July 19, 2024

Nilia Moberly Green, TOCOR
U.S. EPA Region 5
Ralph H. Metcalfe Federal Building
77 West Jackson Blvd
Chicago, Illinois 60604

PROJECT: Contract No.: 68HE0318D0003
Task Order No.: 68HE0523F0033

SUBJECT: Final Operable Unit 3 Sediment Technical Memorandum – Year 1
McLouth Steel Corp. Superfund Site
Trenton, Michigan

Dear Ms. Green:

CDM Smith Federal Programs Corporation (CDM Smith) has reviewed the United States Environmental Protection Agency (EPA) and the Michigan Department of Environment, Great Lakes, and Energy (EGLE) comments provided on July 12, 2024, regarding the McLouth Steel Superfund Site, Operable Unit 3 Sediment Technical Memorandum – Year 1 (TM). CDM Smith has revised the TM to address EPA's comments 2, 3, 4, 12, and 13, EGLE comments 1, 2, 3, and 5 from the June 20, 2024 letter, and EGLE Technical Assessment Memorandum comment 2a dated June 17, 2024. The remaining comments will be addressed in the Year 2 OU3 TM or in the Remedial Investigation Report.

The following comments were addressed from the Operable Unit 3 Sediment Technical Memorandum – Year 1 review comment documents:

1. EPA Comment #2, Page 2, Monguagon Creek: The pre-design investigation was completed in September 2021; however, the remedial design for contaminated sediment within Monguagon Creek and the Trenton Channel along a portion of the northern parcel is on-going.

   CDM Smith Response: The sentence is updated to: "According to 'Monguagon Creek Upper Trenton Channel Site Lakes Legacy Act Project' (EPA 2024), field work for the pre-design investigation was completed in September 2021, however, the remedial design for contaminated sediment within Monguagon Creek and the Trenton Channel along a portion of the northern parcel is still on-going."

2. EPA Comment #3, Page 2, Hot Spots: (Hot Spots 2 and 4) Sediment remediation of Monguagon Creek – Upper Trenton Channel project is now tentatively planned for 2027 due to disposal limitations.

   CDM Smith Response: The sentence is updated to: "Hot Spots 2 and 4 (EA Engineering 2015) are adjacent to the site on the western side of the Trenton Channel; remediation of these areas is tentatively planned for 2027 due to disposal limitation."

3. EPA Comment #4, Page 2, Hot Spots: (Hot Spot 3) The eastern side of the Trenton Channel is no longer being investigated and is determined for no further action for sediment remediation.

   CDM Smith Response: The sentence is updated to: "Hot Spot 3 is on the eastern side of the Trenton Channel and is no longer being investigated, as it was determined that no further action for sediment remediation is needed."

4. EPA Comment #12, Page 5, Surface Water Discharge Sampling: The second sentence is incomplete and must be corrected.

   CDM Smith Response: The sentence is updated to: "CDM Smith collected surface water samples from five off-site locations (MSTC23-SWDL06, -SWDL07, -SWDL08, -SWDL09, and -SWDL10), and at an additional on-site location (MSTC23-SWDL-SEEP-01)."

5. EPA Comment #13, Page 5, Data Validation: The paragraph indicates that the data validation reports for dioxins/furans (D/Fs) and reactive sulfide and a portion of the PFAS results were not available as the technical memorandum was being prepared. A statement should have been included that the pending D/F, reactive sulfide, and PFAS data validation reports will be evaluated to ensure acceptability of the data

   CDM Smith Response: The sentence is added to the text: "The pending PFAS, D/F, and PAHs data validation reports will be evaluated to ensure acceptability of the data and will be discussed in the Year 2 Technical Memoranda or in the Remedial Investigation Report."

6. EGLE (June 20, 2024 letter) Comment #1, Surface Water Discharge Sampling, Second Sentence: This sentence does not seem complete and seems to be missing something. Please revise.

   CDM Smith Response: Revised. Please see the response to EPA's Comment #12 above.

7. EGLE (June 20, 2024 letter) Comment #2, Surface Water Discharge Sampling, Fifth Sentence. "As of this technical memorandum, CDM Smith has not received the analytical results for these samples and will therefore evaluate and report *these* data as part of Year 2 reporting efforts." Please change "these" to "the".

   CDM Smith Response: The sentence is revised to say "the data" instead of "these data."

8. EGLE (June 20, 2024 letter) Comment #3 Dioxins/Furans, Second Sentence: Change the sentence to the following, "Of the D/Fs analyzed, only 2,3,7,8-tetrachloroediebenzo-P-dioxin and total dioxin toxicity equivalence (TEQ) (for mammals) were detected above the PAL." As other compounds were detected, but a PAL was not established for them.

   CDM Smith Response: The sentence is revised accordingly.

9. EGLE (June 20, 2024 letter) Comment #5, Table Index on Page 22: The title for Table 7 in this Index is not the same as the title for that table in the report. Please revise.

   CDM Smith Response: Table 7's title is revised to, "AVS/SEM Sediment Sample Detections and Exceedances – Inorganics," and the index on Page 22 is updated.

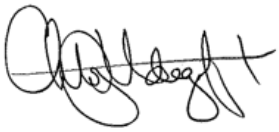
10. EGLE (June 17, 2024 letter) Comment #2a, Page 8, AVS/SEM data collection: Please include the following reference in the report: EPA. 2005, EPA. Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks for the Protection of Benthic Organisms: Metal Mixtures (Cadmium, Copper, Lead, Nickel, Silver, and Zinc), EPA/600/R-02/011, Office of Research and Development.

    CDM Smith Response: This sentence was added to the text: "The bioavailability ratio is calculated in accordance to EPA (2005) "Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks for the Protection of Benthic Organisms: Metal Mixtures (Cadmium, Copper, Lead, Nickel, Silver, and Zinc), EPA/600/R-02/011." References section was updated accordingly.

If you have any questions regarding this submittal, please contact me at your earliest convenience at (412) 208–2429 or vandegriftcj@cdmsmith.com.

Very truly yours,

CDM FEDERAL PROGRAMS CORPORATION



Senior Project Manager

cc: John Grabs, CDM Smith
Ernest Ashley, CDM Smith
Project file

Memorandum

To: *Nilia Moberly Green, TOCOR, EPA Region 5*

From: *Christopher Vandegrift, Senior Project Manager*

Date: *July 19, 2024*

Subject: *McLouth Steel Corporation Superfund Site*
Operable Unit 3 Sediment Technical Memorandum — Year 1

CDM Federal Programs Corporation (CDM Smith) prepared this technical memorandum to summarize the Operable Unit (OU) 3 sediment investigation performed at the McLouth Steel Corporation (McLouth) Superfund Site. This project is a part of U.S. Environmental Protection Agency (EPA) Design and Engineering Services Contract No. 68HE0318D0003, Task Order No. 68HE0523F0033. This technical memorandum presents data collected in October 2023 to characterize the nature, extent, and concentrations of chemical contaminants in sediment and provide recommendations for additional site characterization, where appropriate.

Site Background

The site is in Trenton, Michigan, in an area that includes industrial, commercial, and residential properties (**Figure 1**). This area is known for its history of industrial development, such as steel mills, chemical manufacturing facilities, coal-fired power plants, and landfills. These plants once operated and introduced contaminants, such as polychlorinated biphenyls (PCBs), various metals, fuels, solvents, scrubber dusts, acids, and slag, into the environment. Today, north of the site, a multitude of marinas and boat launches, manufacturing plants, and a golf course are present.

The site consists of the southwestern 197 acres of the former McLouth steel mill property, which originally comprised approximately 273 acres (**Figure 2**). The remaining approximately 76 acres is a separate cleanup site (Riverview-Trenton Railroad Company [RTRR] site) being addressed by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) (formerly the Michigan Department of Environmental Quality) under the Resource Conservation and Recovery Act (RCRA) program. The site is divided into three OUs: OU1 is the property source areas, OU2 is sitewide groundwater, and OU3 is Detroit River surface water and sediment. OU3 is on the western side of the Upper Trenton Channel (UTC), which is part of the Detroit River, and is downstream of the Grosse Ile Toll Bridge (**Figure 1**).

The Trenton Channel

The Trenton Channel separates from the larger Detroit River at the north end of Grosse Ile approximately 2.25 miles north of the Grosse Ile Toll Bridge. It contains a navigation channel with a project depth of 28 feet and measured depths up to 30 feet. The width of the Trenton Channel adjacent to the site ranges from approximately 950 to 1,250 feet. According to nautical charts, the depth of the

river channel ranges from 6 feet adjacent to the northern portion of the McLouth bulkhead to the east of the site, to approximately 30 feet in the middle of the channel. Deep water (greater than 24 feet) is shown adjacent to the 1,740-foot bulkhead where, historically, ships would dock. A U.S. Geological Survey (USGS) monitoring station is located at the Grosse Ile Parkway Bridge, 2 miles south of the southern end of the site. Streamflow at that station ranged from 42,700 to 51,000 cubic feet per second during 2015 (the most recent year of data available on the USGS website). River current velocities were measured to the north of the site in 2006 and measured up to 2.4 cubic feet per second (Erickson et al. 2007).

Monguagon Creek

North of the site and the Trenton Channel is Monguagon Creek. Monguagon Creek is approximately 0.7 miles long, 30 to 40 feet wide, and discharges into the UTC. From 1951 to 1982, manufacturing wastes and products were released to portions of the Huntington Drain, which is upstream of the site and adjacent to Monguagon Creek; this area was used as a surface impoundment for sludge, chromium, and corrosive waste. During the 1970s, 2,4-di-tert-amylphenol (2,4-DP), oil, gas, lead, and zinc were discharged into the creek from an outfall on the Elf Atochem property, which is upstream of the West Jefferson Road Bridge. In January 1997, the outfall was redirected to the Trenton Channel (Conestoga-Rovers & Associates 1997). Since 1994, Monguagon Creek has been the focus of seven sediment investigations performed by EGLE; EPA; Bridgestone Americas Tire Operations, LLC; BASF Corporation; and Arkema. In June 2018, Rambøll Group A/S completed a focused feasibility study (FFS) on Monguagon Creek. According to “Monguagon Creek Upper Trenton Channel Site Lakes Legacy Act Project” (EPA 2024), field work for the pre-design investigation was completed in September 2021, however, the remedial design for contaminated sediment within Monguagon Creek and the Trenton Channel along a portion of the northern parcel is still on-going.

Hot Spots

To date, limited data have been collected in the UTC adjacent to the site by EPA and EGLE. In 2014, EPA performed an assessment of contaminated sediments in the Mid/Lower Trenton Channel area from the Grosse Ile Toll Bridge to Calf Island, including a cove, an inlet, and a creek (EA Engineering Science and Technology [EA Engineering] 2015). This investigation identified nine areas of “high impact,” referred to as hot spots. Hot Spot 1 comprises Monguagon Creek and the area adjacent to the southwest of the Grosse Ile Toll Bridge; this area was targeted for remediation in 2023. Hot Spots 2 and 4 (EA Engineering 2015) are adjacent to the site on the western side of the Trenton Channel; remediation of these areas is tentatively planned for 2027 due to disposal limitation. Hot Spot 3 is on the eastern side of the Trenton Channel and is no longer being investigated, as it was determined that no further action for sediment remediation is needed. Hot Spots 5 through 9 will likely be investigated in the future as work sequentially progresses from upstream to downstream at the channel.

Physical Setting

Site Soils

The near-surface geology of the site area consists of glacial Great Lakes lacustrine clay and silt deposits overlain by fill material/deposits, especially in the floodplain areas along the Detroit River. The clay and silt deposits vary in thickness from approximately 10 to 40 feet and appear to be laterally extensive across the site. Occasional small lenses of lacustrine sand may be present throughout the deposits. Most

of the soil borings at the site did not reveal a sand or gravel layer within or below the clay overlying the bedrock.

Geology and Hydrogeology

Beneath the fill and glacial deposits, the site is underlain by bedrock of the Paleozoic Era, Devonian System, and Middle Devonian Series. The bedrock geology underlying the area's lacustrine deposits is the Dundee Limestone and the Detroit River Group Formations. The Dundee Formation consists of massive limestone deposits from 40 to 400 feet thick. The underlying Detroit River Group Formation consists of limestone, dolomite, and sandstone deposits with interbedded anhydrite and salt deposits. This formation can be more than 1,000 feet thick. Based on the approximate 30-foot depth of the Trenton Channel near the site, the river and bed deposits are likely incised into the lacustrine clay and possibly into the top of the limestone bedrock. The base of the river channel is likely comprised of sand and gravel.

In general, shallow groundwater from the McLouth facility and surrounding properties is expected to flow toward and discharge into the Trenton Channel. This expectation is supported by groundwater contour maps presented in the RCRA Facility Assessment Report (Techna Corporation 1998) and the Groundwater Investigation Report for the RTRR property to the north (ASTI Environmental 2021). The shallow groundwater may be perched above the lacustrine clay. However, monitoring wells in the bedrock are not present to establish water levels and to identify whether there is a significant gap between the shallow and bedrock groundwater elevations. Based on the thickness and extent of the lacustrine clay, the layer is expected to function as an aquitard beneath the shallow groundwater system and the bedrock.

Operable Unit 3 Sediment Investigation Activities

The OU3 sediment investigation supplements EPA's 2014 investigation at Hot Spots 2 and 3 (EA Engineering 2015). The planned sediment-related activities included a utility survey, sediment sampling for chemical analysis, and sediment trap sampling. Each of these activities are discussed below.

Utility Survey

To safely collect sediment samples, CDM Smith surveyed underwater utilities using One Call via Michigan's 811 MissDig system. CDM Smith also coordinated with various utility owners to obtain current Global Positioning System coordinates for known underwater pipe crossings and various underwater structures. MissDig representatives also marked known buried utility locations on each shoreline. This information was used to guide the selection of sampling locations to avoid pipe crossings and utilities.

Sediment Sampling

The OU3 Quality Assurance Project Plan (QAPP) and Field Sampling Plan (FSP) (CDM Smith 2023) proposed collecting surface and subsurface sediment samples at 23 locations. The surface samples, representing the top 6 inches of sediment, were to be collected using a Powers-Ogle-Noble-Ayers-Robertson (PONAR) dredge sampler. In addition, sediment cores at these 23 locations were to be

collected using vibracoring and segmented into 1-foot intervals for the top 3 feet and into 2-foot intervals thereafter.

Between October 11 and October 19, 2023, CDM Smith, along with EPA, performed the sampling activities. Because of a lack of sediment and apparent refusal at several of the targeted locations, samples were collected at only 17 locations, resulting in 29 core interval and 16 surface samples. **Figures 3a**, **3b**, and **3c** show the sampling locations. Sediment sampling was conducted in accordance with the EPA-approved QAPP/FSP. Photoionization detector measurements and sediment descriptions were recorded on boring logs, provided in **Attachment A**.

Sediment Sample Analysis

In all, 356 sediment samples, 16 field duplicates, 10 equipment blanks, 3 field blanks, and 3 trip blanks were submitted for analysis. Sediment samples were analyzed by the following laboratories using the methods noted:

- ChemTech Consulting Group analyzed target analyte list (TAL) metals (including mercury and cyanide) by Superfund Analytical Method (SFAM) 01.1
- Pace Analytical Services analyzed TAL volatile organic compounds (VOCs) by SFAM01.1, pesticides by SFAM01.1, TAL PCB Aroclors by SFAM01.1, and percent moisture
- Metri Group analyzed dioxins/furans (D/Fs) by High-Resolution Superfund Method (HRSM) 02.1.
- EPA's Region 3 Analytical Services Branch Laboratory analyzed per- and polyfluoroalkyl substances (PFAS) by Liquid Chromatography, Mass Spectrometry, and Tandem Mass Spectrometry
- RTI Laboratories, Inc. analyzed polycyclic aromatic hydrocarbons (PAHs) by 2182-8270 Selected Ion Monitoring (SIM), total organic carbon by AIG009A/2182 – Lloyd Kahn, pH by AIG008/ASTM International (ASTM) D4972, and percent moisture
- Eurofins Scientific Inc. analyzed acid volatile sulfide (AVS)/simultaneously extracted metals-simultaneously extracted metals (SEM) by GEN-AVS-EPA 821-R-91-100, SW846 6010C
- CDM Smith performed grain size analysis by ASTM D6913 and D7928, and additional geotechnical analysis on the following sediment samples: MSTC23-SD02-1.0, MSTC23-SD03-1.0, MSTC23-SD20-1.0, MSTC23-SD01-SS-0-0.5, MSTC23-SD05-SS-0-0.5, MSTC23-SD07-SS-0-0.5, MSTC23-SD20-SS-0-0.5, MSTC23-SD20-0-1.0, and MSTC23-SD20-1.0-2.0

Attachment B provides the analytical data and **Attachment C** provides the geotechnical data.

All excess sediment and decontamination water were collected, containerized, and temporarily stored in 55-gallon drums in the southwestern corner of the parking lot at the site for subsequent disposal in accordance with applicable regulations.

Sediment Trap Sampling

CDM Smith set eight sediment traps at four locations in the Trenton Channel (**Figures 3a**, **3b**, and **3c**). Sediment traps were in place from December 5, 2023, to January 3, 2024. Because of lack of sediment deposition in the sediment traps, no sediment samples from the traps were submitted for analysis.

Surface Water Discharge Sampling

Surface water sampling was conducted on April 11 and 12, 2024, during and after a significant precipitation event (approximately 0.4 inches of rainfall). CDM Smith collected surface water samples from five off-site locations (MSTC23-SWDL06, -SWDL07, -SWDL08, -SWDL09, and -SWDL10), and at an additional on-site location (MSTC23-SWDL-SEEP-01). One field duplicate, an equipment blank, and a field blank were collected for quality assurance/quality control. CDM Smith was unable to collect surface water discharge samples from any on-site outfall locations because of lack of surface water flow. The off-site location samples were sent to the appropriate laboratories for analysis. As of this technical memorandum, CDM Smith has not received the analytical results for these samples and will therefore evaluate and report the data as part of Year 2 reporting efforts.

Bathymetry

A bathymetry study was not completed during Year 1 activities, as initially contemplated. CDM Smith has scheduled a bathymetry study to be completed during 2024 for Year 2 work.

Data Validation

The data available for this investigation were validated as described in QAPP Worksheets #34 through #36 (CDM Smith 2023), except for PFAS, D/Fs, and PAHs. The preliminary analytical results for PFAS, D/Fs, and PAHs are presented herein as they are expected to be usable, but they should be considered preliminary and subject to data validation. The data in this technical memorandum are being presented for completeness and with the purpose of evaluating the next steps in the investigation. The pending PFAS, D/F, and PAHs data validation reports will be evaluated to ensure acceptability of the data and will be discussed in the Year 2 Technical Memoranda or in the Remedial Investigation Report.

Operable Unit 3 Sediment Investigation Sampling Results

Of the 23 locations targeted for sampling, there was no recoverable sediment at six of the locations. At another six locations, only surficial sediments, representing the top 6 inches of the sediment bed, were recovered. At the remaining 11 locations, sediment thicknesses ranged up to 9 feet. Sediment traps deployed over a 1-month period did not retain sufficient sediment for analysis. This, coupled with the lack of accumulated sediment in several areas, support the understanding that the channel in this general area of the Trenton Channel is a high-energy system that both scours sediment and does not readily deposit sediment onto the channel bed. The sediment present consists of combinations of sands, silts, and clays. Historical navigation maintenance dredging (of both channels and harbors) may also have contributed to the lack of sediment in many of the areas.

CDM Smith evaluated the sampling results to prepare summary statistics and identify patterns illustrating the distribution of contaminants of potential concern across the site. The main analyte

groups were PCB Aroclors, VOCs, pesticides, D/Fs, inorganics (metals and cyanide), and PAHs. PFAS were analyzed for a subset of samples.

Sample results are provided in the tables in **Attachment B**. Summary statistics are provided and discussed in the text that follows. **Figures 4a**, **4b**, **4c**, **5a**, **5b**, and **5c** illustrate the concentration distribution of the various classes of analytes.

The detected concentrations of analytes were compared to the project action limits (PALs) listed on QAPP Worksheet #15. **Table 1** summarizes the number of detections and exceedances for each major analyte class.

Table 1 – Sediment Sample Detections and Exceedances Summary

Analyte Group	Total Exceedances*	Total Detections*
PCB Aroclors	63 (66%)	75 (78%)
VOCs	25 (23%)	50 (45%)
Pesticides	365 (45%)	534 (65%)
D/Fs	54 (56%)	54 (56%)
Inorganics	558 (65%)	747 (86%)
PAHs	772 (41%)	1,263 (67%)

*Percentage are based on total analytes examined; % – percent

Polychlorinated Biphenyl Aroclors

More than 65% of the samples had PCBs detected and 44% exceeded the PALs for PCBs. **Figures 4a**, **4b**, and **4c** show the PCB Aroclors distributions and concentrations.

Table 2 – Sediment Sample Detections and Exceedances – Polychlorinated Biphenyls

Analyte	Exceeded	Detected	Total Samples
PCB-1248 (Aroclor 1248)	29	36	48
PCB-1260 (Aroclor 1260)	34	39	48

Volatile Organic Compounds

VOCs were not widely detected at the site, with 45% of samples having VOCs detected and 23% exceeding their respective PAL. Only acetone and methyl ethyl ketone (2-butanone) were detected. For these detections, acetone exceeded its PAL 96% of the time, but 2-butanone only exceeded 4% of the time.

Table 3 – Sediment Sample Detections and Exceedances – Volatile Organic Compounds

Analyte	Exceeded	Detected	Total Samples
Acetone	24	25	55
Methyl Ethyl Ketone (2-Butanone)	1	25	55

Pesticides

Pesticides were detected in many of the samples; 65% had pesticide detections and 45% exceeded the PAL. Heptachlor was the only analyte with a detection percentage below 50%, with 17% of samples having detections and 13% having exceedances.

Table 4 – Sediment Sample Detections and Exceedances – Pesticides

Analyte	Exceeded	Detected	Total Samples
Aldrin	19	30	48
Alpha Hexachlorocyclohexane (BHC)	9	27	48
Alpha Endosulfan	21	34	48
Alpha-Chlordane	15	24	48
Beta BHC	32	36	48
Beta Endosulfan	33	35	48
Beta Chlordane	27	37	48
Dieldrin	32	37	48
Endosulfan Sulfate	6	35	48
Endrin	29	31	48
Gamma BHC (Lindane)	16	31	48
Heptachlor	6	8	48
Heptachlor Epoxide	18	31	48
Methoxychlor	21	30	48
p,p'-DDD	24	35	48
p,p'-DDE	28	37	48
p,p'-DDT	29	36	48

Dioxins/Furans

D/F results are currently unvalidated. Of the D/Fs analyzed, only 2,3,7,8-tetrachlorodibenzo-P-dioxin and total dioxin toxicity equivalence (TEQ) (for mammals) were detected above the PAL. 2,3,7,8-tetrachlorodibenzo-P-dioxin was detected in 13% of the samples, while total dioxin TEQ was reported for every sample. Total dioxin TEQ also exceeded its PAL in every sample. **Table 5** summarizes D/F detections and PAL exceedances. **Figures 5a**, **5b**, and **5c** show the D/F distributions and concentrations.

Table 5 – Sediment Sample Detections and Exceedances – Dioxins/Furans

Analyte	Exceeded	Detected	Total Samples
2,3,7,8-Tetrachlorodibenzo-p-Dioxin	6	6	48
Total Dioxin TEQ (Mammal)	48	48	48

Inorganics (Metals and Cyanide)

Metals were detected in 86% of samples and 65% of samples had PAL exceedances. Based on the number of PAL exceedances, the results of past site studies, and the association of certain analytes with steel-making, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, and zinc data were highlighted in the figures. **Figures 4a**, **4b**, and **4c** show the distributions and concentrations of these metals.

Table 6 – Sediment Sample Detections and Exceedances – Inorganics (Metals and Cyanide)

Analyte	Exceeded	Detected	Total Samples
Aluminum	7	48	48
Antimony	9	26	48
Arsenic	48	48	48
Barium	43	48	48
Cadmium	28	48	48
Chromium	48	48	48
Cobalt	48	48	48
Copper	28	48	48
Cyanide	12	12	48
Iron	48	48	48
Lead	27	48	48
Manganese	44	48	48
Mercury	34	40	48
Nickel	31	48	48
Selenium	9	12	48
Silver	21	34	48
Thallium	43	47	48
Zinc	30	48	48

Many samples had SEM detections; metals were detected in 97% of AVS/SEM samples and 91% of samples had PAL exceedances. **Table 7** summarizes the detection and exceedance results for AVS and SEM. The bioavailability potential of cadmium, copper, lead, mercury, nickel, and zinc were considered when reviewing the AVS/SEM data. Of the 48 AVS/SEM samples, 19 were nondetect for AVS. In total, 33 or approximately 70% of samples showed a potential for the specified metals to be bioavailable. The bioavailability ratio is calculated in accordance to EPA (2005) "Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks for the Protection of Benthic Organisms: Metal Mixtures (Cadmium, Copper, Lead, Nickel, Silver, and Zinc), EPA/600/R-02/011." **Table 8** presents the total SEM metal molar concentration, AVS molar concentration, and bioavailability ratio of each sample. SEM metals are considered bioavailable when the bioavailability ratio is greater than 1.

Table 7 – AVS/SEM Sediment Sample Detections and Exceedances – Inorganics

Analyte	Exceeded	Detected	Total Samples
AVS*	-	29	48
Cadmium	35	48	48
Copper	48	48	48
Lead	47	48	48
Nickel	40	40	48
Zinc	48	48	48

*AVS does not have an associated PAL, therefore exceedances cannot be calculated

Table 8 – AVS/SEM Molar Concentration and Bioavailability Ratio Summary

Sample ID	Total Metal Molar Concentration (µmol/g)	AVS Molar Concentration (µmol/g)	Bioavailability Ratio
MSTC23-SD01-SS-0.5	6.59	25	0.26
MSTC23-SD02-1.0	9.40	13	0.72
MSTC23-SD02-2.0	7.55	9.6	0.79
MSTC23-SD02-SS-0.5	4.46	7.2	0.62
MSTC23-SD03-1.0	7.54	1.8	4.19*
MSTC23-SD03-2.0	8.33	1.7	**4.90**
MSTC23-SD03-SS-0.5	2.93	3.8	0.77
MSTC23-SD05-SS-0.5	2.60	ND	*
MSTC23-SD06-1.0	6.35	3.6	**1.76**
MSTC23-SD06-2.0	9.32	8.1	**1.15**
MSTC23-SD06-3.0	7.33	4.2	**1.74**
MSTC23-SD06-5.0	8.75	4.5	**1.94**
MSTC23-SD06-7.0	8.06	1.8	**4.48**
MSTC23-SD06-9.0	6.06	2.1	**2.89**
MSTC23-SD06A-7.0	7.82	3.7	**2.11**
MSTC23-SD06-SS-0.5	6.46	ND	*
MSTC23-SD07-SS-0.5	3.19	14	0.23
MSTC23-SD08A-SS-0.5	0.85	2	0.43
MSTC23-SD08-SS-0.5	1.35	2.2	0.61
MSTC23-SD08-SS-1.0	0.68	4.6	0.15
MSTC23-SD08-SS-2.0	0.24	ND	*
MSTC23-SD09-SS-0.5	5.61	3.5	**1.6**
MSTC23-SD09-SS-1.0	9.18	3.2	**2.87**
MSTC23-SD09-SS-2.0	0.28	ND	*
MSTC23-SD10-SS-0.5	1.72	ND	*
MSTC23-SD12-SS-0.5	1.62	3.6	0.45
MSTC23-SD13-SS-0.5	1.41	ND	*
MSTC23-SD13-SS-1.0	0.25	ND	*
MSTC23-SD14-SS-0.5	4.57	1.2	**3.81**
MSTC23-SD14-SS-1.0	0.25	ND	*
MSTC23-SD14-SS-2.0	0.26	ND	*
MSTC23-SD15-SS-0.5	2.44	ND	*
MSTC23-SD19-SS-0.5	7.54	2.4	**3.14**
MSTC23-SD19-SS-1.0	7.81	1.4	**5.58**
MSTC23-SD19-SS-2.0	7.65	ND	*
MSTC23-SD20-SS-0.5	2.19	ND	*

Sample ID	Total Metal Molar Concentration (µmol/g)	AVS Molar Concentration (µmol/g)	Bioavailability Ratio
MSTC23-SD20-SS-1.0	7.22	110	0.07
MSTC23-SD20-SS-2.0	0.41	ND	*
MSTC23-SD22-SS-0.5	1.50	2.3	0.65
MSTC23-SD22-SS-1.0	3.69	6.0	0.61
MSTC23-SD22-SS-2.0	2.05	3.4	0.60
MSTC23-SD22-SS-3.0	0.31	ND	*
MSTC23-SD22-SS-5.0	0.27	ND	*
MSTC23-SD23-SS-0.5	0.62	12	0.05
MSTC23-SD23-SS-1.0	0.23	ND	*
MSTC23-SD23-SS-2.0	0.54	ND	*
MSTC23-SD23-SS-3.0	0.50	ND	*
MSTC23-SD23-SS-5.0	0.22	ND	*

* AVS molar concentration is nondetect (ND), therefore bioavailability ratio cannot be calculated; µmol/g – micromoles per gram; **bold** – SEM/AVS is greater than 1; Metals are bioavailable

Inorganics (Metals and Cyanide) PALs and Exceedances

Several inorganics had very high exceedance percentages. **Table 9** shows the average concentrations of selected inorganics at depth compared with their PAL. Order of magnitude is also included to show the extent of exceedances. Order of magnitude is based on the average concentration of the exceedances from PONAR (reflective of the top 6 inches) and from 0 to 1 foot and 1 to 2 feet deep.

Table 9 – PAL Limits and Average Exceedances per Depth for Selected Inorganics

Analyte	PAL (mg/kg)	PONAR (mg/kg)	0–1 Foot (mg/kg)	1–2 Feet (mg/kg)	Average Concentration (mg/kg)	Order of Magnitude
Cadmium	0.71	3.67	5.75	10.12	6.51	1
Chromium	0.3	105.78	93.18	117.4	105.45	3
Cobalt	2.3	7.12	6.7	7.57	7.13	-
Copper	31.6	83.92	116.17	158	119.36	1
Iron	5,500	31,777.78	28,081.82	22,600	27,486.53	1
Lead	35.8	128.36	195	221.8	181.72	1
Manganese	180	999.41	529	642	723.47	-
Mercury	0.174	1.87	3.87	3.69	3.14	1
Nickel	22.7	91.55	64	93.71	83.09	-
Zinc	121	407.86	550	644	533.95	-

mg/kg – milligrams per kilogram

Polycyclic Aromatic Hydrocarbons

PAHs were detected in 76% of the samples and 50% of these samples had PAL exceedances. **Table 10** summarizes the PAH detections and exceedances. **Figures 5a**, **5b**, and **5c** show the PAH distributions and concentrations.

Table 10 – Sediment Sample Detections and Exceedances – Polycyclic Aromatic Hydrocarbons

Analyte	Exceeded	Detected	Total Samples
Acenaphthene	20	20	48
Acenaphthylene	24	24	48
Anthracene	36	39	48
Benzo(a)anthracene	34	38	48
Benzo(a)pyrene	30	33	48
Benzo(b)fluoranthene	27	34	48
Benzo(g,h,i)perylene	24	26	48
Benzo(k)fluoranthene	30	34	48
Benzo[e]pyrene	23	33	48
C1-Benz[a]anthracenes/Chrysenes	23	35	48
C1-Fluoranthenes/Pyrenes	31	46	48
C1-Fluorenes	18	44	48
C1-Naphthalene	4	35	48
C1-Phenanthrenes/Anthracenes	30	45	48
C2-Benz(a)anthracene/Chrysene	6	29	48
C2-Fluorenes	19	41	48
C2-Naphthalene	17	42	48
C2-Phenanthrenes/Anthracenes	28	46	48
C3-Fluorenes	18	33	48
C3-Naphthalene	21	47	48
C3-Phenanthrenes/Anthracenes	25	47	48
C4-Naphthalene	22	47	48
C4-Phenanthrenes/Anthracenes	23	46	48
Chrysene	35	39	48
Dibenz(a,h)anthracene	20	21	48
Fluoranthene	35	44	48
Fluorene	22	26	48
Indeno(1,2,3-c,d)pyrene	23	26	48
Naphthalene	25	37	48
Perylene	7	18	48

Analyte	Exceeded	Detected	Total Samples
Phenanthrene	35	46	48
Pyrene	37	44	48

Per- and Polyfluoroalkyl Substances

PFAS results are currently unvalidated. There were some detections and no exceedances. PFAS data is presented in **Attachment B**.

Vertical Distribution

Sample locations were evaluated to identify trends of exceedances in shallow or deeper sediments. Depth did not appear to have a major impact on contaminant exceedance amounts. If a contaminant had high exceedances, the high exceedances were generally observed at every depth sampled. **Table 11** summarizes the vertical distribution of sediment sample detections and exceedances.

Table 11 – Sediment Sample Detections and Exceedances – Vertical Distribution

Analyte	PAL	Exceedances at Depth Interval (0–0.5 feet) (PONAR)	Exceedances at Depth Interval (0–1 foot)	Exceedances at Depth Interval (1–2 feet)	Exceedances at Depth Interval (in feet)
Acetone	9.9 µg/kg	5 of 22	5 of 13	6 of 11	2–3: 3 of 3 3–5: 2 of 3 5–7: 2 of 2 7–9: 1 of 2
Methyl Ethyl Ketone (2-Butanone)	42.4 µg/kg	0 of 22	1 of 13	0 of 11	2–3: 0 of 3 3–5: 0 of 3 5–7: 0 of 2 7–9: 0 of 1
Aldrin	2 µg/kg	6 of 18	5 of 11	3 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Alpha BHC	6 µg/kg	3 of 18	2 of 11	2 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 0 of 2 7–9: 0 of 1
Alpha Endosulfan	3.26 µg/kg	9 of 18	4 of 11	3 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Alpha-Chlordane	3.24 µg/kg	3 of 18	4 of 11	3 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Beta BHC	5 µg/kg	17 of 18	6 of 11	4 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1

Analyte	PAL	Exceedances at Depth Interval (0–0.5 feet) (PONAR)	Exceedances at Depth Interval (0–1 foot)	Exceedances at Depth Interval (1–2 feet)	Exceedances at Depth Interval (in feet)
Beta Endosulfan	1.94 µg/kg	17 of 18	7 of 11	4 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Beta-Chlordane	3.24 µg/kg	15 of 18	4 of 11	3 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Dieldrin	1.9 µg/kg	17 of 18	6 of 11	4 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Endosulfan Sulfate	34.6 µg/kg	1 of 18	1 of 11	0 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 0 of 1
Endrin	2.22 µg/kg	12 of 18	6 of 11	6 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Gamma BHC (Lindane)	2.37 µg/kg	10 of 18	3 of 11	1 of 10	2–3: 1 of 3 3–5: 0 of 3 5–7: 1 of 2 7–9: 0 of 1
Heptachlor	0.6 µg/kg	2 of 18	3 of 11	1 of 10	2–3: 0 of 3 3–5: 0 of 3 5–7: 0 of 2 7–9: 0 of 1
Heptachlor Epoxide	2.47 µg/kg	6 of 18	4 of 11	3 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Methoxychlor	13.6 µg/kg	8 of 18	5 of 11	3 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
p,p'-DDD	4.88 µg/kg	11 of 18	5 of 11	3 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
p,p'-DDE	3.16 µg/kg	13 of 18	7 of 11	3 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1

Analyte	PAL	Exceedances at Depth Interval (0–0.5 feet) (PONAR)	Exceedances at Depth Interval (0–1 foot)	Exceedances at Depth Interval (1–2 feet)	Exceedances at Depth Interval (in feet)
p,p'-DDT	4.16 µg/kg	16 of 18	5 of 11	3 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
PCB-1248 (Aroclor 1248)	59.8 µg/kg	15 of 18	6 of 11	3 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
PCB-1260 (Aroclor 1260)	59.8 µg/kg	18 of 18	7 of 11	4 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Aluminum	7,700 mg/kg	0 of 18	3 of 11	2 of 10	2–3: 0 of 3 3–5: 0 of 3 5–7: 2 of 2 7–9: 0 of 1
Antimony	2 mg/kg	3 of 18	3 of 11	3 of 10	2–3: 0 of 3 3–5: 0 of 3 5–7: 0 of 2 7–9: 0 of 1
Arsenic	0.68 mg/kg	18 of 18	11 of 11	10 of 10	2–3: 3 of 3 3–5: 3 of 3 5–7: 2 of 2 7–9: 1 of 1
Barium	20 mg/kg	17 of 18	10 of 11	9 of 10	2–3: 2 of 3 3–5: 2 of 3 5–7: 2 of 2 7–9: 1 of 1
Cadmium	0.71 mg/kg	10 of 18	8 of 11	5 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Chromium	0.3 mg/kg	18 of 18	11 of 11	10 of 10	2–3: 3 of 3 3–5: 3 of 3 5–7: 2 of 2 7–9: 1 of 1
Cobalt	2.3 mg/kg	18 of 18	11 of 11	10 of 10	2–3: 3 of 3 3–5: 3 of 3 5–7: 2 of 2 7–9: 1 of 1
Copper	31.6 mg/kg	12 of 18	6 of 11	5 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1

Analyte	PAL	Exceedances at Depth Interval (0–0.5 feet) (PONAR)	Exceedances at Depth Interval (0–1 foot)	Exceedances at Depth Interval (1–2 feet)	Exceedances at Depth Interval (in feet)
Cyanide	0.0001 mg/kg	4 of 18	1 of 11	3 of 10	2–3: 0 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Iron	5,500 mg/kg	18 of 18	11 of 11	10 of 10	2–3: 3 of 3 3–5: 3 of 3 5–7: 2 of 2 7–9: 1 of 1
Lead	35.8 mg/kg	11 of 18	6 of 11	5 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Manganese	180 mg/kg	17 of 18	10 of 11	10 of 10	2–3: 2 of 3 3–5: 2 of 3 5–7: 2 of 2 7–9: 1 of 1
Mercury	0.174 mg/kg	15 of 18	8 of 11	6 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Nickel	22.7 mg/kg	11 of 18	8 of 11	7 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Selenium	0.72 mg/kg	3 of 18	2 of 11	3 of 10	2–3: 1 of 3 3–5: 0 of 3 5–7: 0 of 2 7–9: 0 of 1
Silver	0.5 mg/kg	5 of 18	6 of 11	5 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Thallium	0.078 mg/kg	15 of 18	11 of 11	9 of 10	2–3: 3 of 3 3–5: 2 of 3 5–7: 2 of 2 7–9: 1 of 1
Zinc	121 mg/kg	14 of 18	6 of 11	5 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Acenaphthene	6.71 µg/kg	14 of 18	2 of 11	2 of 10	2–3: 1 of 3 3–5: 0 of 3 5–7: 1 of 2 7–9: 0 of 1

Analyte	PAL	Exceedances at Depth Interval (0–0.5 feet) (PONAR)	Exceedances at Depth Interval (0–1 foot)	Exceedances at Depth Interval (1–2 feet)	Exceedances at Depth Interval (in feet)
Acenaphthylene	5.87 µg/kg	15 of 18	4 of 11	2 of 10	2–3: 1 of 3 3–5: 0 of 3 5–7: 1 of 2 7–9: 1 of 1
Anthracene	57.2 µg/kg	18 of 18	7 of 11	5 of 10	2–3: 2 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Benzo(a)anthracene	108 ug/kg	18 of 18	7 of 11	4 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Benzo(a)pyrene	110 µg/kg	17 of 18	5 of 11	3 of 10	2–3: 2 of 3 3–5: 1 of 3 5–7: 1 of 2 7–9: 1 of 1
Benzo(b)fluoranthene	1,100 µg/kg	15 of 18	4 of 11	3 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Benzo(g,h,i)perylene	170 µg/kg	17 of 18	2 of 11	3 of 10	2–3: 2 of 3 3–5: 0 of 3 5–7: 0 of 2 7–9: 0 of 1
Benzo(k)fluoranthene	240 µg/kg	17 of 18	4 of 11	3 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Benzo[e]pyrene	1,000 µg/kg	14 of 18	4 of 11	3 of 10	2–3: 1 of 3 3–5: 0 of 3 5–7: 1 of 2 7–9: 0 of 1
C1-Benz[a]anthracene/Chrysenes	1,000 µg/kg	11 of 18	4 of 11	5 of 10	2–3: 1 of 3 3–5: 0 of 3 5–7: 2 of 2 7–9: 0 of 1
C1-Fluoranthenes/ Pyrenes	1,000 µg/kg	14 of 18	6 of 11	5 of 10	2–3: 2 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
C1-Fluorenes	600 µg/kg	5 of 18	5 of 11	5 of 10	2–3: 1 of 3 3–5: 0 of 3 5–7: 2 of 2 7–9: 0 of 1

Analyte	PAL	Exceedances at Depth Interval (0–0.5 feet) (PONAR)	Exceedances at Depth Interval (0–1 foot)	Exceedances at Depth Interval (1–2 feet)	Exceedances at Depth Interval (in feet)
C1-Naphthalene	600 µg/kg	0 of 18	2 of 11	2 of 10	2–3: 1 of 3 3–5: 0 of 3 5–7: 0 of 2 7–9: 0 of 1
C1-Phenanthrenes/ Anthracenes	600 µg/kg	13 of 18	6 of 11	5 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
C2-Benz(a)anthracene/ Chrysene	1,000 µg/kg	2 of 18	2 of 11	2 of 10	2–3: 0 of 3 3–5: 0 of 3 5–7: 0 of 2 7–9: 0 of 1
C2-Fluorenes	600 µg/kg	4 of 18	6 of 11	4 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
C2-Naphthalene	600 µg/kg	3 of 18	5 of 11	4 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
C2-Phenanthrenes/ Anthracenes	600 µg/kg	11 of 18	6 of 11	5 of 10	2–3: 2 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
C3-Fluorenes	600 µg/kg	6 of 18	5 of 11	2 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
C3-Naphthalene	600 µg/kg	5 of 18	6 of 11	5 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
C3-Phenanthrenes/ Anthracenes	600 µg/kg	9 of 18	6 of 11	5 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
C4-Naphthalene	600 µg/kg	6 of 18	6 of 11	5 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
C4-Phenanthrenes/ Anthracenes	600 µg/kg	8 of 18	6 of 11	5 of 10	2–3: 1 of 3 3–5: 0 of 3 5–7: 2 of 2 7–9: 1 of 1

Analyte	PAL	Exceedances at Depth Interval (0–0.5 feet) (PONAR)	Exceedances at Depth Interval (0–1 foot)	Exceedances at Depth Interval (1–2 feet)	Exceedances at Depth Interval (in feet)
Chrysene	166 µg/kg	18 of 18	7 of 11	4 of 10	2–3: 2 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Dibenz(a,h)anthracene	33 µg/kg	15 of 18	2 of 11	2 of 10	2–3: 1 of 3 3–5: 0 of 3 5–7: 0 of 2 7–9: 0 of 1
Fluoranthene	423 µg/kg	18 of 18	6 of 11	5 of 10	2–3: 2 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Fluorene	77.4 µg/kg	12 of 18	3 of 11	3 of 10	2–3: 1 of 3 3–5: 0 of 3 5–7: 1 of 2 7–9: 1 of 1
Indeno(1,2,3-c,d)pyrene	200 µg/kg	16 of 18	7 of 11	3 of 10	2–3: 2 of 3 3–5: 0 of 3 5–7: 0 of 2 7–9: 0 of 1
Naphthalene	176 µg/kg	9 of 18	5 of 11	5 of 10	2–3: 1 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Perylene	1,000 µg/kg	5 of 18	0 of 11	2 of 10	2–3: 0 of 3 3–5: 0 of 3 5–7: 0 of 2 7–9: 0 of 1
Phenanthrene	204 µg/kg	18 of 18	6 of 11	5 of 10	2–3: 2 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
Pyrene	195 µg/kg	18 of 18	8 of 11	5 of 10	2–3: 2 of 3 3–5: 1 of 3 5–7: 2 of 2 7–9: 1 of 1
2,3,7,8-Tetrachlorodibenzo-p-Dioxin	0.12 pg/g	4 of 18	1 of 11	1 of 10	2–3: 0 of 3 3–5: 0 of 3 5–7: 0 of 2 7–9: 0 of 1
Total Dioxin TEQ (Mammal)	0.12 pg/g	18 of 18	11 of 11	10 of 10	2–3: 3 of 3 3–5: 3 of 3 5–7: 2 of 2 7–9: 1 of 1

µg/kg – micrograms per kilogram; pg/g – picograms per gram

Findings – Maximum Exceedances Distribution Relative to Trenton Channel Shoreline

Maximum exceedances found in the sediment were concentrated primarily adjacent to the site, with a decrease in maximum exceedances the further south the samples were collected. Sample exceedances at each location are shown in **Figures 4a**, **4b**, and **4c**. The highest number of maximum exceedances were adjacent to the former wastewater treatment plant (WWTP). The other areas of maximum exceedances were adjacent to and upstream of the McLouth bulkhead at the site. **Table 12** lists the sediment borings, their location relative to the shoreline, and the constituents detected at relatively high concentrations in that area.

