcholanthrene	mg/kg	-	-	-	-	-	-	-	-	-
3-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-
4-Aminobiphenyl	mg/kg	-	-	-	-	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-
4-Chloroaniline	mg/kg	-	-	-	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-
4-Dimethylaminoazobenzene	mg/kg	-	-	-	-	-	-	-	-	-
4-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-
4-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-
5-Nitro-2-toluidine	mg/kg	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-
Acenaphthene	mg/kg	-	-	-	-	-	-	-	-	-
Acenaphthylene	mg/kg	-	-	-	-	-	-	-	-	-
Acetophenone	mg/kg	-	-	-	-	-	-	-	-	-
Anthracene	mg/kg	-	-	-	-	-	-	-	-	-
Atrazine	mg/kg	-	-	-	-	-	-	-	-	-
Benzaldehyde	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-
Benzyl alcohol	mg/kg	-	-	-	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg	-	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	-	-	-	-	-	-
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	-	-	-	-	-	-
Caprolactam	mg/kg	-	-	-	-	-	-	-	-	-
Carbazole	mg/kg	-	-	-	-	-	-	-	-	-
Chlorobenzilate	mg/kg	-	-	-	-	-	-	-	-	-
Chrysene	mg/kg	-	-	-	-	-	-	-	-	-
Diallyate	mg/kg	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	-	-	-	-	-	-	-	-	-
Dibenzofuran	mg/kg	-	-	-	-	-	-	-	-	-
Diethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-
Dimethoate	mg/kg	-	-	-	-	-	-	-	-	-
Dimethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	-	-	-	-	-	-
Dinoseb	mg/kg	-	-	-	-	-	-	-	-	-
Diphenylamine	mg/kg	-	-	-	-	-	-	-	-	-
Disulfoton	mg/kg	-	-	-	-	-	-	-	-	-
Ethyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-
Ethyl parathion	mg/kg	-	-	-	-	-	-	-	-	-
Famphur	mg/kg	-	-	-	-	-	-	-	-	-
Fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-
Fluorene	mg/kg	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	-	-	-	-	-	-	-	-	-
Hexachloroethane	mg/kg	-	-	-	-	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-27	SS-28	SS-28	SS-29	SS-30	SS-34	SS-35	SS-36	SS-37	SS-37
Sample ID:	S-58502-050516-SSH-SS27B	S-58502-050516-SSH-SS28A	S-58502-050516-SSH-SS28B	S-58502-050516-SSH-SS29A	S-58502-050516-SSH-SS30A	S-58502-050616-SSH-SS34A	S-58502-050616-SSH-SS35A	S-58502-050616-SSH-SS36A	S-58502-050616-SSH-SS37A	S-58502-050616-SSH-SS37B
Sample Date:	5/5/2016	5/5/2016	5/5/2016	5/5/2016	5/5/2016	5/6/2016	5/6/2016	5/6/2016	5/6/2016	5/6/2016
Sample Depth:	(3.08-4.42) ft BGS	(0.83-4.5) ft BGS	(0.83-4.5) ft BGS	(0-2.67) ft BGS	(0-2) ft BGS	(1-3.33) ft BGS	(1.17-3.5) ft BGS	(0.25-4.33) ft BGS	(0.67-2) ft BGS	(2-3.75) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate)

Parameters	Units									
Hexachloropropene	mg/kg	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	-	-	-	-	-	-
Isodrin	mg/kg	-	-	-	-	-	-	-	-	-
Isophorone	mg/kg	-	-	-	-	-	-	-	-	-
Isosafrole	mg/kg	-	-	-	-	-	-	-	-	-
Kepone	mg/kg	-	-	-	-	-	-	-	-	-
Methapyrilene	mg/kg	-	-	-	-	-	-	-	-	-
Methyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-
Methyl parathion	mg/kg	-	-	-	-	-	-	-	-	-
Naphthalene	mg/kg	-	-	-	-	-	-	-	-	-
Nitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodiethylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-butylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosomethylethylamine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosopiperidine	mg/kg	-	-	-	-	-	-	-	-	-
N-Nitrosopyrrolidine	mg/kg	-	-	-	-	-	-	-	-	-
Pentachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-
Pentachloronitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-
Pentachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-
Phenacetin	mg/kg	-	-	-	-	-	-	-	-	-
Phenanthrene	mg/kg	-	-	-	-	-	-	-	-	-
Phenol	mg/kg	-	-	-	-	-	-	-	-	-
Phorate	mg/kg	-	-	-	-	-	-	-	-	-
p-Phenylenediamine	mg/kg	-	-	-	-	-	-	-	-	-
Pronamide	mg/kg	-	-	-	-	-	-	-	-	-
Pyrene	mg/kg	-	-	-	-	-	-	-	-	-
Safrole	mg/kg	-	-	-	-	-	-	-	-	-
Thionazin (O,O-diethyl-O-2-pyrazinyl phosphorothioate)	mg/kg	-	-	-	-	-	-	-	-	-

Metals											
Aluminum	mg/kg	18000	15000	15000	17000	12000	17000	19000	20000	-	13000
Antimony	mg/kg	3.2	4.7	4.6	3.5	10	5.6	3.7	3.6 J	-	3.4 J
Arsenic	mg/kg	16	17	17	16	18	20	19	19	-	13
Barium	mg/kg	140	110	110	110	130	130	130	130	-	110
Beryllium	mg/kg	2.0	1.6	1.5	1.9	1.2	1.8	2.1	1.9	-	1.2
Cadmium	mg/kg	6.6	8.1	8.8	6.2	12	9.8	7.1	8.6	-	4.9
Cadmium	umol/g	-	-	-	-	-	-	-	-	-	-
Calcium	mg/kg	38000	30000	54000	23000	46000	43000	30000	31000 J	-	47000 J
Cation exchange capacity	meq/100g	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	140	120	140	130	85	150	150	170	-	120
Cobalt	mg/kg	6.5	6.4	7.1	6.3	6.5	7.8	7.3	7.8	-	6.2
Copper	mg/kg	120	140	160	120	160	160	120	140	-	120
Copper	umol/g	-	-	-	-	-	-	-	-	-	-
Iron	mg/kg	68000	55000	69000	65000	29000	74000	74000	84000	-	61000
Lead	mg/kg	710	850	1200 ^a	740	840	1200 ^a	740	780	-	800
Lead	umol/g	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	11000	7800	8100	8300	7600	10000	10000	11000	-	9000
Manganese	mg/kg	6500 ^d	4500 ^d	5200 ^d	4000 ^d	3400 ^d	5800 ^d	5500 ^d	6000 ^d	-	4500 ^d
Mercury	mg/kg	0.17	0.12 U	0.14 U	0.12	0.15 U	0.14	0.11 U	0.16	-	0.081 U
Mercury	umol/g	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	44	41	46	43	31	50	50	55	-	43
Nickel	umol/g	-	-	-	-	-	-	-	-	-	-
Potassium	mg/kg	1700	1200	1200	1300	1500	1500	1600	1700	-	1200
Selenium	mg/kg	7.6	8.1	6.9	7.8	8.4	7.9	8.3	8.5	-	5.2
Silver	mg/kg	2.3	3.0	2.6	3.2	2.8	3.0	3.6	3.3	-	1.8
Sodium	mg/kg	740	870	810	740	1100	960	770	850	-	760
Thallium	mg/kg	0.66	1.2	0.81	0.54	2.8	1.2	0.59	0.70	-	0.57
Tin	mg/kg	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/kg	20	21	20	18	28	23	21	21	-	15
Zinc	mg/kg	20000	27000	31000	32000	12000	33000	36000	26000	-	21000
Zinc	umol/g	-	-	-	-	-	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-27	SS-28	SS-28	SS-29	SS-30	SS-34	SS-35	SS-36	SS-37	SS-37
Sample ID:	S-58502-050516-SSH-SS27B	S-58502-050516-SSH-SS28A	S-58502-050516-SSH-SS28B	S-58502-050516-SSH-SS29A	S-58502-050516-SSH-SS30A	S-58502-050616-SSH-SS34A	S-58502-050616-SSH-SS35A	S-58502-050616-SSH-SS36A	S-58502-050616-SSH-SS37A	S-58502-050616-SSH-SS37B
Sample Date:	5/5/2016	5/5/2016	5/5/2016	5/5/2016	5/5/2016	5/6/2016	5/6/2016	5/6/2016	5/6/2016	5/6/2016
Sample Depth:	(3.08-4.42) ft BGS	(0.83-4.5) ft BGS	(0.83-4.5) ft BGS	(0-2.67) ft BGS	(0-2) ft BGS	(1-3.33) ft BGS	(1.17-3.5) ft BGS	(0.25-4.33) ft BGS	(0.67-2) ft BGS	(2-3.75) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate)

Parameters		Units									
MetalsSEM											
Cadmium	mg/kg	-	-	-	-	-	-	-	-	-	-
Cadmium	umol/g	-	-	-	-	-	-	-	-	-	-
Copper	mg/kg	-	-	-	-	-	-	-	-	-	-
Copper	umol/g	-	-	-	-	-	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-	-	-	-	-	-
Lead	umol/g	-	-	-	-	-	-	-	-	-	-
Mercury	mg/kg	-	-	-	-	-	-	-	-	-	-
Mercury	umol/g	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-	-	-	-	-	-
Nickel	umol/g	-	-	-	-	-	-	-	-	-	-
Simultaneously extracted metals (SEM)	umol/g	-	-	-	-	-	-	-	-	-	-
Simultaneously extracted metals (SEM)/Acid-volatile sulfide ratio (AVS)	none	-	-	-	-	-	-	-	-	-	-
Sulfide	umol/g	-	-	-	-	-	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-	-	-	-	-	-
Zinc	umol/g	-	-	-	-	-	-	-	-	-	-
PCBs(1)											
Aroclor-1016 (PCB-1016)	mg/kg	0.9 U	0.1 U	0.1 U	0.092 U	0.12 U	0.12 U	0.095 U	0.092 U	1.2 U	0.075 U
Aroclor-1221 (PCB-1221)	mg/kg	0.9 U	0.1 U	0.1 U	0.092 U	0.12 U	0.12 U	0.095 U	0.092 U	1.2 U	0.075 U
Aroclor-1232 (PCB-1232)	mg/kg	0.9 U	0.1 U	0.1 U	0.092 U	0.12 U	0.12 U	0.095 U	0.092 U	1.2 U	0.075 U
Aroclor-1242 (PCB-1242)	mg/kg	3.7	0.38	0.38	0.19	0.33	0.16	0.32	0.32	1.2 U	0.22
Aroclor-1248 (PCB-1248)	mg/kg	0.9 U	0.1 U	0.1 U	0.092 U	0.12 U	0.12 U	0.095 U	0.092 U	1.2 U	0.075 U
Aroclor-1254 (PCB-1254)	mg/kg	0.9 U	0.18	0.21	0.12	0.14	0.12 U	0.14	0.17	1.2 U	0.075 U
Aroclor-1260 (PCB-1260)	mg/kg	0.9 U	0.1 U	0.1 U	0.092 U	0.12 U	0.12 U	0.095 U	0.092 U	1.2 U	0.075 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	-	-	-	-	-	-	-	-	-	-
Wet											
Ammonia	mg/kg	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/kg	660	640	700	370	1000	530	540	460	-	390
Cyanide (total)	mg/kg	4.5 J	30 J	3.2 UJ	16 J	26 J	28 J	28 J	5.4 J	-	9.4 J
Formaldehyde	mg/kg	70 J ^{bc}	84 J ^{bc}	42 J	72 J ^{bc}	170 J ^{bc}	53 J ^c	51 J ^c	44 J ^c	-	46 J ^c
Nitrate (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-
Orthophosphate	mg/kg	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-
Sulfide	mg/kg	-	-	-	-	-	-	-	-	-	-
Sulfide	umol/g	-	-	-	-	-	-	-	-	-	-
Sulfide (acid volatile)	mg/kg	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	%	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/kg	34000	-	-	-	-	-	-	36000	-	26000
Total solids	%	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

R Rejected.

B Not detected substantially above level reported in the lab or field blanks.