Table 12 – Sediment Sample Maximum Exceedances – Distribution Relative to Shoreline

Sediment Boring*	Location	Analytes
MSTC23-SD01	Site Shoreline – Upstream of Steel Bulkhead	**Inorganics (5):** Chromium, Cobalt, Manganese, Nickel, Zinc
MSTC23-SD02	Site Shoreline – Along Steel Bulkhead	**Pesticides (1):** Alpha Endosulfan **D/Fs (1):** 2,3,7,8-Tetrachlorodibenzofuran **Inorganics (2):** Aluminum, Cyanide **PAHs (2):** C1-Fluorenes, C3-Naphthalene
MSTC23-SD03	Site Shoreline – Along Steel Bulkhead	**VOCs (1):** Methyl Ethyl Ketone (2-Butanone) **Pesticides (1):** Aldrin **D/Fs (1):** Total Dioxin TEQ (Mammal) **Inorganics (1):** Mercury **PAHs (6):** C1-Naphthalene, C1-Phenanthrenes/Anthracenes, C2-Fluorenes, C2-Naphthalene, C2-Phenanthrenes/Anthracenes, C4-Naphthalene
MSTC23-SD05	Site Shoreline – Along Steel Bulkhead	**Pesticides (5):** Beta BHC (Beta Hexachlorocyclohexane), Beta Endosulfan, Endrin, Gamma BHC (Lindane), Heptachlor Epoxide **PAHs (7):** Acenaphthylene, Benzo(a)anthracene, C1-Fluoranthenes/Pyrenes, Chrysene, Fluoranthene, Naphthalene, Phenanthrene
MSTC23-SD06	Site Shoreline – Along Steel Bulkhead; Adjacent to WWTP	**VOCs (1):** Acetone **Pesticides (7):** Alpha BHC (Alpha Hexachlorocyclohexane), Alpha-Chlordane, Beta-Chlordane, Dieldrin, Endosulfan Sulfate, p,p'-DDE, p,p'-DDT **Aroclors (2):** PCB-1248 (Aroclor 1248), PCB-1260 (Aroclor 1260) **Inorganics (4):** Barium, Cadmium, Selenium, Silver
MSTC23-SD07	Downstream of WWTP – Along Shoreline	**PAHs (10):** Acenaphthene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Benzo[e]pyrene, C1-Benz[a]anthracenes/Chrysenes, Dibenz(a,h)anthracene, Indeno(1,2,3-c,d)pyrene, Perylene
MSTC23-SD09	Downstream of Site – Along Shoreline Near Residential Area	**Pesticides (2):** Heptachlor, p,p'-DDE **Inorganics (4):** Arsenic, Iron, Lead, Thallium
MSTC23-SD14	Downstream of Site – Along Shoreline Near Residential Area	**Pesticides (2):** Methoxychlor, p,p'-DDD **PAHs (1):** Pyrene

Sediment Boring*	Location	Analytes
MSTC23-SD19	Downstream of Site – Along Shoreline Near Residential Area	**Inorganics (3):** Antimony, Cadmium, Copper **PAHs (6):** Anthracene, C3-Fluorenes, C3-Phenanthrenes/Anthracenes, C4-Phenanthrenes/Anthracenes, Fluorene, C2-Benz(a)anthracene/Chrysene

*__Figures 3a__, __3b__, and __3c__ show the sediment coring locations

Recommendations

A review of the analytical data does not show a distinct vertical trend except possibly for PAHs, which seem to decrease with depth in the samples from the middle portion of OU3. The other chemicals are present throughout the sediment vertical profile at relatively similar concentrations. A potential goal for additional characterization may include investigating areas to the east of sample locations 2, 3, 6, and 19 to better define the lateral extent of contamination.

To fully evaluate the nature and extent of PAL exceedances and the presence of potential source material at OU3, additional sediment borings near maximum exceedance and unbounded locations are recommended. Based on the existing sediment data, decision-makers would benefit from further sediment characterization at the following locations:

- East of MSTC23-SD02, along the McLouth bulkhead, where one maximum exceedance of pesticides and two maximum exceedances of inorganics were detected
- East of MSTC23-SD03, along the McLouth bulkhead, where one maximum exceedance of VOCs, one maximum exceedance of pesticides, and one maximum exceedance of inorganics were detected
- East of MSTC23-SD06, along the McLouth bulkhead and adjacent to the former WWTP, where one maximum exceedance of VOCs, seven maximum exceedances of pesticides, two maximum exceedances of PCB Aroclors, and four maximum exceedances of inorganics were detected
- East of MSTC23-SD19, downstream and along the residential shoreline, where three maximum exceedances of inorganics were detected

To evaluate these four areas along the Trenton Channel, up to four sediment borings per area would be assumed and refined following review of the bathymetric survey data, where the presence of mounds of sediment or depressions filled with sediment will be determined. Based on location-specific PAL exceedances, sediment borings and sediment sampling depths may be limited. Additional analytical characterization of the underlying regional clay is not anticipated. While these areas were identified based on Year 1 sediment borings, the Trenton Channel exhibited detections and exceedances of many analytes throughout. Further sediment borings outside of these zones may be necessary to further understand the full extent of contamination. The final scope of additional sediment characterization and specific boring locations will be finalized after all OU data has been evaluated and reviewed, including the bathymetric survey.

Because of the lack of sediment in sediment traps, a proposed change to both location and duration of sediment traps is recommended. Year 2 sediment traps should be placed in the Trenton Channel for at least 60 days at locations where there is known sediment deposition to better allow for adequate sediment accumulation for analysis.

For Year 2, based on Year 1 observations, sediment partitioning could be used to derive porewater concentrations to avoid potential issues during porewater sample collection.

Last, a survey of habitat quality could help in evaluating potential ecological risks.

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Figures

Tables

Attachments

Figures

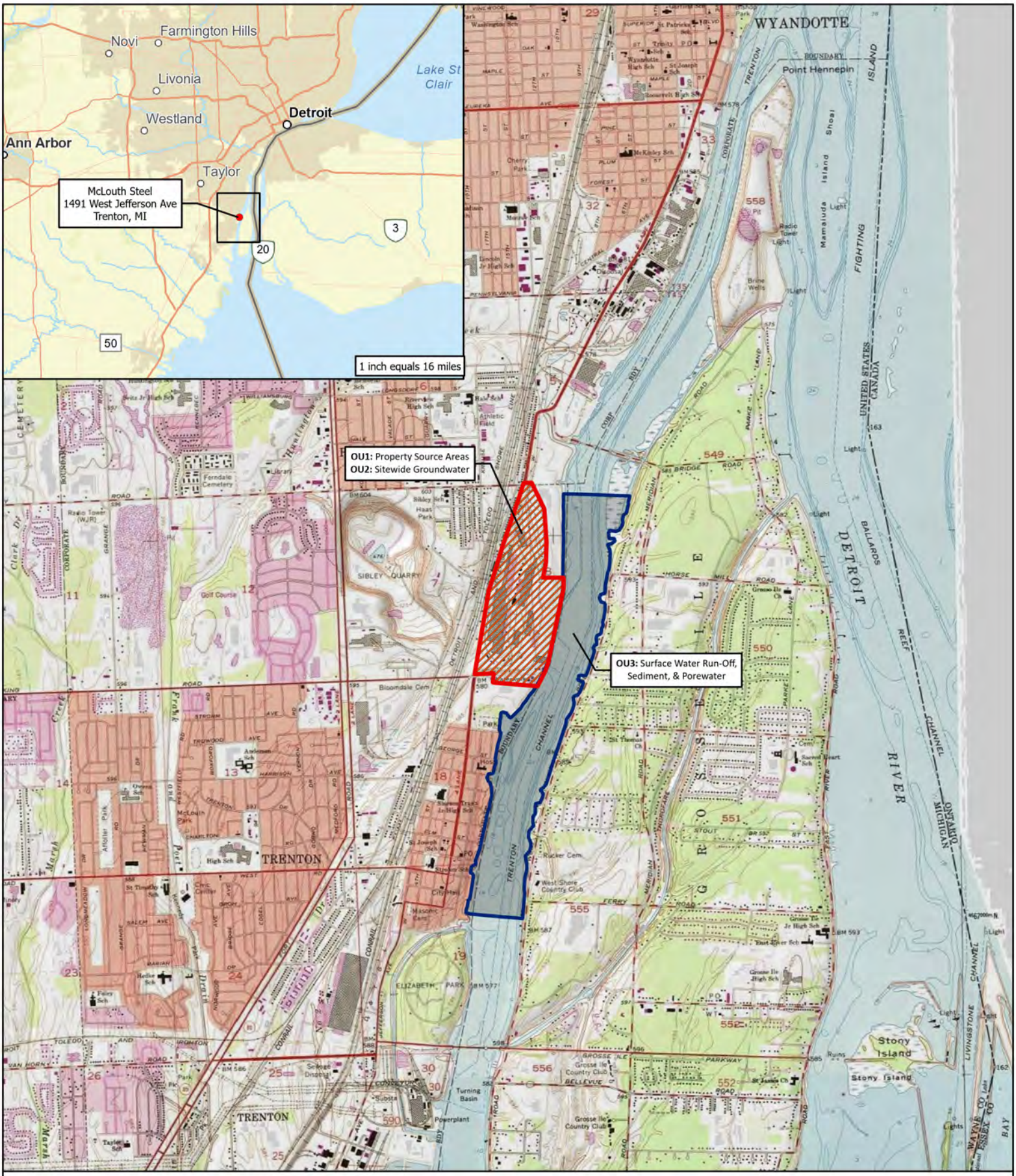

Figure 1
Site Location Map
McLouth Steel Corp Superfund Site
Trenton, Wayne County. Michigan

CDM Smith

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Feet

NAD 1983 StatePlane Michigan South FIPS 2113 Feet

Legend

- Current Structure
- Former Structure
- Former Tanks & Silos
- Site Boundary

Figure 2

Site Layout

McLouth Steel Corp Superfund Site

Trenton, Wayne County. Michigan

CDM Smith

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CDM Smith

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Sediment Sample Collection Status

- Surface & Subsurface Samples
- Surface Sample Only
- Not Sampled - Negligible Sediment Present
- Sediment Trap Deployed/Retrieved - Negligible Sediment Present

- Designated Underwater Utility Crossing Corridor
- Former McLouth Steel Corp. Site
- RTRR Property Site
- Wayne County Parcels

* Location was relocated based on existing conditions

Figure 3a
Sediment Sampling Locations
McLouth Steel Corp Superfund Site
Trenton, Wayne County, Michigan

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Sediment Sample Collection Status

- Surface & Subsurface Samples
- Surface Sample Only
- Not Sampled - Negligible Sediment Present
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- Former McLouth Steel Corp. Site
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NAD 1983 StatePlane Michigan South FIPS 2113 Feet

CDM Smith

Figure 3b
Sediment Sampling Locations
McLouth Steel Corp Superfund Site
Trenton, Wayne County, Michigan

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CDM Smith

N

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NAD 1983 StatePlane Michigan South FIPS 2113 Feet

Sediment Sample Collection Status

- Surface & Subsurface Samples
- Surface Sample Only
- Not Sampled - Negligible Sediment Present
- Sediment Trap Deployed/Retrieved - Negligible Sediment Present
- Undwerwater Utility Crossing
- No Dig Zone (25' Buffer)
- Former McLouth Steel Corp. Site
- RTRR Property Site
- Wayne County Parcels

Figure 3c
Sediment Sampling Locations
McLouth Steel Corp Superfund Site
Trenton, Wayne County, Michigan

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Location:	MSTC23-SD01
Sample Depth (ft bss):	SS - 0.5
Analyte	Result
INORGANICS (mg/kg) CADMIUM	8.8
INORGANICS (mg/kg) CHROMIUM, TOTAL	780
INORGANICS (mg/kg) COBALT	15
INORGANICS (mg/kg) COPPER	180
INORGANICS (mg/kg) IRON	67,000
INORGANICS (mg/kg) LEAD	310
INORGANICS (mg/kg) MANGANESE	5,100
INORGANICS (mg/kg) MERCURY	5.3
INORGANICS (mg/kg) NICKEL	460
INORGANICS (mg/kg) ZINC	1,300
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	1800
PCBs (µg/kg) PCB-1260 (AROCLOR 1260)	1200

Location:	MSTC23-SD03		
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
INORGANICS (mg/kg) CADMIUM	1.5	7.4	10
INORGANICS (mg/kg) CHROMIUM, TOTAL	110	120	290
INORGANICS (mg/kg) COBALT	9.5	5.2	8.7
INORGANICS (mg/kg) COPPER	120	82	140
INORGANICS (mg/kg) IRON	36,000	36,000	48,000
INORGANICS (mg/kg) LEAD	56	140	240
INORGANICS (mg/kg) MANGANESE	2,000	300	590
INORGANICS (mg/kg) MERCURY	1.2	12	7.3
INORGANICS (mg/kg) NICKEL	65	65	140
INORGANICS (mg/kg) ZINC	240	440	650
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	1,100	5,600	6,000
PCBs (µg/kg) PCB-1260 (AROCLOR 1260)	1,800	2,900	2,300

Location:	MSTC23-SD02		
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
INORGANICS (mg/kg) CADMIUM	4.2	4.4	9.0
INORGANICS (mg/kg) CHROMIUM, TOTAL	160	130	300
INORGANICS (mg/kg) COBALT	8.4	9.2	12
INORGANICS (mg/kg) COPPER	70	85	130
INORGANICS (mg/kg) IRON	25,000	24,000	44,000
INORGANICS (mg/kg) LEAD	97	110	320
INORGANICS (mg/kg) MANGANESE	1,200	870	2,500
INORGANICS (mg/kg) MERCURY	4.7	5.3	11
INORGANICS (mg/kg) NICKEL	93	81	190
INORGANICS (mg/kg) ZINC	390	380	790
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	1,900	2,900	5,000
PCBs (µg/kg) PCB-1260 (AROCLOR 1260)	4,000	1,700	2,500

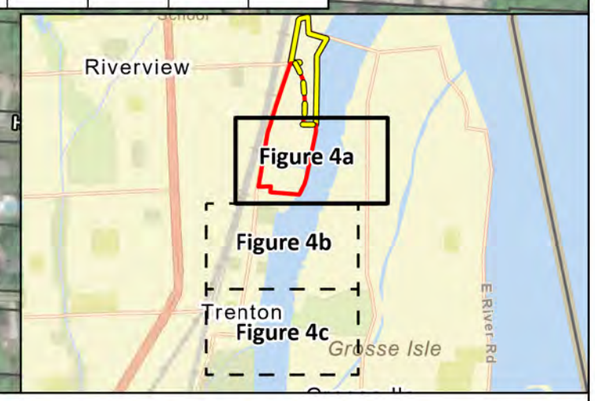
Location:	MSTC23-SD05
Sample Depth (ft bss):	SS - 0.5
Analyte	Result
INORGANICS (mg/kg) CADMIUM	1.0
INORGANICS (mg/kg) CHROMIUM, TOTAL	58
INORGANICS (mg/kg) COBALT	9.4
INORGANICS (mg/kg) COPPER	47
INORGANICS (mg/kg) IRON	34,000
INORGANICS (mg/kg) LEAD	47
INORGANICS (mg/kg) MANGANESE	710
INORGANICS (mg/kg) MERCURY	1.4
INORGANICS (mg/kg) NICKEL	42
INORGANICS (mg/kg) ZINC	240
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	1,400
PCBs (µg/kg) PCB-1260 (AROCLOR 1260)	3,100

Location:	MSTC23-SD06*						
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2	2 - 3	3 - 5	5 - 7	7 - 9
Analyte	Result	Result	Result	Result	Result	Result	Result
INORGANICS (mg/kg) CADMIUM	0.76	8.7	13	14	9.0	13	8.2
INORGANICS (mg/kg) CHROMIUM, TOTAL	87	220	370	320	210	330	250
INORGANICS (mg/kg) COBALT	9.9	6.0	10	12	6.9	10	8.2
INORGANICS (mg/kg) COPPER	62	86	150	160	100	190	130
INORGANICS (mg/kg) IRON	45,000	35,000	30,000	40,000	25,000	46,000	50,000
INORGANICS (mg/kg) LEAD	52	160	290	320	200	340	220
INORGANICS (mg/kg) MANGANESE	900	400	930	870	620	840	950
INORGANICS (mg/kg) MERCURY	0.39	1.5	1.8	2.0	5.0	4.2	3.9
INORGANICS (mg/kg) NICKEL	68	97	190	160	130	190	120
INORGANICS (mg/kg) ZINC	240	440	850	820	530	930	640
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	330	1,300	4,900	7,800	6,700	5,600	3,000
PCBs (µg/kg) PCB-1260 (AROCLOR 1260)	550	580	560	4,600	5,000	2,400	440

Location:	MSTC23-SD07
Sample Depth (ft bss):	SS - 0.5
Analyte	Result
INORGANICS (mg/kg) CADMIUM	1.2
INORGANICS (mg/kg) CHROMIUM, TOTAL	87
INORGANICS (mg/kg) COBALT	8.9
INORGANICS (mg/kg) COPPER	52
INORGANICS (mg/kg) IRON	69,000
INORGANICS (mg/kg) LEAD	71
INORGANICS (mg/kg) MANGANESE	1,400
INORGANICS (mg/kg) MERCURY	0.99
INORGANICS (mg/kg) NICKEL	53
INORGANICS (mg/kg) ZINC	380
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	390
PCBs (µg/kg) PCB-1260 (AROCLOR 1260)	470

Notes:
Sed PAL - Sediment Project Action Limit
mg/kg - milligrams per kilogram
µg/kg - micrograms per kilogram
ft bss - feet below sediment surface
BOLD - PAL Exceeded
ND - Not Detected

Analyte	Sed PAL
INORGANICS (mg/kg) CADMIUM	0.71
INORGANICS (mg/kg) CHROMIUM, TOTAL	0.3
INORGANICS (mg/kg) COBALT	2.3
INORGANICS (mg/kg) COPPER	31.6
INORGANICS (mg/kg) IRON	5,500
INORGANICS (mg/kg) LEAD	35.8
INORGANICS (mg/kg) MANGANESE	180
INORGANICS (mg/kg) MERCURY	0.174
INORGANICS (mg/kg) NICKEL	22.7
INORGANICS (mg/kg) ZINC	121
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	59.8
PCBs (µg/kg) PCB-1260 (AROCLOR 1260)	59.8



CDM Smith

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NAD 1983 StatePlane Michigan South FIPS 2113 Feet

Sediment Sample Collection Status
- Surface & Subsurface Samples
- Surface Sample Only
- Not Sampled - Negligible Sediment Present
- Sediment Trap Deployed/Retrieved - Negligible Sediment Present

- Designated Underwater Utility Crossing Corridor
- Former McLouth Steel Corp. Site
- RTRR Property Site
- Wayne County Parcels

* Location was relocated based on existing conditions

Figure 4a
Sediment Sample Exceedances - Inorganics & PCB Aroclors
McLouth Steel Corp Superfund Site
Trenton, Wayne County, Michigan

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Location:	MSTC23-SD20		
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
INORGANICS (mg/kg) CADMIUM	0.30	**0.84**	0.18
CHROMIUM, TOTAL	**33**	**22**	**8.0**
COBALT	**4.9**	**3.1**	**2.7**
COPPER	13	13	5.3
IRON	**42,000**	**8,400**	**7,300**
LEAD	28	27	6.4
MANGANESE	**690**	**210**	**260**
MERCURY	**2.3**	**0.20**	0.046
NICKEL	22	15	7.7
ZINC	**160**	100	28
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	**240**	59	9.4
PCB-1260 (AROCLOR 1260)	**380**	**65**	9.6

Location:	MSTC23-SD08		
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
INORGANICS (mg/kg) CADMIUM	0.14	**0.79**	0.12
CHROMIUM, TOTAL	**10**	**19**	**10**
COBALT	**3.5**	**5.1**	**5.2**
COPPER	7.6	15	6.9
IRON	**14,000**	**11,000**	**12,000**
LEAD	7.0	31	4.7
MANGANESE	150	**240**	**300**
MERCURY	0.082	**0.33**	ND
NICKEL	9.3	17	12
ZINC	51	81	30
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	**75**	35	ND
PCB-1260 (AROCLOR 1260)	**96**	34	ND

Location:	MSTC23-SD09		
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
INORGANICS (mg/kg) CADMIUM	**11**	**12**	0.48
CHROMIUM, TOTAL	**210**	**240**	**20**
COBALT	**8.7**	**9.6**	**8.5**
COPPER	160	200	21
IRON	**50,000**	**100,000**	**19,000**
LEAD	**440**	**470**	15
MANGANESE	**1,400**	**1,600**	**400**
MERCURY	**4.7**	**6.1**	**0.18**
NICKEL	**84**	**110**	**27**
ZINC	**1,100**	**1,100**	68
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	**980**	**1,600**	24
PCB-1260 (AROCLOR 1260)	**1,100**	**1,200**	30

Location:	MSTC23-SD22*				
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2	2 - 3	3 - 5
Analyte	Result	Result	Result	Result	Result
INORGANICS (mg/kg) CADMIUM	**0.84**	**2.8**	**4.6**	0.16	0.092
CHROMIUM, TOTAL	**29**	**80**	**36**	**9.3**	**7.4**
COBALT	**5.4**	**5.7**	**4.9**	**6.0**	**4.4**
COPPER	**32**	**54**	**100**	11	5.8
IRON	**17,000**	**21,000**	**15,000**	**7,400**	**5,800**
LEAD	29	**110**	**89**	10	3.3
MANGANESE	**270**	**460**	**330**	150	120
MERCURY	**0.42**	**0.62**	**0.58**	0.092	ND
NICKEL	21	**44**	**25**	11	8.8
ZINC	**160**	**370**	**300**	38	26
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	**140**	**190**	55	ND	ND
PCB-1260 (AROCLOR 1260)	**150**	**150**	26	ND	ND

Location:	MSTC23-SD10
Sample Depth (ft bss):	SS - 0.5
Analyte	Result
INORGANICS (mg/kg) CADMIUM	**0.96**
CHROMIUM, TOTAL	**49**
COBALT	**7.0**
COPPER	**41**
IRON	**37,000**
LEAD	**43**
MANGANESE	**760**
MERCURY	**0.94**
NICKEL	**34**
ZINC	**250**
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	ND
PCB-1260 (AROCLOR 1260)	**280**

Location:	MSTC23-SD12
Sample Depth (ft bss):	SS - 0.5
Analyte	Result
INORGANICS (mg/kg) CADMIUM	0.55
CHROMIUM, TOTAL	**34**
COBALT	**6.3**
COPPER	27
IRON	**24,000**
LEAD	26
MANGANESE	**450**
MERCURY	**0.34**
NICKEL	20
ZINC	**170**
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	ND
PCB-1260 (AROCLOR 1260)	**160**

Location:	MSTC23-SD23				
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2	2 - 3	3 - 5
Analyte	Result	Result	Result	Result	Result
INORGANICS (mg/kg) CADMIUM	0.49	0.33	0.18	0.12	0.11
CHROMIUM, TOTAL	**23**	**13**	**13**	**9.1**	**9.0**
COBALT	**6.7**	**5.3**	**6.2**	**5.0**	**4.8**
COPPER	27	11	13	9.4	9.6
IRON	**15,000**	**8,500**	**7,700**	**7,800**	**7,400**
LEAD	18	13	6.2	5.0	4.8
MANGANESE	**260**	160	**300**	**220**	**220**
MERCURY	**0.19**	0.076	ND	ND	ND
NICKEL	21	13	17	12	13
ZINC	110	57	37	29	29
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	**210**	17	ND	ND	ND
PCB-1260 (AROCLOR 1260)	**260**	15	ND	ND	ND

Location:	MSTC23-SD14		
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
INORGANICS (mg/kg) CADMIUM	0.45	0.37	0.20
CHROMIUM, TOTAL	**18**	**15**	**17**
COBALT	**3.4**	**8.7**	**11**
COPPER	**57**	17	19
IRON	**15,000**	**17,000**	**16,000**
LEAD	**70**	6.9	8.1
MANGANESE	**270**	**370**	**370**
MERCURY	0.083	ND	ND
NICKEL	**25**	**25**	**29**
ZINC	**380**	63	50
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	**190**	ND	ND
PCB-1260 (AROCLOR 1260)	**120**	ND	ND

Location:	MSTC23-SD13	
Sample Depth (ft bss):	SS - 0.5	0 -1
Analyte	Result	Result
INORGANICS (mg/kg) CADMIUM	0.47	0.31
CHROMIUM, TOTAL	**15**	**16**
COBALT	**3.2**	**9.3**
COPPER	21	18
IRON	**18,000**	**17,000**
LEAD	26	7.5
MANGANESE	**280**	**410**
MERCURY	**0.25**	ND
NICKEL	13	**27**
ZINC	110	65
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	ND	ND
PCB-1260 (AROCLOR 1260)	**74**	ND

Notes:
Sed PAL - Sediment Project Action Limit
mg/kg - milligrams per kilogram
µg/kg - micrograms per kilogram
ft bss - feet below sediment surface
BOLD - PAL Exceeded
ND - Not Detected

Analyte	Sed PAL
INORGANICS (mg/kg) CADMIUM	0.71
CHROMIUM, TOTAL	0.3
COBALT	2.3
COPPER	31.6
IRON	5,500
LEAD	35.8
MANGANESE	180
MERCURY	0.174
NICKEL	22.7
ZINC	121
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	59.8
PCB-1260 (AROCLOR 1260)	59.8

MSTC23-SD21
MSTC23-SD11
MSC22-ST3-2
MSC22-ST3-1
Byromar Ln
Church Rd
Stanton Dr
Trenton Channel
W Jefferson
Church Pl
Riverside Dr
George St
Riverside Osteopathic Hospital
Truax St
Superior St
Harrison Ave
Slocum Truax Park
Atwood St
Balmoral Dr
River

Riverview
Figure 4a
Figure 4b
Figure 4c
Trenton
Grosse Isle
E River Rd

N
0 400 800 Feet
NAD 1983 StatePlane Michigan South FIPS 2113 Feet

Sediment Sample Collection Status
- Surface & Subsurface Samples
- Surface Sample Only
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- Sediment Trap Deployed/Retrieved - Negligible Sediment Present

- Former McLouth Steel Corp. Site
- RTRR Property Site
- Wayne County Parcels

* Location was relocated based on existing conditions

Figure 4b
Sediment Sample Exceedances - Inorganics & PCB Aroclors
McLouth Steel Corp Superfund Site
Trenton, Wayne County, Michigan

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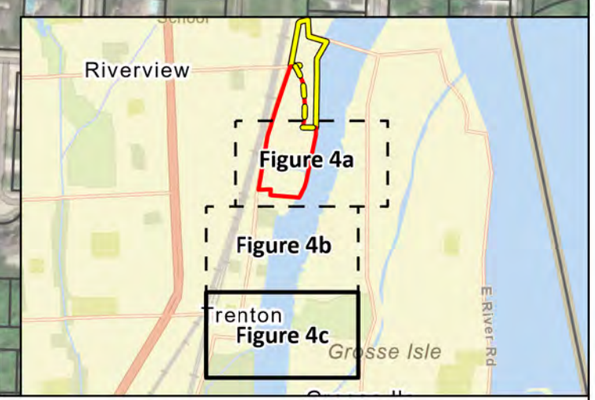
Location:	MSTC23-SD15	
Sample Depth (ft bss):	SS - 0.5	
	Analyte	Result
INORGANICS (mg/kg)	CADMIUM	0.62
	CHROMIUM, TOTAL	**43**
	COBALT	**6.2**
	COPPER	**46**
	IRON	**21,000**
	LEAD	**46**
	MANGANESE	**510**
	MERCURY	**0.53**
	NICKEL	**28**
	ZINC	**260**
PCBs (µg/kg)	PCB-1248 (AROCLOR 1248)	**82**
	PCB-1260 (AROCLOR 1260)	**110**

Location:	MSTC23-SD19		
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
INORGANICS (mg/kg) CADMIUM	**6.4**	**9.1**	**14**
CHROMIUM, TOTAL	**140**	**150**	**110**
COBALT	**5.6**	**6.5**	**6.5**
COPPER	**140**	**190**	**270**
IRON	**29,000**	**31,000**	**27,000**
LEAD	**180**	**180**	**170**
MANGANESE	**480**	**430**	**440**
MERCURY	**4.4**	**4.9**	**1.3**
NICKEL	**55**	**63**	**55**
ZINC	**440**	**570**	**630**
PCBs (µg/kg) PCB-1248 (AROCLOR 1248)	**480**	**480**	ND
PCB-1260 (AROCLOR 1260)	**740**	**450**	**260**

Notes:
Sed PAL - Sediment Project Action Limit
mg/kg - milligrams per kilogram
µg/kg - micrograms per kilogram
ft bss - feet below sediment surface
BOLD - PAL Exceeded
ND - Not Detected

	Analyte	Sed PAL
INORGANICS (mg/kg)	CADMIUM	0.71
	CHROMIUM, TOTAL	0.3
	COBALT	2.3
	COPPER	31.6
	IRON	5,500
	LEAD	35.8
	MANGANESE	180
	MERCURY	0.174
	NICKEL	22.7
	ZINC	121
PCBs (µg/kg)	PCB-1248 (AROCLOR 1248)	59.8
	PCB-1260 (AROCLOR 1260)	59.8



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0 400 800 Feet

NAD 1983 StatePlane Michigan South FIPS 2113 Feet

Sediment Sample Collection Status

- Surface & Subsurface Samples
- Surface Sample Only
- Not Sampled - Negligible Sediment Present
- Sediment Trap Deployed/Retrieved - Negligible Sediment Present
- Undwerwater Utility Crossing
- No Dig Zone (25' Buffer)
- Former McLouth Steel Corp. Site
- RTRR Property Site
- Wayne County Parcels

Figure 4c
Sediment Sample Exceedances - Inorganics & PCB Aroclors
McLouth Steel Corp Superfund Site
Trenton, Wayne County, Michigan

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Notes:
A - Unvalidated Result
H - Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J - The identification of the analyte is acceptable; the reported value is an estimation.
Sed PAL - Sediment Project Action Limit
pg/kg - picograms per kilogram
µg/kg - micrograms per kilogram
ft bss - feet below sediment surface
BOLD - PAL Exceeded
ND - Not Detected

	Analyte	Sed PAL
PAHs (ug/kg)	Acenaphthene	6.71
	Acenaphthylene	5.87
	Anthracene	57.2
	Benz(a)anthracene	108
	C1-Benzanthracene/chrysenes	1,000
	C2-Benzanthracene/chrysenes	1000
	C3-Benzanthracene/chrysenes	1000
	C4-Benzanthracene/chrysenes	1000
	Benzo(a)pyrene	110
	Benzo(b)fluoranthene	1100
	Benzo(e)pyrene	1000
	Benzo(g,h,i)perylene	170
	Benzo(k)fluoranthene	240
	Chrysene	166
	Dibenz(a,h)anthracene	33
	Fluoranthene	423
	C1-Fluoranthene/pyrenes	1000
	Fluorene	77.4
	C1-Fluorenes	600
	C2-Fluorenes	600
	C3-Fluorenes	600
	Indeno(1,2,3-cd)pyrene	200
	Naphthalene	176
	C1-Naphthalenes	600
	C2-Naphthalenes	600
	C3-Naphthalenes	600
	C4-Naphthalenes	600
	Perylene	1000
	Phenanthrene	204
	C1-Phenanthrene/anthracenes	600
	C2-Phenanthrene/anthracenes	600
	C3-Phenanthrene/anthracenes	600
	C4-Phenanthrene/anthracenes	600
	Pyrene	195
DIOXIN/FURANS (pg/kg)	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.12
	Total Dioxin TEQ (Mammal)	0.12

Location:	MSTC23-SD03		
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
Acenaphthene	220 A	ND	ND
Acenaphthylene	450 A	ND	ND
Anthracene	730 A	560 A	1100 A
3enzo(a)anthracene	2700 A	1600 A	3400 A
Benzo(a)pyrene	5400 A	1700 HA	3400 HA
Benzo(b)fluoranthene	5600 A	2200 HA	4100 HA
3enzo(g,h,i)perylene	2400 A	ND	1600 HA
Benzo(k)fluoranthene	2100 A	610 HA	1700 HA
Benzo(e)pyrene	3200 A	1300 HA	2100 HA
C1-Ben:[a]anthracenes/Chrysenes	1500 A	ND	1400 A
C1-Fluoranthenes/Pyrenes	2600 A	3200 A	5200 A
C1-Fluorenes	390 A	920 A	1100 A
C1-Naphthalene	190 A	720 A	950 A
C1-Phenanthrenes/Anthracenes	1800 A	5800 A	6700 A
C2-Benz[a]anthracene/Chrysene	310 A	ND	ND
C2-Fluorenes	290 A	3000 A	2200 A
C2-Naphthalene	400 A	2700 A	1900 A
C2-Phenanthrenes/Anthracenes	1700 A	8000 A	8900 A
C3-Fluorenes	200 A	1400 A	2000 A
C3-Naphthalene	550 A	4700 A	6800 A
C3-Phenanthrenes/Anthracenes	1100 A	6900 A	8100 A
C4-Naphthalene	700 A	5100 A	6800 A
C4-Phenanthrenes/Anthracenes	720 A	4000 A	730 A
Chrysene	2500 A	1600 A	3200 A
Diben:(a,h)anthracene	600 A	ND	ND
Fluoranthene	4000 A	2800 A	5000 A
Fluorene	320 A	ND	690 A
Indeno(1,2,3-c,d)pyrene	1900 A	ND	1500 HA
Naphthalene	550 A	450 A	540 A
Perylene	1000 A	ND	ND
Phenanthrene	2500 A	2700 A	3600 A
Pyrene	4200 A	3500 A	5800 A
2,3,7,8-Tetrachlorodibenzo-p-dioxin	5.38 J	ND	ND
Total Dioxin TEQ (Mammal)	17.9	97.3	105

Location:	MSTC23-SD01
Sample Depth (ft bss):	SS - 0.5
Analyte	Result
Anthracene	320 A
Benzo[a]anthracene	830 A
C1-Fluorenes	1100 A
C1-Phenanthrenes/Anthracenes	850 A
C2-Fluorenes	690 A
C2-Phenanthrenes/Anthracenes	2500 A
C3-Fluorenes	1400 A
C3-Naphthalene	1300 A
C3-Phenanthrenes/Anthracenes	2500 A
C4-Naphthalene	900 A
Chrysene	860 A
Fluoranthene	1300 A
Naphthalene	200 A
Phenanthrene	960 A
Pyrene	1400 A
Total Dioxin TEQ (Mammal)	21.46 JA

Location:	MSTC23-SD02		
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
Acenaphthylene	480 A	ND	ND
Anthracene	2800 A	710 A	450 A
Benzo(a)anthracene	2600 A	2000 A	1400 A
Benzo(a)pyrene	2900 HA	2500 HA	ND
Benzo(b)fluoranthene	3500 HA	ND	ND
Benzo(g,h,i)perylene	1600 HA	ND	ND
Benzo(k)fluoranthene	1200 HA	ND	ND
Benzo(e)pyrene	1800 HA	1600 HA	ND
C1-Benz[a]anthracenes/Chrysenes	2000 A	1800 A	1400 A
C1-Fluoranthenes/Pyrenes	3700 A	2800 A	2800 A
C1-Fluorenes	1900 A	1500 A	770 A
C1-Naphthalene	440 A	840 A	620 A
C1-Phenanthrenes/Anthracenes	1800 A	5900 A	3200 A
C2-Fluorenes	2400 A	2700 A	ND
C2-Naphthalene	1800 A	3600 A	1800 A
C2-Phenanthrenes/Anthracenes	5000 A	8600 A	5400 A
C3-Fluorenes	2600 A	1600 A	ND
C3-Naphthalene	3400 A	6500 A	2800 A
C3-Phenanthrenes/Anthracenes	4200 A	7500 A	6000 A
C4-Naphthalene	3500 A	5500 A	2600 A
C4-Phenanthrenes/Anthracenes	1700 A	1900 A	1500 A
Chrysene	2600 A	2200 A	1500 A
Fluoranthene	4000 A	3000 A	2200 A
Indeno[1,2,3-c,d]pyrene	1400 HA	ND	ND
Naphthalene	540 A	720 A	810 A
Phenanthrene	2700 A	3200 A	1900 A
Pyrene	4900 A	4000 A	3000 A
2,3,7,8-Tetrachlorodibenzo-p-dioxin	6.18 JKA	ND	ND
Total Dioxin TEQ (Mammal)	45.35 IA	140.67 IA	210.69 IA

Location:	MSTC23-SD05
Sample Depth (ft bss):	SS - 0.5
Analyte	Result
Acenaphthene	660 A
Acenaphthylene	1100 A
Anthracene	2300 A
Benzo(a)anthracene	9200 HA
Benzo(a)pyrene	10000 HA
Benzo(b)fluoranthene	12000 HA
Benzo(g,h,i)perylene	3900 A
Benzo(k)fluoranthene	4100 A
Benzo(e)pyrene	5900 A
C1-Benz[a]anthracenes/Chrysenes	4600 A
C1-Fluoranthenes/Pyrenes	8400 A
C1-Fluorenes	850 A
C1-Naphthalene	420 A
C1-Phenanthrenes/Anthracenes	4200 A
C2-Benz[a]anthracene/Chrysene	1200 A
C2-Fluorenes	360 A
C2-Naphthalene	450 A
C2-Phenanthrenes/Anthracenes	2500 A
C3-Fluorenes	140 A
C3-Naphthalene	380 A
C3-Phenanthrenes/Anthracenes	920 A
C4-Naphthalene	660 A
C4-Phenanthrenes/Anthracenes	1200 A
Chrysene	10000 HA
Diben:(a,h)anthracene	790 A
Fluoranthene	15000 HA
Fluorene	870 A
Indeno(1,2,3-c,d)pyrene	3300 A
Naphthalene	1300 A
Perylene	1900 A
Phenanthrene	7600 HA
Pyrene	1000 A
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND
Total Dioxin TEQ (Mammal)	48.5

Location:	MSTC23-SD06						
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2	2 - 3	3 - 5	5 - 7	7 - 9
Analyte	Result	Result	Result	Result	Result	Result	Result
Acenaphthene	60 A	210 A	ND	ND	ND	170 A	ND
Acenaphthylene	84 A	220 A	ND	ND	ND	180 A	230 A
Anthracene	190 A	450 A	810 A	600 A	330 A	440 A	450 A
Benzo(a)anthracene	810 A	ND	ND	ND	1000 A	1300 A	1600 A
Benzo(a)pyrene	900 A	ND	ND	2200 HA	1300 HA	1300 A	1400 A
Benzo(b)fluoranthene	1200 A	ND	ND	2600 HA	1700 HA	1600 A	1800 A
Benzo(g,h,i)perylene	500 A	ND	ND	1100 HA	ND	ND	ND
Benzo(k)fluoranthene	370 A	ND	ND	820 HA	740 HA	680 A	790 A
Benzo(e)pyrene	610 A	ND	ND	1400 HA	860 HA	1000 A	970 A
C1-Benz[a]anthracenes/Chrysenes	340 A	ND	1300 A	1100 A	540 A	1100 A	ND
C1-Fluoranthenes/Pyrenes	680 A	1700 A	2900 A	2400 A	1500 A	2500 A	2200 A
C1-Fluorenes	100 A	950 A	1200 A	720 A	550 A	720 A	590 A
C1-Naphthalene	60 A	470 A	560 A	390 A	380 A	410 A	330 A
C1-Phenanthrenes/Anthracenes	450 A	4100 A	5000 A	4300 A	3000 A	3400 A	2600 A
C2-Benz[a]anthracene/Chrysene	110 A	ND	330 A	ND	ND	900 A	ND
C2-Fluorenes	68 A	1900 A	1900 A	1600 A	1100 A	1500 A	870 A
C2-Naphthalene	95 A	1600 A	1900 A	1300 A	1300 A	1400 A	960 A
C2-Phenanthrenes/Anthracenes	320 A	6300 A	8200 A	6900 A	4500 A	6600 A	3800 A
C3-Fluorenes	110 A	1300 A	1500 A	1300 A	850 A	3100 A	1600 A
C3-Naphthalene	120 A	3300 A	3500 A	3000 A	2700 A	3100 A	1700 A
C3-Phenanthrenes/Anthracenes	200 A	4700 A	8300 A	6200 A	3500 A	5700 A	4100 A
C4-Naphthalene	110 A	2200 A	2800 A	4900 A	1600 A	4100 A	2000 A
C4-Phenanthrenes/Anthracenes	160 A	1400 A	1900 A	1100 A	590 A	1700 A	1300 A
Chrysene	780 A	ND	ND	1800 A	1200 A	1400 A	1900 A
Diben:(a,h)anthracene	120 A	ND	ND	ND	ND	ND	ND
Fluoranthene	1400 A	2100 A	3700 A	2700 A	1700 A	2100 A	2100 A
Fluorene	88 A	340 A	ND	ND	ND	300 A	400 A
Indeno(1,2,3-c,d)pyrene	380 A	ND	ND	860 HA	ND	ND	ND
Naphthalene	160 A	310 A	560 A	400 A	320 A	380 A	430 A
Perylene	200 A	ND	ND	ND	ND	ND	81 UA
Phenanthrene	750 A	2000 A	3100 A	2200 A	1600 A	1700 A	1700 A
Pyrene	1400 A	2500 A	4800 A	3800 A	2100 A	2300 A	3000 A
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND	ND	ND	ND	ND	ND	
Total Dioxin TEQ (Mammal)	18.8	42.7	38.8	21.6	28.1	94.3	

Location:	MSTC23-SD07
Sample Depth (ft bss):	SS - 0.5
Analyte	Result
Acenaphthene	760 A
Acenaphthylene	230 A
Anthracene	2300 A
Benzo(a)anthracene	8300 A
Benzo(a)pyrene	26000 HA
Benzo(b)fluoranthene	27000 HA
Benzo(g,h,i)perylene	17000 HA
Benzo(k)fluoranthene	8800 HA
Benzo(e)pyrene	16000 HA
C1-Benz[a]anthracenes/Chrysenes	6200 A
C1-Fluoranthenes/Pyrenes	6100 A
C1-Phenanthrenes/Anthracenes	1900 A
C2-Benz[a]anthraeene/Chrysene	1600 A
C2-Phenanthrenes/Anthracenes	1500 A
C3-Fluorenes	690 A
C3-Phenanthrenes/Anthracenes	1400 A
C4-Phenanthrenes/Anthracenes	1600 A
Chrysene	9800 A
Diben:(a,h)anthracene	8500 HA
Fluoranthene	7900 A
Fluorene	800 A
Indeno(1,2,3-c,d)pyrene	13000 HA
Naphthalene	870 A
Perylene	6400 HA
Phenanthrene	2200 A
Pyrene	10000 A
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND
Total Dioxin TEQ (Mammal)	26.8

MSC22-ST1-2
MSC22-ST1-1
MSTC23-SD04
MSC22-ST2-2
MSC22-ST2-1
King Rd
W Jefferson Ave
Railroad
Trenton Channel
W River Rd
Horsemill Rd
Island Estate Dr
Meridian Rd
Riverview
Trenton
Grosse Isle
E River Rd
Figure 5a
Figure 5b
Figure 5c

Sediment Sample Collection Status
- Surface & Subsurface Samples
- Surface Sample Only
- Not Sampled - Negligible Sediment Present
- Sediment Trap Deployed/Retrieved - Negligible Sediment Present

- Designated Underwater Utility Crossing Corridor
- Former McLouth Steel Corp. Site
- RTRR Property Site
- Wayne County Parcels

* Location was relocated based on existing conditions

N
0 400 800 Feet
NAD 1983 StatePlane Michigan South FIPS 2113 Feet

CDM Smith

Figure 5a
Sediment Sample Exceedances - PAHs & Dioxin/Furans
McLouth Steel Corp Superfund Site
Trenton, Wayne County, Michigan

FRENOHJP C:\Projects\Environmental\McLouth Steel\McClouth Steel\McClouth Steel.aprx 5/20/2024

Notes:

A - Unvalidated Result

H - Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

J - The identification of the analyte is acceptable; the reported value is an estimation.

Sed PAL - Sediment Project Action Limit

pg/kg - picograms per kilogram

µg/kg - micrograms per kilogram

ft bss - feet below sediment surface

BOLD - PAL Exceeded

ND - Not Detected

	Analyte	Sed PAL
PAHs (ug/kg)	Acenaphthene	6.71
	Acenaphthylene	5.87
	Anthracene	57.2
	Benz(a)anthracene	108
	C1-Benzanthracene/chrysenes	1,000
	C2-Benzanthracene/chrysenes	1000
	C3-Benzanthracene/chrysenes	1000
	C4-Benzanthracene/chrysenes	1000
	Benzo(a)pyrene	110
	Benzo(b)fluoranthene	1100
	Benzo(e)pyrene	1000
	Benzo(g,h,i)perylene	170
	Benzo(k)fluoranthene	240
	Chrysene	166
	Dibenz(a,h)anthracene	33
	Fluoranthene	423
	C1-Fluoranthene/pyrenes	1000
	Fluorene	77.4
	C1-Fluorenes	600
	C2-Fluorenes	600
	C3-Fluorenes	600
	Indeno(1,2,3-cd)pyrene	200
	Naphthalene	176
	C1-Naphthalenes	600
	C2-Naphthalenes	600
	C3-Naphthalenes	600
	C4-Naphthalenes	600
	Perylene	1000
	Phenanthrene	204
	C1-Phenanthrene/anthracenes	600
	C2-Phenanthrene/anthracenes	600
	C3-Phenanthrene/anthracenes	600
	C4-Phenanthrene/anthracenes	600
	Pyrene	195
DIOXIN/FURANS (pg/kg)	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.12
	Total Dioxin TEQ (Mammal)	0.12

Location: MSTC23-SD09

Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
Acenaphthene	360 HA	ND	ND
Acenaphthylene	280 HA	ND	ND
Anthracene	1200 HA	580 HA	17 JHA
Benzo(a)anthracene	2500 HA	1600 HA	59 HA
Benzo(a)pyrene	2200 HA	ND	ND
Benzo(b)fluoranthene	2800 HA	1700 HA	ND
Benzo(g,h,i)perylene	630 HA	ND	ND
Benzo(k)fluoranthene	1100 HA	570 HA	ND
Benzo(e)pyrene	1500 HA	ND	ND
C1-Benz[a]anthracenes/Chrysenes	1800 HA	1400 HA	ND
C1-Fluoranthenes/Pyrenes	3100 HA	2600 HA	78 HA
C1-Fluorenes	760 HA	1300 HA	ND
C1-Phenanthrenes/Anthracenes	4500 HA	3800 HA	200 HA
C2-Fluorenes	1100 HA	2400 HA	55 HA
C2-Naphthalene	1500 HA	1700 HA	74 HA
C2-Phenanthrenes/Anthrazenes	4400 HA	5000 HA	300 HA
C3-Fluorenes	1400 HA	2600 HA	44 HA
C3-Naphthalene	2700 HA	3500 HA	190 HA
C3-Phenanthrenes/Anthracenes	6400 HA	7600 HA	280 HA
C4-Naphthalene	2000 HA	3200 HA	210 HA
C4-Phenanthrenes/Anthracenes	2200 HA	3800 HA	130 HA
Chrysene	2600 HA	1600 HA	61 HA
Dibenz(a,h)anthracene	ND	ND	ND
Fluoranthene	4800 HA	2700 HA	78 HA
Fluorene	830 HA	660 HA	ND
Indeno(1,2,3-c,d)pyrene	570 HA	ND	ND
Naphthalene	770 HA	540 HA	ND
Phenanthrene	4000 HA	2600 HA	110 HA
Pyrene	4400 HA	3000 HA	76 HA
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND	ND	ND
Total Dioxin TEQ (Mammal)	20.4	20.0	2.55

Location: MSTC23-SD08

Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
Acenaphthene	52 A	ND	ND
Acenaphthylene	45 A	ND	ND
Anthracene	240 A	14 JA	ND
Benzo(a)anthracene	1400 A	57 A	ND
Benzo(a)pyrene	2500 HA	81 JHA	ND
Benzo(b)fluoranthene	2500 HA	68 JHA	ND
Benzo(g,h,i)perylene	1400 HA	ND	ND
Benzo(k)fluoranthene	1100 HA	45 JHA	ND
Benzo(e)pyrene	1400 HA	54 JHA	ND
C1-Benz[a]anthracenes/Chrysenes	980 A	53 A	ND
C1-Fluoranthenes/Pyrenes	1500 A	81 A	27 A
C1-Phenanthrenes/Anthracenes	470 A	45 A	25 A
C2-Benz[a]anthrcecene/Chrysene	270 A	38 A	16 A
C2-Phenanthrenes/Anthracenes	410 A	ND	52 A
C3-Fluorenes	70 A	ND	ND
C3-Phenanthrenes/Anthracenes	ND	43 A	48 A
C4-Phenanthrenes/Anthracenes	350 A	52 A	31 A
Chrysene	1500 A	52 A	ND
Dibenz(a,h)anthracene	360 HA	ND	ND
Fluoranthene	1700 A	69 A	23 A
Fluorene	69 A	ND	ND
Indeno(1,2,3-c,d)pyrene	1100 HA	ND	ND
Naphthalene	48 A	ND	ND
Perylene	610 HA	ND	ND
Phenanthrene	500 A	41 A	15 A
Pyrene	1900 A	76 A	23 A
2,3,7,8-Tetrachlorodibenzo-p-dioxin	2.56 B	ND	ND
Total Dioxin TEQ (Mammal)	29.7	2.26	0.556

Location: MSTC23-SD20

Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
Acenaphthene	180 A	ND	ND
Acenaphthylene	96 A	ND	ND
Anthracene	750 A	39 A	ND
Benzo(a)anthracene	2500 A	210 A	38 A
Benzo(a)pyrene	5100 A	93 A	48 A
Benzo(b)fluoranthene	5200 A	320 A	56 A
Benzo(g,h,i)perylene	2500 A	140 A	ND
Benzo(k)fluoranthene	2300 A	120 A	26 A
Benzo(e)pyrene	3100 A	220 A	36 A
C1-Benz[a]anthracenes/Chrysenes	1800 A	170 A	30 A
C1-Fluoranthenes/Pyrenes	1900 A	330 A	29 A
C1-Fluorenes	150 A	90 A	ND
C1-Naphthalene	55 A	ND	ND
C1-Phenanthrenes/Anthracenes	500 A	ND	ND
C2-Benz[a]anthracene/Chrysene	620 A	ND	40 A
C2-Fluorenes	150 A	ND	ND
C2-Naphthalene	80 A	31 A	ND
C2-Phenanthrenes/Anthracenes	450 A	260 A	ND
C3-Benzo(a)anthracenes/Chrysenes	ND	ND	ND
C3-Fluorenes	180 A	ND	ND
C3-Naphthalene	96 A	64 A	27 A
C3-Phenanthrenes/Anthracenes	300 A	550 A	64 A
C4-Benzo(a)anthracenes/Chrysenes	220 A	ND	ND
C4-Naphthalene	74 A	230 A	68 A
C4-Phenanthrenes/Anthracenes	98 A	310 A	50 A
Chrysene	2900 A	290 A	46 A
Dibenz(a,h)anthracene	880 A	ND	ND
Fluoranthene	2700 A	360 A	46 A
Fluorene	98 A	ND	ND
Indeno(1,2,3-c,d)pyrene	2200 A	100 A	ND
Naphthalene	150 A	21 JA	ND
Perylene	1400 A	ND	ND
Phenanthrene	710 A	77 A	18 JA
Pyrene	2900 A	350 A	52 A
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND	ND	ND
Total Dioxin TEQ (Mammal)	14.5	7.97	1.26

Location: MSTC23-SD22'

Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2	2 - 3	3 - 5
Analyte	Result	Result	Result	Result	Result
Acenaphthene	ND	ND	490 A	120 A	ND
Acenaphthylene	ND	360 A	710 A	140 A	ND
Anthracene	1400 A	2000 A	1700 A	310 A	ND
Benzo(a)anthracene	1300 A	2700 A	4800 A	930 A	ND
Benzo(a)pyrene	1900 HA	2800 HA	5200 HA	1000 HA	ND
Benzo(b)fluoranthene	2400 HA	3100 HA	4800 HA	950 HA	ND
Benzo(g,h,i)perylene	1600 HA	1800 HA	2800 HA	530 HA	ND
Benzo(k)fluoranthene	1000 HA	1100 HA	2100 HA	370 HA	ND
Benzo(e)pyrene	1300 HA	1700 HA	2800 HA	560 HA	ND
C1-Benz[a]anthracenes/Chrysenes	960 A	2700 A	4800 A	940 A	ND
C1-Fluoranthenes/Pyrenes	1300 A	1600 A	6300 A	1400 A	ND
C1-Fluorenes	310 A	480 A	980 A	210 A	ND
C1-Naphthalene	66 A	120 A	250 A	23 JA	ND
C1-Phenanthrenes/Anthracenes	850 A	2600 A	4500 A	920 A	ND
C2-Benz[a]anthracene/Chrysene	ND	1800 A	1900 A	390 A	ND
C2-Fluorenes	420 A	740 A	980 A	170 A	ND
C2-Naphthalene	380 A	450 A	560 A	110 A	ND
C2-Phenanthrenes/Anthracenes	1100 A	3500 A	6400 A	860 A	24 JA
C3-Benzo(a)anthracenes/Chrysenes	ND	ND	ND	ND	ND
C3-Fluorenes	640 A	ND	290 A	74 A	ND
C3-Naphthalene	680 A	990 A	1100 A	190 A	ND
C3-Phenanthrenes/Anthracenes	1000 A	4300 A	3800 A	520 A	27 A
C4-Benzo(a)anthracenes/Chrysenes	ND	ND	ND	ND	ND
C4-Naphthalene	520 A	870 A	710 A	240 A	ND
C4-Phenanthrenes/Anthracenes	430 A	1900 A	2200 A	180 A	ND
Chrysene	1800 A	2700 A	4700 A	950 A	ND
Dibenz(a,h)anthracene	280 HA	380 HA	640 HA	110 HA	ND
Fluoranthene	3300 A	3700 A	6000 A	1300 A	ND
Fluorene	ND	640 A	830 A	92 A	ND
Indeno(1,2,3-c,d)pyrene	1500 HA	1500 HA	2400 HA	420 HA	ND
Naphthalene	61 A	180 A	250 A	32 A	ND
Perylene	630 HA	740 HA	1200 HA	270 HA	ND
Phenanthrene	1400 A	1900 A	4300 A	780 A	ND
Pyrene	3200 A	4600 A	7100 HA	1900 A	ND
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND	ND	ND	ND	ND
Total Dioxin TEQ (Mammal)	4.08	5.37	2.76	0.107	0.117

Location: MSTC23-SD10

Sample Depth (ft bss):	SS - 0.5
Analyte	Result
Acenaphthene	130 HA
Acenaphthylene	230 HA
Anthracene	430 HA
Benzo(a)anthracene	2100 HA
Benzo(a)pyrene	2500 HA
Benzo(b)fluoranthene	3000 HA
Benzo(g,h,i)perylene	960 HA
Benzo(k)fluoranthene	950 HA
Benzo(e)pyrene	1500 HA
C1-Benz[a]anthracenes/Chrysenes	1100 HA
C1-Fluoranthenes/Pyrenes	1800 HA
C1-Fluorenes	190 HA
C1-Phenanthrenes/Anthracenes	960 HA
C2-Fluorenes	120 HA
C2-Naphthalene	150 HA
C2-Phenanthrenes/Anthracenes	890 HA
C3-Fluorenes	86 HA
C3-Naphthalene	190 HA
C3-Phenanthrenes/Anthracenes	790 HA
C4-Naphthalene	210 HA
C4-Phenanthrenes/Anthracenes	590 HA
Chrysene	1900 HA
Dibenz(a,h)anthracene	200 HA
Fluoranthene	3000 HA
Fluorene	160 HA
Indeno(1,2,3-c,d)pyrene	860 HA
Naphthalene	200 HA
Phenanthrene	1500 HA
Pyrene	2900 HA
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND
Total Dioxin TEQ (Mammal)	231

Location: MSTC23-SD12

Sample Depth (ft bss):	SS - 0.5
Analyte	Result
Acenaphthene	210 HA
Acenaphthylene	94 HA
Anthracene	2400 HA
Benzo(a)anthracene	2000 HA
Benzo(a)pyrene	2500 HA
Benzo(b)fluoranthene	3100 HA
Benzo(g,h,i)perylene	1200 HA
Benzo(k)fluoranthene	1400 HA
Benzo(e)pyrene	1600 HA
C1-Benz[a]anthracenes/Chrysenes	890 HA
C1-Fluoranthenes/Pyrenes	1500 HA
C1-Fluorenes	220 HA
C1-Phenanthrenes/Anthracenes	770 HA
C2-Fluorenes	75 HA
C2-Naphthalene	98 HA
C2-Phenanthrenes/Anthracenes	540 HA
C3-Fluorenes	ND
C3-Naphthalene	100 HA
C3-Phenanthrenes/Anthracenes	320 HA
C4-Naphthalene	200 HA
C4-Phenanthrenes/Anthracenes	460 HA
Chrysene	1900 HA
Dibenz(a,h)anthracene	210 HA
Fluoranthene	4200 HA
Fluorene	240 HA
Indeno(1,2,3-c,d)pyrene	1200 HA
Naphthalene	100 HA
Phenanthrene	2800 HA
Pyrene	4000 HA
2,3,7,8-Tetrachlorodibenzo-p-dioxin	2.41 B
Total Dioxin TEQ (Mammal)	32.3

Location: MSTC23-SD13

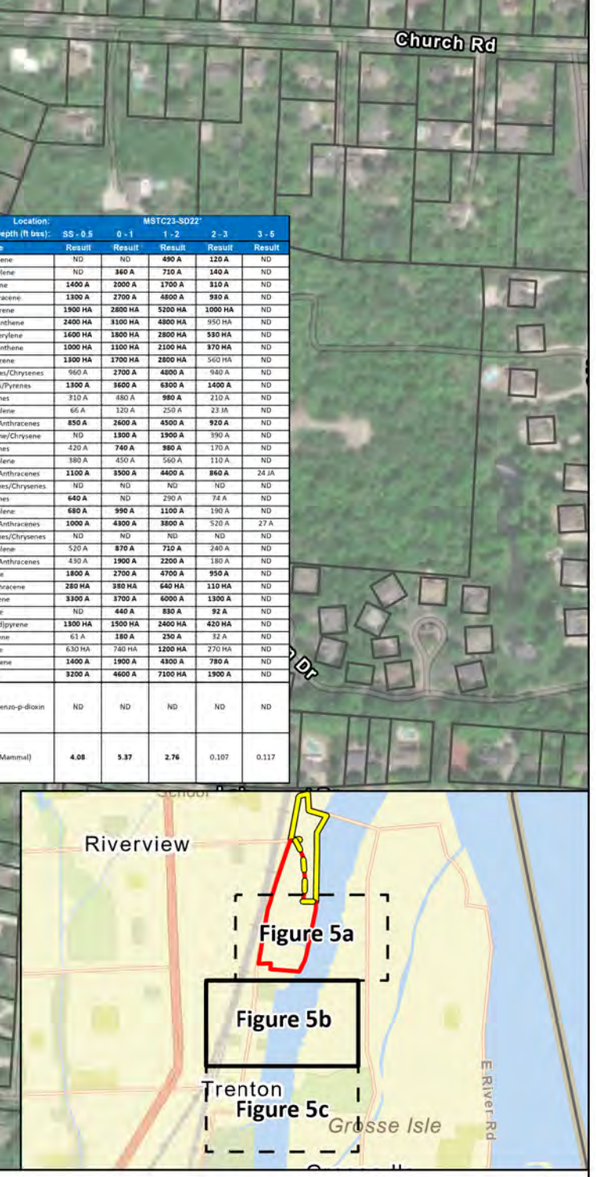
Sample Depth (ft bss):	SS - 0.5	0 - 1
Analyte	Result	Result
Acenaphthene	19 JA	ND
Acenaphthylene	29 A	ND
Anthracene	110 A	ND
Benzo(a)anthracene	420 A	ND
Benzo(a)pyrene	450 A	ND
Benzo(b)fluoranthene	510 A	ND
Benzo(g,h,i)perylene	220 A	ND
Benzo(k)fluoranthene	290 A	ND
Benzo(e)pyrene	320 A	ND
C1-Benz[a]anthracenes/Chrysenes	NA	ND
C1-Fluoranthenes/Pyrenes	420 A	61 A
C1-Fluorenes	58 A	38 A
C1-Naphthalene	NA	ND
C1-Phenanthrenes/Anthracenes	200 A	140 A
C2-Benz[a]anthracene/Chrysene	NA	19 JA
C2-Fluorenes	61 A	64 A
C2-Naphthalene	32 A	64 A
C2-Phenanthrenes/Anthracenes	170 A	110 A
C3-Benzo[a]anthracenes/Chrysenes	NA	ND
C3-Fluorenes	68 A	29 A
C3-Naphthalene	49 A	200 A
C3-Phenanthrenes/Anthracenes	120 A	70 A
C4-Benzo(a)anthracenes/Chrysenes	NA	ND
C4-Naphthalene	51 A	320 A
C4-Phenanthrenes/Anthracenes	62 A	120 A
Chrysene	470 A	ND
Dibenz(a,h)anthracene	91 A	ND
Fluoranthene	760 A	ND
Fluorene	35 A	ND
Indeno(1,2,3-c,d)pyrene	190 A	ND
Naphthalene	21 JA	ND
Perylene	130 A	ND
Phenanthrene	260 A	48 A
Pyrene	780 A	ND
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND	ND
Total Dioxin TEQ (Mammal)	71.4	0.642

Location: MSTC23-SD14

Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
Acenaphthene	370 A	ND	ND
Acenaphthylene	140 A	ND	ND
Anthracene	1200 A	ND	ND
Benzo(a)anthracene	5500 A	ND	ND
Benzo(a)pyrene	5900 A	ND	ND
Benzo(b)fluoranthene	7800 HA	ND	ND
Benzo(g,h,i)perylene	2500 A	ND	ND
Benzo(k)fluoranthene	3500 A	ND	ND
Benzo(e)pyrene	3900 A	ND	ND
C1-Benz[a]anthracenes/Chrysenes	2700 A	ND	ND
C1-Fluoranthenes/Pyrenes	3700 A	48 A	53 A
C1-Fluorenes	830 A	39 A	33 A
C1-Naphthalene	61 A	ND	ND
C1-Phenanthrenes/Anthracenes	1600 A	98 A	94 A
C2-Benz[a]anthracene/Chrysene	980 A	ND	ND
C2-Fluorenes	100 A	65 A	49 A
C2-Naphthalene	97 A	54 A	46 A
C2-Phenantrenes/Anthracenes	770 A	110 A	91 A
C3-Benzo[a]anthracenes/Chrysenes	ND	ND	ND
C3-Fluorenes	560 A	ND	ND
C3-Naphthalene	120 A	150 A	120 A
C3-Phenanthrenes/Anthracenes	410 A	110 A	120 A
C4-Benzo(a)anthracenes/Chrysenes	ND	ND	ND
C4-Naphthalene	110 A	210 A	150 A
C4-Phenanthrenes/Anthracenes	680 A	18 JA	93 A
Chrysene	5800 A	ND	ND
Dibenz(a,h)anthracene	1000 A	ND	ND
Fluoranthene	12000 HA	ND	ND
Fluorene	510 A	ND	ND
Indeno(1,2,3-c,d)pyrene	2300 A	ND	ND
Naphthalene	54 A	ND	ND
Perylene	1400 A	ND	ND
Phenanthrene	5900 A	34 A	30 A
Pyrene	11000 HA	ND	ND
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND	ND	1.13 B
Total Dioxin TEQ (Mammal)	12.9	0.0	11.3

Location: MSTC23-SD23

Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2	2 - 3	3 - 5
Analyte	Result	Result	Result	Result	Result
Acenaphthene	140 A	ND	ND	ND	ND
Acenaphthylene	310 A	35 A	ND	ND	ND
Anthracene	570 A	98 A	ND	ND	ND
Benzo(a)anthracene	1900 A	290 A	12 A	ND	ND
Benzo(a)pyrene	2500 A	820 A	ND	ND	ND
Benzo(b)fluoranthene	2500 A	350 A	ND	ND	ND
Benzo(g,h,i)perylene	1000 A	130 A	ND	ND	ND
Benzo(k)fluoranthene	1200 A	150 A	ND	ND	ND
Benzo(e)pyrene	1600 A	210 A	ND	ND	ND
C1-Benz[a]anthracenes/Chrysenes	1200 A	200 A	15 A	ND	ND
C1-Fluoranthenes/Pyrenes	2300 A	380 A	29 A	21 A	13 A
C1-Fluorenes	320 A	50 A	11 A	8 JA	ND
C1-Naphthalene	89 A	15 A	ND	ND	ND
C1-Phenanthrenes/Anthracenes	1100 A	230 A	20 A	16 A	22 A
C2-Benz[a]anthracene/Chrysene	370 A	81 A	14 A	ND	14 A
C2-Fluorenes	ND	48 A	11 A	ND	20 A
C2-Naphthalene	200 A	32 A	ND	ND	ND
C2-Phenanthrenes/Anthracenes	820 A	130 A	34 A	18 A	34 A
C3-Benzo[a]anthracenes/Chrysenes	ND	ND	ND	ND	ND
C3-Fluorenes	ND	42 A	ND	ND	ND
C3-Naphthalene	160 A	57 A	14 A	13 A	15 A
C3-Phenanthrenes/Anthracenes	500 A	80 A	17 A	30 A	48 A
C4-Benzo(a)anthracenes/Chrysenes	ND	ND	ND	ND	ND
C4-Naphthalene	100 A	42 A	36 A	29 A	53 A
C4-Phenanthrenes/Anthracenes	540 A	85 A	24 A	23 A	28 A
Chrysene	2100 A	350 A	17 A	ND	ND
Dibenz(a,h)anthracene	220 A	32 A	ND	ND	ND
Fluoranthene	3100 A	380 A	19 A	6 JA	8 A
Fluorene	200 A	32 A	ND	ND	ND
Indeno(1,2,3-c,d)pyrene	910 A	120 A	ND	ND	ND
Naphthalene	240 A	29 A	ND	ND	ND
Perylene	440 A	93 A	ND	ND	ND
Phenanthrene	1400 A	190 A	10 A	ND	5 JA
Pyrene	3200 A	380 A	18 A	7 JA	9 A
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND	0.462 J	ND	ND	ND
Total Dioxin TEQ (Mammal)	3.56	7.35	0.000	0.000	0.000



Sediment Sample Collection Status

- Surface & Subsurface Samples
- Surface Sample Only
- Not Sampled - Negligible Sediment Present
- Sediment Trap Deployed/Retrieved - Negligible Sediment Present

- Former McLouth Steel Corp. Site
- RTRR Property Site
- Wayne County Parcels

* Location was relocated based on existing conditions

N

0 400 800 Feet

NAD 1983 StatePlane Michigan South FIPS 2113 Feet

CDM Smith

Figure 5b
Sediment Sample Exceedances - PAHs & Dioxin/Furans
McLouth Steel Corp Superfund Site
Trenton, Wayne County, Michigan

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Notes:

A - Unvalidated Result

H - Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

J - The identification of the analyte is acceptable; the reported value is an estimation.

Sed PAL - Sediment Project Action Limit

pg/kg - picograms per kilogram

µg/kg - micrograms per kilogram

ft bss - feet below sediment surface

BOLD - PAL Exceeded

ND - Not Detected

	Analyte	Sed PAL
PAHs (ug/kg)	Acenaphthene	6.71
	Acenaphthylene	5.87
	Anthracene	57.2
	Benz(a)anthracene	108
	C1-Benzanthracene/chrysenes	1,000
	C2-Benzanthracene/chrysenes	1000
	C3-Benzanthracene/chrysenes	1000
	C4-Benzanthracene/chrysenes	1000
	Benzo(a)pyrene	110
	Benzo(b)fluoranthene	1100
	Benzo(e)pyrene	1000
	Benzo(g,h,i)perylene	170
	Benzo(k)fluoranthene	240
	Chrysene	166
	Dibenz(a,h)anthracene	33
	Fluoranthene	423
	C1-Fluoranthene/pyrenes	1000
	Fluorene	77.4
	C1-Fluorenes	600
	C2-Fluorenes	600
	C3-Fluorenes	600
	Indeno(1,2,3-cd)pyrene	200
	Naphthalene	176
	C1-Naphthalenes	600
	C2-Naphthalenes	600
	C3-Naphthalenes	600
	C4-Naphthalenes	600
	Perylene	1000
	Phenanthrene	204
	C1-Phenanthrene/anthracenes	600
	C2-Phenanthrene/anthracenes	600
	C3-Phenanthrene/anthracenes	600
	C4-Phenanthrene/anthracenes	600
	Pyrene	195
DIOXIN/FURANS (pg/kg)	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.12
	Total Dioxin TEQ (Mammal)	0.12

Location:	MSTC23-SD15	
Sample Depth (ft bss):	SS - 0.5	
Analyte	Result	
PAHs (ug/kg)	Acenaphthene	120 A
	Acenaphthylene	62 A
	Anthracene	660 A
	Benzo(a)anthracene	2800 A
	Benzo(a)pyrene	3600 A
	Benzo(b)fluoranthene	4800 A
	Benzo(g,h,i)perylene	1500 A
	Benzo(k)fluoranthene	2200 A
	Benzo(e)pyrene	2600 A
	C1-Benz[a]anthracenes/Chrysenes	1400 A
	C1-Fluoranthenes/Pyrenes	2000 A
	C1-Fluorenes	190 A
	C1-Naphthalene	21 JA
	C1-Phenanthrenes/Anthracenes	750 A
	C2-Benz(a)anthracene/Chrysene	300 A
	C2-Fluorenes	79 A
	C2-Naphthalene	47 A
	C2-Phenanthrenes/Anthracenes	410 A
	C3-Benzo(a)anthracenes/Chrysenes	ND
	C3-Fluorenes	280 A
	C3-Naphthalene	78 A
	C3-Phenanthrenes/Anthracenes	280 A
	C4-Benzo(a)anthracenes/Chrysenes	250 A
	C4-Naphthalene	180 A
	C4-Phenanthrenes/Anthracenes	690 A
	Chrysene	3400 A
	Dibenz(a,h)anthracene	540 A
	Fluoranthene	6500 A
	Fluorene	160 A
	Indeno(1,2,3-cd)pyrene	1400 A
	Naphthalene	55 A
	Perylene	880 A
	Phenanthrene	2500 A
	Pyrene	6200 A
DIOXIN/FURANS (pg/kg)	2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND
	Total Dioxin TEQ (Mammal)	10.0

Location:	MSTC23-SD19		
Sample Depth (ft bss):	SS - 0.5	0 - 1	1 - 2
Analyte	Result	Result	Result
PAHs (ug/kg)	Acenaphthene	ND	460 A	560 A
	Acenaphthylene	ND	610 A	810 A
	Anthracene	1500 A	3900 A	1300 A
	Benzo(a)anthracene	3700 A	3700 A	4900 A
	Benzo(a)pyrene	3900 HA	4000 HA	5500 HA
	Benzo(b)fluoranthene	4300 HA	4400 HA	5800 HA
	Benzo(g,h,i)perylene	2500 HA	2400 HA	3600 HA
	Benzo(k)fluoranthene	1800 HA	1600 HA	2700 HA
	Benzo(e)pyrene	2400 HA	2500 HA	3200 HA
	C1-Benz[a]anthracenes/Chrysenes	3800 A	4600 A	4400 A
	C1-Fluoranthenes/Pyrenes	5300 A	7600 A	5600 A
	C1-Fluorenes	970 A	1600 A	600 A
	C1-Naphthalene	490 A	530 A	400 A
	C1-Phenanthrenes/Anthracenes	4500 A	5700 A	2800 A
	C2-Benz[a]anthracene/Chrysene	ND	1800 A	1900 A
	C2-Fluorenes	2300 A	1800 A	880 A
	C2-Naphthalene	1200 A	1300 A	730 A
	C2-Phenanthrenes/Anthracenes	6200 A	8200 A	4800 A
	C3-Benzo[a]anthracenes/Chrysenes	ND	ND	ND
	C3-Fluorenes	3400 A	2500 A	ND
	C3-Naphthalene	2200 A	2500 A	1200 A
	C3-Phenanthrenes/Anthracenes	8200 A	9500 A	5700 A
	C4-Benzo[a]anthracenes/Chrysenes	ND	ND	ND
	C4-Naphthalene	1400 A	1800 A	950 A
	C4-Phenanthrenes/Anthracenes	5100 A	7900 A	5300 A
	Chrysene	4000 A	4200 A	5000 A
	Dibenz[a,h]anthracene	520 HA	550 HA	830 HA
	Fluoranthene	6100 A	5800 A	6500 A
	Fluorene	1400 A	1000 A	810 A
	Indeno[1,2,3-c,d]pyrene	2100 HA	2000 HA	3200 HA
	Naphthalene	420 A	370 A	880 A
	Perylene	ND	ND	1300 HA
	Phenanthrene	4200 A	3800 A	3300 A
	Pyrene	7000 A	7200 A	7000 A
DIOXIN/FURANS (pg/kg)	2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND	ND	ND
	Total Dioxin TEQ (Mammal)	19.6	97.3	33.6

Sediment Sample Collection Status

- Surface & Subsurface Samples
- Surface Sample Only
- Not Sampled - Negligible Sediment Present
- Sediment Trap Deployed/Retrieved - Negligible Sediment Present

- Undwerwater Utility Crossing
- No Dig Zone (25' Buffer)
- Former McLouth Steel Corp. Site
- RTRR Property Site
- Wayne County Parcels

N

0 400 800 Feet

NAD 1983 StatePlane Michigan South FIPS 2113 Feet

CDM Smith

Figure 5c
Sediment Sample Exceedances - PAHs & Dioxin/Furans
McLouth Steel Corp Superfund Site
Trenton, Wayne County, Michigan

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Attachment A

Field Documentation (Boring Logs and Equipment Calibration)

McLouth Steel Corp. Superfund Site
GENERAL EQUIPMENT CALIBRATION LOG

Instrument (make/model/serial #): Horiba U-52 Manufacturer: Horiba/YSI Rental Company: Pine

Upon receipt, all parts are included and this instrument is in working order: Jordyn Mausack 10/16/23
(signature/date)

Calibration Date	Initial Setting	Standard/ Gas Used (Concentration)	Lot Control No. Expiration Date	Adjustments Made	Final Reading	Comments Pass/Fail	Signature
10/16/23	—	autoCal 4.0/4.49/0.0	2400111 05/3/24	none	3.97 pH 4.47/0.0	pass	
10		auto cal 4.0/4.49	24001111 05/3/24	none	4.00 pH 4.49 ms/cm 0.0 NTU	pass	
10/14/23	—	auto cal 4.0/4.47	24001111 05/31/24	None	3.96 PH 4.43 MS/cm 0.0 NTU	Pass	

REV 12/22

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Completed By	Date	Rental Company	Rental Company Number	Instrument Serial Number	Time Instrument On[1]	Warm Up 5 to 10 Minutes[2]
J. Wagenaar	10/14/23	Pine	214159	592-602754	0700	Yes

Calibration Gas	Manufacturer	Lot No./Expiration Date	Concentration(s)
ISOBUTYLENE	Pine	304-40255611G-1	CO: ✓ H_2S: ✓ LEL: ✓ O_2: ✓
		10/18/2026	Isobutylene: 100.0 ppm

Fresh Air Calibration	Carbon Monoxide (CO) Reading	VOC[3] Reading (zero)	H_2S Reading (zero)	LEL Reading (zero)	Oxygen (O_2)
Expected Reading[4]	Zero	Zero	Zero	Zero	20.9%
Actual Reading	✓	0.0	✓	✓	✓

Multiple Sensor Calibration	CO Reading	H_2S Reading	LEL Reading	O_2 Reading	VOC Sensor Calibration	VOC Reading
Expected Reading[5]	✓	✓	✓	✓	Expected Reading	100.0 ppm
Actual Reading					Actual Reading	99.6 ppm

Instrument OK? YES (Calibration Completed) NO (Problem with instrument, detail in comments)

Calibration Check[6]	Completed (Circle one): YES NO		
Time:	Date:	Calibration Completed By:	
Calibration Gas	Same as Above (Circle one)? YES NO (IF NO COMPLETE INFORMATION BELOW)		
	Manufacturer	Lot No./Expiration Date	Concentration(s)
			CO: H_2S: LEL: O_2:
			Isobutylene:

[1] Note time instrument is turned on for initial warm up

[2] While instrument is warming up, make sure inlet tubing is connected to a hydrophobic filter and fill one Tedlar bag with isobutylene and one with four gas mix

[3] VOC – volatile organic compounds, H_2S – hydrogen sulfide, LEL – lower explosive limit

[4] Instruments should read zero after fresh air calibration is complete, write down actual readings below headings

[5] Write concentration from calibration gas on this line

[6] Complete at the end of the day

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Completed By	Date	Rental Company	Rental Company Number	Instrument Serial Number	Time Instrument On[1]	Warm Up 5 to 10 Minutes[2]
J. Wu-Jeremiah	10/18/23	Pine	214159	592-602754	0700	Yes

Calibration Gas	Manufacturer	Lot No./Expiration Date	Concentration(s)
ISOBUTYLENE	Pine	301-402556116-1	CO: — H_2S: — LEL: — O_2: —
		10/18/2026	Isobutylene: 100.0 ppm

Fresh Air Calibration	Carbon Monoxide (CO) Reading	VOC[3] Reading (zero)	H_2S Reading (zero)	LEL Reading (zero)	Oxygen (O_2)
Expected Reading[4]	Zero	Zero	Zero	Zero	20.9%
Actual Reading	/	0.0	/	/	/

Multiple Sensor Calibration	CO Reading	H_2S Reading	LEL Reading	O_2 Reading	VOC Sensor Calibration	VOC Reading
Expected Reading[5]	/	/	/	/	Expected Reading	100.0 ppm
Actual Reading					Actual Reading	99.1 ppm

Instrument OK? YES (Calibration Completed) NO (Problem with instrument, detail in comments)

Calibration Check[6]	Completed (Circle one): YES NO		
Time:	Date:	Calibration Completed By:	
Calibration Gas	Same as Above (Circle one)? YES NO (IF NO COMPLETE INFORMATION BELOW)		
	Manufacturer	Lot No./Expiration Date	Concentration(s)
			CO: H_2S: LEL: O_2:
			Isobutylene:

[1] Note time instrument is turned on for initial warm up

[2] While instrument is warming up, make sure inlet tubing is connected to a hydrophobic filter and fill one Tedlar bag with isobutylene and one with four gas mix

[3] VOC – volatile organic compounds, H_2S – hydrogen sulfide, LEL – lower explosive limit

[4] Instruments should read zero after fresh air calibration is complete, write down actual readings below headings

[5] Write concentration from calibration gas on this line

[6] Complete at the end of the day

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Check Readings:				
CO:	H_2S:	LEL:	O_2:	VOC:

Comments/Corrective Action: _____

_____

_____

_____

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Completed By	Date	Rental Company	Rental Company Number	Instrument Serial Number	Time Instrument On[1]	Warm Up 5 to 10 Minutes[2]
J. Ungemach	10/18/2023	Pine	214455	592-602834	0700	yes

Calibration Gas	Manufacturer	Lot No./Expiration Date	Concentration(s)
ISOBUTYLENE	Pine	304-402556116-1	CO: / H_2S: / LEL: / O_2: /
		10/18/2026	Isobutylene: 100.0 ppm

Fresh Air Calibration	Carbon Monoxide (CO) Reading	VOC[3] Reading (zero)	H_2S Reading (zero)	LEL Reading (zero)	Oxygen (O_2)
Expected Reading[4]	Zero	Zero	Zero	Zero	20.9%
Actual Reading	/	0.0	/	/	/

Multiple Sensor Calibration	CO Reading	H_2S Reading	LEL Reading	O_2 Reading	VOC Sensor Calibration	VOC Reading
Expected Reading[5]	/	/	/	/	Expected Reading	100.0 ppm
Actual Reading					Actual Reading	99.7 ppm

Instrument OK? YES (Calibration Completed) NO (Problem with instrument, detail in comments)

Calibration Check[6]	Completed (Circle one): YES NO		
Time:	Date:	Calibration Completed By:	
Calibration Gas	Same as Above (Circle one)? YES NO (IF NO COMPLETE INFORMATION BELOW)		
	Manufacturer	Lot No./Expiration Date	Concentration(s)
			CO: H_2S: LEL: O_2:
			Isobutylene:

[1] Note time instrument is turned on for initial warm up

[2] While instrument is warming up, make sure inlet tubing is connected to a hydrophobic filter and fill one Tedlar bag with isobutylene and one with four gas mix

[3] VOC – volatile organic compounds, H_2S – hydrogen sulfide, LEL – lower explosive limit

[4] Instruments should read zero after fresh air calibration is complete, write down actual readings below headings

[5] Write concentration from calibration gas on this line

[6] Complete at the end of the day

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Check Readings:				
CO:	H_2S:	LEL:	O_2:	VOC:

Comments/Corrective Action: _____

_____

_____

_____

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Completed By	Date	Rental Company	Rental Company Number	Instrument Serial Number	Time Instrument On[1]	Warm Up 5 to 10 Minutes[2]
J Wagenaar	10/17/2023	Rae	~~304~~ 214156	592-602834	0700	Yes

Calibration Gas	Manufacturer	Lot No./Expiration Date	Concentration(s)
150 BUTYLENE	Rae	304-402556116-1	CO: ✓ H_2S: ✓ LEL: ✓ O_2: ✓
		10/18/2023	Isobutylene: 100.0 ppm

Fresh Air Calibration	Carbon Monoxide (CO) Reading	VOC[3] Reading (zero)	H_2S Reading (zero)	LEL Reading (zero)	Oxygen (O_2)
Expected Reading[4]	Zero	Zero	Zero	Zero	20.9%
Actual Reading	✓	0.0	✓	✓	✓

Multiple Sensor Calibration	CO Reading	H_2S Reading	LEL Reading	O_2 Reading	VOC Sensor Calibration	VOC Reading
Expected Reading[5]	✓	✓	✓		Expected Reading	100.0 ppm
Actual Reading	✓	✓	✓		Actual Reading	100.0 ppm

Instrument OK? YES (Calibration Completed) NO (Problem with instrument, detail in comments)

Calibration Check[6]	Completed (~~Circle one~~): YES NO		
Time:	Date:	Calibration Completed By:	
Calibration Gas	Same as Above (Circle one)? YES NO (IF NO COMPLETE INFORMATION BELOW)		
	Manufacturer	Lot No./Expiration Date	Concentration(s)
			CO: H_2S: LEL: O_2:
			Isobutylene:

[1] Note time instrument is turned on for initial warm up

[2] While instrument is warming up, make sure inlet tubing is connected to a hydrophobic filter and fill one Tedlar bag with isobutylene and one with four gas mix

[3] VOC – volatile organic compounds, H_2S – hydrogen sulfide, LEL – lower explosive limit

[4] Instruments should read zero after fresh air calibration is complete, write down actual readings below headings

[5] Write concentration from calibration gas on this line

[6] Complete at the end of the day

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Check Readings:				
CO:	H_2S:	LEL:	O_2:	VOC:

Comments/Corrective Action: _____

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McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Completed By	Date	Rental Company	Rental Company Number	Instrument Serial Number	Time Instrument On[1]	Warm Up 5 to 10 Minutes[2]
J. Wagenaar	10/17/23	~~Zalco~~ Pine	~~54~~ 214159	592-602754	0709	Yes

Calibration Gas	Manufacturer	Lot No./Expiration Date	Concentration(s)
ISOBUTYLENE	Pine	304-402556116-1	CO: ✓ H_2S: ✓ LEL: ✓ O_2: ✓
		10/18/2026	Isobutylene: 100.0

Fresh Air Calibration	Carbon Monoxide (CO) Reading	VOC[3] Reading (zero)	H_2S Reading (zero)	LEL Reading (zero)	Oxygen (O_2)
Expected Reading[4]	Zero	Zero	Zero	Zero	20.9%
Actual Reading	✓	0.0	✓	✓	✓

Multiple Sensor Calibration	CO Reading	H_2S Reading	LEL Reading	O_2 Reading	VOC Sensor Calibration	VOC Reading
Expected Reading[5]	✓	✓	✓	✓	Expected Reading	100.0 ppm
Actual Reading					Actual Reading	100.5 ppm

Instrument OK? YES (Calibration Completed) NO (Problem with instrument, detail in comments)

Calibration Check[6]	Completed (Circle one): YES NO		
Time:	Date:	Calibration Completed By:	
Calibration Gas	Same as Above (Circle one)? YES NO (IF NO COMPLETE INFORMATION BELOW)		
	Manufacturer	Lot No./Expiration Date	Concentration(s)
			CO: H_2S: LEL: O_2:
			Isobutylene:

[1] Note time instrument is turned on for initial warm up

[2] While instrument is warming up, make sure inlet tubing is connected to a hydrophobic filter and fill one Tedlar bag with isobutylene and one with four gas mix

[3] VOC – volatile organic compounds, H_2S – hydrogen sulfide, LEL – lower explosive limit

[4] Instruments should read zero after fresh air calibration is complete, write down actual readings below headings

[5] Write concentration from calibration gas on this line

[6] Complete at the end of the day

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Check Readings:				
CO:	H_2S:	LEL:	O_2:	VOC:

Comments/Corrective Action: _____

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McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Completed By	Date	Rental Company	Rental Company Number	Instrument Serial Number	Time Instrument On[1]	Warm Up 5 to 10 Minutes[2]
Elijah Hall	10/16/23	Pine	214155	5		

Calibration Gas	Manufacturer	Lot No./Expiration Date	Concentration(s)
Isobutlene	Pine	304-402-556-1161	CO: – H_2S: – LEL: – O_2: –
		10/18/2026	Isobutylene: 100.0 ppm

Fresh Air Calibration	Carbon Monoxide (CO) Reading	VOC[3] Reading (zero)	H_2S Reading (zero)	LEL Reading (zero)	Oxygen (O_2)
Expected Reading[4]	Zero	Zero	Zero	Zero	20.9%
Actual Reading	–	0.0	–	–	–

Multiple Sensor Calibration	CO Reading	H_2S Reading	LEL Reading	O_2 Reading	VOC Sensor Calibration	VOC Reading
Expected Reading[5]					Expected Reading	100.0 ppm
Actual Reading					Actual Reading	100.1 ppm

Instrument OK? YES (Calibration Completed) NO (Problem with instrument, detail in comments)

Calibration Check[6]	Completed (Circle one): YES NO		
Time:	Date:	Calibration Completed By:	
Calibration Gas	Same as Above (Circle one)? YES NO (IF NO COMPLETE INFORMATION BELOW)		
	Manufacturer	Lot No./Expiration Date	Concentration(s)
			CO: H_2S: LEL: O_2:
			Isobutylene:

[1] Note time instrument is turned on for initial warm up

[2] While instrument is warming up, make sure inlet tubing is connected to a hydrophobic filter and fill one Tedlar bag with isobutylene and one with four gas mix

[3] VOC – volatile organic compounds, H_2S – hydrogen sulfide, LEL – lower explosive limit

[4] Instruments should read zero after fresh air calibration is complete, write down actual readings below headings

[5] Write concentration from calibration gas on this line

[6] Complete at the end of the day

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Check Readings:				
CO:	H_2S:	LEL:	O_2:	VOC:

Comments/Corrective Action: _____

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Completed By	Date	Rental Company	Rental Company Number	Instrument Serial Number	Time Instrument On[1]	Warm Up 5 to 10 Minutes[2]
J. Wagenaar	10/16/2023	Pine	214169	592-602754	~~Yes~~ 730	Yes

Calibration Gas	Manufacturer	Lot No./Expiration Date	Concentration(s)
ISOBUTYLENE	Pine	304-402 690404-1	CO: — H_2S: — LEL: — O_2: —
			Isobutylene: 100.0 ppm

Fresh Air Calibration	Carbon Monoxide (CO) Reading	VOC[3] Reading (zero)	H_2S Reading (zero)	LEL Reading (zero)	Oxygen (O_2)
Expected Reading[4]	Zero	Zero	Zero	Zero	20.9%
Actual Reading	✓	0.0	✓	✓	✓

Multiple Sensor Calibration	CO Reading	H_2S Reading	LEL Reading	O_2 Reading	VOC Sensor Calibration	VOC Reading
Expected Reading[5]					Expected Reading	100.0 ppm
Actual Reading	✓	✓	✓	✓	Actual Reading	100.0 ppm

Instrument OK? ~~YES (Calibration Completed)~~ NO (Problem with instrument, detail in comments)

Calibration Check[6]	Completed (Circle one): YES NO		
Time:	Date:	Calibration Completed By:	
Calibration Gas	Same as Above (Circle one)? YES NO (IF NO COMPLETE INFORMATION BELOW)		
	Manufacturer	Lot No./Expiration Date	Concentration(s)
			CO: H_2S: LEL: O_2:
			Isobutylene:

[1] Note time instrument is turned on for initial warm up

[2] While instrument is warming up, make sure inlet tubing is connected to a hydrophobic filter and fill one Tedlar bag with isobutylene and one with four gas mix

[3] VOC – volatile organic compounds, H_2S – hydrogen sulfide, LEL – lower explosive limit

[4] Instruments should read zero after fresh air calibration is complete, write down actual readings below headings

[5] Write concentration from calibration gas on this line

[6] Complete at the end of the day

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Check Readings:				
CO:	H_2S:	LEL:	O_2:	VOC:

Comments/Corrective Action: _____

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McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Completed By	Date	Rental Company	Rental Company Number	Instrument Serial Number	Time Instrument On[1]	Warm Up 5 to 10 Minutes[2]
J. Wagenmaker	10/11/23	Pine	214159	592-602754	0720	Yes

Calibration Gas	Manufacturer	Lot No./Expiration Date	Concentration(s)
ISOBUTYLENE	Pine	304-402690404-1	CO: ✓ H_2S: ✓ LEL: ✓ O_2: ✓
			Isobutylene: 100.0 ppm

Fresh Air Calibration	Carbon Monoxide (CO) Reading	VOC[3] Reading (zero)	H_2S Reading (zero)	LEL Reading (zero)	Oxygen (O_2)
Expected Reading[4]	Zero	Zero	Zero	Zero	20.9%
Actual Reading	✓	0.0	✓	✓	✓

Multiple Sensor Calibration	CO Reading	H_2S Reading	LEL Reading	O_2 Reading	VOC Sensor Calibration	VOC Reading
Expected Reading[5]	✓		✓	✓	Expected Reading	100.0 ppm
Actual Reading	✓	✓	✓	✓	Actual Reading	100.2 ppm

Instrument OK? YES (Calibration Completed) NO (Problem with instrument, detail in comments)

Calibration Check[6]	Completed (Circle one): YES NO		
Time:	Date:	Calibration Completed By:	
Calibration Gas	Same as Above (Circle one)? YES NO (IF NO COMPLETE INFORMATION BELOW)		
	Manufacturer	Lot No./Expiration Date	Concentration(s)
			CO: H_2S: LEL: O_2:
			Isobutylene:

[1] Note time instrument is turned on for initial warm up

[2] While instrument is warming up, make sure inlet tubing is connected to a hydrophobic filter and fill one Tedlar bag with isobutylene and one with four gas mix

[3] VOC – volatile organic compounds, H_2S – hydrogen sulfide, LEL – lower explosive limit

[4] Instruments should read zero after fresh air calibration is complete, write down actual readings below headings

[5] Write concentration from calibration gas on this line

[6] Complete at the end of the day

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Check Readings:				
CO:	H_2S:	LEL:	O_2:	VOC:

Comments/Corrective Action: _____

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McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Completed By	Date	Rental Company	Rental Company Number	Instrument Serial Number	Time Instrument On[1]	Warm Up 5 to 10 Minutes[2]
J. Wagenaar	12/1/23	Pine	R994	592-000281	1300	Yes

Calibration Gas	Manufacturer	Lot No./Expiration Date	Concentration(s)
ISOBUTYLENE	Pine	304-402556116-1	CO: ✓ H_2S: ✓ LEL: ✓ O_2: ✓
		10/18/2026	Isobutylene: 1000 ppm

Fresh Air Calibration	Carbon Monoxide (CO) Reading	VOC[3] Reading (zero)	H_2S Reading (zero)	LEL Reading (zero)	Oxygen (O_2)
Expected Reading[4]	Zero	Zero	Zero	Zero	20.9%
Actual Reading	✓	0.0	✓	✓	✓

Multiple Sensor Calibration	CO Reading	H_2S Reading	LEL Reading	O_2 Reading	VOC Sensor Calibration	VOC Reading
Expected Reading[5]	✓	✓	✓	✓	Expected Reading	100.0 ppm
Actual Reading					Actual Reading	100.0

Instrument OK? YES (Calibration Completed) NO (Problem with instrument, detail in comments)

Calibration Check[6]	Completed (Circle one): YES NO		
Time:	Date:	Calibration Completed By:	
Calibration Gas	Same as Above (Circle one)? YES NO (IF NO COMPLETE INFORMATION BELOW)		
	Manufacturer	Lot No./Expiration Date	Concentration(s)
			CO: H_2S: LEL: O_2:
			Isobutylene:

[1] Note time instrument is turned on for initial warm up

[2] While instrument is warming up, make sure inlet tubing is connected to a hydrophobic filter and fill one Tedlar bag with isobutylene and one with four gas mix

[3] VOC – volatile organic compounds, H_2S – hydrogen sulfide, LEL – lower explosive limit

[4] Instruments should read zero after fresh air calibration is complete, write down actual readings below headings

[5] Write concentration from calibration gas on this line

[6] Complete at the end of the day

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Check Readings:				
CO:	H_2S:	LEL:	O_2:	VOC:

Comments/Corrective Action: _____

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McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Completed By	Date	Rental Company	Rental Company Number	Instrument Serial Number	Time Instrument On[1]	Warm Up 5 to 10 Minutes[2]
~~J. Lyte~~ D. Kahun	10/12/23	Pine	214159	592-602754	0710	Yes

Calibration Gas	Manufacturer	Lot No./Expiration Date	Concentration(s)
ISOBUTYLENE	Pine	304-402690404-1	CO: ✓ H_2S: ✓ LEL: ✓ O_2: ✓
			Isobutylene: 100.0ppm

Fresh Air Calibration	Carbon Monoxide (CO) Reading	VOC[3] Reading (zero)	H_2S Reading (zero)	LEL Reading (zero)	Oxygen (O_2)
Expected Reading[4]	Zero	Zero	Zero	Zero	20.9%
Actual Reading	✓	0.0	✓	✓	✓

Multiple Sensor Calibration	CO Reading	H_2S Reading	LEL Reading	O_2 Reading	VOC Sensor Calibration	VOC Reading
Expected Reading[5]					Expected Reading	100.0
Actual Reading	✓	✓	✓	✓	Actual Reading	98.7

Instrument OK? YES (Calibration Completed) NO (Problem with instrument, detail in comments)

Calibration Check[6]	Completed (Circle one): YES NO		
Time:	Date:	Calibration Completed By:	
Calibration Gas	Same as Above (Circle one)? YES NO (IF NO COMPLETE INFORMATION BELOW)		
	Manufacturer	Lot No./Expiration Date	Concentration(s)
			CO: H_2S: LEL: O_2:
			Isobutylene:

[1] Note time instrument is turned on for initial warm up

[2] While instrument is warming up, make sure inlet tubing is connected to a hydrophobic filter and fill one Tedlar bag with isobutylene and one with four gas mix

[3] VOC – volatile organic compounds, H_2S – hydrogen sulfide, LEL – lower explosive limit

[4] Instruments should read zero after fresh air calibration is complete, write down actual readings below headings

[5] Write concentration from calibration gas on this line

[6] Complete at the end of the day

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Check Readings:				
CO:	H_2S:	LEL:	O_2:	VOC:

Comments/Corrective Action: _____

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McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Completed By	Date	Rental Company	Rental Company Number	Instrument Serial Number	Time Instrument On[1]	Warm Up 5 to 10 Minutes[2]
J. W. Jennaker	10/13/2023	Pine			1200	Yes

Calibration Gas	Manufacturer	Lot No./Expiration Date	Concentration(s)
ISOBUTYLENE	Pine	304-402690404-1	CO: — H_2S: — LEL: — O_2: —
		3/21/2027	Isobutylene: 100.0

Fresh Air Calibration	Carbon Monoxide (CO) Reading	VOC[3] Reading (zero)	H_2S Reading (zero)	LEL Reading (zero)	Oxygen (O_2)
Expected Reading[4]	Zero	Zero	Zero	Zero	20.9%
Actual Reading	—	0.0	—	—	—

Multiple Sensor Calibration	CO Reading	H_2S Reading	LEL Reading	O_2 Reading	VOC Sensor Calibration	VOC Reading
Expected Reading[5]					Expected Reading	100.0 ppm
Actual Reading					Actual Reading	100.0 ppm

Instrument OK? YES (Calibration Completed) NO (Problem with instrument, detail in comments)

Calibration Check[6]	Completed (Circle one): YES NO		
Time:	Date:	Calibration Completed By:	
Calibration Gas	Same as Above (Circle one)? YES NO (IF NO COMPLETE INFORMATION BELOW)		
	Manufacturer	Lot No./Expiration Date	Concentration(s)
			CO: H_2S: LEL: O_2:
			Isobutylene:

[1] Note time instrument is turned on for initial warm up

[2] While instrument is warming up, make sure inlet tubing is connected to a hydrophobic filter and fill one Tedlar bag with isobutylene and one with four gas mix

[3] VOC – volatile organic compounds, H_2S – hydrogen sulfide, LEL – lower explosive limit

[4] Instruments should read zero after fresh air calibration is complete, write down actual readings below headings

[5] Write concentration from calibration gas on this line

[6] Complete at the end of the day

McLouth Steel Corp Superfund Site

Instrument Calibration Log

RAE Systems .MultiRAE + (4 gas + PID)

Calibration Check Readings:				
CO:	H_2S:	LEL:	O_2:	VOC:

Comments/Corrective Action: _____

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McLouth Steel Corp. Superfund Site
GENERAL EQUIPMENT CALIBRATION LOG

Instrument (make/model/serial #): Horiba U-52 Manufacturer: Horiba Rental Company: Rine

Upon receipt, all parts are included and this instrument is in working order: [signature] 10/11/23
(signature/date)

Calibration Date	Initial Setting	Standard/ Gas Used (Concentration)	Lot Control No. Expiration Date	Adjustments Made	Final Reading	Comments Pass/Fail	Signature
10/11/23	~~autocal~~ —	autocal 4.0/4.49/0.0	24001111 5/31/24	None	3.97/4.49/0.0	pass	[signature]
~~11/11~~							
10/11/23	~	autocal 4.0/4.49/00	24001111 5/31/2024	none	3.90/4.42/0.0	PASS	[signature]
10/12/23	—	autoCal 4.0/4.49/0.0	24001111 5/31/2024	none	4.00/4.48/0.2	pass	[signature]
10/12/23	—	autoCal 4.0/4.49/0.0	24001111 5/31/2024	none	4.00/4.49/0.0	pass	[signature]
10/13/23	—	autoCal 4.0/4.49/0.0	24001111 5/31/2024	none	3.99/4.46/0.0	pass	[signature]
10/13/23	—	autoCal 4.0/4.49/0.0	24001111 5/31/2024	none	3.99/4.49/0.3	pass	[signature]

REV 12/22

McLouth Steel Corp. Superfund Site
GENERAL EQUIPMENT CALIBRATION LOG

Instrument (make/model/serial #): Horiba U-52 Manufacturer: Horiba Rental Company: Rine

Upon receipt, all parts are included and this instrument is in working order: Joseph Marsala 10/2/23;
(signature/date)

Calibration Date	Initial Setting	Standard/ Gas Used (Concentration)	Lot Control No. Expiration Date	Adjustments Made	Final Reading	Comments Pass/Fail	Signature
10/2/23	—	autocal 4.0 pH/4.49 mS/cm	24001111 5/31/24	—	4.01, 4.49 0.0NTU	Pass	
10/2/23	—	autocal 4.0 /4.49/0.0	24001111 5/31/24	—	3.94, 4.45 0.0NTU	Pass	
10/3/23	—	autocal 4.0 /4.49/0.0	24001111 5/31/2024	none	3.99, 4.52, 0.6 NTU	pass	
10/3/23	—	auto cal 4.0/4.49/0.0	24001111 5/31/2024	none	4.00, 4.51, 0.0 NTU	pass	
10/4/23	—	auto cal 4.0/4.49/0.0	24001111 5/31/2024	none	4.0, 4.49, 0.0	pass	
10/4/23	—	auto cal 4.0/4.49/0.0	24001111 5/31/2024	none	4.0, 4.49, 0.0	pass	
10/5/23	—	Auto Cal 4.0/4.49/0.0	24001111 5/31/2024	None	3.97, 4.52, 0.0	pass	
10/5/23	—	Auto Cal 4.0/4.49/0.0	24001111 5/31/2024	None	3.99, 4.48, 0.0	pass	
10/6/23	—	autocal 4.0/4.49/0.0	24001111 5/31/24	—	3.97, 4.49, 0.2	pass	
10/6/23	—	autocal 4.0/4.49/0.0	24001111 5/31/24	—	3.98, 4.44, 13	pass.	
10/9/23	—	auto Cal 4.0/4.49/0.0	24001111 5/31/24	—	4.00, 4.51, 0.0	pass	
10/10/23	—	Auto Cal 4.0/4.49/0.0	24001111 5/31/24	—	4.00, 4.52, 0.0	pass	

MSTC23-SD02

PROJECT: McLouth Steel Corp.		WATER DEPTH (FT):	LOGGED BY: Jason Wagenmaker
PROJECT NUMBER: 281860		MUDLINE ELEVATION (FT):	ATTEMPT NO.:
CLIENT:		VERTICAL DATUM (ft): NAVD88	NORTHING (ft):
LOCATION: Trenton, Michigan		DRIVE LENGTH (FT): 1.8	EASTING (ft):
CONTRACTOR: EPA		RECOVERY (FT)/(%): 1.8 / 100	HORIZ. DATUM (CRD. SYS.): NAD 1983 (SP MI S)
METHOD/CORE DIA. (IN): Vibracore /		NAPL PRESENT?:	DATE AND TIME: 10-19-23 00:00

RECOVERED LENGTH (FT)	ELEV. (ft)	GRAPHIC LOG	USCS SYMBOL	SEDIMENT DESCRIPTION (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, Additional Constituents, Sheen, Odor)	GRAVEL (%)	SAND (%)	FINES (%)	PID (PPM)	SAMPLE ID
			ML	SILT. Very soft. Silt is lower plasticity, medium dilantancy, sludge like	10	5	85	1.4 2.2	
1			ML	SILT. Very soft. Silt is lower plasticity, medium dilantancy, sludge like	0	5	95	2.8 3	
2			CH	REFUSAL				3.2	
3									
4									
5									
6									
7									
8									
9									

STANDARD LOG: MCLOUTH SEDIMENT MCLOUTH.GPJ STANDARD_ENVIRONMENTAL_PROJECT.GDT 4/16/24 REV.

CDM Smith
535 Griswold Street
Suite 930
Detroit, MI 48226
Telephone: 212-785-9123

SEDIMENT BORING DRAFT LOG
MSTC23-SD02

PROJECT NO.

MSTC23-SD03

PROJECT: McLouth Steel Corp.		WATER DEPTH (FT):	LOGGED BY: Jason Wagenmaker
PROJECT NUMBER: 281860		MUDLINE ELEVATION (FT):	ATTEMPT NO.:
CLIENT:		VERTICAL DATUM (ft): NAVD88	NORTHING (ft):
LOCATION: Trenton, Michigan		DRIVE LENGTH (FT): 2	EASTING (ft):
CONTRACTOR: EPA		RECOVERY (FT)/(%): 2 / 100	HORIZ. DATUM (CRD. SYS.): NAD 1983 (SP MI S)
METHOD/CORE DIA. (IN): Vibracore /		NAPL PRESENT?:	DATE AND TIME: 10-18-23 00:00

RECOVERED LENGTH (FT)	ELEV. (ft)	GRAPHIC LOG	USCS SYMBOL	SEDIMENT DESCRIPTION (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, Additional Constituents, Sheen, Odor)	GRAVEL (%)	SAND (%)	FINES (%)	PID (PPM)	SAMPLE ID
			ML	SILT. Very soft. Silt is lower plasticity, medium dilantancy. Core is very sludge like	0	5	95		
			CH	REFUSAL					

1
2
3
4
5
6
7
8
9

STANDARD LOG: MCLOUTH SEDIMENT MCLOUTH.GPJ STANDARD_ENVIRONMENTAL_PROJECT.GDT 4/16/24 REV.

CDM Smith
535 Griswold Street
Suite 930
Detroit, MI 48226
Telephone: 212-785-9123

SEDIMENT BORING DRAFT LOG
MSTC23-SD03

PROJECT NO.

MSTC23-SD06

PROJECT: McLouth Steel Corp.		WATER DEPTH (FT):	LOGGED BY: Jason Wagenmaker
PROJECT NUMBER: 281860		MUDLINE ELEVATION (FT):	ATTEMPT NO.:
CLIENT:		VERTICAL DATUM (ft): NAVD88	NORTHING (ft):
LOCATION: Trenton, Michigan		DRIVE LENGTH (FT): 9	EASTING (ft):
CONTRACTOR: EPA		RECOVERY (FT)/(%): 9 / 100	HORIZ. DATUM (CRD. SYS.): NAD 1983 (SP MI S)
METHOD/CORE DIA. (IN): Vibracore /		NAPL PRESENT?:	DATE AND TIME: 10-18-23 00:00

RECOVERED LENGTH (FT)	ELEV. (ft)	GRAPHIC LOG	USCS SYMBOL	SEDIMENT DESCRIPTION (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, Additional Constituents, Sheen, Odor)	GRAVEL (%)	SAND (%)	FINES (%)	PID (PPM)	SAMPLE ID
1			SM	SANDY SILT WITH TRACE CLAY. Very soft. Silt is low plasticity, medum dilantancy. Sand is poorly graded, very fine, round. Gravel on surface, 1/4"-1". Sludge like. ~4' layer of odorous low density, possible industrial product. Breaks apart on pressure, solid.	5	20	75		
2									
3									
4									
5			CH	NOTE: Sediment characteristics for 5 feet through 9 feet below sediment surface is not available for this boring location.					
6									
7									
8									
9				REFUSAL					

STANDARD LOG: MCLOUTH SEDIMENT MCLOUTH.GPJ STANDARD_ENVIRONMENTAL_PROJECT.GDT 4/16/24 REV.

CDM Smith
535 Griswold Street
Suite 930
Detroit, MI 48226
Telephone: 212-785-9123

SEDIMENT BORING DRAFT LOG
MSTC23-SD06

PROJECT NO.

MSTC23-SD08

PROJECT: McLouth Steel Corp.		WATER DEPTH (FT):	LOGGED BY: Jason Wagenmaker
PROJECT NUMBER: 281860		MUDLINE ELEVATION (FT):	ATTEMPT NO.:
CLIENT:		VERTICAL DATUM (ft): NAVD88	NORTHING (ft):
LOCATION: Trenton, Michigan		DRIVE LENGTH (FT): 2.5	EASTING (ft):
CONTRACTOR: EPA		RECOVERY (FT)/(%): 2.5 / 100	HORIZ. DATUM (CRD. SYS.): NAD 1983 (SP MI S)
METHOD/CORE DIA. (IN): Vibracore /		NAPL PRESENT?:	DATE AND TIME: 10-17-23 00:00

RECOVERED LENGTH (FT)	ELEV. (ft)	GRAPHIC LOG	USCS SYMBOL	SEDIMENT DESCRIPTION (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, Additional Constituents, Sheen, Odor)	GRAVEL (%)	SAND (%)	FINES (%)	PID (PPM)	SAMPLE ID
			SM	SILTY SAND WITH CLAY. Loose. Sandy is poorly graded, very fine, round. Silt is low plasticity, medium dilantancy, clay is high plasticity, low dilantancy.	0	60	40		
			SM	SILTY SAND. Loose. Sand is poorly graded, fine, silt. Silt is low plasticity, medium dilantancy	0	70	30		
			CH	REFUSAL					

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STANDARD LOG: MCLOUTH SEDIMENT MCLOUTH.GPJ STANDARD_ENVIRONMENTAL_PROJECT.GDT 4/16/24 REV.

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SEDIMENT BORING DRAFT LOG
MSTC23-SD08

PROJECT NO.

MSTC23-SD09

PROJECT: McLouth Steel Corp.		WATER DEPTH (FT):	LOGGED BY: Jason Wagenmaker
PROJECT NUMBER: 281860		MUDLINE ELEVATION (FT):	ATTEMPT NO.:
CLIENT:		VERTICAL DATUM (ft): NAVD88	NORTHING (ft):
LOCATION: Trenton, Michigan		DRIVE LENGTH (FT): 2.8	EASTING (ft):
CONTRACTOR: EPA		RECOVERY (FT)/(%): 2.8 / 100	HORIZ. DATUM (CRD. SYS.): NAD 1983 (SP MI S)
METHOD/CORE DIA. (IN): Vibracore /		NAPL PRESENT?:	DATE AND TIME: 10-13-23 00:00

RECOVERED LENGTH (FT)	ELEV. (ft)	GRAPHIC LOG	USCS SYMBOL	SEDIMENT DESCRIPTION (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, Additional Constituents, Sheen, Odor)	GRAVEL (%)	SAND (%)	FINES (%)	PID (PPM)	SAMPLE ID
1			ML	SILT WITH TRACE CLAY. Soft. Silt is low plasticity, medium dilantancy	0	5	90		
2			CH	FAT CLAY WITH SAND. Soft. Clay is high plasticity, low dilantancy, sand is poorly graded, very fine, round	5	15	80		
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STANDARD LOG: MCLOUTH SEDIMENT MCLOUTH.GPJ STANDARD_ENVIRONMENTAL_PROJECT.GDT 4/16/24 REV.

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SEDIMENT BORING DRAFT LOG
MSTC23-SD09

PROJECT NO.

MSTC23-SD13

PROJECT: McLouth Steel Corp.		WATER DEPTH (FT):	LOGGED BY: Jason Wagenmaker
PROJECT NUMBER: 281860		MUDLINE ELEVATION (FT):	ATTEMPT NO.:
CLIENT:		VERTICAL DATUM (ft): NAVD88	NORTHING (ft):
LOCATION: Trenton, Michigan		DRIVE LENGTH (FT): 1.4	EASTING (ft):
CONTRACTOR: EPA		RECOVERY (FT)/(%): 1.4 / 100	HORIZ. DATUM (CRD. SYS.): NAD 1983 (SP MI S)
METHOD/CORE DIA. (IN): Vibracore /		NAPL PRESENT?:	DATE AND TIME: 10-13-23 00:00

RECOVERED LENGTH (FT)	ELEV. (ft)	GRAPHIC LOG	USCS SYMBOL	SEDIMENT DESCRIPTION (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, Additional Constituents, Sheen, Odor)	GRAVEL (%)	SAND (%)	FINES (%)	PID (PPM)	SAMPLE ID
			CH	SILTY CLAY. Very soft. Clay is high plasticity, silt is low plasticity, medium dilantancy. Sand is poorly graded, fine, subround to subangular. Gravel from surface fell inside casing to 2'. Sediments fell through and are lost, gravel is subangular to subround, poorly graded, 1/4"-1/8", shells found in gravel layer.	5	10	85		
				REFUSAL					

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STANDARD LOG: MCLOUTH SEDIMENT MCLOUTH.GPJ STANDARD_ENVIRONMENTAL_PROJECT.GDT 4/16/24 REV.

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SEDIMENT BORING DRAFT LOG
MSTC23-SD13

PROJECT NO.

MSTC23-SD14

PROJECT: McLouth Steel Corp.		WATER DEPTH (FT):	LOGGED BY: Jason Wagenmaker
PROJECT NUMBER: 281860		MUDLINE ELEVATION (FT):	ATTEMPT NO.:
CLIENT:		VERTICAL DATUM (ft): NAVD88	NORTHING (ft):
LOCATION: Trenton, Michigan		DRIVE LENGTH (FT): 2.6	EASTING (ft):
CONTRACTOR: EPA		RECOVERY (FT)/(%): 2.6 / 100	HORIZ. DATUM (CRD. SYS.): NAD 1983 (SP MI S)
METHOD/CORE DIA. (IN): Vibracore /		NAPL PRESENT?:	DATE AND TIME: 10-23-23 00:00

RECOVERED LENGTH (FT)	ELEV. (ft)	GRAPHIC LOG	USCS SYMBOL	SEDIMENT DESCRIPTION (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, Additional Constituents, Sheen, Odor)	GRAVEL (%)	SAND (%)	FINES (%)	PID (PPM)	SAMPLE ID
			CH	SILTY CLAY. Very soft. Clay is high plasticity, low dilantancy, silt is low plasticity, medium dilantancy. Tree debri and branches found in upper 2'. 3" rock on top of core	5	5	90		
			CH	FAT CLAY WITH SILT. Stiff. Clay is high plasticity, low dilantancy	0	0	100		
				REFUSAL					

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SEDIMENT BORING DRAFT LOG
MSTC23-SD14

PROJECT NO.

STANDARD LOG: MCLOUTH SEDIMENT MCLOUTH.GPJ STANDARD_ENVIRONMENTAL_PROJECT.GDT 4/16/24 REV.

MSTC23-SD15

PROJECT: McLouth Steel Corp.		WATER DEPTH (FT):	LOGGED BY: Jason Wagenmaker
PROJECT NUMBER: 281860		MUDLINE ELEVATION (FT):	ATTEMPT NO.:
CLIENT:		VERTICAL DATUM (ft): NAVD88	NORTHING (ft):
LOCATION: Trenton, Michigan		DRIVE LENGTH (FT): 0.5	EASTING (ft):
CONTRACTOR: EPA		RECOVERY (FT)/(%): 0.5 / 100	HORIZ. DATUM (CRD. SYS.): NAD 1983 (SP MI S)
METHOD/CORE DIA. (IN): Vibracore /		NAPL PRESENT?:	DATE AND TIME: 10-11-23 00:00

RECOVERED LENGTH (FT)	ELEV. (ft)	GRAPHIC LOG	USCS SYMBOL	SEDIMENT DESCRIPTION (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, Additional Constituents, Sheen, Odor)	GRAVEL (%)	SAND (%)	FINES (%)	PID (PPM)	SAMPLE ID
			SM	SILTY SAND. Loose. Sand is poorly graded, fine to very fine, subround to subangular. Silt is low plasticity, medium dilantancy.	5	65	30		
			CH	REFUSAL					

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STANDARD LOG: MCLOUTH SEDIMENT MCLOUTH.GPJ STANDARD_ENVIRONMENTAL_PROJECT.GDT 4/16/24 REV.

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SEDIMENT BORING DRAFT LOG
MSTC23-SD15

PROJECT NO.

MSTC23-SD19

PROJECT:	McLouth Steel Corp.	WATER DEPTH (FT):	LOGGED BY: Jason Wagenmaker
PROJECT NUMBER:	281860	MUDLINE ELEVATION (FT):	ATTEMPT NO.:
CLIENT:		VERTICAL DATUM (ft): NAVD88	NORTHING (ft):
LOCATION:	Trenton, Michigan	DRIVE LENGTH (FT): 2	EASTING (ft):
CONTRACTOR:	EPA	RECOVERY (FT)/(%): 1.5 / 75	HORIZ. DATUM (CRD. SYS.): NAD 1983 (SP MI S)
METHOD/CORE DIA. (IN):	Vibracore /	NAPL PRESENT?:	DATE AND TIME: 10-11-23 00:00

RECOVERED LENGTH (FT)	ELEV. (ft)	GRAPHIC LOG	USCS SYMBOL	SEDIMENT DESCRIPTION (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, Additional Constituents, Sheen, Odor)	GRAVEL (%)	SAND (%)	FINES (%)	PID (PPM)	SAMPLE ID
			ML	SILT. Very soft. Silt is low plasticity, medium dilantancy	5	5	90		
			CH	REFUSAL					

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STANDARD LOG: MCLOUTH SEDIMENT MCLOUTH.GPJ STANDARD_ENVIRONMENTAL_PROJECT.GDT 4/16/24 REV.

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SEDIMENT BORING DRAFT LOG
MSTC23-SD19

PROJECT NO.