(1) PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table

(Duplicate)

GHD 11208041-MEM-10-Att 2 and 3 - s107DI-XT2-058502-RACER SO SE Exceed locs data vs MDEQ-YC.xlsx

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-38	SS-38	SS-39	SS-50	SS-62	SS-72	SS-72	SS-73	SS-77	SS-82	SS-82
Sample ID:	S-58502-050616-SSH-SS38A	S-58502-050616-SSH-SS38B	S-58502-050616-SSH-SS39	S-58502-081516-SSH-SE20	S-58502-081516-SSH-SE32	S-58502-090817-SSH-72-1	S-58502-090817-SSH-72-2	S-58502-090817-SSH-73	S-58502-090817-SSH-77	S-58502-090817-SSH-82-1	S-58502-090817-SSH-82-2
Sample Date:	5/6/2016	5/6/2016	5/6/2016	8/15/2016	8/15/2016	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017
Sample Depth:	(0.83-4.67) ft BGS	(0.83-4.67) ft BGS	(0.25-2.75) ft BGS	-	-	(0.5-1.5) ft BGS	(1.5-2.25) ft BGS	(0-1) ft BGS	(0-2.25) ft BGS	(0-2.5) ft BGS	(2.5-3) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
(Duplicate)											
Parameters	Units										
2,6-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Acetylaminofluorene	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Toluidine	mg/kg	-	-	-	-	-	-	-	-	-	-
3&4-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg	-	-	-	-	-	-	-	-	-	-
3,3-Dimethylbenzidine	mg/kg	-	-	-	-	-	-	-	-	-	-
3-Methylcholanthrene	mg/kg	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Aminobiphenyl	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Dimethylaminoazobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
5-Nitro-2-toluidine	mg/kg	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-
Acenaphthene	mg/kg	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	mg/kg	-	-	-	-	-	-	-	-	-	-
Acetophenone	mg/kg	-	-	-	-	-	-	-	-	-	-
Anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-
Atrazine	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzaldehyde	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzyl alcohol	mg/kg	-	-	-	-	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	-	-	-	-	-	-	-
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	-	-	-	-	-	-	-
Caprolactam	mg/kg	-	-	-	-	-	-	-	-	-	-
Carbazole	mg/kg	-	-	-	-	-	-	-	-	-	-
Chlorobenzilate	mg/kg	-	-	-	-	-	-	-	-	-	-
Chrysene	mg/kg	-	-	-	-	-	-	-	-	-	-
Diallate	mg/kg	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	mg/kg	-	-	-	-	-	-	-	-	-	-
Diethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-	-
Dimethoate	mg/kg	-	-	-	-	-	-	-	-	-	-
Dimethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	-	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	-	-	-	-	-	-	-
Dinoseb	mg/kg	-	-	-	-	-	-	-	-	-	-
Diphenylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
Disulfoton	mg/kg	-	-	-	-	-	-	-	-	-	-
Ethyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-	-
Ethyl parathion	mg/kg	-	-	-	-	-	-	-	-	-	-
Famphur	mg/kg	-	-	-	-	-	-	-	-	-	-
Fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-	-
Fluorene	mg/kg	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

[illegible]

(Duplicate)

Parameters	Units
Hexachloropropene	mg/kg
Indeno(1,2,3-cd)pyrene	mg/kg
Isodrin	mg/kg
Isophorone	mg/kg
Isosafrole	mg/kg
Kepone	mg/kg
Methapyrilene	mg/kg
Methyl methanesulfonate	mg/kg
Methyl parathion	mg/kg
Naphthalene	mg/kg
Nitrobenzene	mg/kg
N-Nitrosodiethylamine	mg/kg
N-Nitrosodimethylamine	mg/kg
N-Nitrosodi-n-butylamine	mg/kg
N-Nitrosodi-n-propylamine	mg/kg
N-Nitrosodiphenylamine	mg/kg
N-Nitrosomethylethylamine	mg/kg
N-Nitrosopiperidine	mg/kg
N-Nitrosopyrrolidine	mg/kg
Pentachlorobenzene	mg/kg
Pentachloronitrobenzene	mg/kg
Pentachlorophenol	mg/kg
Phenacetin	mg/kg
Phenanthrene	mg/kg
Phenol	mg/kg
Phorate	mg/kg
p-Phenylenediamine	mg/kg
Pronamide	mg/kg
Pyrene	mg/kg
Safrole	mg/kg
Thionazin (O,O-diethyl-O-2-pyrazinyl phosphorothioate)	mg/kg

Metals

[illegible]

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-38	SS-38	SS-39	SS-50	SS-62	SS-72	SS-72	SS-73	SS-77	SS-82	SS-82
Sample ID:	S-58502-050616-SSH-SS38A	S-58502-050616-SSH-SS38B	S-58502-050616-SSH-SS39	S-58502-081516-SSH-SE20	S-58502-081516-SSH-SE32	S-58502-090817-SSH-72-1	S-58502-090817-SSH-72-2	S-58502-090817-SSH-73	S-58502-090817-SSH-77	S-58502-090817-SSH-82-1	S-58502-090817-SSH-82-2
Sample Date:	5/6/2016	5/6/2016	5/6/2016	8/15/2016	8/15/2016	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017
Sample Depth:	(0.83-4.67) ft BGS	(0.83-4.67) ft BGS	(0.25-2.75) ft BGS	-	-	(0.5-1.5) ft BGS	(1.5-2.25) ft BGS	(0-1) ft BGS	(0-2.25) ft BGS	(0-2.5) ft BGS	(2.5-3) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate)

Parameters		Units										
MetalsSEM												
Cadmium	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Cadmium	umol/g	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Copper	umol/g	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Lead	umol/g	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Mercury	umol/g	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Nickel	umol/g	-	-	-	-	-	-	-	-	-	-	-
Simultaneously extracted metals (SEM)	umol/g	-	-	-	-	-	-	-	-	-	-	-
Simultaneously extracted metals (SEM)/Acid-volatile sulfide ratio (AVS)	none	-	-	-	-	-	-	-	-	-	-	-
Sulfide	umol/g	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Zinc	umol/g	-	-	-	-	-	-	-	-	-	-	-
PCBs(1)												
Aroclor-1016 (PCB-1016)	mg/kg	1 U	0.1 U	0.91 U	7.3 U	2.6 U	0.71 U	9.3 U	6.3 U	9.1 U	11 UF1	8.9 U
Aroclor-1221 (PCB-1221)	mg/kg	1 U	0.1 U	0.91 U	7.3 U	2.6 U	0.71 U	9.3 U	6.3 U	9.1 U	11 U	8.9 U
Aroclor-1232 (PCB-1232)	mg/kg	1 U	0.1 U	0.91 U	7.3 U	2.6 U	0.71 U	9.3 U	6.3 U	9.1 U	11 U	8.9 U
Aroclor-1242 (PCB-1242)	mg/kg	1 U	0.32	0.91 U	63	31	1.8	24	19	18	30	22
Aroclor-1248 (PCB-1248)	mg/kg	1 U	0.1 U	0.91 U	7.3 U	2.6 U	0.71 U	9.3 U	6.3 U	9.1 U	11 U	8.9 U
Aroclor-1254 (PCB-1254)	mg/kg	1 U	0.1 U	0.91 U	9.1	4	0.71 U	9.3 U	6.3 U	9.1 U	11 U	8.9 U
Aroclor-1260 (PCB-1260)	mg/kg	1 U	0.1 U	0.91 U	7.3 U	2.6 U	0.71 U	9.3 U	6.3 U	9.1 U	11 U	8.9 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	0.71 U	9.3 U	6.3 U	9.1 U	11 U	8.9 U
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	0.71 U	9.3 U	6.3 U	9.1 U	11 U	8.9 U
Total PCBs	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/kg	260	420	510	-	-	-	-	-	-	-	-
Cyanide (total)	mg/kg	4.9 J	2.9 U	17 J	-	-	-	-	-	-	-	-
Formaldehyde	mg/kg	90 J ^{bc}	73 J ^{bc}	41 J	-	-	-	-	-	-	-	-
Nitrate (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Orthophosphate	mg/kg	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-
Sulfide	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Sulfide	umol/g	-	-	-	-	-	-	-	-	-	-	-
Sulfide (acid volatile)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	%	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Total solids	%	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

R Rejected.

B Not detected substantially above level reported in the lab or field blanks.

(1) PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-84	SS-84	SS-85	SS-85	SS-87	SS-97	SS-99	SS-100	SS-100	SS-102	SS-102
Sample ID:	S-58502-090817-SSH-84-1	S-58502-090817-SSH-84-2	S-58502-090817-SSH-85-1	S-58502-090817-SSH-85-2	S-58502-090817-SSH-87	S-58502-090817-SSH-97	S-58502-090817-SSH-99	S-58502-090817-SSH-100-1	S-58502-090817-SSH-100-2	S-58502-092217-SSH-102-1	S-58502-092217-SSH-102-2
Sample Date:	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/22/2017	9/22/2017
Sample Depth:	(0-2) ft BGS	(2-2.5) ft BGS	(0-2.5) ft BGS	(2.5-3) ft BGS	(0-3.5) ft BGS	(0-0.75) ft BGS	(0-3) ft BGS	(0-1.5) ft BGS	(1.5-2) ft BGS	(0-1) ft BGS	(2-2.5) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

Parameters	Units										
VOAs											
1,1,1-Trichloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/kg	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Hexanone	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	-	-	-	-	-	-	-	-	-	-
Acetone	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzene	mg/kg	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/kg	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/kg	-	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	mg/kg	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	mg/kg	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/kg	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	mg/kg	-	-	-	-	-	-	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-	-	-	-	-
Cyclohexane	mg/kg	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/kg	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
Isopropyl benzene	mg/kg	-	-	-	-	-	-	-	-	-	-
Methyl acetate	mg/kg	-	-	-	-	-	-	-	-	-	-
Methyl cyclohexane	mg/kg	-	-	-	-	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg	-	-	-	-	-	-	-	-	-	-
Methylene chloride	mg/kg	-	-	-	-	-	-	-	-	-	-
Styrene	mg/kg	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-
Toluene	mg/kg	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-	-	-	-	-
Trichloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg	-	-	-	-	-	-	-	-	-	-
Trifluorotrichloroethane (CFC-113)	mg/kg	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/kg	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	mg/kg	-	-	-	-	-	-	-	-	-	-

SVOAs											
0,0,0-Triethylphosphorothioate	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2,4,5-Tetrachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,3,5-Trinitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
1,4-Naphthoquinone	mg/kg	-	-	-	-	-	-	-	-	-	-
1-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	-	-	-	-	-	-	-	-	-	-
2,3,4,6-Tetrachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	-	-	-	-	-	-	-	-	-	-

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Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-84	SS-84	SS-85	SS-85	SS-87	SS-97	SS-99	SS-100	SS-100	SS-102	SS-102
Sample ID:	S-58502-090817-SSH-84-1	S-58502-090817-SSH-84-2	S-58502-090817-SSH-85-1	S-58502-090817-SSH-85-2	S-58502-090817-SSH-87	S-58502-090817-SSH-97	S-58502-090817-SSH-99	S-58502-090817-SSH-100-1	S-58502-090817-SSH-100-2	S-58502-092217-SSH-102-1	S-58502-092217-SSH-102-2
Sample Date:	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/22/2017	9/22/2017
Sample Depth:	(0-2) ft BGS	(2-2.5) ft BGS	(0-2.5) ft BGS	(2.5-3) ft BGS	(0-3.5) ft BGS	(0-0.75) ft BGS	(0-3) ft BGS	(0-1.5) ft BGS	(1.5-2) ft BGS	(0-1) ft BGS	(2-2.5) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