MSTC23-SD20

PROJECT: McLouth Steel Corp.		WATER DEPTH (FT):	LOGGED BY: Jason Wagenmaker
PROJECT NUMBER: 281860		MUDLINE ELEVATION (FT):	ATTEMPT NO.:
CLIENT:		VERTICAL DATUM (ft): NAVD88	NORTHING (ft):
LOCATION: Trenton, Michigan		DRIVE LENGTH (FT): 2.2	EASTING (ft):
CONTRACTOR: EPA		RECOVERY (FT)/(%): 2.2 / 100	HORIZ. DATUM (CRD. SYS.): NAD 1983 (SP MI S)
METHOD/CORE DIA. (IN): Vibracore /		NAPL PRESENT?:	DATE AND TIME: 10-16-23 00:00

RECOVERED LENGTH (FT)	ELEV. (ft)	GRAPHIC LOG	USCS SYMBOL	SEDIMENT DESCRIPTION (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, Additional Constituents, Sheen, Odor)	GRAVEL (%)	SAND (%)	FINES (%)	PID (PPM)	SAMPLE ID
			SM	SILTY SAND WITH TRACE CLAY. Loose. Sand is poorly graded, medium to fine, round to subround. Silt is low plasticity, medium dilantancy. Shell fragments from 0'-2.3'	0	70	30		
			SM	SILTY SAND. Loose. Sand is poorly graded, medium course, subround to round, silt is low plasticity, medium dilantancy. Shell fragments from 0'-2.3'	5	75	20		
			CH	REFUSAL					

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SEDIMENT BORING DRAFT LOG
MSTC23-SD20

PROJECT NO.

MSTC23-SD22

PROJECT: McLouth Steel Corp.		WATER DEPTH (FT):	LOGGED BY: Jason Wagenmaker
PROJECT NUMBER: 281860		MUDLINE ELEVATION (FT):	ATTEMPT NO.:
CLIENT:		VERTICAL DATUM (ft): NAVD88	NORTHING (ft):
LOCATION: Trenton, Michigan		DRIVE LENGTH (FT): 5.7	EASTING (ft):
CONTRACTOR: EPA		RECOVERY (FT)/(%): 5.7 / 100	HORIZ. DATUM (CRD. SYS.): NAD 1983 (SP MI S)
METHOD/CORE DIA. (IN): Vibracore /		NAPL PRESENT?:	DATE AND TIME: 10-13-23 00:00

RECOVERED LENGTH (FT)	ELEV. (ft)	GRAPHIC LOG	USCS SYMBOL	SEDIMENT DESCRIPTION (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, Additional Constituents, Sheen, Odor)	GRAVEL (%)	SAND (%)	FINES (%)	PID (PPM)	SAMPLE ID
			ML	SANDY SILT. Very soft. Silt is low plasticity, medium dilantancy, sand is poorly graded, very fine, round	0	20	80		
			ML	SANDY SILT WITH CLAY. Soft. Silt is low plasticity, medium dilantancy, sand is poorly graded, very fine, round, clay is high plasticity, low dilantancy	0	30	70		
			CH	REFUSAL					

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STANDARD LOG: MCLOUTH SEDIMENT MCLOUTH.GPJ STANDARD_ENVIRONMENTAL_PROJECT.GDT 4/16/24 REV.

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SEDIMENT BORING DRAFT LOG
MSTC23-SD22

PROJECT NO.

MSTC23-SD23

PROJECT: McLouth Steel Corp.		WATER DEPTH (FT):	LOGGED BY: Jason Wagenmaker
PROJECT NUMBER: 281860		MUDLINE ELEVATION (FT):	ATTEMPT NO.:
CLIENT:		VERTICAL DATUM (ft): NAVD88	NORTHING (ft):
LOCATION: Trenton, Michigan		DRIVE LENGTH (FT): 4.2	EASTING (ft):
CONTRACTOR: EPA		RECOVERY (FT)/(%): 4.2 / 100	HORIZ. DATUM (CRD. SYS.): NAD 1983 (SP MI S)
METHOD/CORE DIA. (IN): Vibracore /		NAPL PRESENT?:	DATE AND TIME: 10-16-23 00:00

RECOVERED LENGTH (FT)	ELEV. (ft)	GRAPHIC LOG	USCS SYMBOL	SEDIMENT DESCRIPTION (Density, Moisture, Color, Minor Constituent, MAJOR Constituent, Additional Constituents, Sheen, Odor)	GRAVEL (%)	SAND (%)	FINES (%)	PID (PPM)	SAMPLE ID
			SM	SILTY SAND WITH TRACE CLAY. Loose. Sand is poorly graded, very fine, round, silt is low plasticity, medium dilantancy	0	70	30		
			SM	SILTY SAND WITH TRACE CLAY. Very soft. Sand is poorly graded, fine, round. Clay is high plasticity, low dilantancy. Increasing sand grain size from 1'-3' from fine grained to medium grained	0	60	40		
			SM	SILTY SAND. Loose. Sand is poorly graded, medium grained, round, silt is low plasticity, medium dilantancy.	0	75	25		
			CH	REFUSAL					

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STANDARD LOG: MCLOUTH SEDIMENT MCLOUTH.GPJ STANDARD_ENVIRONMENTAL_PROJECT.GDT 4/16/24 REV.

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SEDIMENT BORING DRAFT LOG
MSTC23-SD23

PROJECT NO.

Attachment B

Analytical Data Tables

Table A - VOCs Detection Results

				Location	MSTC23-SD01	MSTC23-SD01	MSTC23-SD02	MSTC23-SD02	MSTC23-SD02	MSTC23-SD02	MSTC23-SD03	MSTC23-SD03
				Sample #	MSTC23-SD01-SS-0.5	MSTC23-SD01-SS-0.5_ME	MSTC23-SD02-1.0	MSTC23-SD02-2.0	MSTC23-SD02-SS-0.5	MSTC23-SD02-SS-0.5_ME	MSTC23-SD03-1.0	MSTC23-SD03-2.0
				Start Depth	0	0	0	1	0	0	0	1
				End Depth	0.5	0.5	1	2	0.5	0.5	1	2
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/18/2023	10/18/2023	10/19/2023	10/19/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
001-Mclouth_VOC	1,1,1-TRICHLOROETHANE	71-55-6	213	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	1,1,2,2-TETRACHLOROETHANE	79-34-5	600	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	670000	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	1,1,2-TRICHLOROETHANE	79-00-5	150	ug/kg	0.68 BA	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	1,1-DICHLOROETHANE	75-34-3	0.575	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	1,1-DICHLOROETHENE	75-35-4	19.4	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	1,2,3-TRICHLOROBENZENE	87-61-6	113	ug/kg	7.6 UJ	440 R	12 UJ	6.4 J+	7.5 UJ	560 R	5.7 J+	5.4 J+
001-Mclouth_VOC	1,2,3-TRICHLOROPROPANE	96-18-4	5.1	ug/kg	7.6 UJ	440 R	12 UJ	11 UJ	7.5 UJ	560 R	11 UJ	8.4 UJ
001-Mclouth_VOC	1,2,4-TRICHLOROBENZENE	120-82-1	5062	ug/kg	7.6 UJ	440 R	12 UJ	11 UJ	7.5 UJ	560 R	11 UJ	8.4 UJ
001-Mclouth_VOC	1,2,4-TRIMETHYLBENZENE	95-63-6	30000	ug/kg	7.6 UJ	440 R	23 J+	54 J+	3.9 J+	560 R	27 J+	53 J+
001-Mclouth_VOC	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5.3	ug/kg	7.6 UJ	440 R	12 UJ	11 UJ	7.5 UJ	560 R	11 UJ	8.4 UJ
001-Mclouth_VOC	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	106-93-4	36	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	1,2-DICHLOROBENZENE	95-50-1	294	ug/kg	7.6 UJ	440 R	1.6 J+	4.2 J+	7.5 UJ	560 R	2.4 J+	4 J+
001-Mclouth_VOC	1,2-DICHLOROETHANE	107-06-2	260	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	1,2-DICHLOROPROPANE	78-87-5	333	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	27000	ug/kg	7.6 UJ	440 R	11 J+	24 J+	1.8 J+	560 R	12 J+	25 J+
001-Mclouth_VOC	1,3-DICHLOROBENZENE	541-73-1	1315	ug/kg	1.7 J+	440 R	2.6 J+	11 UJ	7.5 UJ	560 R	9.4 J+	3.9 J+
001-Mclouth_VOC	1,4-DICHLOROBENZENE	106-46-7	318	ug/kg	7.6 UJ	440 R	12 UJ	1.8 J+	7.5 UJ	560 R	11 UJ	1.6 J+
001-Mclouth_VOC	2-HEXANONE	591-78-6	58.2	ug/kg	15 UJ	890 R	25 U	22 U	15 UJ	1100 R	22 U	17 U
001-Mclouth_VOC	ACETONE	67-64-1	**9.9**	ug/kg	**71 J-**	890 R	**70 J**	**60 J**	**17 J+**	1100 R	**99 J**	**70 J**
001-Mclouth_VOC	BENZENE	71-43-2	142	ug/kg	7.6 UJ	440 R	4.8 J	9.7 J	7.5 UJ	560 R	1.8 J	9.2
001-Mclouth_VOC	BROMOCHLOROMETHANE	74-97-5	15000	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	BROMODICHLOROMETHANE	75-27-4	210	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	BROMOFORM	75-25-2	492	ug/kg	7.6 UJ	440 R	12 UJ	11 UJ	7.5 UJ	560 R	11 UJ	8.4 UJ
001-Mclouth_VOC	BROMOMETHANE	74-83-9	1.37	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
pproved Final Quality	CARBON DISULFIDE	75-15-0	23.9	ug/kg	5.2 J-	440 R	4.2 J	4.9 J	7.5 UJ	560 R	6.8 J	9.9
001-Mclouth_VOC	CARBON TETRACHLORIDE	56-23-5	650	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	CHLOROBENZENE	108-90-7	291	ug/kg	7.6 UJ	440 R	12 U	11 UJ	7.5 UJ	560 R	11 UJ	8.4 UJ
001-Mclouth_VOC	CHLOROETHANE	75-00-3	540000	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	CHLOROFORM	67-66-3	121	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	CHLOROMETHANE	74-87-3	11000	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
pproved Final Quality	CIS-1,2-DICHLOROETHYLENE	156-59-2	432	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	CIS-1,3-DICHLOROPROPENE	10061-01-5	1.5		7.6 R	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	CYCLOHEXANE	110-82-7	650000	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	3.3 J
001-Mclouth_VOC	DIBROMOCHLOROMETHANE	124-48-1	198	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	DICHLORODIFLUOROMETHANE	75-71-8	8700	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	ETHYLBENZENE	100-41-4	175	ug/kg	7.6 UJ	440 R	12 U	8.6 J	7.5 UJ	560 R	11 U	4.6 J
001-Mclouth_VOC	ISOPROPYLBENZENE (CUMENE)	98-82-8	35	ug/kg	7.6 UJ	440 R	3 J+	5.5 J+	7.5 UJ	560 R	3.6 J+	6.3 J+
001-Mclouth_VOC	m,p-Xylene	179601-23-1	433	ug/kg	7.6 UJ	440 R	10 J	32	2.5 J+	560 R	12	23
001-Mclouth_VOC	METHYL ACETATE	79-20-9	7800000	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	METHYL ETHYL KETONE (2-BUTANONE)	78-93-3	**42.4**	ug/kg	27 J-	890 R	28	25	16 J+	1100 R	**46**	37
001-Mclouth_VOC	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	108-10-1	25.1	ug/kg	15 UJ	890 R	25 U	22 U	15 UJ	1100 R	22 U	17 U

Table A - VOCs Detection Results

				Location	MSTC23-SD01	MSTC23-SD01	MSTC23-SD02	MSTC23-SD02	MSTC23-SD02	MSTC23-SD02	MSTC23-SD03	MSTC23-SD03
				Sample #	MSTC23-SD01-SS-0.5	MSTC23-SD01-SS-0.5_ME	MSTC23-SD02-1.0	MSTC23-SD02-2.0	MSTC23-SD02-SS-0.5	MSTC23-SD02-SS-0.5_ME	MSTC23-SD03-1.0	MSTC23-SD03-2.0
				Start Depth	0	0	0	1	0	0	0	1
				End Depth	0.5	0.5	1	2	0.5	0.5	1	2
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/18/2023	10/18/2023	10/19/2023	10/19/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
001-Mclouth_VOC	METHYLCYCLOHEXANE	108-87-2		ug/kg	2 J-	440 R	5.8 J	11	7.5 UJ	560 R	8.5 J	26
001-Mclouth_VOC	METHYLENE CHLORIDE	75-09-2	159	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	O-XYLENE (1,2-DIMETHYLBENZENE)	95-47-6	433	ug/kg	7.6 UJ	440 R	13	23	1.7 J+	560 R	12	23
001-Mclouth_VOC	STYRENE	100-42-5	254	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	TERT-BUTYL METHYL ETHER	1634-04-4	304	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	TETRACHLOROETHENE (PCE)	127-18-4	990	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	TOLUENE	108-88-3	1220	ug/kg	7.6 UJ	440 R	12 U	12	7.5 UJ	560 R	11 U	2.7 J
001-Mclouth_VOC	TRANS-1,2-DICHLOROETHENE	156-60-5	654	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.5	ug/kg	7.6 R	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	TRICHLOROETHENE (TCE)	79-01-6	112	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	TRICHLOROFLUOROMETHANE	75-69-4	2300000	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U
001-Mclouth_VOC	VINYL CHLORIDE	75-01-4	59	ug/kg	7.6 UJ	440 R	12 U	11 U	7.5 UJ	560 R	11 U	8.4 U

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

Acronyms and Abbreviations:

CAS # - Chemical Abstract Service Number
FD - Field duplicate
N - Field sample
PAL - Project Action Limit
A - Unvalidated Result
B - The target analyte was detected in the associated blank.
J - The identification of the analyte is acceptable; the reported value is an estimate
J+ - The result is an estimated quantity, but the results may be biased high
J- - The result is an estimated quantity, but the results may be biased low

R - The data is unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

U - Not detected

Table A - VOCs Detection Results

				Location	MSTC23-SD03	MSTC23-SD05	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06
				Sample #	MSTC23-SD03-SS-0.5	MSTC23-SD05-SS-0.5	MSTC23-SD06-1.0	MSTC23-SD06-2.0	MSTC23-SD06-3.0	MSTC23-SD06-5.0	MSTC23-SD06-7.0	MSTC23-SD06-9.0
				Start Depth	0	0	0	1	2	3	5	7
				End Depth	0.5	0.5	1	2	3	5	7	9
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	11/17/2023	11/17/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
001-Mclouth_VOC	1,1,1-TRICHLOROETHANE	71-55-6	213	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,1,2,2-TETRACHLOROETHANE	79-34-5	600	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 U	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	670000	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,1,2-TRICHLOROETHANE	79-00-5	150	ug/kg	7.1 U	8.8 U	5.3 U	5.3 UJ	3.7 R	5.9 U	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,1-DICHLOROETHANE	75-34-3	0.575	ug/kg	7.1 U	8.8 U	5.3 U	5.3 UJ	3.7 UJ	5.9 U	7.8 U	7.4 U
001-Mclouth_VOC	1,1-DICHLOROETHENE	75-35-4	19.4	ug/kg	7.1 U	8.8 U	5.3 U	5.3 UJ	3.7 UJ	5.9 U	7.8 U	7.4 U
001-Mclouth_VOC	1,2,3-TRICHLOROBENZENE	87-61-6	113	ug/kg	7.1 U	8.8 UJ	5.3 UJ	2.5 J+	3.7 R	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,2,3-TRICHLOROPROPANE	96-18-4	5.1	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,2,4-TRICHLOROBENZENE	120-82-1	5062	ug/kg	7.1 U	8.8 UJ	5.3 UJ	5.3 UJ	3.7 R	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,2,4-TRIMETHYLBENZENE	95-63-6	30000	ug/kg	7.1 U	8.8 U	7.3 J-	12 J+	8.5 J+	4.3 J	47 J+	30 J+
001-Mclouth_VOC	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5.3	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 U	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	106-93-4	36	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,2-DICHLOROBENZENE	95-50-1	294	ug/kg	7.1 U	8.8 UJ	5.3 UJ	0.9 J+	3.7 R	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,2-DICHLOROETHANE	107-06-2	260	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,2-DICHLOROPROPANE	78-87-5	333	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	27000	ug/kg	7.1 U	8.8 U	3.9 J-	5.9 J+	4.4 J+	2.2 J	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,3-DICHLOROBENZENE	541-73-1	1315	ug/kg	7.1 U	8.8 UJ	5.3 UJ	5.3 UJ	0.79 J+	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	1,4-DICHLOROBENZENE	106-46-7	318	ug/kg	7.1 U	8.8 UJ	5.3 UJ	5.3 UJ	3.7 R	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	2-HEXANONE	591-78-6	58.2	ug/kg	14 U	18 U	11 U	11 UJ	7.3 UJ	12 U	16 UJ	15 U
001-Mclouth_VOC	ACETONE	67-64-1	**9.9**	ug/kg	**12 J**	18 U	**51 J**	**68**	**50 J+**	**61**	**85**	**58 J**
001-Mclouth_VOC	BENZENE	71-43-2	142	ug/kg	7.1 U	8.8 U	7	9.9 J+	4.2 J+	1.8 J	5.7 J+	4.3 J
001-Mclouth_VOC	BROMOCHLOROMETHANE	74-97-5	15000	ug/kg	7.1 U	8.8 U	5.3 U	5.3 UJ	3.7 UJ	5.9 U	7.8 U	7.4 U
001-Mclouth_VOC	BROMODICHLOROMETHANE	75-27-4	210	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	BROMOFORM	75-25-2	492	ug/kg	7.1 U	8.8 U	5.3 U	5.3 UJ	3.7 UJ	5.9 U	7.8 UJ	7.4 UJ
001-Mclouth_VOC	BROMOMETHANE	74-83-9	1.37	ug/kg	7.1 U	8.8 U	5.3 U	5.3 U	3.7 UJ	5.9 U	7.8 U	7.4 U
pproved Final Quality	CARBON DISULFIDE	75-15-0	23.9	ug/kg	7.1 U	8.8 U	4.3 J	5.1 J	2.9 J+	5.6 J	10	7.4
001-Mclouth_VOC	CARBON TETRACHLORIDE	56-23-5	650	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	CHLOROBENZENE	108-90-7	291	ug/kg	7.1 U	8.8 UJ	5.3 UJ	5.3 UJ	3.7 R	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	CHLOROETHANE	75-00-3	540000	ug/kg	7.1 U	8.8 U	5.3 U	5.3 U	3.7 UJ	5.9 U	7.8 U	7.4 U
001-Mclouth_VOC	CHLOROFORM	67-66-3	121	ug/kg	7.1 U	8.8 U	5.3 U	5.3 UJ	3.7 UJ	5.9 U	7.8 U	7.4 U
001-Mclouth_VOC	CHLOROMETHANE	74-87-3	11000	ug/kg	7.1 U	8.8 U	5.3 U	5.3 U	3.7 UJ	5.9 U	7.8 U	7.4 U
pproved Final Quality	CIS-1,2-DICHLOROETHYLENE	156-59-2	432	ug/kg	7.1 U	8.8 U	5.3 U	5.3 UJ	3.7 UJ	5.9 U	7.8 U	7.4 U
001-Mclouth_VOC	CIS-1,3-DICHLOROPROPENE	10061-01-5	1.5		7.1 U	8.8 U	5.3 U	5.3 UJ	3.7 R	5.9 U	7.8 UJ	7.4 UJ
001-Mclouth_VOC	CYCLOHEXANE	110-82-7	650000	ug/kg	7.1 U	8.8 U	1.6 J-	3.3 J+	1.6 J+	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	DIBROMOCHLOROMETHANE	124-48-1	198	ug/kg	7.1 U	8.8 U	5.3 U	5.3 UJ	3.7 UJ	5.9 U	7.8 UJ	7.4 U
001-Mclouth_VOC	DICHLORODIFLUOROMETHANE	75-71-8	8700	ug/kg	7.1 U	8.8 U	5.3 U	5.3 U	3.7 UJ	5.9 U	7.8 U	7.4 UJ
001-Mclouth_VOC	ETHYLBENZENE	100-41-4	175	ug/kg	7.1 U	8.8 U	5.3 UJ	2.2 J+	0.99 J+	0.97 J	5.5 J+	4.1 J
001-Mclouth_VOC	ISOPROPYLBENZENE (CUMENE)	98-82-8	35	ug/kg	7.1 U	8.8 U	1.3 J-	2.1 J+	1.2 J+	5.9 U	6.8 J+	4.5 J+
001-Mclouth_VOC	m,p-Xylene	179601-23-1	433	ug/kg	7.1 U	8.8 U	3.7 J-	7.2 J+	3.6 J+	3.2 J	24 J+	17
001-Mclouth_VOC	METHYL ACETATE	79-20-9	7800000	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	METHYL ETHYL KETONE (2-BUTANONE)	78-93-3	**42.4**	ug/kg	14	9.4 J	19	27	19 J+	22	35	23
001-Mclouth_VOC	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	108-10-1	25.1	ug/kg	14 U	18 U	11 U	11 UJ	7.3 UJ	12 U	16 UJ	15 U

Table A - VOCs Detection Results

				Location	MSTC23-SD03	MSTC23-SD05	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06
				Sample #	MSTC23-SD03-SS-0.5	MSTC23-SD05-SS-0.5	MSTC23-SD06-1.0	MSTC23-SD06-2.0	MSTC23-SD06-3.0	MSTC23-SD06-5.0	MSTC23-SD06-7.0	MSTC23-SD06-9.0
				Start Depth	0	0	0	1	2	3	5	7
				End Depth	0.5	0.5	1	2	3	5	7	9
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	11/17/2023	11/17/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
001-Mclouth_VOC	METHYLCYCLOHEXANE	108-87-2		ug/kg	7.1 U	8.8 U	3.3 J-	5.1 J+	2.8 J+	1.6 J-	20 J+	12 J-
001-Mclouth_VOC	METHYLENE CHLORIDE	75-09-2	159	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	O-XYLENE (1,2-DIMETHYLBENZENE)	95-47-6	433	ug/kg	7.1 U	8.8 U	6.7 J-	7.7 J+	5 J+	3.1 J	21 J+	14
001-Mclouth_VOC	STYRENE	100-42-5	254	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 R	3.7 R	5.9 U	7.8 UJ	7.4 U
001-Mclouth_VOC	TERT-BUTYL METHYL ETHER	1634-04-4	304	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	TETRACHLOROETHENE (PCE)	127-18-4	990	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 R	3.7 R	5.9 U	7.8 UJ	7.4 U
001-Mclouth_VOC	TOLUENE	108-88-3	1220	ug/kg	7.1 U	8.8 U	5.3 UJ	2.6 J+	0.74 J+	6	45 J+	49 J
001-Mclouth_VOC	TRANS-1,2-DICHLOROETHENE	156-60-5	654	ug/kg	7.1 U	8.8 U	5.3 U	5.3 UJ	3.7 UJ	5.9 U	7.8 U	7.4 U
001-Mclouth_VOC	TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.5	ug/kg	7.1 U	8.8 U	5.3 U	5.3 UJ	3.7 R	5.9 U	7.8 UJ	7.4 UJ
001-Mclouth_VOC	TRICHLOROETHENE (TCE)	79-01-6	112	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 R	3.7 R	5.9 U	7.8 UJ	7.4 UJ
001-Mclouth_VOC	TRICHLOROFLUOROMETHANE	75-69-4	2300000	ug/kg	7.1 U	8.8 U	5.3 UJ	5.3 UJ	3.7 UJ	5.9 UJ	7.8 UJ	7.4 UJ
001-Mclouth_VOC	VINYL CHLORIDE	75-01-4	59	ug/kg	7.1 U	8.8 U	5.3 U	5.3 U	3.7 UJ	5.9 U	7.8 UJ	7.4 U

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

Acronyms and Abbreviations:

CAS # - Chemical Abstract Service Number
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PAL - Project Action Limit
A - Unvalidated Result
B - The target analyte was detected in the associated blank.
J - The identification of the analyte is acceptable; the reported value is an estimate
J+ - The result is an estimated quantity, but the results may be biased high
J- - The result is an estimated quantity, but the results may be biased low

R - The data is unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

U - Not detected

Table A - VOCs Detection Results

				Location	MSTC23-SD06	MSTC23-SD06	MSTC23-SD07	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08
				Sample #	MSTC23-SD06A-7.0	MSTC23-SD06-SS-0.5	MSTC23-SD07-SS-0.5	MSTC23-SD08-1.0	MSTC23-SD08-1.0_ME	MSTC23-SD08-2.0	MSTC23-SD08A-SS-0.5	MSTC23-SD08-SS-0.5
				Start Depth	5	0	0	0	0	1	0	0
				End Depth	7	0.5	0.5	1	1	2	0.5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	FD	N	N	N	N	N	FD	N
				Parent Sample #	MSTC23-SD06-7.0						MSTC23-SD08-SS-0.5	
				Sample Date	11/17/2023	10/18/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
001-Mclouth_VOC	1,1,1-TRICHLOROETHANE	71-55-6	213	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	1,1,2,2-TETRACHLOROETHANE	79-34-5	600	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	670000	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	1,1,2-TRICHLOROETHANE	79-00-5	150	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	1,1-DICHLOROETHANE	75-34-3	0.575	ug/kg	9.1 U	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	1,1-DICHLOROETHENE	75-35-4	19.4	ug/kg	9.1 U	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	1,2,3-TRICHLOROBENZENE	87-61-6	113	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 UJ	5.4 U	6 U
001-Mclouth_VOC	1,2,3-TRICHLOROPROPANE	96-18-4	5.1	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	1,2,4-TRICHLOROBENZENE	120-82-1	5062	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 UJ	5.4 U	6 U
001-Mclouth_VOC	1,2,4-TRIMETHYLBENZENE	95-63-6	30000	ug/kg	67 J+	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5.3	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	106-93-4	36	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	1,2-DICHLOROBENZENE	95-50-1	294	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 UJ	5.4 U	6 U
001-Mclouth_VOC	1,2-DICHLOROETHANE	107-06-2	260	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	1,2-DICHLOROPROPANE	78-87-5	333	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	27000	ug/kg	37 J+	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	1,3-DICHLOROBENZENE	541-73-1	1315	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 UJ	5.4 U	6 U
001-Mclouth_VOC	1,4-DICHLOROBENZENE	106-46-7	318	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 UJ	5.4 U	6 U
001-Mclouth_VOC	2-HEXANONE	591-78-6	58.2	ug/kg	18 UJ	10 U	21 R	11 R	670 R	10 U	11 U	12 U
001-Mclouth_VOC	ACETONE	67-64-1	**9.9**	ug/kg	**110**	10 U	**23 J+**	11 R	670 R	**16 J**	11 U	12 U
001-Mclouth_VOC	BENZENE	71-43-2	142	ug/kg	7.8 J+	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	BROMOCHLOROMETHANE	74-97-5	15000	ug/kg	9.1 U	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	BROMODICHLOROMETHANE	75-27-4	210	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	BROMOFORM	75-25-2	492	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	BROMOMETHANE	74-83-9	1.37	ug/kg	9.1 U	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
pproved Final Quality	CARBON DISULFIDE	75-15-0	23.9	ug/kg	14	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	CARBON TETRACHLORIDE	56-23-5	650	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	CHLOROBENZENE	108-90-7	291	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 UJ	5.4 U	6 U
001-Mclouth_VOC	CHLOROETHANE	75-00-3	540000	ug/kg	9.1 U	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	CHLOROFORM	67-66-3	121	ug/kg	9.1 U	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	CHLOROMETHANE	74-87-3	11000	ug/kg	9.1 U	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
pproved Final Quality	CIS-1,2-DICHLOROETHYLENE	156-59-2	432	ug/kg	9.1 U	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	CIS-1,3-DICHLOROPROPENE	10061-01-5	1.5		9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	CYCLOHEXANE	110-82-7	650000	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	DIBROMOCHLOROMETHANE	124-48-1	198	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	DICHLORODIFLUOROMETHANE	75-71-8	8700	ug/kg	9.1 U	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	ETHYLBENZENE	100-41-4	175	ug/kg	7.6 J+	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	ISOPROPYLBENZENE (CUMENE)	98-82-8	35	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	m,p-Xylene	179601-23-1	433	ug/kg	33 J+	5.2 U	10 R	4.3 J+	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	METHYL ACETATE	79-20-9	7800000	ug/kg	3.7 J-	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	METHYL ETHYL KETONE (2-BUTANONE)	78-93-3	**42.4**	ug/kg	42	10 U	21 R	11 R	670 R	5.6 J	7.9 J	12 U
001-Mclouth_VOC	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	108-10-1	25.1	ug/kg	18 UJ	10 U	21 R	11 R	670 R	10 R	11 U	12 U

Table A - VOCs Detection Results

				Location	MSTC23-SD06	MSTC23-SD06	MSTC23-SD07	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08
				Sample #	MSTC23-SD06A-7.0	MSTC23-SD06-SS-0.5	MSTC23-SD07-SS-0.5	MSTC23-SD08-1.0	MSTC23-SD08-1.0_ME	MSTC23-SD08-2.0	MSTC23-SD08A-SS-0.5	MSTC23-SD08-SS-0.5
				Start Depth	5	0	0	0	0	1	0	0
				End Depth	7	0.5	0.5	1	1	2	0.5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	FD	N	N	N	N	N	FD	N
				Parent Sample #	MSTC23-SD06-7.0						MSTC23-SD08-SS-0.5	
				Sample Date	11/17/2023	10/18/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
001-Mclouth_VOC	METHYLCYCLOHEXANE	108-87-2		ug/kg	23 J+	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	METHYLENE CHLORIDE	75-09-2	159	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	O-XYLENE (1,2-DIMETHYLBENZENE)	95-47-6	433	ug/kg	29 J+	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	STYRENE	100-42-5	254	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	TERT-BUTYL METHYL ETHER	1634-04-4	304	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	TETRACHLOROETHENE (PCE)	127-18-4	990	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	TOLUENE	108-88-3	1220	ug/kg	65 J+	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	TRANS-1,2-DICHLOROETHENE	156-60-5	654	ug/kg	9.1 U	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.5	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	TRICHLOROETHENE (TCE)	79-01-6	112	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	TRICHLOROFLUOROMETHANE	75-69-4	2300000	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U
001-Mclouth_VOC	VINYL CHLORIDE	75-01-4	59	ug/kg	9.1 UJ	5.2 U	10 R	5.6 R	330 R	5.2 R	5.4 U	6 U

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

Acronyms and Abbreviations:

CAS # - Chemical Abstract Service Number
FD - Field duplicate
N - Field sample
PAL - Project Action Limit
A - Unvalidated Result
B - The target analyte was detected in the associated blank.
J - The identification of the analyte is acceptable; the reported value is an estimate
J+ - The result is an estimated quantity, but the results may be biased high
J- - The result is an estimated quantity, but the results may be biased low

R - The data is unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

U - Not detected

Table A - VOCs Detection Results

				Location	MSTC23-SD09	MSTC23-SD09	MSTC23-SD09	MSTC23-SD10	MSTC23-SD10	MSTC23-SD12	MSTC23-SD13	MSTC23-SD13
				Sample #	MSTC23-SD09-1.0	MSTC23-SD09-2.0	MSTC23-SD09-SS-0.5	MSTC23-SD10-SS-0.5	MSTC23-SD10-SS-0.5_ME	MSTC23-SD12-SS-0.5	MSTC23-SD13-1.0	MSTC23-SD13-SS-0.5
				Start Depth	0	1	0	0	0	0	0	0
				End Depth	1	2	0.5	0.5	0.5	0.5	1	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/12/2023	10/12/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
001-Mclouth_VOC	1,1,1-TRICHLOROETHANE	71-55-6	213	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,1,2,2-TETRACHLOROETHANE	79-34-5	600	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	670000	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,1,2-TRICHLOROETHANE	79-00-5	150	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,1-DICHLOROETHANE	75-34-3	0.575	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,1-DICHLOROETHENE	75-35-4	19.4	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,2,3-TRICHLOROBENZENE	87-61-6	113	ug/kg	9.9 R	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,2,3-TRICHLOROPROPANE	96-18-4	5.1	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,2,4-TRICHLOROBENZENE	120-82-1	5062	ug/kg	9.9 R	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,2,4-TRIMETHYLBENZENE	95-63-6	30000	ug/kg	14 J-	5.9 J+	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5.3	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	106-93-4	36	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,2-DICHLOROBENZENE	95-50-1	294	ug/kg	9.9 R	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,2-DICHLOROETHANE	107-06-2	260	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,2-DICHLOROPROPANE	78-87-5	333	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	27000	ug/kg	6.2 J-	4.1 J+	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,3-DICHLOROBENZENE	541-73-1	1315	ug/kg	2.1 J-	4.1 UJ	1.6 J-	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	1,4-DICHLOROBENZENE	106-46-7	318	ug/kg	9.9 R	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	2-HEXANONE	591-78-6	58.2	ug/kg	20 UJ	8.2 UJ	16 UJ	15 R	1100 UJ	16 UJ	8.4 UJ	11 UJ
001-Mclouth_VOC	ACETONE	67-64-1	**9.9**	ug/kg	**62 J**	**30 J**	16 UJ	15 R	1100 UJ	16 UJ	8.4 UJ	11 UJ
001-Mclouth_VOC	BENZENE	71-43-2	142	ug/kg	5 J	0.96 J	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	BROMOCHLOROMETHANE	74-97-5	15000	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	BROMODICHLOROMETHANE	75-27-4	210	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	BROMOFORM	75-25-2	492	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	BROMOMETHANE	74-83-9	1.37	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
pproved Final Quality	CARBON DISULFIDE	75-15-0	23.9	ug/kg	7.2 J	5.4 J	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	CARBON TETRACHLORIDE	56-23-5	650	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	CHLOROBENZENE	108-90-7	291	ug/kg	9.9 R	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	CHLOROETHANE	75-00-3	540000	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	CHLOROFORM	67-66-3	121	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	CHLOROMETHANE	74-87-3	11000	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
pproved Final Quality	CIS-1,2-DICHLOROETHYLENE	156-59-2	432	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	CIS-1,3-DICHLOROPROPENE	10061-01-5	1.5		9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	CYCLOHEXANE	110-82-7	650000	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	DIBROMOCHLOROMETHANE	124-48-1	198	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	DICHLORODIFLUOROMETHANE	75-71-8	8700	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	ETHYLBENZENE	100-41-4	175	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	ISOPROPYLBENZENE (CUMENE)	98-82-8	35	ug/kg	2 J-	1.1 J+	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	m,p-Xylene	179601-23-1	433	ug/kg	6.1 J-	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	METHYL ACETATE	79-20-9	7800000	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	150 J	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	METHYL ETHYL KETONE (2-BUTANONE)	78-93-3	**42.4**	ug/kg	25 J	8 J	18 J	15 R	1100 UJ	16 UJ	8.4 UJ	10 J
001-Mclouth_VOC	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	108-10-1	25.1	ug/kg	20 UJ	8.2 UJ	16 UJ	15 R	1100 UJ	16 UJ	8.4 UJ	11 UJ

Table A - VOCs Detection Results

				Location	MSTC23-SD09	MSTC23-SD09	MSTC23-SD09	MSTC23-SD10	MSTC23-SD10	MSTC23-SD12	MSTC23-SD13	MSTC23-SD13
				Sample #	MSTC23-SD09-1.0	MSTC23-SD09-2.0	MSTC23-SD09-SS-0.5	MSTC23-SD10-SS-0.5	MSTC23-SD10-SS-0.5_ME	MSTC23-SD12-SS-0.5	MSTC23-SD13-1.0	MSTC23-SD13-SS-0.5
				Start Depth	0	1	0	0	0	0	0	0
				End Depth	1	2	0.5	0.5	0.5	0.5	1	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/12/2023	10/12/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
001-Mclouth_VOC	METHYLCYCLOHEXANE	108-87-2		ug/kg	11 J-	6.7 J	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	METHYLENE CHLORIDE	75-09-2	159	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	O-XYLENE (1,2-DIMETHYLBENZENE)	95-47-6	433	ug/kg	5 J-	0.83 J	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	STYRENE	100-42-5	254	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	TERT-BUTYL METHYL ETHER	1634-04-4	304	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	TETRACHLOROETHENE (PCE)	127-18-4	990	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	TOLUENE	108-88-3	1220	ug/kg	1.6 J-	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	TRANS-1,2-DICHLOROETHENE	156-60-5	654	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.5	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	TRICHLOROETHENE (TCE)	79-01-6	112	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	TRICHLOROFLUOROMETHANE	75-69-4	2300000	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ
001-Mclouth_VOC	VINYL CHLORIDE	75-01-4	59	ug/kg	9.9 UJ	4.1 UJ	7.8 UJ	7.5 R	530 UJ	7.8 UJ	4.2 UJ	5.4 UJ

Notes:

1. Identifies results that exceed the listed PAL value

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R - The data is unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

U - Not detected

Table A - VOCs Detection Results

				Location	MSTC23-SD14	MSTC23-SD14	MSTC23-SD14	MSTC23-SD15	MSTC23-SD19	MSTC23-SD19	MSTC23-SD19	MSTC23-SD20
				Sample #	MSTC23-SD14-1.0	MSTC23-SD14-2.0	MSTC23-SD14-SS-0.5	MSTC23-SD15-SS-0.5	MSTC23-SD19-1.0	MSTC23-SD19-2.0	MSTC23-SD19-SS-0.5	MSTC23-SD20-1.0
				Start Depth	0	1	0	0	0	1	0	0
				End Depth	1	2	0.5	0.5	1	2	0.5	1
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/12/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/16/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
001-Mclouth_VOC	1,1,1-TRICHLOROETHANE	71-55-6	213	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,1,2,2-TETRACHLOROETHANE	79-34-5	600	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	670000	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,1,2-TRICHLOROETHANE	79-00-5	150	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,1-DICHLOROETHANE	75-34-3	0.575	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,1-DICHLOROETHENE	75-35-4	19.4	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,2,3-TRICHLOROBENZENE	87-61-6	113	ug/kg	4.5 R	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,2,3-TRICHLOROPROPANE	96-18-4	5.1	ug/kg	4.5 R	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,2,4-TRICHLOROBENZENE	120-82-1	5062	ug/kg	4.5 R	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,2,4-TRIMETHYLBENZENE	95-63-6	30000	ug/kg	4.5 R	4.2 UJ	5.7 UJ	410 R	660 R	570 R	300 J	4.8 R
001-Mclouth_VOC	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5.3	ug/kg	4.5 R	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	106-93-4	36	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,2-DICHLOROBENZENE	95-50-1	294	ug/kg	4.5 R	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,2-DICHLOROETHANE	107-06-2	260	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,2-DICHLOROPROPANE	78-87-5	333	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	27000	ug/kg	4.5 R	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,3-DICHLOROBENZENE	541-73-1	1315	ug/kg	4.5 R	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	1,4-DICHLOROBENZENE	106-46-7	318	ug/kg	4.5 R	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	2-HEXANONE	591-78-6	58.2	ug/kg	9 UJ	8.4 UJ	11 UJ	830 R	1300 R	1100 R	1400 R	9.5 R
001-Mclouth_VOC	ACETONE	67-64-1	**9.9**	ug/kg	5.8 J	8.4 UJ	11 UJ	830 R	1300 R	1100 R	1400 R	9.5 R
001-Mclouth_VOC	BENZENE	71-43-2	142	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	BROMOCHLOROMETHANE	74-97-5	15000	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	BROMODICHLOROMETHANE	75-27-4	210	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	BROMOFORM	75-25-2	492	ug/kg	4.5 R	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	BROMOMETHANE	74-83-9	1.37	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
pproved Final Quality	CARBON DISULFIDE	75-15-0	23.9	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	CARBON TETRACHLORIDE	56-23-5	650	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	CHLOROBENZENE	108-90-7	291	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	CHLOROETHANE	75-00-3	540000	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	CHLOROFORM	67-66-3	121	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	CHLOROMETHANE	74-87-3	11000	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
pproved Final Quality	CIS-1,2-DICHLOROETHYLENE	156-59-2	432	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	CIS-1,3-DICHLOROPROPENE	10061-01-5	1.5		4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	CYCLOHEXANE	110-82-7	650000	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	DIBROMOCHLOROMETHANE	124-48-1	198	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	DICHLORODIFLUOROMETHANE	75-71-8	8700	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	ETHYLBENZENE	100-41-4	175	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	ISOPROPYLBENZENE (CUMENE)	98-82-8	35	ug/kg	4.5 R	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	m,p-Xylene	179601-23-1	433	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	METHYL ACETATE	79-20-9	7800000	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	METHYL ETHYL KETONE (2-BUTANONE)	78-93-3	**42.4**	ug/kg	9 UJ	8.4 UJ	11 UJ	830 R	1300 R	1100 R	1400 R	9.5 R
001-Mclouth_VOC	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	108-10-1	25.1	ug/kg	9 UJ	8.4 UJ	11 UJ	830 R	1300 R	1100 R	1400 R	9.5 R

Table A - VOCs Detection Results

				Location	MSTC23-SD14	MSTC23-SD14	MSTC23-SD14	MSTC23-SD15	MSTC23-SD19	MSTC23-SD19	MSTC23-SD19	MSTC23-SD20
				Sample #	MSTC23-SD14-1.0	MSTC23-SD14-2.0	MSTC23-SD14-SS-0.5	MSTC23-SD15-SS-0.5	MSTC23-SD19-1.0	MSTC23-SD19-2.0	MSTC23-SD19-SS-0.5	MSTC23-SD20-1.0
				Start Depth	0	1	0	0	0	1	0	0
				End Depth	1	2	0.5	0.5	1	2	0.5	1
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/12/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/16/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
001-Mclouth_VOC	METHYLCYCLOHEXANE	108-87-2		ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	METHYLENE CHLORIDE	75-09-2	159	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	O-XYLENE (1,2-DIMETHYLBENZENE)	95-47-6	433	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	STYRENE	100-42-5	254	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	TERT-BUTYL METHYL ETHER	1634-04-4	304	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	TETRACHLOROETHENE (PCE)	127-18-4	990	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	TOLUENE	108-88-3	1220	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	TRANS-1,2-DICHLOROETHENE	156-60-5	654	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.5	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	TRICHLOROETHENE (TCE)	79-01-6	112	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	TRICHLOROFLUOROMETHANE	75-69-4	2300000	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R
001-Mclouth_VOC	VINYL CHLORIDE	75-01-4	59	ug/kg	4.5 UJ	4.2 UJ	5.7 UJ	410 R	660 R	570 R	680 R	4.8 R

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

Acronyms and Abbreviations:

CAS # - Chemical Abstract Service Number
FD - Field duplicate
N - Field sample
PAL - Project Action Limit
A - Unvalidated Result
B - The target analyte was detected in the associated blank.
J - The identification of the analyte is acceptable; the reported value is an estimate
J+ - The result is an estimated quantity, but the results may be biased high
J- - The result is an estimated quantity, but the results may be biased low

R - The data is unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

U - Not detected

Table A - VOCs Detection Results

				Location	MSTC23-SD20	MSTC23-SD20	MSTC23-SD20	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22
				Sample #	MSTC23-SD20-1.0_ME	MSTC23-SD20-2.0	MSTC23-SD20-SS-0.5	MSTC23-SD22-1.0	MSTC23-SD22-2.0	MSTC23-SD22-3.0	MSTC23-SD22-5.0	MSTC23-SD22-SS-0.5
				Start Depth	0	1	0	0	1	2	3	0
				End Depth	1	2	0.5	1	2	3	5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/16/2023	10/16/2023	10/16/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
001-Mclouth_VOC	1,1,1-TRICHLOROETHANE	71-55-6	213	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	1,1,2,2-TETRACHLOROETHANE	79-34-5	600	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	670000	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	1,1,2-TRICHLOROETHANE	79-00-5	150	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	1,1-DICHLOROETHANE	75-34-3	0.575	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	1,1-DICHLOROETHENE	75-35-4	19.4	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	1,2,3-TRICHLOROBENZENE	87-61-6	113	ug/kg	320 U	280 U	6.1 U	3.2 J+	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	1,2,3-TRICHLOROPROPANE	96-18-4	5.1	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	1,2,4-TRICHLOROBENZENE	120-82-1	5062	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	1,2,4-TRIMETHYLBENZENE	95-63-6	30000	ug/kg	320 U	280 U	6.1 U	4.7 J+	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5.3	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	106-93-4	36	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	1,2-DICHLOROBENZENE	95-50-1	294	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	1,2-DICHLOROETHANE	107-06-2	260	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	1,2-DICHLOROPROPANE	78-87-5	333	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	27000	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	1,3-DICHLOROBENZENE	541-73-1	1315	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	1,4-DICHLOROBENZENE	106-46-7	318	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	2-HEXANONE	591-78-6	58.2	ug/kg	650 U	560 U	12 U	15 UJ	19 U	12 U	11 R	26 UJ
001-Mclouth_VOC	ACETONE	67-64-1	**9.9**	ug/kg	650 U	560 U	12 U	**31**	**32**	**20**	**19 J+**	**17 J**
001-Mclouth_VOC	BENZENE	71-43-2	142	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	BROMOCHLOROMETHANE	74-97-5	15000	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	BROMODICHLOROMETHANE	75-27-4	210	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	BROMOFORM	75-25-2	492	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	BROMOMETHANE	74-83-9	1.37	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
pproved Final Quality	CARBON DISULFIDE	75-15-0	23.9	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	CARBON TETRACHLORIDE	56-23-5	650	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	CHLOROBENZENE	108-90-7	291	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	CHLOROETHANE	75-00-3	540000	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	CHLOROFORM	67-66-3	121	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	CHLOROMETHANE	74-87-3	11000	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
pproved Final Quality	CIS-1,2-DICHLOROETHYLENE	156-59-2	432	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	CIS-1,3-DICHLOROPROPENE	10061-01-5	1.5		320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	CYCLOHEXANE	110-82-7	650000	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	DIBROMOCHLOROMETHANE	124-48-1	198	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	DICHLORODIFLUOROMETHANE	75-71-8	8700	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	ETHYLBENZENE	100-41-4	175	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	ISOPROPYLBENZENE (CUMENE)	98-82-8	35	ug/kg	320 U	280 U	6.1 U	1.5 J+	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	m,p-Xylene	179601-23-1	433	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	METHYL ACETATE	79-20-9	7800000	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	METHYL ETHYL KETONE (2-BUTANONE)	78-93-3	**42.4**	ug/kg	650 U	560 U	12 U	13 J	13 J	6.9 J	11 R	26 U
001-Mclouth_VOC	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	108-10-1	25.1	ug/kg	650 U	560 U	12 U	15 UJ	19 U	12 U	11 R	26 UJ

Table A - VOCs Detection Results

				Location	MSTC23-SD20	MSTC23-SD20	MSTC23-SD20	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22
				Sample #	MSTC23-SD20-1.0_ME	MSTC23-SD20-2.0	MSTC23-SD20-SS-0.5	MSTC23-SD22-1.0	MSTC23-SD22-2.0	MSTC23-SD22-3.0	MSTC23-SD22-5.0	MSTC23-SD22-SS-0.5
				Start Depth	0	1	0	0	1	2	3	0
				End Depth	1	2	0.5	1	2	3	5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/16/2023	10/16/2023	10/16/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
001-Mclouth_VOC	METHYLCYCLOHEXANE	108-87-2		ug/kg	320 U	280 U	6.1 U	4.5 J+	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	METHYLENE CHLORIDE	75-09-2	159	ug/kg	320 U	280 U	6.1 U	2.6 J	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	O-XYLENE (1,2-DIMETHYLBENZENE)	95-47-6	433	ug/kg	320 U	280 U	6.1 U	1.8 J+	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	STYRENE	100-42-5	254	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	TERT-BUTYL METHYL ETHER	1634-04-4	304	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	TETRACHLOROETHENE (PCE)	127-18-4	990	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	TOLUENE	108-88-3	1220	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	TRANS-1,2-DICHLOROETHENE	156-60-5	654	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.5	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	TRICHLOROETHENE (TCE)	79-01-6	112	ug/kg	320 U	280 U	6.1 U	7.4 UJ	9.3 U	5.9 U	5.6 R	13 UJ
001-Mclouth_VOC	TRICHLOROFLUOROMETHANE	75-69-4	2300000	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U
001-Mclouth_VOC	VINYL CHLORIDE	75-01-4	59	ug/kg	320 U	280 U	6.1 U	7.4 U	9.3 U	5.9 U	5.6 R	13 U

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

Acronyms and Abbreviations:

CAS # - Chemical Abstract Service Number
FD - Field duplicate
N - Field sample
PAL - Project Action Limit
A - Unvalidated Result
B - The target analyte was detected in the associated blank.
J - The identification of the analyte is acceptable; the reported value is an estimate
J+ - The result is an estimated quantity, but the results may be biased high
J- - The result is an estimated quantity, but the results may be biased low

R - The data is unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

U - Not detected

Table A - VOCs Detection Results

				Location	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23
				Sample #	MSTC23-SD23-1.0	MSTC23-SD23-2.0	MSTC23-SD23-2.0_ME	MSTC23-SD23-3.0	MSTC23-SD23-5.0	MSTC23-SD23-SS-0.5	MSTC23-SD23-SS-0.5_ME
				Start Depth	0	1	1	2	3	0	0
				End Depth	1	2	2	3	5	0.5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N
				Parent Sample #							
				Sample Date	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023
Method Group	Analyte	CAS #	Sed PAL	Units							
001-Mclouth_VOC	1,1,1-TRICHLOROETHANE	71-55-6	213	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	1,1,2,2-TETRACHLOROETHANE	79-34-5	600	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	670000	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	1,1,2-TRICHLOROETHANE	79-00-5	150	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	1,1-DICHLOROETHANE	75-34-3	0.575	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	1,1-DICHLOROETHENE	75-35-4	19.4	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	1,2,3-TRICHLOROBENZENE	87-61-6	113	ug/kg	290 U	4.7 R	360 U	5.7 UJ	290 U	12 R	820 U
001-Mclouth_VOC	1,2,3-TRICHLOROPROPANE	96-18-4	5.1	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	1,2,4-TRICHLOROBENZENE	120-82-1	5062	ug/kg	290 U	4.7 R	360 U	5.7 UJ	290 U	12 R	820 U
001-Mclouth_VOC	1,2,4-TRIMETHYLBENZENE	95-63-6	30000	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5.3	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	106-93-4	36	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	1,2-DICHLOROBENZENE	95-50-1	294	ug/kg	290 U	4.7 R	360 U	5.7 UJ	290 U	12 R	820 U
001-Mclouth_VOC	1,2-DICHLOROETHANE	107-06-2	260	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	1,2-DICHLOROPROPANE	78-87-5	333	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	27000	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	1,3-DICHLOROBENZENE	541-73-1	1315	ug/kg	290 U	4.7 R	360 U	5.7 UJ	290 U	12 R	820 U
001-Mclouth_VOC	1,4-DICHLOROBENZENE	106-46-7	318	ug/kg	290 U	4.7 R	360 U	5.7 UJ	290 U	12 R	820 U
001-Mclouth_VOC	2-HEXANONE	591-78-6	58.2	ug/kg	580 U	9.4 R	710 U	11 U	590 U	24 R	1600 U
001-Mclouth_VOC	ACETONE	67-64-1	**9.9**	ug/kg	580 U	9.4 R	710 U	**27**	590 U	24 R	1600 U
001-Mclouth_VOC	BENZENE	71-43-2	142	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	BROMOCHLOROMETHANE	74-97-5	15000	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	BROMODICHLOROMETHANE	75-27-4	210	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	BROMOFORM	75-25-2	492	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	BROMOMETHANE	74-83-9	1.37	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
pproved Final Quality	CARBON DISULFIDE	75-15-0	23.9	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	CARBON TETRACHLORIDE	56-23-5	650	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	CHLOROBENZENE	108-90-7	291	ug/kg	290 U	4.7 R	360 U	5.7 UJ	290 U	12 R	820 U
001-Mclouth_VOC	CHLOROETHANE	75-00-3	540000	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	CHLOROFORM	67-66-3	121	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	CHLOROMETHANE	74-87-3	11000	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
pproved Final Quality	CIS-1,2-DICHLOROETHYLENE	156-59-2	432	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	CIS-1,3-DICHLOROPROPENE	10061-01-5	1.5		290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	CYCLOHEXANE	110-82-7	650000	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	DIBROMOCHLOROMETHANE	124-48-1	198	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	DICHLORODIFLUOROMETHANE	75-71-8	8700	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	ETHYLBENZENE	100-41-4	175	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	ISOPROPYLBENZENE (CUMENE)	98-82-8	35	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	m,p-Xylene	179601-23-1	433	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	METHYL ACETATE	79-20-9	7800000	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	350 J
001-Mclouth_VOC	METHYL ETHYL KETONE (2-BUTANONE)	78-93-3	**42.4**	ug/kg	580 U	9.4 R	710 U	9.2 J	590 U	24 R	1600 U
001-Mclouth_VOC	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	108-10-1	25.1	ug/kg	580 U	9.4 R	710 U	11 U	590 U	24 R	1600 U

Table A - VOCs Detection Results

				Location	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23
				Sample #	MSTC23-SD23-1.0	MSTC23-SD23-2.0	MSTC23-SD23-2.0_ME	MSTC23-SD23-3.0	MSTC23-SD23-5.0	MSTC23-SD23-SS-0.5	MSTC23-SD23-SS-0.5_ME
				Start Depth	0	1	1	2	3	0	0
				End Depth	1	2	2	3	5	0.5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N
				Parent Sample #							
				Sample Date	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023
Method Group	Analyte	CAS #	Sed PAL	Units							
001-Mclouth_VOC	METHYLCYCLOHEXANE	108-87-2		ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	METHYLENE CHLORIDE	75-09-2	159	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	O-XYLENE (1,2-DIMETHYLBENZENE)	95-47-6	433	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	STYRENE	100-42-5	254	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	TERT-BUTYL METHYL ETHER	1634-04-4	304	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	TETRACHLOROETHENE (PCE)	127-18-4	990	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	TOLUENE	108-88-3	1220	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	TRANS-1,2-DICHLOROETHENE	156-60-5	654	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.5	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	TRICHLOROETHENE (TCE)	79-01-6	112	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	TRICHLOROFLUOROMETHANE	75-69-4	2300000	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U
001-Mclouth_VOC	VINYL CHLORIDE	75-01-4	59	ug/kg	290 U	4.7 R	360 U	5.7 U	290 U	12 R	820 U

Notes:

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R - The data is unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

U - Not detected

Table B - PAHs Detection Results

					Location	MSTC23-SD01	MSTC23-SD02	MSTC23-SD02	MSTC23-SD02	MSTC23-SD03	MSTC23-SD03	MSTC23-SD03	MSTC23-SD05	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06
					Sample #	MSTC23-SD01-SS-0.5	MSTC23-SD02-1.0	MSTC23-SD02-2.0	MSTC23-SD02-SS-0.5	MSTC23-SD03-1.0	MSTC23-SD03-2.0	MSTC23-SD03-SS-0.5	MSTC23-SD05-SS-0.5	MSTC23-SD06-1.0	MSTC23-SD06-2.0	MSTC23-SD06-3.0	MSTC23-SD06-5.0
					Start Depth	0	0	1	0	0	1	0	0	0	1	2	3
					End Depth	0.5	1	2	0.5	1	2	0.5	0.5	1	2	3	5
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	N
					Parent Sample #												
					Sample Date	10/18/2023	10/19/2023	10/19/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
Method Group	Analyte	CAS #	Sed PAL	Units													
002-Mclouth_PAH	2-Methylnaphthalene	91-57-6		ug/kg		27 UA	700 A	520 A	430 A	580 A	800 A	170 A	380 A	400 A	460 A	320 A	320 A
002-Mclouth_PAH	Acenaphthene	83-32-9	**6.71**	ug/kg		27 UA	31 UA	29 UA	30 UA	29 UA	29 UA	**220 A**	**660 A**	**210 A**	27 UA	28 UA	25 UA
002-Mclouth_PAH	Acenaphthylene	208-96-8	**5.87**	ug/kg		27 UA	31 UA	29 UA	**480 A**	29 UA	29 UA	**450 A**	**1100 A**	**220 A**	27 UA	28 UA	25 UA
002-Mclouth_PAH	Anthracene	120-12-7	**57.2**	ug/kg		**320 A**	**710 A**	**450 A**	**2800 A**	**560 A**	**1100 A**	**730 A**	**2300 A**	**450 A**	**810 A**	**600 A**	**330 A**
002-Mclouth_PAH	Benzo(a)anthracene	56-55-3	**108**	ug/kg		**830 A**	**2000 A**	**1400 A**	**2600 A**	**1600 A**	**3400 A**	**2700 A**	**9200 HA**	28 UA	27 UA	28 UA	**1000 A**
002-Mclouth_PAH	Benzo(a)pyrene	50-32-8	**110**	ug/kg		90 UHA	**2500 HA**	96 UHA	**2900 HA**	**1700 HA**	**3400 HA**	**5400 A**	**10000 HA**	28 UA	91 UHA	**2200 HA**	**1300 HA**
002-Mclouth_PAH	Benzo(b)fluoranthene	205-99-2	**1100**	ug/kg		90 UHA	100 UHA	96 UHA	**3500 HA**	**2200 HA**	**4100 HA**	**5600 A**	**12000 HA**	28 UA	91 UHA	**2600 HA**	**1700 HA**
002-Mclouth_PAH	Benzo(g,h,i)perylene	191-24-2	**170**	ug/kg		90 UHA	100 UHA	96 UHA	**1600 HA**	97 UHA	**1600 HA**	**2400 A**	**3900 A**	28 UA	91 UHA	**1100 HA**	83 UHA
002-Mclouth_PAH	Benzo(k)fluoranthene	207-08-9	**240**	ug/kg		90 UHA	100 UHA	96 UHA	**1200 HA**	**610 HA**	**1700 HA**	**2100 A**	**4100 A**	28 UA	91 UHA	**820 HA**	**740 HA**
002-Mclouth_PAH	Benzo[e]pyrene	192-97-2	**1000**	ug/kg		90 UHA	**1600 HA**	96 UHA	**1800 HA**	**1300 HA**	**2100 HA**	**3200 A**	**5900 A**	28 UA	91 UHA	**1400 HA**	860 HA
002-Mclouth_PAH	C1-Benz[a]anthracenes/Chrysenes	C1BZACHRYS	**1000**	ug/kg		27 UA	**1800 A**	**1400 A**	**2000 A**	29 UA	**1400 A**	**1500 A**	**4600 A**	28 UA	**1300 A**	**1100 A**	540 A
002-Mclouth_PAH	C1-Dibenz(a,h)anthracenes	53-70-3-C1		ug/kg		27 UA	31 UA	29 UA	30 UA	29 UA	29 UA	34 A	660 A	28 UA	27 UA	28 UA	25 UA
002-Mclouth_PAH	C1-Fluoranthenes/Pyrenes	C1FLPY	**1000**	ug/kg		27 UA	**2800 A**	**2800 A**	**3700 A**	**3200 A**	**5200 A**	**2600 A**	**8400 A**	**1700 A**	**2900 A**	**2400 A**	**1500 A**
002-Mclouth_PAH	C1-Fluorenes	C1FLUOR	**600**	ug/kg		**1100 A**	**1500 A**	**770 A**	**1900 A**	**920 A**	**1100 A**	390 A	**850 A**	**950 A**	**1200 A**	**720 A**	550 A
002-Mclouth_PAH	C1-Naphthalene	91-20-3-C1	**600**	ug/kg		130 A	**840 A**	**620 A**	440 A	**720 A**	**950 A**	190 A	420 A	470 A	560 A	390 A	380 A
002-Mclouth_PAH	C1-Phenanthrenes/Anthracenes	C1PHAN	**600**	ug/kg		**850 A**	**5900 A**	**3200 A**	**3800 A**	**5800 A**	**6700 A**	**1800 A**	**4200 A**	**4100 A**	**5000 A**	**4300 A**	**3000 A**
002-Mclouth_PAH	C2-Benz(a)anthracene/Chrysene	C2BANCHRYS	**1000**	ug/kg		27 UA	31 UA	910 A	30 UA	29 UA	29 UA	310 A	**1200 A**	28 UA	330 A	28 UA	25 UA
002-Mclouth_PAH	C2-Dibenz(a,h)anthracenes	53-70-3-C2		ug/kg		27 UA	31 UA	29 UA	30 UA	29 UA	29 UA	24 UA	31 A	28 UA	27 UA	28 UA	25 UA
002-Mclouth_PAH	C2-Fluoranthenes/Pyrenes	C2FLPY		ug/kg		27 UA	31 UA	29 UA	1100 A	29 UA	29 UA	1200 A	4600 A	28 UA	790 A	990 A	920 A
002-Mclouth_PAH	C2-Fluorenes	C2FLUOR	**600**	ug/kg		**690 A**	**2700 A**	29 UA	**2400 A**	**3000 A**	**2200 A**	290 A	360 A	**1900 A**	**1900 A**	**1600 A**	**1100 A**
002-Mclouth_PAH	C2-Naphthalene	91-20-3-C2	**600**	ug/kg		480 A	**3600 A**	**1800 A**	**1800 A**	**2700 A**	**3900 A**	400 A	450 A	**1600 A**	**1900 A**	**1300 A**	**1300 A**
002-Mclouth_PAH	C2-Phenanthrenes/Anthracenes	C2PHAN	**600**	ug/kg		**2500 A**	**8600 A**	**5400 A**	**5000 A**	**8000 A**	**8900 A**	**1700 A**	**2500 A**	**6300 A**	**8200 A**	**6900 A**	**4500 A**
002-Mclouth_PAH	C3-Benzo(a)anthracenes/Chrysenes	C3BAACYR	1000	ug/kg		27 UA	31 UA	130 A	30 UA	29 UA	29 UA	24 UA	22 UA	28 UA	27 UA	28 UA	25 UA
002-Mclouth_PAH	C3-Dibenz(a,h)anthracenes	53-70-3-C3		ug/kg		27 UA	31 UA	29 UA	30 UA	29 UA	29 UA	24 UA	22 UA	28 UA	27 UA	28 UA	25 UA
002-Mclouth_PAH	C3-Fluoranthenes/Pyrenes	C3FLPY		ug/kg		970 A	980 A	870 A	1100 A	850 A	880 A	870 A	860 A	850 A	810 A	760 A	670 A
002-Mclouth_PAH	C3-Fluorenes	C3FLUOR	**600**	ug/kg		**1400 A**	**1600 A**	29 UA	**2600 A**	**1400 A**	**2000 A**	200 A	140 A	**1300 A**	**1500 A**	**1300 A**	**850 A**
002-Mclouth_PAH	C3-Naphthalene	91-20-3-C3	**600**	ug/kg		**1300 A**	**6500 A**	**2800 A**	**3400 A**	**4700 A**	**6300 A**	550 A	380 A	**3300 A**	**3500 A**	**3000 A**	**2700 A**
002-Mclouth_PAH	C3-Phenanthrenes/Anthracenes	C3PHAN	**600**	ug/kg		**2500 A**	**7500 A**	**6000 A**	**4200 A**	**6900 A**	**8100 A**	**1100 A**	**920 A**	**4700 A**	**8300 A**	**6200 A**	**3500 A**
002-Mclouth_PAH	C4-Benzo(a)anthracenes/Chrysenes	C4BAACYR	1000	ug/kg		27 UA	31 UA	29 UA	30 UA	29 UA	29 UA	57 A	200 A	28 UA	27 UA	28 UA	25 UA
002-Mclouth_PAH	C4-Naphthalene	91-20-3-C4	**600**	ug/kg		**900 A**	**5500 A**	**2600 A**	**3500 A**	**5100 A**	**6800 A**	**700 A**	**660 A**	**2200 A**	**2800 A**	**4900 A**	**1600 A**
002-Mclouth_PAH	C4-Phenanthrenes/Anthracenes	C4PHAN	**600**	ug/kg		27 UA	**1900 A**	**1500 A**	**1700 A**	**4000 A**	**730 A**	**720 A**	**1200 A**	**1400 A**	**1900 A**	**1100 A**	590 A
002-Mclouth_PAH	Chrysene	218-01-9	**166**	ug/kg		**860 A**	**2200 A**	**1500 A**	**2600 A**	**1600 A**	**3200 A**	**2500 A**	**10000 HA**	28 UA	27 UA	**1800 A**	**1200 A**
002-Mclouth_PAH	Dibenz(a,h)anthracene	53-70-3	**33**	ug/kg		90 UHA	100 UHA	96 UHA	99 UHA	97 UHA	97 UHA	**600 A**	**790 A**	28 UA	91 UHA	94 UHA	83 UHA
002-Mclouth_PAH	Fluoranthene	206-44-0	**423**	ug/kg		**1300 A**	**3000 A**	**2200 A**	**4000 A**	**2800 A**	**5000 A**	**4000 A**	**15000 HA**	**2100 A**	**3700 A**	**2700 A**	**1700 A**
002-Mclouth_PAH	Fluorene	86-73-7	**77.4**	ug/kg		27 UA	31 UA	29 UA	30 UA	29 UA	**690 A**	**320 A**	**870 A**	**340 A**	27 UA	28 UA	25 UA
002-Mclouth_PAH	Indeno(1,2,3-c,d)pyrene	193-39-5	**200**	ug/kg		90 UHA	100 UHA	96 UHA	**1400 HA**	97 UHA	**1500 HA**	**1900 A**	**3300 A**	28 UA	91 UHA	**860 HA**	83 UHA
002-Mclouth_PAH	Naphthalene	91-20-3	**176**	ug/kg		**200 A**	**720 A**	**810 A**	**540 A**	**450 A**	**540 A**	**550 A**	**1300 A**	**310 A**	**560 A**	**400 A**	**320 A**
002-Mclouth_PAH	Perylene	198-55-0	**1000**	ug/kg		90 UHA	100 UHA	96 UHA	99 UHA	97 UHA	97 UHA	**1000 A**	**1900 A**	28 UA	91 UHA	94 UHA	83 UHA
002-Mclouth_PAH	Phenanthrene	85-01-8	**204**	ug/kg		**960 A**	**3200 A**	**1900 A**	**2700 A**	**2700 A**	**3600 A**	**2500 A**	**7600 HA**	**2000 A**	**3100 A**	**2200 A**	**1600 A**
002-Mclouth_PAH	Pyrene	129-00-0	**195**	ug/kg		**1400 A**	**4000 A**	**3000 A**	**4900 A**	**3500 A**	**5800 A**	**4200 A**	**1000 A**	**2500 A**	**4800 A**	**3300 A**	**2100 A**

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

Acronyms and Abbreviations:

CAS # - Chemical Abstract Service Number

FD - Field duplicate

N - Field sample

PAL - Project Action Limit

A - Unvalidated Result

H - Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

J - The identification of the analyte is acceptable; the reported value is an estimate

U - Not detected

Table B - PAHs Detection Results

					Location	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD07	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD09	MSTC23-SD09
					Sample #	MSTC23-SD06-7.0	MSTC23-SD06-9.0	MSTC23-SD06A-7.0	MSTC23-SD06-SS-0.5	MSTC23-SD07-SS-0.5	MSTC23-SD08-1.0	MSTC23-SD08-2.0	MSTC23-SD08A-SS-0.5	MSTC23-SD08-SS-0.5	MSTC23-SD09-1.0	MSTC23-SD09-2.0
					Start Depth	5	7	5	0	0	0	1	0	0	0	1
					End Depth	7	9	7	0.5	0.5	1	2	0.5	0.5	1	2
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Type	N	N	FD	N	N	N	N	FD	N	N	N
					Parent Sample #			MSTC23-SD06-7.0					MSTC23-SD08-SS-0.5			
					Sample Date	11/17/2023	11/17/2023	11/17/2023	10/18/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/13/2023	10/13/2023
Method Group	Analyte	CAS #	Sed PAL	Units												
002-Mclouth_PAH	2-Methylnaphthalene	91-57-6		ug/kg		330 A	270 A	390 A	57 A	180 A	20 UA	6 UA	21 JA	32 A	420 HA	18 UHA
002-Mclouth_PAH	Acenaphthene	83-32-9	**6.71**	ug/kg		**170 A**	24 UA	26 UA	**60 A**	**760 A**	20 UA	6 UA	**44 A**	**52 A**	27 UHA	18 UHA
002-Mclouth_PAH	Acenaphthylene	208-96-8	**5.87**	ug/kg		**180 A**	**230 A**	26 UA	**84 A**	**230 A**	20 UA	6 UA	**45 A**	**45 A**	27 UHA	18 UHA
002-Mclouth_PAH	Anthracene	120-12-7	**57.2**	ug/kg		**440 A**	**450 A**	**440 A**	**190 A**	**2300 A**	14 JA	6 UA	**92 A**	**240 A**	**580 HA**	17 JHA
002-Mclouth_PAH	Benzo(a)anthracene	56-55-3	**108**	ug/kg		**1300 A**	**1600 A**	**1500 A**	**810 A**	**8300 A**	57 A	6 UA	**490 A**	**1400 A**	**1600 HA**	59 HA
002-Mclouth_PAH	Benzo(a)pyrene	50-32-8	**110**	ug/kg		**1300 A**	**1400 A**	87 UA	**900 A**	**26000 HA**	81 JHA	66 UHA	**920 HA**	**2500 HA**	27 UHA	18 UHA
002-Mclouth_PAH	Benzo(b)fluoranthene	205-99-2	**1100**	ug/kg		**1600 A**	**1800 A**	**2200 A**	**1200 A**	**27000 HA**	68 JHA	66 UHA	930 HA	**2500 HA**	**1700 HA**	18 UHA
002-Mclouth_PAH	Benzo(g,h,i)perylene	191-24-2	**170**	ug/kg		87 UA	81 UA	87 UA	**500 A**	**17000 HA**	68 UHA	66 UHA	**600 HA**	**1400 HA**	27 UHA	18 UHA
002-Mclouth_PAH	Benzo(k)fluoranthene	207-08-9	**240**	ug/kg		**680 A**	**790 A**	**530 A**	**370 A**	**8800 HA**	45 JHA	66 UHA	**490 HA**	**1100 HA**	**570 HA**	18 UHA
002-Mclouth_PAH	Benzo[e]pyrene	192-97-2	**1000**	ug/kg		**1000 A**	970 A	87 UA	610 A	**16000 HA**	54 JHA	66 UHA	570 HA	**1400 HA**	27 UHA	18 UHA
002-Mclouth_PAH	C1-Benz[a]anthracenes/Chrysenes	C1BZACHRYS	**1000**	ug/kg		**1100 A**	24 UA	**1300 A**	340 A	**6200 A**	53 A	6 UA	340 A	980 A	**1400 HA**	18 UHA
002-Mclouth_PAH	C1-Dibenz(a,h)anthracenes	53-70-3-C1		ug/kg		26 UA	24 UA	26 UA	25 JA	1100 A	20 UA	6 UA	21 UA	180 A	27 UHA	18 UHA
002-Mclouth_PAH	C1-Fluoranthenes/Pyrenes	C1FLPY	**1000**	ug/kg		**2500 A**	**2200 A**	**2300 A**	680 A	**6100 A**	81 A	27 A	470 A	**1500 A**	**2600 HA**	78 HA
002-Mclouth_PAH	C1-Fluorenes	C1FLUOR	**600**	ug/kg		**720 A**	590 A	**680 A**	100 A	470 A	27 JA	16 A	47 A	140 A	**1300 HA**	18 UHA
002-Mclouth_PAH	C1-Naphthalene	91-20-3-C1	**600**	ug/kg		410 A	330 A	490 A	60 A	180 A	20 UA	6 UA	21 UA	34 A	550 HA	20 JHA
002-Mclouth_PAH	C1-Phenanthrenes/Anthracenes	C1PHAN	**600**	ug/kg		**3400 A**	**2600 A**	**3900 A**	450 A	**1300 A**	45 A	25 A	210 A	470 A	**3800 HA**	200 HA
002-Mclouth_PAH	C2-Benz(a)anthracene/Chrysene	C2BANCHRYS	**1000**	ug/kg		900 A	24 UA	26 UA	110 A	**1600 A**	38 A	16 A	92 A	270 A	560 HA	18 UHA
002-Mclouth_PAH	C2-Dibenz(a,h)anthracenes	53-70-3-C2		ug/kg		26 UA	24 UA	26 UA	20 UA	32 UA	20 UA	6 UA	21 UA	21 UA	27 UHA	18 UHA
002-Mclouth_PAH	C2-Fluoranthenes/Pyrenes	C2FLPY		ug/kg		470 A	24 UA	26 UA	340 A	2400 A	45 A	6 UA	220 A	570 A	27 UHA	18 UHA
002-Mclouth_PAH	C2-Fluorenes	C2FLUOR	**600**	ug/kg		**1500 A**	**870 A**	**2100 A**	68 A	330 A	20 UA	12 A	79 A	150 A	**2400 HA**	55 HA
002-Mclouth_PAH	C2-Naphthalene	91-20-3-C2	**600**	ug/kg		**1400 A**	**960 A**	**1600 A**	95 A	290 A	20 UA	7 JA	47 A	67 A	**1700 HA**	74 HA
002-Mclouth_PAH	C2-Phenanthrenes/Anthracenes	C2PHAN	**600**	ug/kg		**6600 A**	**3800 A**	**6200 A**	320 A	**1500 A**	20 UA	52 A	280 A	410 A	**5000 HA**	300 HA
002-Mclouth_PAH	C3-Benzo(a)anthracenes/Chrysenes	C3BAACYR	1000	ug/kg		26 UA	24 UA	26 UA	20 UA	32 UA	20 UA	6 UA	21 UA	21 UA	27 UHA	18 UHA
002-Mclouth_PAH	C3-Dibenz(a,h)anthracenes	53-70-3-C3		ug/kg		26 UA	24 UA	26 UA	20 UA	32 UA	20 UA	6 UA	21 UA	21 UA	27 UHA	18 UHA
002-Mclouth_PAH	C3-Fluoranthenes/Pyrenes	C3FLPY		ug/kg		26 UA	680 A	800 A	760 A	1300 A	870 A	760 A	860 A	920 A	820 HA	670 HA
002-Mclouth_PAH	C3-Fluorenes	C3FLUOR	**600**	ug/kg		**3100 A**	**1600 A**	**1200 A**	110 A	**690 A**	20 UA	6 UA	110 A	70 A	**2600 HA**	44 HA
002-Mclouth_PAH	C3-Naphthalene	91-20-3-C3	**600**	ug/kg		**3100 A**	**1700 A**	**3400 A**	120 A	250 A	27 JA	17 A	86 A	110 A	**3500 HA**	190 HA
002-Mclouth_PAH	C3-Phenanthrenes/Anthracenes	C3PHAN	**600**	ug/kg		**5700 A**	**4100 A**	**4400 A**	200 A	**1400 A**	43 A	48 A	180 A	21 UA	**7600 HA**	280 HA
002-Mclouth_PAH	C4-Benzo(a)anthracenes/Chrysenes	C4BAACYR	1000	ug/kg		26 UA	24 UA	26 UA	23 JA	93 A	20 UA	6 UA	21 UA	91 A	27 UHA	18 UHA
002-Mclouth_PAH	C4-Naphthalene	91-20-3-C4	**600**	ug/kg		**4100 A**	**2000 A**	**2300 A**	110 A	170 A	57 A	29 A	140 A	150 A	**3200 HA**	210 HA
002-Mclouth_PAH	C4-Phenanthrenes/Anthracenes	C4PHAN	**600**	ug/kg		**1700 A**	**1300 A**	**2100 A**	160 A	**1600 A**	52 A	31 A	200 A	350 A	**3800 HA**	130 HA
002-Mclouth_PAH	Chrysene	218-01-9	**166**	ug/kg		**1400 A**	**1900 A**	**1500 A**	**780 A**	**9800 A**	52 A	6 UA	**580 A**	**1500 A**	**1600 HA**	61 HA
002-Mclouth_PAH	Dibenz(a,h)anthracene	53-70-3	**33**	ug/kg		87 UA	81 UA	87 UA	**120 A**	**3500 HA**	68 UHA	66 UHA	**100 HA**	**360 HA**	27 UHA	18 UHA
002-Mclouth_PAH	Fluoranthene	206-44-0	**423**	ug/kg		**2100 A**	**2100 A**	**2300 A**	**1400 A**	**7900 A**	69 A	23 A	**730 A**	**1700 A**	**2700 HA**	78 HA
002-Mclouth_PAH	Fluorene	86-73-7	**77.4**	ug/kg		**300 A**	**400 A**	26 UA	**88 A**	**300 A**	20 UA	6 UA	47 A	69 A	**660 HA**	18 UHA
002-Mclouth_PAH	Indeno(1,2,3-c,d)pyrene	193-39-5	**200**	ug/kg		87 UA	81 UA	87 UA	**380 A**	**13000 HA**	68 UHA	66 UHA	**420 HA**	**1100 HA**	27 UHA	18 UHA
002-Mclouth_PAH	Naphthalene	91-20-3	**176**	ug/kg		**380 A**	**430 A**	**470 A**	160 A	**370 A**	20 UA	6 UA	47 A	48 A	**540 HA**	18 UHA
002-Mclouth_PAH	Perylene	198-55-0	**1000**	ug/kg		87 UA	81 UA	87 UA	200 A	**6400 HA**	68 UHA	66 UHA	68 UHA	610 HA	27 UHA	18 UHA
002-Mclouth_PAH	Phenanthrene	85-01-8	**204**	ug/kg		**1700 A**	**1700 A**	**1900 A**	**750 A**	**2200 A**	41 A	15 A	**270 A**	**500 A**	**2600 HA**	110 HA
002-Mclouth_PAH	Pyrene	129-00-0	**195**	ug/kg		**2300 A**	**3000 A**	**2600 A**	**1400 A**	**10000 A**	76 A	23 A	**790 A**	**1900 A**	**3000 HA**	76 HA

Notes:

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Table B - PAHs Detection Results