Parameters	Units										
2,6-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Acetylaminofluorene	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
2-Toluidine	mg/kg	-	-	-	-	-	-	-	-	-	-
3&4-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg	-	-	-	-	-	-	-	-	-	-
3,3-Dimethylbenzidine	mg/kg	-	-	-	-	-	-	-	-	-	-
3-Methylcholanthrene	mg/kg	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Aminobiphenyl	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Dimethylaminoazobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
5-Nitro-2-toluidine	mg/kg	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-
Acenaphthene	mg/kg	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	mg/kg	-	-	-	-	-	-	-	-	-	-
Acetophenone	mg/kg	-	-	-	-	-	-	-	-	-	-
Anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-
Atrazine	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzaldehyde	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-	-
Benzyl alcohol	mg/kg	-	-	-	-	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	-	-	-	-	-	-	-
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	-	-	-	-	-	-	-
Caprolactam	mg/kg	-	-	-	-	-	-	-	-	-	-
Carbazole	mg/kg	-	-	-	-	-	-	-	-	-	-
Chlorobenzilate	mg/kg	-	-	-	-	-	-	-	-	-	-
Chrysene	mg/kg	-	-	-	-	-	-	-	-	-	-
Diallyate	mg/kg	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	mg/kg	-	-	-	-	-	-	-	-	-	-
Diethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-	-
Dimethoate	mg/kg	-	-	-	-	-	-	-	-	-	-
Dimethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	-	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	-	-	-	-	-	-	-
Dinoseb	mg/kg	-	-	-	-	-	-	-	-	-	-
Diphenylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
Disulfoton	mg/kg	-	-	-	-	-	-	-	-	-	-
Ethyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-	-
Ethyl parathion	mg/kg	-	-	-	-	-	-	-	-	-	-
Famphur	mg/kg	-	-	-	-	-	-	-	-	-	-
Fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-	-
Fluorene	mg/kg	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-

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Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-84	SS-84	SS-85	SS-85	SS-87	SS-97	SS-99	SS-100	SS-100	SS-102	SS-102
Sample ID:	S-58502-090817-SSH-84-1	S-58502-090817-SSH-84-2	S-58502-090817-SSH-85-1	S-58502-090817-SSH-85-2	S-58502-090817-SSH-87	S-58502-090817-SSH-97	S-58502-090817-SSH-99	S-58502-090817-SSH-100-1	S-58502-090817-SSH-100-2	S-58502-092217-SSH-102-1	S-58502-092217-SSH-102-2
Sample Date:	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/22/2017	9/22/2017
Sample Depth:	(0-2) ft BGS	(2-2.5) ft BGS	(0-2.5) ft BGS	(2.5-3) ft BGS	(0-3.5) ft BGS	(0-0.75) ft BGS	(0-3) ft BGS	(0-1.5) ft BGS	(1.5-2) ft BGS	(0-1) ft BGS	(2-2.5) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

Parameters	Units										
Hexachloropropene	mg/kg	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	-	-	-	-	-	-	-
Isodrin	mg/kg	-	-	-	-	-	-	-	-	-	-
Isophorone	mg/kg	-	-	-	-	-	-	-	-	-	-
Isosafrole	mg/kg	-	-	-	-	-	-	-	-	-	-
Kepone	mg/kg	-	-	-	-	-	-	-	-	-	-
Methapyrilene	mg/kg	-	-	-	-	-	-	-	-	-	-
Methyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-	-
Methyl parathion	mg/kg	-	-	-	-	-	-	-	-	-	-
Naphthalene	mg/kg	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiethylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-butylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
N-Nitrosomethylethylamine	mg/kg	-	-	-	-	-	-	-	-	-	-
N-Nitrosopiperidine	mg/kg	-	-	-	-	-	-	-	-	-	-
N-Nitrosopyrrolidine	mg/kg	-	-	-	-	-	-	-	-	-	-
Pentachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
Pentachloronitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-
Phenacetin	mg/kg	-	-	-	-	-	-	-	-	-	-
Phenanthrene	mg/kg	-	-	-	-	-	-	-	-	-	-
Phenol	mg/kg	-	-	-	-	-	-	-	-	-	-
Phorate	mg/kg	-	-	-	-	-	-	-	-	-	-
p-Phenylenediamine	mg/kg	-	-	-	-	-	-	-	-	-	-
Pronamide	mg/kg	-	-	-	-	-	-	-	-	-	-
Pyrene	mg/kg	-	-	-	-	-	-	-	-	-	-
Safrole	mg/kg	-	-	-	-	-	-	-	-	-	-
Thionazin (O,O-diethyl-O-2-pyrazinyl phosphorothioate)	mg/kg	-	-	-	-	-	-	-	-	-	-
Metals											
Aluminum	mg/kg	-	-	-	-	-	-	-	-	-	-
Antimony	mg/kg	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/kg	-	-	-	-	-	-	-	-	-	-
Barium	mg/kg	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/kg	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/kg	-	-	-	-	-	-	-	-	-	-
Cadmium	umol/g	-	-	-	-	-	-	-	-	-	-
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-
Cation exchange capacity	meq/100g	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/kg	-	-	-	-	-	-	-	-	-	-
Copper	mg/kg	-	-	-	-	-	-	-	-	-	-
Copper	umol/g	-	-	-	-	-	-	-	-	-	-
Iron	mg/kg	-	-	-	-	-	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-	-	-	-	-	-
Lead	umol/g	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-
Manganese	mg/kg	-	-	-	-	-	-	-	-	-	-
Mercury	mg/kg	-	-	-	-	-	-	-	-	-	-
Mercury	umol/g	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-	-	-	-	-	-
Nickel	umol/g	-	-	-	-	-	-	-	-	-	-
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	-	-	-	-	-	-	-	-	-	-
Silver	mg/kg	-	-	-	-	-	-	-	-	-	-
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	-	-	-	-	-	-	-	-	-	-
Tin	mg/kg	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/kg	-	-	-	-	-	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-	-	-	-	-	-
Zinc	umol/g	-	-	-	-	-	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	H	H	H	H	H	H	H
Sample Location:	SS-84	SS-84	SS-85	SS-85	SS-87	SS-97	SS-99	SS-100	SS-100	SS-102	SS-102	
Sample ID:	S-58502-090817-SSH-84-1	S-58502-090817-SSH-84-2	S-58502-090817-SSH-85-1	S-58502-090817-SSH-85-2	S-58502-090817-SSH-87	S-58502-090817-SSH-97	S-58502-090817-SSH-99	S-58502-090817-SSH-100-1	S-58502-090817-SSH-100-2	S-58502-092217-SSH-102-1	S-58502-092217-SSH-102-2	
Sample Date:	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/22/2017	9/22/2017	
Sample Depth:	(0-2) ft BGS	(2-2.5) ft BGS	(0-2.5) ft BGS	(2.5-3) ft BGS	(0-3.5) ft BGS	(0-0.75) ft BGS	(0-3) ft BGS	(0-1.5) ft BGS	(1.5-2) ft BGS	(0-1) ft BGS	(2-2.5) ft BGS	
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	

Parameters	Units											
MetalsSEM												
Cadmium	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Cadmium	umol/g	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Copper	umol/g	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Lead	umol/g	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Mercury	umol/g	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Nickel	umol/g	-	-	-	-	-	-	-	-	-	-	-
Simultaneously extracted metals (SEM)	umol/g	-	-	-	-	-	-	-	-	-	-	-
Simultaneously extracted metals (SEM)/Acid-volatile sulfide ratio (AVS)	none	-	-	-	-	-	-	-	-	-	-	-
Sulfide	umol/g	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Zinc	umol/g	-	-	-	-	-	-	-	-	-	-	-
PCBs(1)												
Aroclor-1016 (PCB-1016)	mg/kg	26 U	4.9 U	2.5 U	10 U	13 U	5.1 U	10 U	53 U	0.35 U	2.1 U	19 U
Aroclor-1221 (PCB-1221)	mg/kg	26 U	4.9 U	2.5 U	10 U	13 U	5.1 U	10 U	53 U	0.35 U	2.1 U	19 U
Aroclor-1232 (PCB-1232)	mg/kg	26 U	4.9 U	2.5 U	10 U	13 U	5.1 U	10 U	53 U	0.35 U	2.1 U	19 U
Aroclor-1242 (PCB-1242)	mg/kg	52	8.2	3.4	36	50	5.1 U	10 U	53 U	0.35 U	3.1	38
Aroclor-1248 (PCB-1248)	mg/kg	26 U	4.9 U	2.5 U	10 U	13 U	18	34	150	1.6	2.1 U	19 U
Aroclor-1254 (PCB-1254)	mg/kg	26 U	4.9 U	2.5 U	10 U	13 U	5.1 U	10 U	53 U	0.35 U	2.1 U	19 U
Aroclor-1260 (PCB-1260)	mg/kg	26 U	4.9 U	2.5 U	10 U	13 U	5.1 U	10 U	53 U	0.35 U	2.1 U	19 U
Aroclor-1262 (PCB-1262)	mg/kg	26 U	4.9 U	2.5 U	10 U	13 U	5.1 U	10 U	53 U	0.35 U	2.1 U	19 U
Aroclor-1268 (PCB-1268)	mg/kg	26 U	4.9 U	2.5 U	10 U	13 U	5.1 U	10 U	53 U	0.35 U	2.1 U	19 U
Total PCBs	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Wet												
Ammonia	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Cyanide (total)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Formaldehyde	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Orthophosphate	mg/kg	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-
Sulfide	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Sulfide	umol/g	-	-	-	-	-	-	-	-	-	-	-
Sulfide (acid volatile)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	%	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Total solids	%	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

R Rejected.

B Not detected substantially above level reported in the lab or field blanks.

(1) PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	RIVER
Sample Location:	SS-105-17	SS-105-17	SS-109	SS-109	SD-28A
Sample ID:	S-58502-092217-SSH-105-1	S-58502-092217-SSH-105-2	S-58502-092917-SSH-109-1	S-58502-092917-SSH-109-2	S40315
Sample Date:	9/22/2017	9/22/2017	9/29/2017	9/29/2017	9/1/2000
Sample Depth:	(0-1) ft BGS	(2-2.5) ft BGS	(0-1) ft BGS	(2.5-3) ft BGS	(0-0.17) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	NA

Parameters	Units				
VOAs					
1,1,1-Trichloroethane	mg/kg	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg	-	-	-	-
1,1,2-Trichloroethane	mg/kg	-	-	-	-
1,1-Dichloroethane	mg/kg	-	-	-	0.096 U
1,1-Dichloroethene	mg/kg	-	-	-	0.096 U
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	-	-	-	-
1,2-Dichlorobenzene	mg/kg	-	-	-	-
1,2-Dichloroethane	mg/kg	-	-	-	-
1,2-Dichloropropane	mg/kg	-	-	-	0.096 U
1,3-Dichlorobenzene	mg/kg	-	-	-	-
1,4-Dichlorobenzene	mg/kg	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	-	-	-	-
2-Hexanone	mg/kg	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	-	-	-	-
Acetone	mg/kg	-	-	-	-
Benzene	mg/kg	-	-	-	-
Bromodichloromethane	mg/kg	-	-	-	-
Bromoform	mg/kg	-	-	-	-
Bromomethane (Methyl bromide)	mg/kg	-	-	-	-
Carbon disulfide	mg/kg	-	-	-	-
Carbon tetrachloride	mg/kg	-	-	-	-
Chlorobenzene	mg/kg	-	-	-	-
Chloroethane	mg/kg	-	-	-	0.096 U
Chloroform (Trichloromethane)	mg/kg	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	-	-	-	-
cis-1,2-Dichloroethene	mg/kg	-	-	-	-
cis-1,3-Dichloropropene	mg/kg	-	-	-	-
Cyclohexane	mg/kg	-	-	-	-
Dibromochloromethane	mg/kg	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg	-	-	-	-
Ethylbenzene	mg/kg	-	-	-	-
Isopropyl benzene	mg/kg	-	-	-	-
Methyl acetate	mg/kg	-	-	-	-
Methyl cyclohexane	mg/kg	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg	-	-	-	-
Methylene chloride	mg/kg	-	-	-	-
Styrene	mg/kg	-	-	-	-
Tetrachloroethene	mg/kg	-	-	-	-
Toluene	mg/kg	-	-	-	-
trans-1,2-Dichloroethene	mg/kg	-	-	-	-
trans-1,3-Dichloropropene	mg/kg	-	-	-	-
Trichloroethene	mg/kg	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg	-	-	-	-
Trifluorotrichloroethane (CFC-113)	mg/kg	-	-	-	-
Vinyl chloride	mg/kg	-	-	-	0.096 U
Xylenes (total)	mg/kg	-	-	-	-