					Location	MSTC23-SD09	MSTC23-SD10	MSTC23-SD12	MSTC23-SD13	MSTC23-SD13	MSTC23-SD14	MSTC23-SD14	MSTC23-SD14	MSTC23-SD15	MSTC23-SD19	MSTC23-SD19
					Sample #	MSTC23-SD09-SS-0.5	MSTC23-SD10-SS-0.5	MSTC23-SD12-SS-0.5	MSTC23-SD13-SS-0.5	MSTC23-SD13-SS-1.0	MSTC23-SD14-1.0	MSTC23-SD14-2.0	MSTC23-SD14-SS-0.5	MSTC23-SD15-SS-0.5	MSTC23-SD19-1.0	MSTC23-SD19-2.0
					Start Depth	0	0	0	0	0	0	1	0	0	0	1
					End Depth	0.5	0.5	0.5	0.5	1	1	2	0.5	0.5	1	2
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Type	N	N	N	N	N	N	N	N	N	N	N
					Parent Sample #											
					Sample Date	10/13/2023	10/13/2023	10/13/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/11/2023
Method Group	Analyte	CAS #	Sed PAL	Units												
002-Mclouth_PAH	2-Methylnaphthalene	91-57-6		ug/kg		390 HA	66 HA	41 HA	12 JA	18 UA	18 UA	19 UA	35 A	20 JA	27 UA	270 A
002-Mclouth_PAH	Acenaphthene	83-32-9	**6.71**	ug/kg		**360 HA**	**130 HA**	**210 HA**	**19 JA**	18 UA	18 UA	19 UA	**370 A**	**120 A**	**460 A**	**560 A**
002-Mclouth_PAH	Acenaphthylene	208-96-8	**5.87**	ug/kg		**280 HA**	**230 HA**	**94 HA**	**29 A**	18 UA	18 UA	19 UA	**140 A**	**62 A**	**610 A**	**810 A**
002-Mclouth_PAH	Anthracene	120-12-7	**57.2**	ug/kg		**1200 HA**	**430 HA**	**2400 HA**	**110 A**	18 UA	18 UA	19 UA	**1200 A**	**460 A**	**3900 A**	**1300 A**
002-Mclouth_PAH	Benzo(a)anthracene	56-55-3	**108**	ug/kg		**2500 HA**	**2100 HA**	**2000 HA**	**420 A**	18 UA	18 UA	19 UA	**5500 A**	**2800 A**	**3700 A**	**4900 A**
002-Mclouth_PAH	Benzo(a)pyrene	50-32-8	**110**	ug/kg		**2200 HA**	**2500 HA**	**2500 HA**	**450 A**	18 UA	18 UA	19 UA	**5900 A**	**3600 A**	**4000 HA**	**5500 HA**
002-Mclouth_PAH	Benzo(b)fluoranthene	205-99-2	**1100**	ug/kg		**2800 HA**	**3000 HA**	**3100 HA**	510 A	18 UA	18 UA	19 UA	**7800 HA**	**4800 A**	**4400 HA**	**5800 HA**
002-Mclouth_PAH	Benzo(g,h,i)perylene	191-24-2	**170**	ug/kg		**630 HA**	**960 HA**	**1200 HA**	**220 A**	18 UA	18 UA	19 UA	**2500 A**	**1500 A**	**2400 HA**	**3600 HA**
002-Mclouth_PAH	Benzo(k)fluoranthene	207-08-9	**240**	ug/kg		**1100 HA**	**950 HA**	**1400 HA**	**290 A**	18 UA	18 UA	19 UA	**3500 A**	**2200 A**	**1600 HA**	**2700 HA**
002-Mclouth_PAH	Benzo[e]pyrene	192-97-2	**1000**	ug/kg		**1500 HA**	**1500 HA**	**1600 HA**	320 A	18 UA	18 UA	19 UA	**3900 A**	**2600 A**	**2500 HA**	**3200 HA**
002-Mclouth_PAH	C1-Benz[a]anthracenes/Chrysenes	C1BZACHRYS	**1000**	ug/kg		**1800 HA**	**1100 HA**	890 HA	19 UA	18 UA	18 UA	19 UA	**2700 A**	**1400 A**	**4600 A**	**4400 A**
002-Mclouth_PAH	C1-Dibenz(a,h)anthracenes	53-70-3-C1		ug/kg		27 UHA	130 HA	52 HA	19 UA	18 UA	18 UA	19 UA	20 UA	350 A	27 UA	23 UA
002-Mclouth_PAH	C1-Fluoranthenes/Pyrenes	C1FLPY	**1000**	ug/kg		**3100 HA**	**1800 HA**	**1500 HA**	420 A	61 A	48 A	53 A	**3700 A**	**2000 A**	**7600 A**	**5600 A**
002-Mclouth_PAH	C1-Fluorenes	C1FLUOR	**600**	ug/kg		**760 HA**	190 HA	220 HA	58 A	38 A	39 A	35 A	430 A	190 A	**1600 A**	**600 A**
002-Mclouth_PAH	C1-Naphthalene	91-20-3-C1	**600**	ug/kg		510 HA	75 HA	51 HA	19 UA	18 UA	18 UA	19 UA	43 A	21 JA	530 A	400 A
002-Mclouth_PAH	C1-Phenanthrenes/Anthracenes	C1PHAN	**600**	ug/kg		**4500 HA**	**960 HA**	**770 HA**	200 A	140 A	98 A	94 A	**1600 A**	**750 A**	**5700 A**	**2800 A**
002-Mclouth_PAH	C2-Benz(a)anthracene/Chrysene	C2BANCHRYS	**1000**	ug/kg		690 HA	490 HA	270 HA	19 UA	19 JA	18 UA	19 UA	380 A	300 A	**1800 A**	**1900 A**
002-Mclouth_PAH	C2-Dibenz(a,h)anthracenes	53-70-3-C2		ug/kg		27 UHA	23 UHA	23 UHA	19 UA	18 UA	18 UA	19 UA	20 UA	21 UA	27 UA	23 UA
002-Mclouth_PAH	C2-Fluoranthenes/Pyrenes	C2FLPY		ug/kg		27 UHA	190 HA	230 HA	120 A	72 A	60 A	68 A	2600 A	1500 A	4200 A	3400 A
002-Mclouth_PAH	C2-Fluorenes	C2FLUOR	**600**	ug/kg		**1100 HA**	120 HA	75 HA	61 A	64 A	65 A	49 A	100 A	76 A	**1800 A**	**880 A**
002-Mclouth_PAH	C2-Naphthalene	91-20-3-C2	**600**	ug/kg		**1500 HA**	150 HA	98 HA	32 A	64 A	54 A	46 A	97 A	47 A	**1300 A**	**730 A**
002-Mclouth_PAH	C2-Phenanthrenes/Anthracenes	C2PHAN	**600**	ug/kg		**4400 HA**	**890 HA**	540 HA	170 A	110 A	110 A	91 A	**770 A**	410 A	**8200 A**	**4800 A**
002-Mclouth_PAH	C3-Benzo(a)anthracenes/Chrysenes	C3BAACYR	1000	ug/kg		27 UHA	23 UHA	23 UHA	19 UA	18 UA	18 UA	19 UA	20 UA	21 UA	27 UA	23 UA
002-Mclouth_PAH	C3-Dibenz(a,h)anthracenes	53-70-3-C3		ug/kg		27 UHA	23 UHA	23 UHA	19 UA	18 UA	18 UA	19 UA	20 UA	21 UA	27 UA	23 UA
002-Mclouth_PAH	C3-Fluoranthenes/Pyrenes	C3FLPY		ug/kg		910 HA	890 HA	800 HA	30 A	830 A	770 A	750 A	820 A	860 A	970 A	780 A
002-Mclouth_PAH	C3-Fluorenes	C3FLUOR	**600**	ug/kg		**1400 HA**	86 HA	23 UHA	68 A	29 A	18 UA	19 UA	560 A	280 A	**2500 A**	23 UA
002-Mclouth_PAH	C3-Naphthalene	91-20-3-C3	**600**	ug/kg		**2700 HA**	190 HA	100 HA	49 A	200 A	150 A	120 A	120 A	78 A	**2500 A**	**1200 A**
002-Mclouth_PAH	C3-Phenanthrenes/Anthracenes	C3PHAN	**600**	ug/kg		**6400 HA**	**790 HA**	320 HA	120 A	70 A	110 A	120 A	410 A	280 A	**8500 A**	**5700 A**
002-Mclouth_PAH	C4-Benzo(a)anthracenes/Chrysenes	C4BAACYR	1000	ug/kg		27 UHA	78 HA	32 HA	19 UA	18 UA	18 UA	19 UA	20 UA	250 A	27 UA	23 UA
002-Mclouth_PAH	C4-Naphthalene	91-20-3-C4	**600**	ug/kg		**2000 HA**	210 HA	200 HA	51 A	320 A	210 A	150 A	110 A	180 A	**1800 A**	**950 A**
002-Mclouth_PAH	C4-Phenanthrenes/Anthracenes	C4PHAN	**600**	ug/kg		**2200 HA**	590 HA	460 HA	62 A	120 A	18 JA	93 A	**680 A**	**690 A**	**7900 A**	**5300 A**
002-Mclouth_PAH	Chrysene	218-01-9	**166**	ug/kg		**2600 HA**	**1900 HA**	**1900 HA**	**470 A**	18 UA	18 UA	19 UA	**5800 A**	**3400 A**	**4200 A**	**5000 A**
002-Mclouth_PAH	Dibenz(a,h)anthracene	53-70-3	**33**	ug/kg		27 UHA	**200 HA**	**210 HA**	**91 A**	18 UA	18 UA	19 UA	**1000 A**	**540 A**	**550 HA**	**830 HA**
002-Mclouth_PAH	Fluoranthene	206-44-0	**423**	ug/kg		**4800 HA**	**3000 HA**	**4200 HA**	**760 A**	18 UA	18 UA	19 UA	**12000 HA**	**6500 A**	**5800 A**	**6500 A**
002-Mclouth_PAH	Fluorene	86-73-7	**77.4**	ug/kg		**830 HA**	**160 HA**	**240 HA**	35 A	18 UA	18 UA	19 UA	**510 A**	**160 A**	**1000 A**	**810 A**
002-Mclouth_PAH	Indeno(1,2,3-c,d)pyrene	193-39-5	**200**	ug/kg		**570 HA**	**860 HA**	**1200 HA**	190 A	18 UA	18 UA	19 UA	**2300 A**	**1400 A**	**2000 HA**	**3200 HA**
002-Mclouth_PAH	Naphthalene	91-20-3	**176**	ug/kg		**770 HA**	**200 HA**	100 HA	21 JA	18 UA	18 UA	19 UA	54 A	55 A	**370 A**	**880 A**
002-Mclouth_PAH	Perylene	198-55-0	**1000**	ug/kg		27 UHA	570 HA	800 HA	130 A	18 UA	18 UA	19 UA	**1400 A**	880 A	90 UHA	**1300 HA**
002-Mclouth_PAH	Phenanthrene	85-01-8	**204**	ug/kg		**4000 HA**	**1500 HA**	**2800 HA**	**260 A**	48 A	34 A	30 A	**5900 A**	**2500 A**	**3800 A**	**3300 A**
002-Mclouth_PAH	Pyrene	129-00-0	**195**	ug/kg		**4400 HA**	**2900 HA**	**4000 HA**	**780 A**	18 UA	18 UA	19 UA	**11000 HA**	**6200 A**	**7200 A**	**7000 A**

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

Acronyms and Abbreviations:

CAS # - Chemical Abstract Service Number

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U - Not detected

Table B - PAHs Detection Results

					Location	MSTC23-SD19	MSTC23-SD20	MSTC23-SD20	MSTC23-SD20	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23
					Sample #	MSTC23-SD19-SS-0.5	MSTC23-SD20-1.0	MSTC23-SD20-2.0	MSTC23-SD20-SS-0.5	MSTC23-SD22-1.0	MSTC23-SD22-2.0	MSTC23-SD22-3.0	MSTC23-SD22-5.0	MSTC23-SD22-SS-0.5	MSTC23-SD23-1.0	MSTC23-SD23-2.0	MSTC23-SD23-3.0
					Start Depth	0	0	1	0	0	1	2	3	0	0	1	2
					End Depth	0.5	1	2	0.5	1	2	3	5	0.5	1	2	3
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	N
					Parent Sample #												
					Sample Date	10/11/2023	10/16/2023	10/16/2023	10/16/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/16/2023	10/16/2023	10/16/2023
Method Group	Analyte	CAS #	Sed PAL	Units													
002-Mclouth_PAH	2-Methylnaphthalene	91-57-6		ug/kg		29 UA	20 UA	18 UA	57 A	23 UA	220 A	22 JA	19 UA	64 A	14 A	6 UA	6 UA
002-Mclouth_PAH	Acenaphthene	83-32-9	**6.71**	ug/kg		29 UA	20 UA	18 UA	**180 A**	23 UA	**490 A**	**120 A**	19 UA	38 UA	6 UA	6 UA	6 UA
002-Mclouth_PAH	Acenaphthylene	208-96-8	**5.87**	ug/kg		29 UA	20 UA	18 UA	**96 A**	**360 A**	**710 A**	**140 A**	19 UA	38 UA	**35 A**	6 UA	6 UA
002-Mclouth_PAH	Anthracene	120-12-7	**57.2**	ug/kg		**1500 A**	39 A	18 UA	**750 A**	**2000 A**	**1700 A**	**310 A**	19 UA	**1400 A**	**98 A**	6 UA	6 UA
002-Mclouth_PAH	Benzo(a)anthracene	56-55-3	**108**	ug/kg		**3700 A**	**210 A**	38 A	**2500 A**	**2700 A**	**4800 A**	**930 A**	19 UA	**1300 A**	**290 A**	12 A	6 UA
002-Mclouth_PAH	Benzo(a)pyrene	50-32-8	**110**	ug/kg		**3900 HA**	93 A	48 A	**5100 A**	**2800 HA**	**5200 HA**	**1000 HA**	64 UHA	**1900 HA**	**320 A**	64 UHA	69 UHA
002-Mclouth_PAH	Benzo(b)fluoranthene	205-99-2	**1100**	ug/kg		**4300 HA**	320 A	56 A	**5200 A**	**3100 HA**	**4800 HA**	950 HA	64 UHA	**2400 HA**	350 A	64 UHA	69 UHA
002-Mclouth_PAH	Benzo(g,h,i)perylene	191-24-2	**170**	ug/kg		**2500 HA**	140 A	18 UA	**2500 A**	**1800 HA**	**2800 HA**	**530 HA**	64 UHA	**1600 HA**	130 A	64 UHA	69 UHA
002-Mclouth_PAH	Benzo(k)fluoranthene	207-08-9	**240**	ug/kg		**1800 HA**	120 A	26 A	**2300 A**	**1100 HA**	**2100 HA**	**370 HA**	64 UHA	**1000 HA**	150 A	64 UHA	69 UHA
002-Mclouth_PAH	Benzo[e]pyrene	192-97-2	**1000**	ug/kg		**2400 HA**	220 A	36 A	**3100 A**	**1700 HA**	**2800 HA**	560 HA	64 UHA	**1300 HA**	210 A	64 UHA	69 UHA
002-Mclouth_PAH	C1-Benz[a]anthracenes/Chrysenes	C1BZACHRYS	**1000**	ug/kg		**3800 A**	170 A	30 A	**1900 A**	**2700 A**	**4800 A**	940 A	19 UA	960 A	200 A	15 A	6 UA
002-Mclouth_PAH	C1-Dibenz(a,h)anthracenes	53-70-3-C1		ug/kg		29 UA	20 UA	18 UA	290 A	23 UA	23 UA	21 UA	19 UA	38 UA	24 A	6 UA	6 UA
002-Mclouth_PAH	C1-Fluoranthenes/Pyrenes	C1FLPY	**1000**	ug/kg		**5300 A**	330 A	29 A	**1900 A**	**3600 A**	**6300 A**	**1400 A**	19 UA	**1300 A**	380 A	29 A	21 A
002-Mclouth_PAH	C1-Fluorenes	C1FLUOR	**600**	ug/kg		**970 A**	90 A	18 UA	150 A	480 A	**980 A**	210 A	19 UA	310 A	50 A	11 A	8 JA
002-Mclouth_PAH	C1-Naphthalene	91-20-3-C1	**600**	ug/kg		490 A	20 UA	18 UA	55 A	120 A	250 A	23 JA	19 UA	66 A	15 A	6 UA	6 UA
002-Mclouth_PAH	C1-Phenanthrenes/Anthracenes	C1PHAN	**600**	ug/kg		**4500 A**	20 UA	18 UA	500 A	**2600 A**	**4500 A**	**920 A**	19 UA	**850 A**	230 A	20 A	16 A
002-Mclouth_PAH	C2-Benz(a)anthracene/Chrysene	C2BANCHRYS	**1000**	ug/kg		29 UA	20 UA	40 A	620 A	**1300 A**	**1900 A**	390 A	19 UA	38 UA	81 A	14 A	6 UA
002-Mclouth_PAH	C2-Dibenz(a,h)anthracenes	53-70-3-C2		ug/kg		29 UA	20 UA	18 UA	20 UA	23 UA	23 UA	21 UA	19 UA	38 UA	6 UA	6 UA	6 UA
002-Mclouth_PAH	C2-Fluoranthenes/Pyrenes	C2FLPY		ug/kg		29 UA	20 UA	18 UA	1300 A	1800 A	3600 A	720 A	19 UA	1000 A	170 A	6 UA	6 UA
002-Mclouth_PAH	C2-Fluorenes	C2FLUOR	**600**	ug/kg		**2300 A**	20 UA	18 UA	150 A	**740 A**	**980 A**	170 A	19 UA	420 A	48 A	11 A	6 UA
002-Mclouth_PAH	C2-Naphthalene	91-20-3-C2	**600**	ug/kg		**1200 A**	31 A	18 UA	80 A	450 A	560 A	110 A	19 UA	380 A	32 A	6 UA	6 UA
002-Mclouth_PAH	C2-Phenanthrenes/Anthracenes	C2PHAN	**600**	ug/kg		**6200 A**	260 A	18 UA	450 A	**3500 A**	**4400 A**	**860 A**	24 JA	**1100 A**	130 A	34 A	18 A
002-Mclouth_PAH	C3-Benzo(a)anthracenes/Chrysenes	C3BAACYR	1000	ug/kg		29 UA	20 UA	18 UA	20 UA	23 UA	23 UA	21 UA	19 UA	38 UA	6 UA	6 UA	6 UA
002-Mclouth_PAH	C3-Dibenz(a,h)anthracenes	53-70-3-C3		ug/kg		29 UA	20 UA	18 UA	20 UA	23 UA	23 UA	21 UA	19 UA	38 UA	6 UA	6 UA	6 UA
002-Mclouth_PAH	C3-Fluoranthenes/Pyrenes	C3FLPY		ug/kg		900 A	880 A	820 A	900 A	740 A	860 A	790 A	700 A	1600 A	850 A	6 UA	910 A
002-Mclouth_PAH	C3-Fluorenes	C3FLUOR	**600**	ug/kg		**3400 A**	20 UA	18 UA	180 A	23 UA	290 A	74 A	19 UA	**640 A**	42 A	6 UA	6 UA
002-Mclouth_PAH	C3-Naphthalene	91-20-3-C3	**600**	ug/kg		**2200 A**	64 A	27 A	96 A	**990 A**	**1100 A**	190 A	19 UA	**680 A**	57 A	14 A	13 A
002-Mclouth_PAH	C3-Phenanthrenes/Anthracenes	C3PHAN	**600**	ug/kg		**8200 A**	550 A	64 A	300 A	**4300 A**	**3800 A**	520 A	27 A	**1000 A**	80 A	17 A	30 A
002-Mclouth_PAH	C4-Benzo(a)anthracenes/Chrysenes	C4BAACYR	1000	ug/kg		29 UA	20 UA	18 UA	220 A	23 UA	23 UA	21 UA	19 UA	38 UA	6 UA	6 UA	6 UA
002-Mclouth_PAH	C4-Naphthalene	91-20-3-C4	**600**	ug/kg		**1400 A**	230 A	68 A	74 A	**870 A**	**710 A**	240 A	19 UA	520 A	42 A	36 A	29 A
002-Mclouth_PAH	C4-Phenanthrenes/Anthracenes	C4PHAN	**600**	ug/kg		**5100 A**	310 A	50 A	98 A	**1900 A**	**2200 A**	180 A	19 UA	430 A	85 A	24 A	23 A
002-Mclouth_PAH	Chrysene	218-01-9	**166**	ug/kg		**4000 A**	**290 A**	46 A	**2900 A**	**2700 A**	**4700 A**	**950 A**	19 UA	**1800 A**	**350 A**	17 A	6 UA
002-Mclouth_PAH	Dibenz(a,h)anthracene	53-70-3	**33**	ug/kg		**520 HA**	20 UA	18 UA	**880 A**	**380 HA**	**640 HA**	**110 HA**	64 UHA	**280 HA**	32 A	64 UHA	69 UHA
002-Mclouth_PAH	Fluoranthene	206-44-0	**423**	ug/kg		**6100 A**	360 A	46 A	**2700 A**	**3700 A**	**6000 A**	**1300 A**	19 UA	**3300 A**	380 A	19 A	6 JA
002-Mclouth_PAH	Fluorene	86-73-7	**77.4**	ug/kg		**1400 A**	20 UA	18 UA	**98 A**	**440 A**	**830 A**	**92 A**	19 UA	38 UA	32 A	6 UA	6 UA
002-Mclouth_PAH	Indeno(1,2,3-c,d)pyrene	193-39-5	**200**	ug/kg		**2100 HA**	100 A	18 UA	**2200 A**	**1500 HA**	**2400 HA**	**420 HA**	64 UHA	**1300 HA**	120 A	64 UHA	69 UHA
002-Mclouth_PAH	Naphthalene	91-20-3	**176**	ug/kg		**420 A**	21 JA	18 UA	150 A	**180 A**	**250 A**	32 A	19 UA	61 A	29 A	6 UA	6 UA
002-Mclouth_PAH	Perylene	198-55-0	**1000**	ug/kg		96 UHA	20 UA	18 UA	**1400 A**	740 HA	**1200 HA**	270 HA	64 UHA	630 HA	93 A	64 UHA	69 UHA
002-Mclouth_PAH	Phenanthrene	85-01-8	**204**	ug/kg		**4200 A**	77 A	18 JA	**710 A**	**1900 A**	**4300 A**	**780 A**	19 UA	**1400 A**	190 A	10 A	6 UA
002-Mclouth_PAH	Pyrene	129-00-0	**195**	ug/kg		**7000 A**	**390 A**	52 A	**2900 A**	**4600 A**	**7100 HA**	**1900 A**	19 UA	**3200 A**	**380 A**	18 A	7 JA

Notes:

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U - Not detected

Table B - PAHs Detection Results

				Location	MSTC23-SD23	MSTC23-SD23
				Sample #	MSTC23-SD23-5.0	MSTC23-SD23-SS-0.5
				Start Depth	3	0
				End Depth	5	0.5
				Depth Unit	ft	ft
				Sample Type	N	N
				Parent Sample #		
				Sample Date	10/16/2023	10/16/2023
Method Group	Analyte	CAS #	Sed PAL	Units		
002-Mclouth_PAH	2-Methylnaphthalene	91-57-6		ug/kg	6 UA	92 A
002-Mclouth_PAH	Acenaphthene	83-32-9	**6.71**	ug/kg	6 UA	**140 A**
002-Mclouth_PAH	Acenaphthylene	208-96-8	**5.87**	ug/kg	6 UA	**310 A**
002-Mclouth_PAH	Anthracene	120-12-7	**57.2**	ug/kg	6 UA	**570 A**
002-Mclouth_PAH	Benzo(a)anthracene	56-55-3	**108**	ug/kg	6 UA	**1900 A**
002-Mclouth_PAH	Benzo(a)pyrene	50-32-8	**110**	ug/kg	63 UHA	**2500 A**
002-Mclouth_PAH	Benzo(b)fluoranthene	205-99-2	**1100**	ug/kg	63 UHA	**2500 A**
002-Mclouth_PAH	Benzo(g,h,i)perylene	191-24-2	**170**	ug/kg	63 UHA	**1000 A**
002-Mclouth_PAH	Benzo(k)fluoranthene	207-08-9	**240**	ug/kg	63 UHA	**1200 A**
002-Mclouth_PAH	Benzo[e]pyrene	192-97-2	**1000**	ug/kg	63 UHA	**1600 A**
002-Mclouth_PAH	C1-Benz[a]anthracenes/Chrysenes	C1BZACHRYS	**1000**	ug/kg	6 UA	**1200 A**
002-Mclouth_PAH	C1-Dibenz(a,h)anthracenes	53-70-3-C1		ug/kg	6 UA	200 A
002-Mclouth_PAH	C1-Fluoranthenes/Pyrenes	C1FLPY	**1000**	ug/kg	13 A	**2300 A**
002-Mclouth_PAH	C1-Fluorenes	C1FLUOR	**600**	ug/kg	6 UA	320 A
002-Mclouth_PAH	C1-Naphthalene	91-20-3-C1	**600**	ug/kg	6 UA	89 A
002-Mclouth_PAH	C1-Phenanthrenes/Anthracenes	C1PHAN	**600**	ug/kg	22 A	**1100 A**
002-Mclouth_PAH	C2-Benz(a)anthracene/Chrysene	C2BANCHRYS	**1000**	ug/kg	14 A	370 A
002-Mclouth_PAH	C2-Dibenz(a,h)anthracenes	53-70-3-C2		ug/kg	6 UA	35 UA
002-Mclouth_PAH	C2-Fluoranthenes/Pyrenes	C2FLPY		ug/kg	20 A	1400 A
002-Mclouth_PAH	C2-Fluorenes	C2FLUOR	**600**	ug/kg	20 A	35 UA
002-Mclouth_PAH	C2-Naphthalene	91-20-3-C2	**600**	ug/kg	6 UA	200 A
002-Mclouth_PAH	C2-Phenanthrenes/Anthracenes	C2PHAN	**600**	ug/kg	34 A	**820 A**
002-Mclouth_PAH	C3-Benzo(a)anthracenes/Chrysenes	C3BAACYR	1000	ug/kg	6 UA	35 UA
002-Mclouth_PAH	C3-Dibenz(a,h)anthracenes	53-70-3-C3		ug/kg	6 UA	35 UA
002-Mclouth_PAH	C3-Fluoranthenes/Pyrenes	C3FLPY		ug/kg	790 A	1600 A
002-Mclouth_PAH	C3-Fluorenes	C3FLUOR	**600**	ug/kg	6 UA	35 UA
002-Mclouth_PAH	C3-Naphthalene	91-20-3-C3	**600**	ug/kg	15 A	160 A
002-Mclouth_PAH	C3-Phenanthrenes/Anthracenes	C3PHAN	**600**	ug/kg	48 A	500 A
002-Mclouth_PAH	C4-Benzo(a)anthracenes/Chrysenes	C4BAACYR	1000	ug/kg	6 UA	35 UA
002-Mclouth_PAH	C4-Naphthalene	91-20-3-C4	**600**	ug/kg	53 A	100 A
002-Mclouth_PAH	C4-Phenanthrenes/Anthracenes	C4PHAN	**600**	ug/kg	28 A	540 A
002-Mclouth_PAH	Chrysene	218-01-9	**166**	ug/kg	6 UA	**2100 A**
002-Mclouth_PAH	Dibenz(a,h)anthracene	53-70-3	**33**	ug/kg	63 UHA	**220 A**
002-Mclouth_PAH	Fluoranthene	206-44-0	**423**	ug/kg	8 A	**3100 A**
002-Mclouth_PAH	Fluorene	86-73-7	**77.4**	ug/kg	6 UA	**200 A**
002-Mclouth_PAH	Indeno(1,2,3-c,d)pyrene	193-39-5	**200**	ug/kg	63 UHA	**910 A**
002-Mclouth_PAH	Naphthalene	91-20-3	**176**	ug/kg	6 UA	**240 A**
002-Mclouth_PAH	Perylene	198-55-0	**1000**	ug/kg	63 UHA	440 A
002-Mclouth_PAH	Phenanthrene	85-01-8	**204**	ug/kg	5 JA	**1400 A**
002-Mclouth_PAH	Pyrene	129-00-0	**195**	ug/kg	9 A	**3200 A**

Notes:

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Table C - Pesticides & PCBs Detection Results

					Location	MSTC23-SD01	MSTC23-SD02	MSTC23-SD02	MSTC23-SD02	MSTC23-SD03	MSTC23-SD03	MSTC23-SD03
					Sample #	MSTC23-SD01-SS-0.5	MSTC23-SD02-1.0	MSTC23-SD02-2.0	MSTC23-SD02-SS-0.5	MSTC23-SD03-1.0	MSTC23-SD03-2.0	MSTC23-SD03-SS-0.5
					Start Depth	0	0	1	0	0	1	0
					End Depth	0.5	1	2	0.5	1	2	0.5
					Depth Unit	ft	ft	ft	ft	ft	ft	ft
					Sample Type	N	N	N	N	N	N	N
					Parent Sample #							
					Sample Date	10/18/2023	10/19/2023	10/19/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
003-Mclouth_PestPCB	ALDRIN	309-00-2	**2**	ug/kg		**29**	**45 J**	**35 J**	**19 J+**	**36 J**	**46 J**	**3.7 J**
003-Mclouth_PestPCB	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	319-84-6	**6**	ug/kg		5.7 J	3.2 J	**12 J**	**8.9 J**	**12 J**	0.52 J	0.77 J
003-Mclouth_PestPCB	ALPHA ENDOSULFAN	959-98-8	**3.26**	ug/kg		**13 J**	**26 J**	**11 J**	**30 J**	**17 J**	**17 J**	2.8 UJ
003-Mclouth_PestPCB	ALPHA-CHLORDANE	5103-71-9	**3.24**	ug/kg		**0.68 BA**	**60 J**	**38 NJ**	**21 NJ**	**36 J**	**24 J**	1 J
003-Mclouth_PestPCB	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	319-85-7	**5**	ug/kg		**51**	**86 J**	**49 J**	**170 J**	**43 J**	**58 J**	**240 J**
003-Mclouth_PestPCB	BETA ENDOSULFAN	33213-65-9	**1.94**	ug/kg		**19 J**	**23 J**	**20 J**	**84 J+**	**23 J**	**2.5 J**	**52 J**
003-Mclouth_PestPCB	BETA-CHLORDANE	5103-74-2	**3.24**	ug/kg		**43 J**	**62 J+**	**91 J**	**51 J+**	**41 J**	**16 J**	**30 J**
003-Mclouth_PestPCB	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	319-86-8	300	ug/kg		47	45 J	28 J	78 J+	32 J	50 J	37 J
003-Mclouth_PestPCB	DIELDRIN	60-57-1	**1.9**	ug/kg		**62**	**200 J+**	**170**	**90**	**160 J**	**120 J**	**19 J**
003-Mclouth_PestPCB	ENDOSULFAN SULFATE	1031-07-8	**34.6**	ug/kg		13 J	**35 J**	25	17 J+	24 J	20 J	11 J
003-Mclouth_PestPCB	ENDRIN	72-20-8	**2.22**	ug/kg		**19 J**	**16 J**	**11 J**	**260**	**11 J**	**6.7 J**	5.4 UJ
003-Mclouth_PestPCB	ENDRIN ALDEHYDE	7421-93-4	480	ug/kg		63	19 J	17 J	110 J	15 J	4.9 J	5.4 UJ
003-Mclouth_PestPCB	ENDRIN KETONE	53494-70-5		ug/kg		60	96	56 J	87 J+	50 J	78 J	82 J
003-Mclouth_PestPCB	GAMMA BHC (LINDANE)	58-89-9	**2.37**	ug/kg		**8.8**	**4.5 J**	1.3 J	**11 J+**	**6.3 J**	1.9 J	**13 J**
003-Mclouth_PestPCB	HEPTACHLOR	76-44-8	**0.6**	ug/kg		3 U	3.8 U	3 U	3.6 U	3.5 UJ	3.3 UJ	2.8 UJ
003-Mclouth_PestPCB	HEPTACHLOR EPOXIDE	1024-57-3	**2.47**	ug/kg		**59**	**12 J**	**84 J**	**61 J+**	**7.8 J**	**4.5 J**	**8.8 J**
003-Mclouth_PestPCB	METHOXYCHLOR	72-43-5	**13.6**	ug/kg		**15 J**	**30 J**	**25 J**	**50 J**	**25 J**	**20 J**	**19 J**
003-Mclouth_PestPCB	P,P'-DDD	72-54-8	**4.88**	ug/kg		**12 J**	**17 J**	**23**	**11 J**	**24 J**	**51 J**	**8.5 J**
003-Mclouth_PestPCB	P,P'-DDE	72-55-9	**3.16**	ug/kg		**70 J**	**85 J**	**72 J**	**16 J+**	**83 J**	**76 J+**	**6.7 J**
003-Mclouth_PestPCB	P,P'-DDT	50-29-3	**4.16**	ug/kg		**100**	**270 J**	**220 J**	**190**	**250 J**	**180 J**	**43 J**
003-Mclouth_PestPCB	PCB-1016 (AROCLOR 1016)	12674-11-2	59.8	ug/kg		58 U	150 U	120 U	350 U	340 UJ	320 UJ	54 UJ
003-Mclouth_PestPCB	PCB-1221 (AROCLOR 1221)	11104-28-2	59.8	ug/kg		58 U	150 R	120 U	350 U	340 UJ	320 UJ	54 UJ
003-Mclouth_PestPCB	PCB-1232 (AROCLOR 1232)	11141-16-5	59.8	ug/kg		58 U	150 R	120 U	350 U	340 UJ	320 UJ	54 UJ
003-Mclouth_PestPCB	PCB-1242 (AROCLOR 1242)	53469-21-9	59.8	ug/kg		58 U	150 R	120 U	350 U	340 UJ	320 UJ	54 UJ
003-Mclouth_PestPCB	PCB-1248 (AROCLOR 1248)	12672-29-6	**59.8**	ug/kg		**1800 J+**	**2900 J+**	**5000 J+**	**1900 J+**	**5600 J**	**6000 J**	**1100 J**
approved Final Quality A	PCB-1254 (AROCLOR 1254)	11097-69-1	59.8	ug/kg		58 U	150 R	120 U	350 U	340 UJ	320 UJ	54 UJ
003-Mclouth_PestPCB	PCB-1260 (AROCLOR 1260)	11096-82-5	**59.8**	ug/kg		**1200 J+**	**1700 J+**	**2500 J+**	**4000 J+**	**2900 J**	**2300 J**	**1800 J**
003-Mclouth_PestPCB	PCB-1262 (AROCLOR 1262)	37324-23-5	59.8	ug/kg		58 U	150 R	120 U	350 U	340 UJ	320 UJ	54 UJ
003-Mclouth_PestPCB	PCB-1268 (AROCLOR 1268)	11100-14-4	59.8	ug/kg		58 U	150 R	120 U	350 U	340 UJ	320 UJ	54 UJ
003-Mclouth_PestPCB	TOXAPHENE	8001-35-2	0.077	ug/kg		300 U	380 U	300 U	360 U	350 UJ	330 UJ	280 UJ

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

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A - Unvalidated Result

B - The target analyte was detected in the associated blank.

J - The identification of the analyte is acceptable; the reported value is an estimate

J+ - The result is an estimated quantity, but the results may be biased high

J- - The result is an estimated quantity, but the results may be biased low

R - The data is unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

U - Not detected

Table C - Pesticides & PCBs Detection Results

					Location	MSTC23-SD05	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06
					Sample #	MSTC23-SD05-SS-0.5	MSTC23-SD06-1.0	MSTC23-SD06-2.0	MSTC23-SD06-3.0	MSTC23-SD06-5.0	MSTC23-SD06-7.0	MSTC23-SD06-9.0	MSTC23-SD06A-7.0
					Start Depth	0	0	1	2	3	5	7	5
					End Depth	0.5	1	2	3	5	7	9	7
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Type	N	N	N	N	N	N	N	FD
					Parent Sample #								MSTC23-SD06-7.0
					Sample Date	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	11/17/2023	11/17/2023	11/17/2023
Method Group	Analyte	CAS #	Sed PAL	Units									
003-Mclouth_PestPCB	ALDRIN	309-00-2	**2**	ug/kg		**27 J**	**11 J**	**13 J**	**29 J**	**14 J**	**11 J+**	**3.9 J**	**14 J+**
003-Mclouth_PestPCB	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	319-84-6	**6**	ug/kg		2.8 UJ	**12 J**	**24 J**	**31 J**	**28 J**	0.69 J+	0.43 J	0.68 J+
003-Mclouth_PestPCB	ALPHA ENDOSULFAN	959-98-8	**3.26**	ug/kg		**21 J**	**6.3 J**	**15 J**	**18 J**	**18 J**	**18 J+**	**9.4 J+**	**15 J+**
003-Mclouth_PestPCB	ALPHA-CHLORDANE	5103-71-9	**3.24**	ug/kg		2.8 UJ	**6.1 NJ**	**18 NJ**	**25 NJ**	**23 NJ**	**74 J+**	**30 J+**	**65 J+**
003-Mclouth_PestPCB	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	319-85-7	**5**	ug/kg		**370 J**	**36 J**	**66 J**	**45 J**	**78 J+**	**97 J+**	**83 J**	**110 J+**
003-Mclouth_PestPCB	BETA ENDOSULFAN	33213-65-9	**1.94**	ug/kg		**110 J**	**20 J**	**20 J**	**45 J**	**59 J**	**49 J+**	**33 J**	**56 J+**
003-Mclouth_PestPCB	BETA-CHLORDANE	5103-74-2	**3.24**	ug/kg		**92 J**	**26 J**	**68 J**	**120 J+**	**160 J+**	**120 J+**	**12 J+**	**110 J+**
003-Mclouth_PestPCB	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	319-86-8	300	ug/kg		64 J	37 J	46 J+	59 J+	57 J+	42 J+	27 J+	53 J+
003-Mclouth_PestPCB	DIELDRIN	60-57-1	**1.9**	ug/kg		**16 J**	**35 J**	**130 J**	**240 J+**	**220 J+**	**210 J+**	**82 J**	**180 J+**
003-Mclouth_PestPCB	ENDOSULFAN SULFATE	1031-07-8	**34.6**	ug/kg		**37 J**	15 J	26 J+	**54 J**	**62 J**	**38 J+**	32 J+	**41 J+**
003-Mclouth_PestPCB	ENDRIN	72-20-8	**2.22**	ug/kg		**410 J**	**16 J**	**7.4 J**	**17 J**	**13 J**	**14 J+**	**3.8 J**	**10 J+**
003-Mclouth_PestPCB	ENDRIN ALDEHYDE	7421-93-4	480	ug/kg		77 J	6.8 J	11 J	16 J	14 J	16 J+	8.8 J	15 J+
003-Mclouth_PestPCB	ENDRIN KETONE	53494-70-5		ug/kg		170 J	75 J	64 J	74 J	110 J	86 J+	79	84 J+
003-Mclouth_PestPCB	GAMMA BHC (LINDANE)	58-89-9	**2.37**	ug/kg		**16 J**	**8.9 J**	**13 J+**	**3.6 J**	1.9 J	**3.2 J+**	2.9 U	2.2 J+
003-Mclouth_PestPCB	HEPTACHLOR	76-44-8	**0.6**	ug/kg		2.8 UJ	2.7 UJ	3.2 UJ	2.9 UJ	2.8 UJ	2.9 U	2.9 U	3 U
003-Mclouth_PestPCB	HEPTACHLOR EPOXIDE	1024-57-3	**2.47**	ug/kg		**270 J**	**28 J**	**6.5 J**	**12 J**	**9.3 J**	**8.5 J+**	**2.8 J**	**6.8 J+**
003-Mclouth_PestPCB	METHOXYCHLOR	72-43-5	**13.6**	ug/kg		**63 J**	**27 J**	**24 J**	**54 J**	**79 J**	**51 J+**	**34 J**	**57 J+**
003-Mclouth_PestPCB	P,P'-DDD	72-54-8	**4.88**	ug/kg		**28 J**	**6 J**	**14 J**	**24 J**	**27 J**	**61 J+**	**21 J**	**58 J+**
003-Mclouth_PestPCB	P,P'-DDE	72-55-9	**3.16**	ug/kg		**95 J+**	**14 J**	**27 J+**	**55 J**	**73 J**	**150 J+**	**93 J+**	**150 J+**
003-Mclouth_PestPCB	P,P'-DDT	50-29-3	**4.16**	ug/kg		**34 J**	**65 J**	**340 J**	**470 J+**	**420 J+**	**320 J+**	**150 J+**	**290 J+**
003-Mclouth_PestPCB	PCB-1016 (AROCLOR 1016)	12674-11-2	59.8	ug/kg		550 UJ	52 UJ	61 UJ	280 UJ	270 UJ	57 U	56 U	58 UJ
003-Mclouth_PestPCB	PCB-1221 (AROCLOR 1221)	11104-28-2	59.8	ug/kg		550 UJ	52 UJ	61 UJ	280 UJ	270 UJ	57 U	56 R	58 UJ
003-Mclouth_PestPCB	PCB-1232 (AROCLOR 1232)	11141-16-5	59.8	ug/kg		550 UJ	52 UJ	61 UJ	280 UJ	270 UJ	57 U	56 R	58 UJ
003-Mclouth_PestPCB	PCB-1242 (AROCLOR 1242)	53469-21-9	59.8	ug/kg		550 UJ	52 UJ	61 UJ	280 UJ	270 UJ	57 U	56 R	58 UJ
003-Mclouth_PestPCB	PCB-1248 (AROCLOR 1248)	12672-29-6	**59.8**	ug/kg		**1400 J**	**1300 J**	**4900 J+**	**7800 J+**	**6700 J+**	**5600 J+**	**3000 J**	**5600 J+**
approved Final Quality A	PCB-1254 (AROCLOR 1254)	11097-69-1	59.8	ug/kg		550 UJ	52 UJ	61 UJ	280 UJ	270 UJ	57 U	56 R	58 UJ
003-Mclouth_PestPCB	PCB-1260 (AROCLOR 1260)	11096-82-5	**59.8**	ug/kg		**3100 J**	**580 J**	**560 J+**	**4600 J+**	**5000 J+**	**2400 J+**	**440 J**	**940 J+**
003-Mclouth_PestPCB	PCB-1262 (AROCLOR 1262)	37324-23-5	59.8	ug/kg		550 UJ	52 UJ	61 UJ	280 UJ	270 UJ	57 U	56 R	58 UJ
003-Mclouth_PestPCB	PCB-1268 (AROCLOR 1268)	11100-14-4	59.8	ug/kg		550 UJ	52 UJ	61 UJ	280 UJ	270 UJ	57 U	56 R	58 UJ
003-Mclouth_PestPCB	TOXAPHENE	8001-35-2	0.077	ug/kg		280 UJ	270 UJ	320 UJ	290 UJ	280 UJ	290 U	290 U	300 U

Notes:

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J- - The result is an estimated quantity, but the results may be biased low