SVOAs					
0,0,0-Triethylphosphorothioate	mg/kg	-	-	-	-
1,2,4,5-Tetrachlorobenzene	mg/kg	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-
1,3,5-Trinitrobenzene	mg/kg	-	-	-	-
1,3-Dinitrobenzene	mg/kg	-	-	-	-
1,4-Naphthoquinone	mg/kg	-	-	-	-
1-Naphthylamine	mg/kg	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	-	-	-	-
2,3,4,6-Tetrachlorophenol	mg/kg	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	-	-	-	-
2,4-Dichlorophenol	mg/kg	-	-	-	-
2,4-Dimethylphenol	mg/kg	-	-	-	-
2,4-Dinitrophenol	mg/kg	-	-	-	-
2,4-Dinitrotoluene	mg/kg	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	RIVER
Sample Location:	SS-105-17	SS-105-17	SS-109	SS-109	SD-28A
Sample ID:	S-58502-092217-SSH-105-1	S-58502-092217-SSH-105-2	S-58502-092917-SSH-109-1	S-58502-092917-SSH-109-2	S40315
Sample Date:	9/22/2017	9/22/2017	9/29/2017	9/29/2017	9/1/2000
Sample Depth:	(0-1) ft BGS	(2-2.5) ft BGS	(0-1) ft BGS	(2.5-3) ft BGS	(0-0.17) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	NA

Parameters	Units					
2,6-Dichlorophenol	mg/kg	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	-	-	-	-	-
2-Acetylaminofluorene	mg/kg	-	-	-	-	-
2-Chloronaphthalene	mg/kg	-	-	-	-	-
2-Chlorophenol	mg/kg	-	-	-	-	-
2-Methylnaphthalene	mg/kg	-	-	-	-	-
2-Methylphenol	mg/kg	-	-	-	-	-
2-Naphthylamine	mg/kg	-	-	-	-	-
2-Nitroaniline	mg/kg	-	-	-	-	-
2-Nitrophenol	mg/kg	-	-	-	-	-
2-Toluidine	mg/kg	-	-	-	-	-
3&4-Methylphenol	mg/kg	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg	-	-	-	-	-
3,3-Dimethylbenzidine	mg/kg	-	-	-	-	-
3-Methylcholanthrene	mg/kg	-	-	-	-	-
3-Nitroaniline	mg/kg	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-
4-Aminobiphenyl	mg/kg	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	-	-	-	-	-
4-Chloroaniline	mg/kg	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	-
4-Dimethylaminoazobenzene	mg/kg	-	-	-	-	-
4-Nitroaniline	mg/kg	-	-	-	-	-
4-Nitrophenol	mg/kg	-	-	-	-	-
5-Nitro-2-toluidine	mg/kg	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	mg/kg	-	-	-	-	-
Acenaphthene	mg/kg	-	-	-	-	-
Acenaphthylene	mg/kg	-	-	-	-	-
Acetophenone	mg/kg	-	-	-	-	-
Anthracene	mg/kg	-	-	-	-	-
Atrazine	mg/kg	-	-	-	-	-
Benzaldehyde	mg/kg	-	-	-	-	-
Benzo(a)anthracene	mg/kg	-	-	-	-	-
Benzo(a)pyrene	mg/kg	-	-	-	-	24 ^a
Benzo(b)fluoranthene	mg/kg	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	-
Benzyl alcohol	mg/kg	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	-	-
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	-	-
Caprolactam	mg/kg	-	-	-	-	-
Carbazole	mg/kg	-	-	-	-	-
Chlorobenzilate	mg/kg	-	-	-	-	-
Chrysene	mg/kg	-	-	-	-	-
Diallate	mg/kg	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	-	-	-	-	-
Dibenzofuran	mg/kg	-	-	-	-	-
Diethyl phthalate	mg/kg	-	-	-	-	-
Dimethoate	mg/kg	-	-	-	-	-
Dimethyl phthalate	mg/kg	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	-	-
Dinoseb	mg/kg	-	-	-	-	-
Diphenylamine	mg/kg	-	-	-	-	-
Disulfoton	mg/kg	-	-	-	-	-
Ethyl methanesulfonate	mg/kg	-	-	-	-	-
Ethyl parathion	mg/kg	-	-	-	-	-
Famphur	mg/kg	-	-	-	-	-
Fluoranthene	mg/kg	-	-	-	-	-
Fluorene	mg/kg	-	-	-	-	-
Hexachlorobenzene	mg/kg	-	-	-	-	-
Hexachlorobutadiene	mg/kg	-	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	-	-	-	-	-
Hexachloroethane	mg/kg	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	RIVER
Sample Location:	SS-105-17	SS-105-17	SS-109	SS-109	SD-28A
Sample ID:	S-58502-092217-SSH-105-1	S-58502-092217-SSH-105-2	S-58502-092917-SSH-109-1	S-58502-092917-SSH-109-2	S40315
Sample Date:	9/22/2017	9/22/2017	9/29/2017	9/29/2017	9/1/2000
Sample Depth:	(0-1) ft BGS	(2-2.5) ft BGS	(0-1) ft BGS	(2.5-3) ft BGS	(0-0.17) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	NA

Parameters	Units					
Hexachloropropene	mg/kg	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	-	-
Isodrin	mg/kg	-	-	-	-	-
Isophorone	mg/kg	-	-	-	-	-
Isosafrole	mg/kg	-	-	-	-	-
Kepone	mg/kg	-	-	-	-	-
Methapyrilene	mg/kg	-	-	-	-	-
Methyl methanesulfonate	mg/kg	-	-	-	-	-
Methyl parathion	mg/kg	-	-	-	-	-
Naphthalene	mg/kg	-	-	-	-	-
Nitrobenzene	mg/kg	-	-	-	-	-
N-Nitrosodiethylamine	mg/kg	-	-	-	-	-
N-Nitrosodimethylamine	mg/kg	-	-	-	-	-
N-Nitrosodi-n-butylamine	mg/kg	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg	-	-	-	-	-
N-Nitrosomethylethylamine	mg/kg	-	-	-	-	-
N-Nitrosopiperidine	mg/kg	-	-	-	-	-
N-Nitrosopyrrolidine	mg/kg	-	-	-	-	-
Pentachlorobenzene	mg/kg	-	-	-	-	-
Pentachloronitrobenzene	mg/kg	-	-	-	-	-
Pentachlorophenol	mg/kg	-	-	-	-	-
Phenacetin	mg/kg	-	-	-	-	-
Phenanthrene	mg/kg	-	-	-	-	-
Phenol	mg/kg	-	-	-	-	-
Phorate	mg/kg	-	-	-	-	-
p-Phenylenediamine	mg/kg	-	-	-	-	-
Pronamide	mg/kg	-	-	-	-	-
Pyrene	mg/kg	-	-	-	-	-
Safrole	mg/kg	-	-	-	-	-
Thionazin (O,O-diethyl-O-2-pyrazinyl phosphorothioate)	mg/kg	-	-	-	-	-
Metals						
Aluminum	mg/kg	-	-	-	-	5050
Antimony	mg/kg	-	-	-	-	9.29 UJ
Arsenic	mg/kg	-	-	-	-	6.7
Barium	mg/kg	-	-	-	-	46.3
Beryllium	mg/kg	-	-	-	-	0.4 J
Cadmium	mg/kg	-	-	-	-	0.93 U
Cadmium	umol/g	-	-	-	-	-
Calcium	mg/kg	-	-	-	-	-
Cation exchange capacity	meq/100g	-	-	-	-	-
Chromium	mg/kg	-	-	-	-	12.2
Cobalt	mg/kg	-	-	-	-	-
Copper	mg/kg	-	-	-	-	12.5
Copper	umol/g	-	-	-	-	-
Iron	mg/kg	-	-	-	-	-
Lead	mg/kg	-	-	-	-	16.3
Lead	umol/g	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-
Manganese	mg/kg	-	-	-	-	309
Mercury	mg/kg	-	-	-	-	-
Mercury	umol/g	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	8
Nickel	umol/g	-	-	-	-	-
Potassium	mg/kg	-	-	-	-	-
Selenium	mg/kg	-	-	-	-	-
Silver	mg/kg	-	-	-	-	-
Sodium	mg/kg	-	-	-	-	-
Thallium	mg/kg	-	-	-	-	-
Tin	mg/kg	-	-	-	-	-
Vanadium	mg/kg	-	-	-	-	12.7
Zinc	mg/kg	-	-	-	-	53
Zinc	umol/g	-	-	-	-	-

Analytical Results Summary
Sediment Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	RIVER
Sample Location:	SS-105-17	SS-105-17	SS-109	SS-109	SD-28A
Sample ID:	S-58502-092217-SSH-105-1	S-58502-092217-SSH-105-2	S-58502-092917-SSH-109-1	S-58502-092917-SSH-109-2	S40315
Sample Date:	9/22/2017	9/22/2017	9/29/2017	9/29/2017	9/1/2000
Sample Depth:	(0-1) ft BGS	(2-2.5) ft BGS	(0-1) ft BGS	(2.5-3) ft BGS	(0-0.17) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	NA

Parameters	Units					
MetalsSEM						
Cadmium	mg/kg	-	-	-	-	-
Cadmium	umol/g	-	-	-	-	-
Copper	mg/kg	-	-	-	-	-
Copper	umol/g	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-
Lead	umol/g	-	-	-	-	-
Mercury	mg/kg	-	-	-	-	-
Mercury	umol/g	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-
Nickel	umol/g	-	-	-	-	-
Simultaneously extracted metals (SEM)	umol/g	-	-	-	-	-
Simultaneously extracted metals (SEM)/Acid-volatile sulfide ratio (AVS)	none	-	-	-	-	-
Sulfide	umol/g	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-
Zinc	umol/g	-	-	-	-	-
PCBs(1)						
Aroclor-1016 (PCB-1016)	mg/kg	49 U	0.72 UF1	0.32 U	9.2 U	0.1 U
Aroclor-1221 (PCB-1221)	mg/kg	49 U	0.72 U	0.32 U	9.2 U	0.1 U
Aroclor-1232 (PCB-1232)	mg/kg	49 U	0.72 U	0.32 U	9.2 U	0.1 U
Aroclor-1242 (PCB-1242)	mg/kg	77	1.1	0.32 U	34	0.1 U
Aroclor-1248 (PCB-1248)	mg/kg	49 U	0.72 U	1.2	9.2 U	0.1 U
Aroclor-1254 (PCB-1254)	mg/kg	49 U	0.72 U	0.32 U	9.2 U	0.1 U
Aroclor-1260 (PCB-1260)	mg/kg	49 U	0.72 U	0.32 U	9.2 U	0.1 U
Aroclor-1262 (PCB-1262)	mg/kg	49 U	0.72 U	0.32 U	9.2 U	-
Aroclor-1268 (PCB-1268)	mg/kg	49 U	0.72 U	0.32 U	9.2 U	-
Total PCBs	mg/kg	-	-	-	-	0.1 U
Wet						
Ammonia	mg/kg	-	-	-	-	-
Ammonia-N	mg/kg	-	-	-	-	-
Cyanide (total)	mg/kg	-	-	-	-	-
Formaldehyde	mg/kg	-	-	-	-	-
Nitrate (as N)	mg/kg	-	-	-	-	-
Nitrite (as N)	mg/kg	-	-	-	-	-
Orthophosphate	mg/kg	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-
Sulfide	mg/kg	-	-	-	-	-
Sulfide	umol/g	-	-	-	-	-
Sulfide (acid volatile)	mg/kg	-	-	-	-	-
Total organic carbon (TOC)	%	-	-	-	-	3.8
Total organic carbon (TOC)	mg/kg	-	-	-	-	-
Total solids	%	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

R Rejected.

B Not detected substantially above level reported in the lab or field blanks.

(1) PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table

Attachment 3

Attachment 3

Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

Sample Location:						Slag Area 1– Sample1	Slag Area 1– Sample2	Slag Area 1– Sample3	Slag Area 2– Sample1	Slag Area 2– Sample1	Slag Area 2– Sample3	G	G	G	G
Sample ID:						S-58502-121119-SSH-6219	S-58502-121119-SSH-6319	S-58502-121119-SSH-6419	S-58502-121119-SSH-6619	S-58502-121119-SSH-6619 DUP	S-58502-121119-SSH-6819	B11 (1998)	B12 (1998)	B-103/TMW-103	B-113
Sample Date:						12/11/2019	12/11/2019	12/11/2019	12/11/2019	12/11/2019	12/11/2019	B11	B12	S-17075-020304-CA-113	14
Sample Depth:						(0-6) in	(0-6) in	(0-6) in	(0-6) in	(0-6) in	(0-6) in	2/6/1998	2/6/1998	2/3/2004	2/2/2004
Excavat_status												(3-4) ft BGS	(3-4) ft BGS	(0-1) ft BGS	-
		2023 EGLE Part 201										Unexcavated	Unexcavated	Unexcavated	Unexcavated
		Nonresidential Direct Contact	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation	(Duplicate)									
Parameters	Units	a	b	c	d										
PetrI Prod															
Diesel fuel	mg/kg					-	-	-	-	-	-	-	-	-	-
Ethylene glycol	mg/kg	1000000			29000000	-	-	-	-	-	-	-	-	30 U	10 U
Gasoline	mg/kg					-	-	-	-	-	-	-	-	-	-
Kerosene	mg/kg					-	-	-	-	-	-	-	-	-	-
Mineral spirits	mg/kg					-	-	-	-	-	-	-	-	-	-
Naphtha distillate	mg/kg					-	-	-	-	-	-	-	-	-	-
Non-PHC as diesel	mg/kg					-	-	-	-	-	-	-	-	-	-
PHC as Lube oil	mg/kg					-	-	-	-	-	-	-	-	-	-
Propylene glycol	mg/kg	1000000			180000000	-	-	-	-	-	-	-	-	30 U	10 U
Total Petroleum Hydrocarbons - Heavy Oils	mg/kg					-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons - Jet Fuel	mg/kg					-	-	-	-	-	-	-	-	-	-
TPH-Jet fuel as jet A	mg/kg					-	-	-	-	-	-	-	-	-	-
Wet															
Ammonia	mg/kg				2900000	-	-	-	-	-	-	-	-	2.5 U	-
Ammonia-N	mg/kg					-	-	-	-	-	-	-	-	-	1 U
Chloride	mg/kg	500				-	-	-	-	-	-	-	-	12.3 U	100 U
Cyanide (total)	mg/kg	250			250	-	-	-	-	-	-	-	-	0.78	-
Fluoride	mg/kg					-	-	-	-	-	-	-	-	-	-
Formaldehyde	mg/kg	130000	65	43	260000	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	mg/kg					-	-	-	-	-	-	-	-	6.2 U	0.23
Nitrite (as N)	mg/kg					-	-	-	-	-	-	-	-	1.2 U	0.3 U
pH, lab	s. u.					8.7 J	8.3 J	8.6 J	8.2 J	8.1 J	8.0 J	-	-	-	-
Phenolics (total)	mg/kg					-	-	-	-	-	-	-	-	-	-
Sulfide	mg/kg					-	-	-	-	-	-	-	-	-	-
Total kjeldahl nitrogen (TKN)	mg/kg					-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/kg					-	-	-	-	-	-	-	-	-	-
Total solids	%					-	-	-	-	-	-	76.7	84.2	81.3	-
Total solids	mg/kg					-	-	-	-	-	-	-	-	-	-
Fparam															
pH, field	s.u.					-	-	-	-	-	-	-	-	-	-
Footnotes:															
U	Not detected at the associated reporting limit.														
J	Estimated concentration.														
UJ	Not detected; associated reporting limit is estimated.														
R	Rejected.														
(1)	PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table														

Attachment 3

Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Sample Location:	B-113	B-121	B-121	EB-114	EB-114	EB-114	MW-04250-ABANDONED	MW-04250-ABANDONED	MW-04250-ABANDONED	MW-04250-ABANDONED	MW-04757	MW-04757	MW-04757	MW-04757	OB-208	OB-208	OB-208	SB-1
Sample ID:	S-17075-020204-CA-108	08	S-17075-020204-CA-106	EB-114b	EB-114b	EB-114	B00021	B00022	B00023	B00024	B10036	B10037	B10038	B10039	OB-208	OB-208	OB-208	SB-1
Sample Date:	2/2/2004	2/2/2004	2/2/2004	9/1/1987	9/1/1987	9/1/1987	9/15/1998	9/15/1998	9/15/1998	9/15/1998	9/22/1998	9/22/1998	9/22/1998	9/22/1998	9/1/1987	9/1/1987	9/1/1987	6/2/1998
Sample Depth:	(1-2.5) ft BGS	-	(1.5-2.5) ft BGS	(0-2) ft BGS	(4-5.5) ft BGS	(9-11) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(4-6) ft BGS	(12-14) ft BGS	(0-2) ft BGS	(2-6) ft BGS	(2-6) ft BGS	(2-6) ft BGS	(10-12) ft BGS	(0-2) ft BGS	(6-8) ft BGS	(12-14) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	excavated	Unknown	Unknown	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unknown	Unknown	Unknown	Unexcavated

							(Duplicate)								(Duplicate)				
Parameters	Units																		
Methyl tert butyl ether (MTBE)	mg/kg	0.25 U	0.25 U	0.29 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	mg/kg	0.25 U	0.25 U	0.29 U	-	-	-	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	-	-	-	-
Naphthalene	mg/kg	-	-	-	-	-	-	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U	-	-	-	-
N-Butylbenzene	mg/kg	-	0.05 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Propylbenzene	mg/kg	-	0.1 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	mg/kg	-	-	-	-	-	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	-	-	-	-
Propionitrile (ethyl cyanide)	mg/kg	-	-	-	-	-	-	R	R	R	R	R	R	R	R	-	-	-	-
Styrene	mg/kg	0.05 U	0.05 U	0.057 U	-	-	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	-	-	-	-
tert-Butylbenzene	mg/kg	-	0.05 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	mg/kg	0.05 U	0.05 U	0.057 U	-	-	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	-	-	-	-
Toluene	mg/kg	0.1 U	0.05 U	0.11 U	-	-	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	-	-	-	-
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.057 U	-	-	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	-	-	-	-
trans-1,3-Dichloropropene	mg/kg	0.05 U	0.05 U	0.057 U	-	-	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	-	-	-	-
trans-1,4-Dichloro-2-butene	mg/kg	-	-	-	-	-	-	R	R	R	R	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	-	-	-	-
Trichloroethene	mg/kg	0.05 U	0.05 U	0.057 U	-	-	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg	0.1 U	0.1 U	0.11 U	-	-	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	-	-	-	-
Trifluorotrichloroethane (CFC-113)	mg/kg	0.25 U	-	0.29 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	mg/kg	-	2.5 U	-	-	-	-	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	-	-	-	-
Vinyl chloride	mg/kg	0.1 U	0.04 U	0.11 U	-	-	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	-	-	-	-
Xylenes (total)	mg/kg	0.5 U	0.15 U	0.57 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SVOAs																			
0,0,0-Triethylphosphorothioate	mg/kg	-	-	-	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	-	0.3 U
1,2,4,5-Tetrachlorobenzene	mg/kg	-	-	-	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	-	0.3 U
1,2,4-Trichlorobenzene	mg/kg	-	0.33 U	-	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	-	0.3 U
1,2-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine	mg/kg	-	0.33 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3,5-Trinitrobenzene	mg/kg	-	-	-	-	-	-	2 UJ	2 UJ	2 UJ	2 UJ	2 U	2 U	2 U	2 U	-	-	-	2 U
1,3-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene	mg/kg	-	0.33 U	-	-	-	-	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
1,4-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Naphthoquinone	mg/kg	-	-	-	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
1-Naphthylamine	mg/kg	-	-	-	-	-	-	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	-	-	-	0.3 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.45 U	0.33 U	0.38 U	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2,3,4,6-Tetrachlorophenol	mg/kg	-	-	-	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2,3-Dichlorophenol	mg/kg	-	0.33 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,3-Dimethylphenol	mg/kg	-	0.33 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.45 U	1.7 U	0.38 U	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2,4,6-Trichlorophenol	mg/kg	0.45 U	0.33 U	0.38 U	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2,4-Dichlorophenol	mg/kg	0.45 U	0.33 U	0.38 U	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2,4-Dimethylphenol	mg/kg	0.45 U	0.33 U	0.38 U	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2,4-Dinitrophenol	mg/kg	2.2 U	1.7 U	1.9 U	-	-	-	2 UJ	2 UJ	2 UJ	2 UJ	2 U	2 U	2 U	2 U	-	-	-	2 U
2,4-Dinitrotoluene	mg/kg	0.45 U	0.33 U	0.38 U	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2,6-Dichlorophenol	mg/kg	-	0.33 U	-	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2,6-Dimethylphenol	mg/kg	-	0.33 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.45 U	0.33 U	0.38 U	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2-Acetylaminofluorene	mg/kg	-	-	-	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2-Chloronaphthalene	mg/kg	0.45 U	0.33 U	0.38 U	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2-Chlorophenol	mg/kg	0.45 U	0.33 U	0.38 U	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2-Methylnaphthalene	mg/kg	0.45 U	0.33 U	0.38 U	-	-	-	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2-Methylphenol	mg/kg	0.45 U	0.33 U	0.38 U	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2-Naphthylamine	mg/kg	-	-	-	-	-	-	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	-	-	-	0.3 U
2-Nitroaniline	mg/kg	2.2 U	0.33 U	1.9 U	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-	-	-	2 U
2-Nitrophenol	mg/kg	0.45 U	0.33 U	0.38 U	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
2-Toluidine	mg/kg	-	-	-	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
3&4-Methylphenol	mg/kg	-	1 U	-	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
3,3'-Dichlorobenzidine	mg/kg	2.2 U	2 U	1.9 U	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-	-	-	2 U
3,3-Dimethylbenzidine	mg/kg	-	-	-	-	-	-	2 UJ	2 UJ	2 UJ	2 UJ	2 U	2 U	2 U	2 U	-	-	-	2 U
3,4-Dimethylphenol	mg/kg	-	0.33 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,5-Dimethylphenol	mg/kg	-	0.33 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/4-Chlorophenol	mg/kg	-	0.33 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Methylcholanthrene	mg/kg	-	-	-	-	-	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U
3-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	mg/kg	2.2 U	1.7 U	1.9 U	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-	-	-	2 U
4,6-Dinitro-2-methylphenol	mg/kg	2.2 U	1.7 U	1.9 U	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-	-	-	2 U
4-Aminobiphenyl	mg/kg	-	-	-	-	-	-	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	-	-	-	0.3 U

Attachment 3

Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Sample Location:	B-113	B-121	B-121	EB-114	EB-114	EB-114	MW-04250-ABANDONED	MW-04250-ABANDONED	MW-04250-ABANDONED	MW-04250-ABANDONED	MW-04757	MW-04757	MW-04757	MW-04757	OB-208	OB-208	OB-208	OB-208	SB-1
Sample ID:	S-17075-020204-CA-108	08	S-17075-020204-CA-106	EB-114b	EB-114b	EB-114	B00021	B00022	B00023	B00024	B10036	B10037	B10038	B10039	OB-208	OB-208	OB-208	OB-208	SB-1
Sample Date:	2/2/2004	2/2/2004	2/2/2004	9/1/1987	9/1/1987	9/1/1987	9/15/1998	9/15/1998	9/15/1998	9/15/1998	9/22/1998	9/22/1998	9/22/1998	9/22/1998	9/1/1987	9/1/1987	9/1/1987	9/1/1987	6/2/1998
Sample Depth:	(1-2.5) ft BGS	-	(1.5-2.5) ft BGS	(0-2) ft BGS	(4-5.5) ft BGS	(9-11) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(4-6) ft BGS	(12-14) ft BGS	(0-2) ft BGS	(2-6) ft BGS	(2-6) ft BGS	(10-12) ft BGS	(0-2) ft BGS	(6-8) ft BGS	(12-14) ft BGS	(2-3) ft BGS	
Excavat_status	Unexcavated	Unexcavated	Unexcavated	excavated	Unknown	Unknown	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unknown	Unknown	Unknown	Unexcavated	

Attachment 3

Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Sample Location:	B-113	B-121	B-121	EB-114	EB-114	EB-114	MW-04250-ABANDONED	MW-04250-ABANDONED	MW-04250-ABANDONED	MW-04250-ABANDONED	MW-04757	MW-04757	MW-04757	MW-04757	OB-208	OB-208	OB-208	SB-1
Sample ID:	S-17075-020204-CA-108	08	S-17075-020204-CA-106	EB-114b	EB-114b	EB-114	B00021	B00022	B00023	B00024	B10036	B10037	B10038	B10039	OB-208	OB-208	OB-208	SB-1
Sample Date:	2/2/2004	2/2/2004	2/2/2004	9/1/1987	9/1/1987	9/1/1987	9/15/1998	9/15/1998	9/15/1998	9/15/1998	9/22/1998	9/22/1998	9/22/1998	9/22/1998	9/1/1987	9/1/1987	9/1/1987	6/2/1998
Sample Depth:	(1-2.5) ft BGS	-	(1.5-2.5) ft BGS	(0-2) ft BGS	(4-5.5) ft BGS	(9-11) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(4-6) ft BGS	(12-14) ft BGS	(0-2) ft BGS	(2-6) ft BGS	(2-6) ft BGS	(10-12) ft BGS	(0-2) ft BGS	(6-8) ft BGS	(12-14) ft BGS	(2-3) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	excavated	Unknown	Unknown	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unknown	Unknown	Unknown	Unexcavated

(Duplicate)

(Duplicate)

ParametersUnits

Petrl Prod

Diesel fuel	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylene glycol	mg/kg	27 U	10 U	29 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gasoline	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kerosene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mineral spirits	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphtha distillate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-PHC as diesel	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PHC as Lube oil	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propylene glycol	mg/kg	27 U	10 U	29 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons - Heavy Oils	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons - Jet Fuel	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-Jet fuel as jet A	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Wet

Ammonia	mg/kg	2.2 U	-	2.3 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/kg	-	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.2
Chloride	mg/kg	23.5	100 U	11.6 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (total)	mg/kg	7.4	-	0.88	-	-	-	2 U	0.5 U	7.2	1 U	3.6	0.6 U	1 U	0.9 U	-	-	-
Fluoride	mg/kg	-	-	-	260	250	280	-	-	-	-	-	-	-	-	180	970	120
Formaldehyde	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	mg/kg	5.5 U	0.23 U	5.8 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/kg	1.1 U	0.3 U	1.2 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenolics (total)	mg/kg	-	-	-	1.6	4.5	2.1 U	-	-	-	-	-	-	-	-	1.4 U	1.6 U	1.4 U
Sulfide	mg/kg	-	-	-	-	-	-	52.8 J	103 J	1440 J	185 J	274 J	18.3 J	55.4 J	14.8 J	-	-	-
Total kjeldahl nitrogen (TKN)	mg/kg	-	-	-	-	-	-	44.4	46.7	173	816	876 J	270 J	733 J	4410 J	-	-	-
Total organic carbon (TOC)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total solids	%	91.4	-	86.2	-	-	-	-	-	-	-	-	-	-	-	-	-	81.5
Total solids	mg/kg	-	-	-	-	-	-	876000	897000	791000	738000	962000	960000	963000	575000	-	-	-

Fparam

pH, field	s.u.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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Footnotes:

- U Not detected at the associated reporting limit.
- J Estimated concentration.
- UJ Not detected; associated reporting limit is estimated.
- R Rejected.
- (1) PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table

Attachment 3

Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	G	G	G	G	G	G	H	H	H	H	H	H	H	H	H	H	H	H
Sample Location:	SB-2	SS-1	TMW-04127	TMW-04127	TMW-04127	TMW-04127	MW-05443	MW-05443	MW-05443	MW-06656-NOT_LOCATED	MW-06656-NOT_LOCATED	MW-06656-NOT_LOCATED	MW-06656-NOT_LOCATED	MW-17661	MW-17661	MW-17661	MW-17661	SB-05540
Sample ID:	SB-2	SS-1	B80204	B80205	B80206Q	B80207	B00035	B00036	B00037	B00054	B00055	B00056	B00057	B00100	B00101	B00102	B00102-M	B10298
Sample Date:	6/3/1998	6/3/1998	3/6/2003	3/6/2003	3/6/2003	3/6/2003	9/16/1998	9/16/1998	9/16/1998	9/18/1998	9/18/1998	9/18/1998	9/18/1998	9/29/1998	9/29/1998	9/29/1998	9/29/1998	6/12/2000
Sample Depth:	(2-3) ft BGS	(0-1) in BTS	(0-2) ft BGS	(2-4) ft BGS	(2-4) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(4-6) ft BGS	(20-22) ft BGS	(0-2) ft BGS	(6-8) ft BGS	(14-16) ft BGS	(14-16) ft BGS	(0-2) ft BGS	(4-6) ft BGS	(16-18) ft BGS	(16-18) ft BGS	(0-2) ft BGS
Excavat_status	Unknown	Unknown	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate)

(Duplicate)

(other)

Parameters	Units
Methyl tert butyl ether (MTBE)	mg/kg
Methylene chloride	mg/kg
Naphthalene	mg/kg
N-Butylbenzene	mg/kg
N-Propylbenzene	mg/kg
o-Xylene	mg/kg
Propionitrile (ethyl cyanide)	mg/kg
Styrene	mg/kg
tert-Butylbenzene	mg/kg
Tetrachloroethene	mg/kg
Toluene	mg/kg
trans-1,2-Dichloroethene	mg/kg
trans-1,3-Dichloropropene	mg/kg
trans-1,4-Dichloro-2-butene	mg/kg
Trichloroethene	mg/kg
Trichlorofluoromethane (CFC-11)	mg/kg
Trifluorotrichloroethane (CFC-113)	mg/kg
Vinyl acetate	mg/kg
Vinyl chloride	mg/kg
Xylenes (total)	mg/kg

SVOAs	
0,0,0-Triethylphosphorothioate	mg/kg
1,2,4,5-Tetrachlorobenzene	mg/kg
1,2,4-Trichlorobenzene	mg/kg
1,2-Dichlorobenzene	mg/kg
1,2-Diphenylhydrazine	mg/kg
1,3,5-Trinitrobenzene	mg/kg
1,3-Dichlorobenzene	mg/kg
1,3-Dinitrobenzene	mg/kg
1,4-Dichlorobenzene	mg/kg
1,4-Naphthoquinone	mg/kg
1-Naphthylamine	mg/kg
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg
2,3,4,6-Tetrachlorophenol	mg/kg
2,3-Dichlorophenol	mg/kg
2,3-Dimethylphenol	mg/kg
2,4,5-Trichlorophenol	mg/kg
2,4,6-Trichlorophenol	mg/kg
2,4-Dichlorophenol	mg/kg
2,4-Dimethylphenol	mg/kg
2,4-Dinitrophenol	mg/kg
2,4-Dinitrotoluene	mg/kg
2,6-Dichlorophenol	mg/kg
2,6-Dimethylphenol	mg/kg
2,6-Dinitrotoluene	mg/kg
2-Acetylaminofluorene	mg/kg
2-Chloronaphthalene	mg/kg
2-Chlorophenol	mg/kg
2-Methylnaphthalene	mg/kg
2-Methylphenol	mg/kg
2-Naphthylamine	mg/kg
2-Nitroaniline	mg/kg
2-Nitrophenol	mg/kg
2-Toluidine	mg/kg
3&4-Methylphenol	mg/kg
3,3'-Dichlorobenzidine	mg/kg
3,3-Dimethylbenzidine	mg/kg
3,4-Dimethylphenol	mg/kg
3,5-Dimethylphenol	mg/kg
3/4-Chlorophenol	mg/kg
3-Methylcholanthrene	mg/kg
3-Methylphenol	mg/kg
3-Nitroaniline	mg/kg
4,6-Dinitro-2-methylphenol	mg/kg
4-Aminobiphenyl	mg/kg

Attachment 3
Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

[illegible]

Attachment 3

Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	G	G	G	G	G	G	H	H	H	H	H	H	H	H	H	H	H	H
Sample Location:	SB-2	SS-1	TMW-04127	TMW-04127	TMW-04127	TMW-04127	MW-05443	MW-05443	MW-05443	MW-06656-NOT_LOCATED	MW-06656-NOT_LOCATED	MW-06656-NOT_LOCATED	MW-06656-NOT_LOCATED	MW-17661	MW-17661	MW-17661	MW-17661	SB-05540
Sample ID:	SB-2	SS-1	B80204	B80205	B80206Q	B80207	B00035	B00036	B00037	B00054	B00055	B00056	B00057	B00100	B00101	B00102	B00102-M	B10298
Sample Date:	6/3/1998	6/3/1998	3/6/2003	3/6/2003	3/6/2003	3/6/2003	9/16/1998	9/16/1998	9/16/1998	9/18/1998	9/18/1998	9/18/1998	9/18/1998	9/29/1998	9/29/1998	9/29/1998	9/29/1998	6/12/2000
Sample Depth:	(2-3) ft BGS	(0-1) in BTS	(0-2) ft BGS	(2-4) ft BGS	(2-4) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(4-6) ft BGS	(20-22) ft BGS	(0-2) ft BGS	(6-8) ft BGS	(14-16) ft BGS	(14-16) ft BGS	(0-2) ft BGS	(4-6) ft BGS	(16-18) ft BGS	(16-18) ft BGS	(0-2) ft BGS
Excavat_status	Unknown	Unknown	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate)

(Duplicate)

(other)

ParametersUnits

Petri Prod

Diesel fuel	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylene glycol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gasoline	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kerosene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mineral spirits	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphtha distillate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-PHC as diesel	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PHC as Lube oil	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propylene glycol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons - Heavy Oils	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons - Jet Fuel	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-Jet fuel as jet A	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Wet

Ammonia	mg/kg	-	-	2.2 U	2.3	2.1 U	4.7	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/kg	1.3	0.08 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (total)	mg/kg	-	-	-	-	-	-	3.3	40 U	1 U	1.5	7.1 U	7 U	7.1 U	6.3	1 U	5 U	-
Fluoride	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Formaldehyde	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10 UJ
Nitrate (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenolics (total)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfide	mg/kg	-	-	-	-	-	-	431	56.1	0.7 U	213 J	11.7 J	2.6 J	0.7 U	791	0.7 U	0.7 U	-
Total kjeldahl nitrogen (TKN)	mg/kg	-	-	-	-	-	-	301	568	201	434 J	181 J	175 J	133 J	586	130	140	-
Total organic carbon (TOC)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	46400	-	-	-
Total solids	%	84.6	69.2	92.6	94.5	93.7	81.2	-	-	-	-	-	-	-	-	-	-	-
Total solids	mg/kg	-	-	-	-	-	-	954000	855000	879000	953000	881000	905000	891000	959000	907000	888000	901000

Fparam

pH, field	s.u.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-----------	------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

R Rejected.

(1) PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table

Attachment 3

Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	H	H	H	H	H	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
Sample Location:	SB-05540	SB-05542	SB-05542	SB-05542	SO-320-13	MW-06939	MW-06939	MW-06939	MW-06951	MW-06951	MW-06951	MW-06951	MW-07959	MW-07959	MW-07959	MW-07959	MW-07959	MW-07959	MW-07959	MW-96939	MW-96939	MW-96939
Sample ID:	B10299	B10300	B20257	B20258	S-58502-071713-SSH-320	B10033	B10034	B10035	B00064	B00065	B00066	B00066-M	B10040	B10041	B10042	B10043	B10044	B10045	B20231	B20232	B20233	
Sample Date:	6/12/2000	6/12/2000	6/13/2000	6/13/2000	7/17/2013	9/22/1998	9/22/1998	9/22/1998	9/21/1998	9/21/1998	9/21/1998	9/21/1998	9/22/1998	9/22/1998	9/22/1998	9/22/1998	9/22/1998	9/22/1998	9/22/1998	5/31/2000	5/31/2000	5/31/2000
Sample Depth:	(2-4) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(5-6) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(6-8) ft BGS	(0-2) ft BGS	(4-6) ft BGS	(8-10) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(4-6) ft BGS	(6-10) ft BGS	(6-10) ft BGS	(10-12) ft BGS	(32-34) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(18-20) ft BGS	
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	

		(other)										(Duplicate)									
Parameters	Units																				
Petri Prod																					
Diesel fuel	mg/kg	-	-	-	3400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylene glycol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gasoline	mg/kg	-	-	-	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kerosene	mg/kg	-	-	-	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mineral spirits	mg/kg	-	-	-	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphtha distillate	mg/kg	-	-	-	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-PHC as diesel	mg/kg	-	-	-	50 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PHC as Lube oil	mg/kg	-	-	-	8100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propylene glycol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons - Heavy Oils	mg/kg	-	-	-	25 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons - Jet Fuel	mg/kg	-	-	-	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-Jet fuel as jet A	mg/kg	-	-	-	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wet																					
Ammonia	mg/kg	-	-	-	-	190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (total)	mg/kg	-	-	-	-	0.52 J	0.9	1.3	0.7 U	2 UJ	1 U	2 U	-	2 U	2 U	1 U	2 U	2 U	0.2 U	-	-
Fluoride	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Formaldehyde	mg/kg	10 UJ	10 UJ	21	-	-	10 UJ	56 J ^c	52 J ^c	10 UJ	78 J ^{bc}	29 J	-	10 UJ	10 UJ	10 UJ	10 UJ	14 J	10 UJ	10 UJ	1 J
Nitrate (as N)	mg/kg	-	-	-	-	410 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	-	-	-	7.16 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenolics (total)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfide	mg/kg	-	-	-	-	-	328 J	111 J	32.5 J	R	R	R	-	96.6 J	50.1 J	1 J	4.1 J	88.4	2.3	-	-
Total kjeldahl nitrogen (TKN)	mg/kg	-	-	-	-	-	138 J	387 J	1540 J	211	2330	391	-	160 J	233 J	405 J	171 J	875 J	168 J	-	-
Total organic carbon (TOC)	mg/kg	-	-	-	-	57000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total solids	%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total solids	mg/kg	-	-	-	-	-	932000	926000	778000	964000	746000	828000	789000	969000	951000	906000	914000	901000	873000	-	-
Fparam																					
pH, field	s.u.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

R Rejected.

(1) PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table

Attachment 3

Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Sample Location:	MW-96939	MW-96939	SB-001-05	SB-001-05	SB-001-05	SB-001-05	SB-002-05	SB-002-05	SB-002-05	SB-004-05	SB-004-05	SB-004-05	SB-005-05	SB-005-05	SB-005-05	SB-006-05	SB-006-05	SB-006-05	SB-011-05	SB-011-05	SB-011-05	SB-013-05
Sample ID:	B20243	B20244	SB-001-05	SB-001-05	B-4-0535	B-4-0536Q	SB-002-05	SB-002-05	B-4-0537	SB-004-05	SB-004-05	B-4-0533	SB-005-05	SB-005-05	B-4-0530	SB-006-05	SB-006-05	B-4-0534	SB-011-05	SB-011-05	B-4-0538	SB-013-05
Sample Date:	6/5/2000	6/5/2000	1/12/2005	1/12/2005	1/14/2005	1/14/2005	1/12/2005	1/12/2005	1/14/2005	1/12/2005	1/12/2005	1/14/2005	1/12/2005	1/12/2005	1/14/2005	1/13/2005	1/13/2005	1/14/2005	1/13/2005	1/13/2005	1/14/2005	1/13/2005
Sample Depth:	(60-62) ft BGS	(74-76) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(1-3) ft BGS	(0-1) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(1-3) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(1-3) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(1-3) ft BGS	(0-2) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate)

Parameters	Units
VOAs	
1,1,1,2-Tetrachloroethane	mg/kg
1,1,1-Trichloroethane	mg/kg
1,1,2,2-Tetrachloroethane	mg/kg
1,1,2-Trichloroethane	mg/kg
1,1-Dichloroethane	mg/kg
1,1-Dichloroethene	mg/kg
1,1-Dichloropropene	mg/kg
1,2,3-Trichlorobenzene	mg/kg
1,2,3-Trichloropropane	mg/kg
1,2,4-Trichlorobenzene	mg/kg
1,2,4-Trimethylbenzene	mg/kg
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg
1,2-Dibromoethane (Ethylene dibromide)	mg/kg
1,2-Dichlorobenzene	mg/kg
1,2-Dichloroethane	mg/kg
1,2-Dichloropropane	mg/kg
1,3,5-Trimethylbenzene	mg/kg
1,3-Dichlorobenzene	mg/kg
1,3-Dichloropropane	mg/kg
1,4-Dichlorobenzene	mg/kg
2&3-Chloro-1-propene	mg/kg
2,2-Dichloropropane	mg/kg
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg
2-Chloroethyl vinyl ether	mg/kg
2-Chlorotoluene	mg/kg
2-Hexanone	mg/kg
2-Phenylbutane (sec-Butylbenzene)	mg/kg
4-Chlorotoluene	mg/kg
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg
Acetone	mg/kg
Acetonitrile	mg/kg
Acrolein	mg/kg
Acrylonitrile	mg/kg
Allyl chloride	mg/kg
Benzene	mg/kg
Bromobenzene	mg/kg
Bromodichloromethane	mg/kg
Bromoform	mg/kg
Bromomethane (Methyl bromide)	mg/kg
Carbon disulfide	mg/kg
Carbon tetrachloride	mg/kg
Chlorobenzene	mg/kg
Chlorobromomethane	mg/kg
Chloroethane	mg/kg
Chloroform (Trichloromethane)	mg/kg
Chloromethane (Methyl chloride)	mg/kg
Chloroprene	mg/kg
cis-1,2-Dichloroethene	mg/kg
cis-1,3-Dichloropropene	mg/kg
cis-1,4-Dichloro-2-butene	mg/kg
Cyclohexane	mg/kg
Cymene (p-Isopropyltoluene)	mg/kg
Dibromochloromethane	mg/kg
Dibromomethane	mg/kg
Dichlorodifluoromethane (CFC-12)	mg/kg
Ethyl methacrylate	mg/kg
Ethylbenzene	mg/kg
Hexachlorobutadiene	mg/kg
Iodomethane	mg/kg
Isopropyl benzene	mg/kg
m&p-Xylenes	mg/kg
Methyl acetate	mg/kg
Methyl acrylonitrile	mg/kg
Methyl cyclohexane	mg/kg
Methyl methacrylate	mg/kg

Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

[illegible]

(Duplicate)

Parameters	Units
Nitrobenzene	mg/kg
N-Nitrosodiethylamine	mg/kg
N-Nitrosodimethylamine	mg/kg
N-Nitrosodi-n-butylamine	mg/kg
N-Nitrosodi-n-propylamine	mg/kg
N-Nitrosodiphenylamine	mg/kg
N-Nitrosomethylethylamine	mg/kg
N-Nitropiperidine	mg/kg
N-Nitrosopyrrolidine	mg/kg
Pentachlorobenzene	mg/kg
Pentachloronitrobenzene	mg/kg
Pentachlorophenol	mg/kg
Phenacetin	mg/kg
Phenanthrene	mg/kg
Phenol	mg/kg
Phorate	mg/kg
p-Phenylenediamine	mg/kg
Pronamide	mg/kg
Pyrene	mg/kg
Pyridine	mg/kg
Safrole	mg/kg
Thionazin (O,O-diethyl-O-2-pyrazinyI phosphorothioate)	mg/kg

Metals

Aluminum	mg/kg	13600	7340	-	-	4430	4190	-	-	32500	-	-	4630	-	-	5040	-	-	4670	-	-	17700	-
Antimony	mg/kg	10.91 UJ	11.93 UJ	-	-	12.1 UJ	12.0 UJ	-	-	10.8 UJ	-	-	11.1 UJ	-	-	11.4 UJ	-	-	11.5 UJ	-	-	12.0 UJ	-
Arsenic	mg/kg	5	7.2	-	-	0.8 J	1.2 J	-	-	1.2	-	-	1.1	-	-	1.1 J	-	-	1.0 J	-	-	1.0 J	-
Barium	mg/kg	76.8	35.6	-	-	95.0	77.3	-	-	406	-	-	65.8	-	-	132	-	-	315	-	-	214	-
Beryllium	mg/kg	0.6 J	0.4 J	-	-	0.4 J	0.3 J	-	-	4.1	-	-	0.4 J	-	-	0.7 J	-	-	0.6 J	-	-	2.4	-
Cadmium	mg/kg	1.09 U	1.19 U	-	-	0.12 U	0.12 U	-	-	0.47	-	-	0.12 U	-	-	0.10 J	-	-	0.12 U	-	-	0.06 J	-
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cation exchange capacity	meq/100g	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	23.5 J	12.1 J	-	-	128 J	59.1 J	-	-	452 J	-	-	59.8 J	-	-	110 J	-	-	92.1 J	-	-	124 J	-
Chromium III (trivalent)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/kg	0.7 UJ	0.7 UJ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/kg	18.5	13.8	-	-	15.7	15.7	-	-	12.3	-	-	12.4	-	-	18.7	-	-	15.5	-	-	13.7	-
Cyanide (total)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/kg	8	9.6	-	-	6.2 J	6.4 J	-	-	59.9 J	-	-	7.3 J	-	-	14.7 J	-	-	8.1 J	-	-	6.0 J	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/kg	343 J	415 J	-	-	3300 J ^d	1880 J ^d	-	-	11900 J ^d	-	-	1640 J ^d	-	-	3010 J ^d	-	-	3030 J ^d	-	-	5000 J ^d	-
Mercury	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	24.3	20	-	-	7.5	8.0	-	-	6.0	-	-	6.9	-	-	7.8	-	-	7.4	-	-	17.1	-
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/kg	28.5	19.3	-	-	6.4	3.9	-	-	22.8	-	-	8.0	-	-	7.3	-	-	5.4	-	-	10.7	-
Zinc	mg/kg	41.8	48.7	-	-	413	580	-	-	2810	-	-	372	-	-	589	-	-	312	-	-	711	-

PCBs (1)

[illegible]

Attachment 3

Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
Sample Location:	MW-96939	MW-96939	SB-001-05	SB-001-05	SB-001-05	SB-001-05	SB-002-05	SB-002-05	SB-002-05	SB-004-05	SB-004-05	SB-004-05	SB-005-05	SB-005-05	SB-005-05	SB-006-05	SB-006-05	SB-006-05	SB-006-05	SB-011-05	SB-011-05	SB-011-05	SB-013-05
Sample ID:	B20243	B20244	SB-001-05	SB-001-05	B-4-0535	B-4-0536Q	SB-002-05	SB-002-05	B-4-0537	SB-004-05	SB-004-05	B-4-0533	SB-005-05	SB-005-05	B-4-0530	SB-006-05	SB-006-05	B-4-0534	SB-011-05	SB-011-05	B-4-0538	SB-013-05	
Sample Date:	6/5/2000	6/5/2000	1/12/2005	1/12/2005	1/14/2005	1/14/2005	1/12/2005	1/12/2005	1/14/2005	1/12/2005	1/12/2005	1/14/2005	1/12/2005	1/12/2005	1/14/2005	1/13/2005	1/13/2005	1/13/2005	1/14/2005	1/13/2005	1/13/2005	1/14/2005	1/13/2005
Sample Depth:	(60-62) ft BGS	(74-76) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(1-3) ft BGS	(0-1) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(1-3) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(1-3) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(1-3) ft BGS	(0-2) ft BGS	
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	

(Duplicate)

Parameters	Units																						
Petrl Prod																							
Diesel fuel	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ethylene glycol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gasoline	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kerosene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mineral spirits	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Naphtha distillate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Non-PHC as diesel	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PHC as Lube oil	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Propylene glycol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Petroleum Hydrocarbons - Heavy Oils	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Petroleum Hydrocarbons - Jet Fuel	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TPH-Jet fuel as jet A	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wet																							
Ammonia	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ammonia-N	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chloride	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cyanide (total)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fluoride	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Formaldehyde	mg/kg	8 J	9 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitrate (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitrite (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pH, lab	s.u.	-	-	-	-	11.84	11.74	-	-	11.76	-	-	8.21	-	-	9.94	-	-	8.92	-	-	11.57	
Phenolics (total)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sulfide	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total kjeldahl nitrogen (TKN)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total organic carbon (TOC)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total solids	%	-	-	-	-	82.1	82.7	-	-	76.9	-	-	87.2	-	-	87.0	-	-	87.0	-	-	83.3	
Total solids	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fparam																							
pH, field	s.u.	-	-	11.7	11.42	-	-	11.51	11.66	-	8.87	9.11	-	8.81	9.44	-	9.01	8.49	-	10.51	11.21	-	9.57

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

R Rejected.

(1) PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table

Attachment 3

Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Sample Location:	SB-013-05	SB-013-05	SB-014-05	SB-014-05	SB-014-05	SB-06949	SB-06949	SB-06949	SB-06949	SB-06949	SB-07043 (16 ft Pile)	SB-07151	SB-07151	SB-07151	SB-07151	SB-07151
Sample ID:	SB-013-05	B-4-0532	SB-014-05	B-4-0531	SB-014-05	B50104	B50105	B50106	B50107Q	B50108	B20264	B50113	B50114Q	B50115	B50116	B50117
Sample Date:	1/13/2005	1/14/2005	1/14/2005	1/14/2005	1/14/2005	12/11/2002	12/11/2002	12/11/2002	12/11/2002	12/11/2002	6/21/2000	12/11/2002	12/11/2002	12/11/2002	12/11/2002	12/11/2002
Sample Depth:	(2-4) ft BGS	(1-3) ft BGS	(0-1) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(0-2) ft BGS	(3-5) ft BGS	(5-7) ft BGS	(5-7) ft BGS	(7-9) ft BGS	(22-24) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(3-5) ft BGS	(5-7) ft BGS	(7-9) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate) (Duplicate)

Parameters	Units															
VOAs																
1,1,1,2-Tetrachloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloropropene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichloropropane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2&3-Chloro-1-propene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,2-Dichloropropane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethyl vinyl ether	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorotoluene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Phenylbutane (sec-Butylbenzene)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorotoluene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetonitrile	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrolein	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrylonitrile	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Allyl chloride	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobromomethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroprene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,4-Dichloro-2-butene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cymene (p-Isopropyltoluene)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl methacrylate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iodomethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropyl benzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
m&p-Xylenes	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl acetate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl acrylonitrile	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl cyclohexane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl methacrylate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Attachment 3
Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Sample Location:	SB-013-05	SB-013-05	SB-014-05	SB-014-05	SB-014-05	SB-06949	SB-06949	SB-06949	SB-06949	SB-06949	SB-07043 (16 ft Pile)	SB-07151	SB-07151	SB-07151	SB-07151	SB-07151
Sample ID:	SB-013-05	B-4-0532	SB-014-05	B-4-0531	SB-014-05	B50104	B50105	B50106	B50107Q	B50108	B20264	B50113	B50114Q	B50115	B50116	B50117
Sample Date:	1/13/2005	1/14/2005	1/14/2005	1/14/2005	1/14/2005	12/11/2002	12/11/2002	12/11/2002	12/11/2002	12/11/2002	6/21/2000	12/11/2002	12/11/2002	12/11/2002	12/11/2002	12/11/2002
Sample Depth:	(2-4) ft BGS	(1-3) ft BGS	(0-1) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(0-2) ft BGS	(3-5) ft BGS	(5-7) ft BGS	(5-7) ft BGS	(7-9) ft BGS	(22-24) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(3-5) ft BGS	(5-7) ft BGS	(7-9) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate)

(Duplicate)

Parameters	Units															
Methyl tert butyl ether (MTBE)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Butylbenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Propylbenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propionitrile (ethyl cyanide)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,4-Dichloro-2-butene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trifluorotrichloroethane (CFC-113)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SVOAs

0,0,0-Triethylphosphorothioate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4,5-Tetrachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3,5-Trinitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Naphthoquinone	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,3,4,6-Tetrachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,3-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,3-Dimethylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dimethylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Acetylaminofluorene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Naphthylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Toluidine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3&4-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,3-Dimethylbenzidine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,4-Dimethylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,5-Dimethylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/4-Chlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Methylcholanthrene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Aminobiphenyl	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Attachment 3
Analytical Results Summary
Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Sample Location:	SB-013-05	SB-013-05	SB-014-05	SB-014-05	SB-014-05	SB-06949	SB-06949	SB-06949	SB-06949	SB-06949	SB-07043 (16 ft Pile)	SB-07151	SB-07151	SB-07151	SB-07151	SB-07151
Sample ID:	SB-013-05	B-4-0532	SB-014-05	B-4-0531	SB-014-05	B50104	B50105	B50106	B50107Q	B50108	B20264	B50113	B50114Q	B50115	B50116	B50117
Sample Date:	1/13/2005	1/14/2005	1/14/2005	1/14/2005	1/14/2005	12/11/2002	12/11/2002	12/11/2002	12/11/2002	12/11/2002	6/21/2000	12/11/2002	12/11/2002	12/11/2002	12/11/2002	12/11/2002
Sample Depth:	(2-4) ft BGS	(1-3) ft BGS	(0-1) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(0-2) ft BGS	(3-5) ft BGS	(5-7) ft BGS	(5-7) ft BGS	(7-9) ft BGS	(22-24) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(3-5) ft BGS	(5-7) ft BGS	(7-9) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate) (Duplicate)

Parameters	Units															
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Dimethylaminoazobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5-Nitro-2-toluidine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetophenone	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aniline	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Atrazine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzaldehyde	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzidine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoic acid	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl alcohol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)ethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)adipate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caprolactam	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzilate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diallate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dicyclohexyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethoate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl phthalate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dinoseb	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diphenylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disulfoton	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl parathion	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Famphur	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloropropene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isodrin	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isosafrole	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kepone	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methapyrilene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl methanesulfonate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl parathion	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Sample Location:	SB-013-05	SB-013-05	SB-014-05	SB-014-05	SB-014-05	SB-06949	SB-06949	SB-06949	SB-06949	SB-06949	SB-06949	SB-07043 (16 ft Pile)	SB-07151	SB-07151	SB-07151	SB-07151
Sample ID:	SB-013-05	B-4-0532	SB-014-05	B-4-0531	SB-014-05	B50104	B50105	B50106	B50107Q	B50108	B20264	B50113	B50114Q	B50115	B50116	B50117
Sample Date:	1/13/2005	1/14/2005	1/14/2005	1/14/2005	1/14/2005	12/11/2002	12/11/2002	12/11/2002	12/11/2002	12/11/2002	6/21/2000	12/11/2002	12/11/2002	12/11/2002	12/11/2002	12/11/2002
Sample Depth:	(2-4) ft BGS	(1-3) ft BGS	(0-1) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(0-2) ft BGS	(3-5) ft BGS	(5-7) ft BGS	(5-7) ft BGS	(7-9) ft BGS	(22-24) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(3-5) ft BGS	(5-7) ft BGS	(7-9) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate) (Duplicate)

Parameters	Units															
Nitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiethylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-butylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosomethylethylamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosopiperidine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosopyrrolidine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachloronitrobenzene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenacetin	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phorate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Phenylenediamine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pronamide	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyridine	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Safrole	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thionazin (O,O-diethyl-O-2-pyrazinyl phosphorothioate)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals																
Aluminum	mg/kg	-	5540	-	5780	-	-	-	-	-	-	28000	-	-	-	-
Antimony	mg/kg	-	10.5 UJ	-	11.4 UJ	-	-	-	-	-	-	11.21 UJ	-	-	-	-
Arsenic	mg/kg	-	0.7 J	-	0.6 J	-	-	-	-	-	-	0.7 J	-	-	-	-
Barium	mg/kg	-	93.8	-	99.0	-	-	-	-	-	-	195	-	-	-	-
Beryllium	mg/kg	-	0.6 J	-	0.7 J	-	-	-	-	-	-	3.9	-	-	-	-
Cadmium	mg/kg	-	0.06 J	-	0.12 U	-	-	-	-	-	-	1.12 U	-	-	-	-
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cation exchange capacity	meq/100g	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	-	86.7 J	-	120 J	-	-	-	-	-	-	75.1	-	-	-	-
Chromium III (trivalent)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/kg	-	-	-	-	-	-	-	-	-	-	2.5 J	-	-	-	-
Cobalt	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/kg	-	16.2	-	13.2	-	-	-	-	-	-	4.4	-	-	-	-
Cyanide (total)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/kg	-	7.0 J	-	7.3 J	-	-	-	-	-	-	2.3	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/kg	-	3450 J ^d	-	3910 J ^d	-	-	-	-	-	-	5180 ^d	-	-	-	-
Mercury	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	-	6.0	-	6.3	-	-	-	-	-	-	0.7 J	-	-	-	-
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/kg	-	5.8	-	6.6	-	-	-	-	-	-	6.2	-	-	-	-
Zinc	mg/kg	-	314	-	392	-	-	-	-	-	-	97.6	-	-	-	-
PCBs (1)																
Aroclor-1016 (PCB-1016)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1221 (PCB-1221)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1232 (PCB-1232)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1242 (PCB-1242)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1248 (PCB-1248)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1254 (PCB-1254)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1260 (PCB-1260)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Soil Compared to 2023 Nonresidential Criteria
RACER Nodular Industrial Land
Saginaw, MI

IU:	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Sample Location:	SB-013-05	SB-013-05	SB-014-05	SB-014-05	SB-014-05	SB-06949	SB-06949	SB-06949	SB-06949	SB-06949	SB-07043 (16 ft Pile)	SB-07151	SB-07151	SB-07151	SB-07151	SB-07151
Sample ID:	SB-013-05	B-4-0532	SB-014-05	B-4-0531	SB-014-05	B50104	B50105	B50106	B50107Q	B50108	B20264	B50113	B50114Q	B50115	B50116	B50117
Sample Date:	1/13/2005	1/14/2005	1/14/2005	1/14/2005	1/14/2005	12/11/2002	12/11/2002	12/11/2002	12/11/2002	12/11/2002	6/21/2000	12/11/2002	12/11/2002	12/11/2002	12/11/2002	12/11/2002
Sample Depth:	(2-4) ft BGS	(1-3) ft BGS	(0-1) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(0-2) ft BGS	(3-5) ft BGS	(5-7) ft BGS	(5-7) ft BGS	(7-9) ft BGS	(22-24) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(3-5) ft BGS	(5-7) ft BGS	(7-9) ft BGS
Excavat_status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated

(Duplicate) (Duplicate)

Parameters	Units															
Petri Prod																
Diesel fuel	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylene glycol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gasoline	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kerosene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mineral spirits	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphtha distillate	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-PHC as diesel	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PHC as Lube oil	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propylene glycol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons - Heavy Oils	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons - Jet Fuel	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-Jet fuel as jet A	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wet																
Ammonia	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (total)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoride	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Formaldehyde	mg/kg	-	-	-	-	-	11 U	17	52 ^c	20	6.4	10 U	12 U	12 U	61 ^c	14
Nitrate (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	-	8.57	-	9.03	-	-	-	-	-	-	-	-	-	-	-
Phenolics (total)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfide	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total kjeldahl nitrogen (TKN)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon (TOC)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total solids	%	-	93.9	-	86.1	-	-	-	-	-	-	-	-	-	-	-
Total solids	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fparam																
pH, field	s.u.	8.83	-	9.05	-	9.52	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

R Rejected.

(1) PCBs at the Site are subject to Toxic Substances Control Act (TSCA) and not screened on this table