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U - Not detected

Table C - Pesticides & PCBs Detection Results

					Location	MSTC23-SD06	MSTC23-SD07	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD09
					Sample #	MSTC23-SD06-SS-0.5	MSTC23-SD07-SS-0.5	MSTC23-SD08-1.0	MSTC23-SD08-2.0	MSTC23-SD08A-SS-0.5	MSTC23-SD08-SS-0.5	MSTC23-SD09-1.0
					Start Depth	0	0	0	1	0	0	0
					End Depth	0.5	0.5	1	2	0.5	0.5	1
					Depth Unit	ft	ft	ft	ft	ft	ft	ft
					Sample Type	N	N	N	N	FD	N	N
					Parent Sample #					MSTC23-SD08-SS-0.5		
					Sample Date	10/18/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/13/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
003-Mclouth_PestPCB	ALDRIN	309-00-2	**2**	ug/kg		0.68 J	1.3 J+	2.3 U	2.1 U	1.3 J	1.1 J	**30 J**
003-Mclouth_PestPCB	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	319-84-6	**6**	ug/kg		2.3 UJ	3.2 U	0.38 J	2.1 U	2.3 U	2.7	1.2 J
003-Mclouth_PestPCB	ALPHA ENDOSULFAN	959-98-8	**3.26**	ug/kg		2.3 UJ	**5.4 J+**	0.32 J	2.1 U	1.7 J	1.4 J	**13 J**
003-Mclouth_PestPCB	ALPHA-CHLORDANE	5103-71-9	**3.24**	ug/kg		2.3 UJ	0.61 NJ	2.3 R	2.1 R	2.3 R	2.3 R	**23 J**
003-Mclouth_PestPCB	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	319-85-7	**5**	ug/kg		**100 J**	**67 J**	3.2 J	2.1 U	**35 J**	**20 J**	**81 J**
003-Mclouth_PestPCB	BETA ENDOSULFAN	33213-65-9	**1.94**	ug/kg		**21 J**	**30 J+**	4.4 U	4.1 U	**2.9 J**	**2.2 J**	**47 J**
003-Mclouth_PestPCB	BETA-CHLORDANE	5103-74-2	**3.24**	ug/kg		**20 J**	**16 J**	2.3 U	2.1 U	**6.3**	**3.3 J**	**16 J**
003-Mclouth_PestPCB	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	319-86-8	300	ug/kg		12 J	17 NJ	1.4 NJ	2.1 R	5.2 NJ	2.7 J	66 J+
003-Mclouth_PestPCB	DIELDRIN	60-57-1	**1.9**	ug/kg		**4.9 J**	**11 J**	1.7 J	4.1 U	**3 J**	0.66 J	**92 J**
003-Mclouth_PestPCB	ENDOSULFAN SULFATE	1031-07-8	**34.6**	ug/kg		5.7 J	11 J	0.66 J	4.1 U	1.8 J	1.2 J	26 J
003-Mclouth_PestPCB	ENDRIN	72-20-8	**2.22**	ug/kg		4.5 UJ	6.2 U	4.4 U	4.1 U	**22**	**6.7**	**7 J**
003-Mclouth_PestPCB	ENDRIN ALDEHYDE	7421-93-4	480	ug/kg		4.5 UJ	6.2 U	4.4 U	4.1 U	4.7 J	4.5 U	8.3 J
003-Mclouth_PestPCB	ENDRIN KETONE	53494-70-5		ug/kg		32 J	50 J	1.4 J	4.1 U	10 J	5.8	65 J
003-Mclouth_PestPCB	GAMMA BHC (LINDANE)	58-89-9	**2.37**	ug/kg		**3.8 J**	**3.7 J+**	2.3 U	2.1 U	1.8 J	1.2 J	0.34 J
003-Mclouth_PestPCB	HEPTACHLOR	76-44-8	**0.6**	ug/kg		2.3 UJ	3.2 UJ	**0.65 J**	2.1 UJ	**0.79 J**	**0.95 J**	**22 J**
003-Mclouth_PestPCB	HEPTACHLOR EPOXIDE	1024-57-3	**2.47**	ug/kg		2.3 U	3.2 U	2.3 U	2.1 U	2.3 U	2 J	1.7 J
003-Mclouth_PestPCB	METHOXYCHLOR	72-43-5	**13.6**	ug/kg		6.7 J	13 J	23 UJ	21 UJ	12 J	23 UJ	**57 J**
003-Mclouth_PestPCB	P,P'-DDD	72-54-8	**4.88**	ug/kg		2.5 J	4.4 J+	4.4 U	4.1 U	1.9 J	3.3 J	**38 J**
003-Mclouth_PestPCB	P,P'-DDE	72-55-9	**3.16**	ug/kg		1 J	**6.4 J+**	1.3 J	4.1 U	2.4 J	2 J	**150 J+**
003-Mclouth_PestPCB	P,P'-DDT	50-29-3	**4.16**	ug/kg		**21 J**	**28 J**	3.3 J	4.1 UJ	**4.5 J**	3.2 J	**270 J+**
003-Mclouth_PestPCB	PCB-1016 (AROCLOR 1016)	12674-11-2	59.8	ug/kg		45 UJ	62 U	44 U	41 U	45 U	45 U	63 UJ
003-Mclouth_PestPCB	PCB-1221 (AROCLOR 1221)	11104-28-2	59.8	ug/kg		45 UJ	62 R	44 U	41 U	45 U	45 U	63 UJ
003-Mclouth_PestPCB	PCB-1232 (AROCLOR 1232)	11141-16-5	59.8	ug/kg		45 UJ	62 R	44 U	41 U	45 U	45 U	63 UJ
003-Mclouth_PestPCB	PCB-1242 (AROCLOR 1242)	53469-21-9	59.8	ug/kg		45 UJ	62 R	44 U	41 U	45 U	45 U	63 UJ
003-Mclouth_PestPCB	PCB-1248 (AROCLOR 1248)	12672-29-6	**59.8**	ug/kg		**330 J**	**390 J**	35 J	41 U	**97 J**	**75 J**	**1600 J+**
approved Final Quality A	PCB-1254 (AROCLOR 1254)	11097-69-1	59.8	ug/kg		45 UJ	62 R	44 U	41 U	45 U	45 U	63 UJ
003-Mclouth_PestPCB	PCB-1260 (AROCLOR 1260)	11096-82-5	**59.8**	ug/kg		**550 J**	**470 J**	34 J	41 U	**79 J**	**96 J**	**1200 J+**
003-Mclouth_PestPCB	PCB-1262 (AROCLOR 1262)	37324-23-5	59.8	ug/kg		45 UJ	62 R	44 U	41 U	45 U	45 U	63 UJ
003-Mclouth_PestPCB	PCB-1268 (AROCLOR 1268)	11100-14-4	59.8	ug/kg		45 UJ	62 R	44 U	41 U	45 U	45 U	63 UJ
003-Mclouth_PestPCB	TOXAPHENE	8001-35-2	0.077	ug/kg		230 UJ	320 UJ	230 U	210 U	230 U	230 U	320 UJ

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U - Not detected

Table C - Pesticides & PCBs Detection Results

					Location	MSTC23-SD09	MSTC23-SD09	MSTC23-SD10	MSTC23-SD12	MSTC23-SD13	MSTC23-SD13	MSTC23-SD14
					Sample #	MSTC23-SD09-2.0	MSTC23-SD09-SS-0.5	MSTC23-SD10-SS-0.5	MSTC23-SD12-SS-0.5	MSTC23-SD13-1.0	MSTC23-SD13-SS-0.5	MSTC23-SD14-1.0
					Start Depth	1	0	0	0	0	0	0
					End Depth	2	0.5	0.5	0.5	1	0.5	1
					Depth Unit	ft	ft	ft	ft	ft	ft	ft
					Sample Type	N	N	N	N	N	N	N
					Parent Sample #							
					Sample Date	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/12/2023	10/12/2023	10/12/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
003-Mclouth_PestPCB	ALDRIN	309-00-2	**2**	ug/kg	2 UJ	**7.4 J**	1.4 J	1.1 J	2 UJ	0.53 J	2.1 UJ	
003-Mclouth_PestPCB	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	319-84-6	**6**	ug/kg	2 UJ	3.2 UJ	**8.6 J**	4.6 J	2 UJ	2.1 UJ	2.1 UJ	
003-Mclouth_PestPCB	ALPHA ENDOSULFAN	959-98-8	**3.26**	ug/kg	0.21 J	**5.3 J**	**4.5 J**	**5.4 J**	2 UJ	1.3 J	2.1 UJ	
003-Mclouth_PestPCB	ALPHA-CHLORDANE	5103-71-9	**3.24**	ug/kg	0.25 J	**8.5 J**	2.7 UJ	2.8 UJ	2 UJ	0.57 J	2.1 UJ	
003-Mclouth_PestPCB	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	319-85-7	**5**	ug/kg	2 UJ	**59 J**	**82 J**	**28 J**	2 UJ	**12 J**	2.1 UJ	
003-Mclouth_PestPCB	BETA ENDOSULFAN	33213-65-9	**1.94**	ug/kg	**2.4 J**	**29 J**	**22 J**	**22 J**	3.8 UJ	1.9 J	4 UJ	
003-Mclouth_PestPCB	BETA-CHLORDANE	5103-74-2	**3.24**	ug/kg	0.36 J	**9.4 J**	**13 J**	**7.1 J**	2 UJ	1.3 J	2.1 UJ	
003-Mclouth_PestPCB	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	319-86-8	300	ug/kg	1 J	57 J	11 J	3.2 J	2 UJ	2.3 J	2.1 UJ	
003-Mclouth_PestPCB	DIELDRIN	60-57-1	**1.9**	ug/kg	1.3 J	**72 J**	**3.3 J**	**4.9 J**	3.8 UJ	**2.4 J**	4 UJ	
003-Mclouth_PestPCB	ENDOSULFAN SULFATE	1031-07-8	**34.6**	ug/kg	3.9 UJ	24 J	4 J	2.3 J	3.8 UJ	0.87 J	4 UJ	
003-Mclouth_PestPCB	ENDRIN	72-20-8	**2.22**	ug/kg	3.9 UJ	**5.1 J**	**36 J**	**23 J**	3.8 UJ	**6 J**	4 UJ	
003-Mclouth_PestPCB	ENDRIN ALDEHYDE	7421-93-4	480	ug/kg	3.9 UJ	4.4 J	14 J	14 J	3.8 UJ	2.7 J	4 UJ	
003-Mclouth_PestPCB	ENDRIN KETONE	53494-70-5		ug/kg	1.2 J	53 J	23 J	13 J	3.8 UJ	4.2 J	4 UJ	
003-Mclouth_PestPCB	GAMMA BHC (LINDANE)	58-89-9	**2.37**	ug/kg	0.22 J	3.2 UJ	**3.1 J**	1.6 J	2 UJ	0.74 J	2.1 UJ	
003-Mclouth_PestPCB	HEPTACHLOR	76-44-8	**0.6**	ug/kg	0.38 J	3.2 UJ	2.7 UJ	2.8 UJ	2 UJ	2.1 UJ	2.1 UJ	
003-Mclouth_PestPCB	HEPTACHLOR EPOXIDE	1024-57-3	**2.47**	ug/kg	0.54 J	3.2 UJ	2 J	1.8 J	2 UJ	0.68 J	2.1 UJ	
003-Mclouth_PestPCB	METHOXYCHLOR	72-43-5	**13.6**	ug/kg	20 UJ	**39 J**	9.7 J	5.1 J	20 UJ	21 UJ	21 UJ	
003-Mclouth_PestPCB	P,P'-DDD	72-54-8	**4.88**	ug/kg	3.9 UJ	**30 J**	**8.1 J**	4.7 J	3.8 UJ	2.5 J	4 UJ	
003-Mclouth_PestPCB	P,P'-DDE	72-55-9	**3.16**	ug/kg	1.7 J	**50 J**	**3.2 J**	**5 J**	3.8 UJ	2.1 J	4 UJ	
003-Mclouth_PestPCB	P,P'-DDT	50-29-3	**4.16**	ug/kg	0.88 J	**220 J**	**14 J**	**5.8 J**	3.8 UJ	**6.3 J**	4 UJ	
003-Mclouth_PestPCB	PCB-1016 (AROCLOR 1016)	12674-11-2	59.8	ug/kg	39 UJ	62 UJ	53 UJ	53 UJ	38 UJ	41 UJ	40 UJ	
003-Mclouth_PestPCB	PCB-1221 (AROCLOR 1221)	11104-28-2	59.8	ug/kg	39 UJ	62 UJ	53 UJ	53 UJ	38 UJ	41 UJ	40 UJ	
003-Mclouth_PestPCB	PCB-1232 (AROCLOR 1232)	11141-16-5	59.8	ug/kg	39 UJ	62 UJ	53 UJ	53 UJ	38 UJ	41 UJ	40 UJ	
003-Mclouth_PestPCB	PCB-1242 (AROCLOR 1242)	53469-21-9	59.8	ug/kg	39 UJ	62 UJ	53 UJ	53 UJ	38 UJ	41 UJ	40 UJ	
003-Mclouth_PestPCB	PCB-1248 (AROCLOR 1248)	12672-29-6	**59.8**	ug/kg	24 J	**980 J+**	53 UJ	53 UJ	38 UJ	42 J	40 UJ	
approved Final Quality A	PCB-1254 (AROCLOR 1254)	11097-69-1	59.8	ug/kg	39 UJ	62 UJ	53 UJ	53 UJ	38 UJ	41 UJ	40 UJ	
003-Mclouth_PestPCB	PCB-1260 (AROCLOR 1260)	11096-82-5	**59.8**	ug/kg	30 J	**1100 J+**	**280 J**	**160 J**	38 UJ	**74 J**	40 UJ	
003-Mclouth_PestPCB	PCB-1262 (AROCLOR 1262)	37324-23-5	59.8	ug/kg	39 UJ	62 UJ	53 UJ	53 UJ	38 UJ	41 UJ	40 UJ	
003-Mclouth_PestPCB	PCB-1268 (AROCLOR 1268)	11100-14-4	59.8	ug/kg	39 UJ	62 UJ	53 UJ	53 UJ	38 UJ	41 UJ	40 UJ	
003-Mclouth_PestPCB	TOXAPHENE	8001-35-2	0.077	ug/kg	200 UJ	320 UJ	270 UJ	280 UJ	200 UJ	210 UJ	210 UJ	

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

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J+ - The result is an estimated quantity, but the results may be biased high

J- - The result is an estimated quantity, but the results may be biased low

R - The data is unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

U - Not detected

Table C - Pesticides & PCBs Detection Results

					Location	MSTC23-SD14	MSTC23-SD14	MSTC23-SD15	MSTC23-SD19	MSTC23-SD19	MSTC23-SD19	MSTC23-SD20
					Sample #	MSTC23-SD14-2.0	MSTC23-SD14-SS-0.5	MSTC23-SD15-SS-0.5	MSTC23-SD19-1.0	MSTC23-SD19-2.0	MSTC23-SD19-SS-0.5	MSTC23-SD20-1.0
					Start Depth	1	0	0	0	1	0	0
					End Depth	2	0.5	0.5	1	2	0.5	1
					Depth Unit	ft	ft	ft	ft	ft	ft	ft
					Sample Type	N	N	N	N	N	N	N
					Parent Sample #							
					Sample Date	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/16/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
003-Mclouth_PestPCB	ALDRIN	309-00-2	**2**	ug/kg	2 UJ	2.3 UJ	2.4 U	**2.3 J**	2.7 U	**4.2 J**	0.8 J
003-Mclouth_PestPCB	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	319-84-6	**6**	ug/kg	2 UJ	2.3 UJ	2.4 U	1.8 J	0.19 J	0.43 J	1.6 J
003-Mclouth_PestPCB	ALPHA ENDOSULFAN	959-98-8	**3.26**	ug/kg	2 UJ	0.23 J+	2.4 U	1.5 J	2.7 U	2.9 J	0.46 J
003-Mclouth_PestPCB	ALPHA-CHLORDANE	5103-71-9	**3.24**	ug/kg	2 UJ	2.3 UJ	0.97 NJ	1 J	2.7 U	2.7 J	0.47 J
003-Mclouth_PestPCB	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	319-85-7	**5**	ug/kg	2 UJ	**8.2 J**	**10 J**	**19 J**	**6.2 J**	**27 J**	3.1
003-Mclouth_PestPCB	BETA ENDOSULFAN	33213-65-9	**1.94**	ug/kg	3.9 UJ	**6.7 J+**	**4.3 J**	**5 J**	5.2 U	**6.8 J**	**2.6 J**
003-Mclouth_PestPCB	BETA-CHLORDANE	5103-74-2	**3.24**	ug/kg	2 UJ	**5.4 J**	2.9 J	2.1 J	0.45 J	**5.1 J**	0.48 J
003-Mclouth_PestPCB	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	319-86-8	300	ug/kg	2 UJ	2.8 J	2.5 J	29 J	12 J	26 J	2.1 NJ
003-Mclouth_PestPCB	DIELDRIN	60-57-1	**1.9**	ug/kg	3.9 UJ	**16 J+**	**4.7 J**	**20**	**2.9 J**	**32**	4.2 U
003-Mclouth_PestPCB	ENDOSULFAN SULFATE	1031-07-8	**34.6**	ug/kg	3.9 UJ	1.5 J	1.1 J	11 J	22 J	18 J	0.99 J
003-Mclouth_PestPCB	ENDRIN	72-20-8	**2.22**	ug/kg	3.9 UJ	4.4 UJ	4.7 U	1.7 J	**17 J**	**2.7 J**	**3.5 J**
003-Mclouth_PestPCB	ENDRIN ALDEHYDE	7421-93-4	480	ug/kg	3.9 UJ	4.3 J+	4.7 U	4.2 J	15 J	4.7 J	4.2 U
003-Mclouth_PestPCB	ENDRIN KETONE	53494-70-5		ug/kg	3.9 UJ	11 J+	3.8 J	19 J	5.9 J	18 J	4.4
003-Mclouth_PestPCB	GAMMA BHC (LINDANE)	58-89-9	**2.37**	ug/kg	2 UJ	**10 J+**	0.6 J	3 U	2.3 J	3.1 U	0.44 J
003-Mclouth_PestPCB	HEPTACHLOR	76-44-8	**0.6**	ug/kg	2 UJ	2.3 UJ	2.4 U	3 U	**1.1 J**	3.1 U	**1 J**
003-Mclouth_PestPCB	HEPTACHLOR EPOXIDE	1024-57-3	**2.47**	ug/kg	2 UJ	2.3 J	1.7 J	**9.9**	2.7 U	**4.1 J**	2.3
003-Mclouth_PestPCB	METHOXYCHLOR	72-43-5	**13.6**	ug/kg	20 UJ	**140 J+**	**52 J**	**20 J**	5.3 J	**32 J**	22 UJ
003-Mclouth_PestPCB	P,P'-DDD	72-54-8	**4.88**	ug/kg	3.9 UJ	**66 J+**	**8.4 J**	**14 J**	1.3 J	**29 J**	2.5 J
003-Mclouth_PestPCB	P,P'-DDE	72-55-9	**3.16**	ug/kg	3.9 UJ	**11 J**	**5.2 J**	**12 J**	1 J	**31 J**	**4.9 J**
003-Mclouth_PestPCB	P,P'-DDT	50-29-3	**4.16**	ug/kg	3.9 UJ	**8 J**	**5.4 J**	**15 J**	5.2 UJ	**190 J**	2.2 J
003-Mclouth_PestPCB	PCB-1016 (AROCLOR 1016)	12674-11-2	59.8	ug/kg	39 UJ	44 UJ	47 U	59 U	52 U	61 U	42 U
003-Mclouth_PestPCB	PCB-1221 (AROCLOR 1221)	11104-28-2	59.8	ug/kg	39 UJ	44 UJ	47 U	59 U	52 U	61 U	42 U
003-Mclouth_PestPCB	PCB-1232 (AROCLOR 1232)	11141-16-5	59.8	ug/kg	39 UJ	44 UJ	47 U	59 U	52 U	61 U	42 U
003-Mclouth_PestPCB	PCB-1242 (AROCLOR 1242)	53469-21-9	59.8	ug/kg	39 UJ	44 UJ	47 U	59 U	52 U	61 U	42 U
003-Mclouth_PestPCB	PCB-1248 (AROCLOR 1248)	12672-29-6	**59.8**	ug/kg	39 UJ	**190 J**	**82 J**	**480 J**	52 U	**480 J**	59 J
approved Final Quality A	PCB-1254 (AROCLOR 1254)	11097-69-1	59.8	ug/kg	39 UJ	44 UJ	47 U	59 U	52 U	61 U	42 U
003-Mclouth_PestPCB	PCB-1260 (AROCLOR 1260)	11096-82-5	**59.8**	ug/kg	39 UJ	**120 J**	**110 J**	**450 J**	**260 J**	**740 J**	**65 J**
003-Mclouth_PestPCB	PCB-1262 (AROCLOR 1262)	37324-23-5	59.8	ug/kg	39 UJ	44 UJ	47 U	59 U	52 U	61 U	42 U
003-Mclouth_PestPCB	PCB-1268 (AROCLOR 1268)	11100-14-4	59.8	ug/kg	39 UJ	44 UJ	47 U	59 U	52 U	61 U	42 U
003-Mclouth_PestPCB	TOXAPHENE	8001-35-2	0.077	ug/kg	200 UJ	230 UJ	240 U	300 U	270 U	310 U	220 U

Notes:

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Table C - Pesticides & PCBs Detection Results

					Location	MSTC23-SD20	MSTC23-SD20	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD23
					Sample #	MSTC23-SD20-2.0	MSTC23-SD20-SS-0.5	MSTC23-SD22-1.0	MSTC23-SD22-2.0	MSTC23-SD22-3.0	MSTC23-SD22-5.0	MSTC23-SD22-SS-0.5	MSTC23-SD23-1.0
					Start Depth	1	0	0	1	2	3	0	0
					End Depth	2	0.5	1	2	3	5	0.5	1
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Type	N	N	N	N	N	N	N	N
					Parent Sample #								
					Sample Date	10/16/2023	10/16/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/16/2023
Method Group	Analyte	CAS #	Sed PAL	Units									
003-Mclouth_PestPCB	ALDRIN	309-00-2	**2**	ug/kg	2 U	2.3 U	1.3 J	2.6 U	2.3 U	2.2 U	1.4 J	2.1 U
003-Mclouth_PestPCB	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	319-84-6	**6**	ug/kg	2 U	**9.4 J**	0.57 J	2.6 U	2.3 U	2.2 U	3.8 U	0.31 J
003-Mclouth_PestPCB	ALPHA ENDOSULFAN	959-98-8	**3.26**	ug/kg	2 U	**3.4 J**	2 J	0.86 J	2.3 U	2.2 U	0.52 J	0.32 J
003-Mclouth_PestPCB	ALPHA-CHLORDANE	5103-71-9	**3.24**	ug/kg	2 R	2.3 R	2.5 U	2.6 U	2.3 U	2.2 U	0.77 NJ	2.1 R
003-Mclouth_PestPCB	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	319-85-7	**5**	ug/kg	2 U	**100 J**	**5.1 J**	3.2 J	2.3 U	2.2 U	3.4 J	2.1 U
003-Mclouth_PestPCB	BETA ENDOSULFAN	33213-65-9	**1.94**	ug/kg	3.9 U	**17 J**	0.62 J	5 U	4.4 U	4.2 U	**2.2 J**	**2.8 J**
003-Mclouth_PestPCB	BETA-CHLORDANE	5103-74-2	**3.24**	ug/kg	0.2 J	**19**	0.47 J	2.6 U	2.3 U	2.2 U	3.8 U	0.27 J
003-Mclouth_PestPCB	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	319-86-8	300	ug/kg	2 R	7.8 J	8.2	2.1 J	2.3 U	2.2 U	1.4 J	0.77 J
003-Mclouth_PestPCB	DIELDRIN	60-57-1	**1.9**	ug/kg	3.9 U	**4.5 J**	**5.8 J**	0.67 J	4.4 U	4.2 U	**5.5 J**	0.49 J
003-Mclouth_PestPCB	ENDOSULFAN SULFATE	1031-07-8	**34.6**	ug/kg	3.9 U	2.6 J	1.6 J	5 U	4.4 U	4.2 U	2 J	4 U
003-Mclouth_PestPCB	ENDRIN	72-20-8	**2.22**	ug/kg	0.72 J	**53**	4.8 U	**2.5 J**	4.4 U	4.2 U	7.4 U	**2.8 J**
003-Mclouth_PestPCB	ENDRIN ALDEHYDE	7421-93-4	480	ug/kg	3.9 U	13 J	4.8 U	2.4 J	4.4 U	4.2 U	7.4 U	4 U
003-Mclouth_PestPCB	ENDRIN KETONE	53494-70-5		ug/kg	3.9 U	19 J	5.8 J	5 U	4.4 U	4.2 U	2.5 J	2.3 J
003-Mclouth_PestPCB	GAMMA BHC (LINDANE)	58-89-9	**2.37**	ug/kg	2 U	**2.8 J**	0.66 J	0.66 J	2.3 U	2.2 U	3.8 U	2.1 U
003-Mclouth_PestPCB	HEPTACHLOR	76-44-8	**0.6**	ug/kg	0.55 J	2.3 UJ	2.5 U	2.6 U	2.3 U	2.2 UJ	3.8 U	2.1 UJ
003-Mclouth_PestPCB	HEPTACHLOR EPOXIDE	1024-57-3	**2.47**	ug/kg	0.24 J	2.1 J	2.5 U	0.36 J	2.3 U	2.2 U	3.8 U	0.24 J
003-Mclouth_PestPCB	METHOXYCHLOR	72-43-5	**13.6**	ug/kg	20 UJ	5.8 J	13 J	26 UJ	23 UJ	22 UJ	38 UJ	21 UJ
003-Mclouth_PestPCB	P,P'-DDD	72-54-8	**4.88**	ug/kg	3.9 U	**6.9 J**	2.3 J	5 U	4.4 U	4.2 U	1.8 J	0.7 J
003-Mclouth_PestPCB	P,P'-DDE	72-55-9	**3.16**	ug/kg	0.76 J	1.8 J	**4.1 J**	5 U	4.4 U	4.2 U	**4.5 J**	4 U
003-Mclouth_PestPCB	P,P'-DDT	50-29-3	**4.16**	ug/kg	3.9 UJ	3.1 J	4.1 J	5 UJ	4.4 UJ	4.2 UJ	**9.2 J**	1.4 J
003-Mclouth_PestPCB	PCB-1016 (AROCLOR 1016)	12674-11-2	59.8	ug/kg	39 U	46 U	48 U	50 U	44 U	42 U	74 U	40 U
003-Mclouth_PestPCB	PCB-1221 (AROCLOR 1221)	11104-28-2	59.8	ug/kg	39 U	46 U	48 U	50 U	44 U	42 U	74 U	40 U
003-Mclouth_PestPCB	PCB-1232 (AROCLOR 1232)	11141-16-5	59.8	ug/kg	39 U	46 U	48 U	50 U	44 U	42 U	74 U	40 U
003-Mclouth_PestPCB	PCB-1242 (AROCLOR 1242)	53469-21-9	59.8	ug/kg	39 U	46 U	48 U	50 U	44 U	42 U	74 U	40 U
003-Mclouth_PestPCB	PCB-1248 (AROCLOR 1248)	12672-29-6	**59.8**	ug/kg	9.4 J	**240 J**	**190 J**	55	44 U	42 U	**140 J**	17 J
approved Final Quality A	PCB-1254 (AROCLOR 1254)	11097-69-1	59.8	ug/kg	39 U	46 U	48 U	50 U	44 U	42 U	74 U	40 U
003-Mclouth_PestPCB	PCB-1260 (AROCLOR 1260)	11096-82-5	**59.8**	ug/kg	9.6 J	**380 J**	**150 J**	26 J	44 U	42 U	**150**	15 J
003-Mclouth_PestPCB	PCB-1262 (AROCLOR 1262)	37324-23-5	59.8	ug/kg	39 U	46 U	48 U	50 U	44 U	42 U	74 U	40 U
003-Mclouth_PestPCB	PCB-1268 (AROCLOR 1268)	11100-14-4	59.8	ug/kg	39 U	46 U	48 U	50 U	44 U	42 U	74 U	40 U
003-Mclouth_PestPCB	TOXAPHENE	8001-35-2	0.077	ug/kg	200 U	230 U	250 U	260 U	230 U	220 U	380 U	210 U

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U - Not detected

Table C - Pesticides & PCBs Detection Results

					Location	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23
					Sample #	MSTC23-SD23-2.0	MSTC23-SD23-3.0	MSTC23-SD23-5.0	MSTC23-SD23-SS-0.5
					Start Depth	1	2	3	0
					End Depth	2	3	5	0.5
					Depth Unit	ft	ft	ft	ft
					Sample Type	N	N	N	N
					Parent Sample #				
					Sample Date	10/16/2023	10/16/2023	10/16/2023	10/16/2023
Method Group	Analyte	CAS #	Sed PAL	Units					
003-Mclouth_PestPCB	ALDRIN	309-00-2	**2**	ug/kg	2.2 U	2.3 U	2 U	1.6 J
003-Mclouth_PestPCB	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	319-84-6	**6**	ug/kg	2.2 U	2.3 U	2 U	4.9 J
003-Mclouth_PestPCB	ALPHA ENDOSULFAN	959-98-8	**3.26**	ug/kg	2.2 U	2.3 U	2 U	**5 J**
003-Mclouth_PestPCB	ALPHA-CHLORDANE	5103-71-9	**3.24**	ug/kg	2.2 R	2.3 R	2 R	3.3 R
003-Mclouth_PestPCB	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	319-85-7	**5**	ug/kg	2.2 U	2.3 U	2 U	**100 J**
003-Mclouth_PestPCB	BETA ENDOSULFAN	33213-65-9	**1.94**	ug/kg	4.2 U	4.4 U	3.9 U	**37**
003-Mclouth_PestPCB	BETA-CHLORDANE	5103-74-2	**3.24**	ug/kg	0.57 J	2.3 U	2 U	**14 J**
003-Mclouth_PestPCB	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	319-86-8	300	ug/kg	2.2 R	2.3 R	2 R	9.6 J
003-Mclouth_PestPCB	DIELDRIN	60-57-1	**1.9**	ug/kg	4.2 U	4.4 U	3.9 U	**2.9 J**
003-Mclouth_PestPCB	ENDOSULFAN SULFATE	1031-07-8	**34.6**	ug/kg	4.2 U	4.4 U	3.9 U	6.1 J
003-Mclouth_PestPCB	ENDRIN	72-20-8	**2.22**	ug/kg	**2.4 J**	4.4 U	3.9 U	**47 J**
003-Mclouth_PestPCB	ENDRIN ALDEHYDE	7421-93-4	480	ug/kg	4.2 U	4.4 U	3.9 U	21 J
003-Mclouth_PestPCB	ENDRIN KETONE	53494-70-5		ug/kg	4.2 U	4.4 U	3.9 U	30 J
003-Mclouth_PestPCB	GAMMA BHC (LINDANE)	58-89-9	**2.37**	ug/kg	2.2 U	2.3 U	2 U	**5.4 J**
003-Mclouth_PestPCB	HEPTACHLOR	76-44-8	**0.6**	ug/kg	2.2 UJ	2.3 UJ	2 UJ	3.3 UJ
003-Mclouth_PestPCB	HEPTACHLOR EPOXIDE	1024-57-3	**2.47**	ug/kg	2.2 U	2.3 U	2 U	**3.2 J**
003-Mclouth_PestPCB	METHOXYCHLOR	72-43-5	**13.6**	ug/kg	22 UJ	23 UJ	20 UJ	6.7 J
003-Mclouth_PestPCB	P,P'-DDD	72-54-8	**4.88**	ug/kg	4.2 U	4.4 U	3.9 U	**13 J**
003-Mclouth_PestPCB	P,P'-DDE	72-55-9	**3.16**	ug/kg	4.2 U	4.4 U	3.9 U	**4.8 J**
003-Mclouth_PestPCB	P,P'-DDT	50-29-3	**4.16**	ug/kg	4.2 UJ	4.4 UJ	3.9 UJ	**10 J**
003-Mclouth_PestPCB	PCB-1016 (AROCLOR 1016)	12674-11-2	59.8	ug/kg	42 U	44 U	39 U	64 U
003-Mclouth_PestPCB	PCB-1221 (AROCLOR 1221)	11104-28-2	59.8	ug/kg	42 U	44 U	39 U	64 U
003-Mclouth_PestPCB	PCB-1232 (AROCLOR 1232)	11141-16-5	59.8	ug/kg	42 U	44 U	39 U	64 U
003-Mclouth_PestPCB	PCB-1242 (AROCLOR 1242)	53469-21-9	59.8	ug/kg	42 U	44 U	39 U	64 U
003-Mclouth_PestPCB	PCB-1248 (AROCLOR 1248)	12672-29-6	**59.8**	ug/kg	42 U	44 U	39 U	**210 J**
approved Final Quality A	PCB-1254 (AROCLOR 1254)	11097-69-1	59.8	ug/kg	42 U	44 U	39 U	64 U
003-Mclouth_PestPCB	PCB-1260 (AROCLOR 1260)	11096-82-5	**59.8**	ug/kg	42 U	44 U	39 U	**260 J**
003-Mclouth_PestPCB	PCB-1262 (AROCLOR 1262)	37324-23-5	59.8	ug/kg	42 U	44 U	39 U	64 U
003-Mclouth_PestPCB	PCB-1268 (AROCLOR 1268)	11100-14-4	59.8	ug/kg	42 U	44 U	39 U	64 U
003-Mclouth_PestPCB	TOXAPHENE	8001-35-2	0.077	ug/kg	220 U	230 U	200 U	330 U

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

Acronyms and Abbreviations:

CAS # - Chemical Abstract Service Number
FD - Field duplicate
N - Field sample
PAL - Project Action Limit
A - Unvalidated Result
B - The target analyte was detected in the associated blank.
J - The identification of the analyte is acceptable; the reported value is an estimate
J+ - The result is an estimated quantity, but the results may be biased high
J- - The result is an estimated quantity, but the results may be biased low
R - The data is unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
U - Not detected

Table D - Dioxins/Furans Detection Results

					Location	MSTC23-SD01	MSTC23-SD02	MSTC23-SD02	MSTC23-SD02	MSTC23-SD03	MSTC23-SD03	MSTC23-SD03	MSTC23-SD05	MSTC23-SD06
					Sample #	MSTC23-SD01-SS-0.5	MSTC23-SD02-1.0	MSTC23-SD02-2.0	MSTC23-SD02-SS-0.5	MSTC23-SD03-1.	MSTC23-SD03-2.0	MSTC23-SD03-SS-0.5	MSTC23-SD05-SS-0.5	MSTC23-SD06-1.0
					Start Depth	0	0	1	0	0	1	0	0	0
					End Depth	0.5	1	2	0.5	1	2	0.5	0.5	1
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Type	N	N	N	N	N	N	N	N	N
					Parent Sample #									
					Sample Date	10/18/2023	10/19/2023	10/19/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
Method Group	Analyte	CAS #	Sed PAL	Units										
007-Mclouth_DioxFur	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN	67562-39-4		pg/g		57.8 JA	177 JA	328 A	101 JA	354 A	329 A	56.4 JA	129 JA	244 A
007-Mclouth_DioxFur	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN	35822-46-9		pg/g		62.5 JA	698 A	886 A	113 JA	655 A	943 A	54 JA	72.2 JA	996 A
007-Mclouth_DioxFur	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN	55673-89-7		pg/g		17.1 JKA	257 UA	219 UA	21.6 JA	71 JKA	235 UA	24 JA	33.2 JA	215 UA
007-Mclouth_DioxFur	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN	70648-26-9		pg/g		22.8 JA	70.2 JA	219 UA	49 JA	65.5 JA	235 UA	24.7 JA	85 JA	215 UA
007-Mclouth_DioxFur	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN	39227-28-6		pg/g		221 UA	257 UA	219 UA	231 UA	242 UA	235 UA	204 UA	181 UA	215 UA
007-Mclouth_DioxFur	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN	57117-44-9		pg/g		19.4 JA	257 UA	150 JKA	32.1 JKA	157 JA	195 JA	21 JA	57.9 JKA	88 JKA
007-Mclouth_DioxFur	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN	57653-85-7		pg/g		24.8 JA	257 A	190 JA	30.5 JKA	197 JA	365 A	204 UA	11.4 JA	128 JKA
007-Mclouth_DioxFur	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN	72918-21-9		pg/g		221 UA	257 UA	219 UA	231 UA	242 UA	235 UA	204 UA	27.1 JA	215 UA
007-Mclouth_DioxFur	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN	19408-74-3		pg/g		221 UA	91.8 JKA	122 JKA	16 JA	81.9 JA	221 JA	204 UA	181 UA	215 UA
007-Mclouth_DioxFur	1,2,3,7,8-PENTACHLORODIBENZOFURAN	57117-41-6		pg/g		221 UA	257 UA	219 UA	39.3 JA	57.6 JA	64.6 JKA	204 UA	54.6 JA	215 UA
007-Mclouth_DioxFur	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN	40321-76-4		pg/g		221 UA	257 UA	219 UA	231 UA	242 UA	235 UA	204 UA	181 UA	215 UA
007-Mclouth_DioxFur	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN	60851-34-5		pg/g		221 UA	257 UA	219 UA	231 UA	242 UA	235 UA	204 UA	13.2 JKA	215 UA
007-Mclouth_DioxFur	2,3,4,7,8-PENTACHLORODIBENZOFURAN	57117-31-4		pg/g		221 UA	59.4 JKA	79 JA	27.2 JKA	72.8 JA	235 UA	13.6 JA	61.4 JA	215 UA
007-Mclouth_DioxFur	2,3,7,8-TETRACHLORODIBENZOFURAN	51207-31-9		pg/g		11.6 JKA	73.7 A	72.7 A	19.7 JA	88 A	74.4 KA	19.5 JA	71.8 A	64.5 A
007-Mclouth_DioxFur	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	1746-01-6	**0.12**	pg/g		44.2 UA	51.3 UA	43.7 UA	**6.18 JKA**	48.4 UA	47 UA	**5.38 JA**	36.2 UA	43 UA
007-Mclouth_DioxFur	OCTACHLORODIBENZOFURAN	39001-02-0		pg/g		174 JA	1670 A	3910 A	506 A	9660 A	6360 A	1630 A	609 A	2280 A
007-Mclouth_DioxFur	OCTACHLORODIBENZO-P-DIOXIN	3268-87-9		pg/g		306 JA	3680 A	4090 A	767 A	3290 A	3280 A	464 A	346 JA	6050 A
007-Mclouth_DioxFur	Total Dioxin TEQ (Mammal)	TEQ(M)	**0.12**	pg/g		**21.4559 JA**	**140.6664 JA**	**210.6933 JA**	**45.3515 JA**	**371.5907 JA**	**389.2984 JA**	**232.7235 JA**	**239.1119 JA**	**296.3256 JA**

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

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N - Field sample

PAL - Project Action Limit

A - Unvalidated Result

B - The target analyte was detected in the associated blank.

J - The identification of the analyte is acceptable; the reported value is an estimate

K - Estimated Maximum Possible Concentration

Table D - Dioxins/Furans Detection Results

				Location	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD07	MSTC23-SD08
				Sample #	MSTC23-SD06-2.0	MSTC23-SD06-3	MSTC23-SD06-5.0	MSTC23-SD06-7.0	MSTC23-SD06-9.0	MSTC23-SD06A-7.0	MSTC23-SD06-SS-0.5	MSTC23-SD07-SS-0.5	MSTC23-SD08A-SS-0.5
				Start Depth	1	2	3	5	7	5	0	0	0
				End Depth	2	3	5	7	9	7	0.5	0.5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	FD	N	N	FD
				Parent Sample #						MSTC23-SD06-7.0			MSTC23-SD08-SS-0.5
				Sample Date	10/18/2023	10/18/2023	10/18/2023	11/17/2023	11/17/2023	11/17/2023	10/18/2023	10/17/2023	10/17/2023
Method Group	Analyte	CAS #	Sed PAL	Units									
007-Mclouth_DioxFur	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN	67562-39-4		pg/g	233 A	121 JA	143 JKA	405 A	300 A	429 A	123 A	76.2 A	23.4 BA
007-Mclouth_DioxFur	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN	35822-46-9		pg/g	845 A	386 A	543 A	672 A	438 A	620 A	52.2 A	71.3 A	18.3 BKA
007-Mclouth_DioxFur	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN	55673-89-7		pg/g	211 UA	219 UA	212 UA	212 UA	35.5 JKA	212 UA	14.1 A	23.4 BJA	3.1 UA
007-Mclouth_DioxFur	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN	70648-26-9		pg/g	211 UA	69.1 JA	212 UA	93.3 JKA	77.6 JA	69 JKA	30.7 A	68.1 A	9.07 BA
007-Mclouth_DioxFur	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN	39227-28-6		pg/g	211 UA	219 UA	212 UA	212 UA	196 UA	212 UA	3.33 UA	50 UA	3.1 UA
007-Mclouth_DioxFur	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN	57117-44-9		pg/g	143 JA	219 UA	212 UA	96.1 JA	73.7 JA	76.6 JA	27.1 A	18.4 BJKA	9.83 BKA
007-Mclouth_DioxFur	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN	57653-85-7		pg/g	211 UA	84.2 JA	127 JA	299 A	101 JKA	206 JA	10.5 KA	21.8 BJKA	3.1 UA
007-Mclouth_DioxFur	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN	72918-21-9		pg/g	211 UA	219 UA	212 UA	212 UA	196 UA	212 UA	3.33 UA	50 UA	3.1 UA
007-Mclouth_DioxFur	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN	19408-74-3		pg/g	211 UA	219 UA	212 UA	116 JKA	32.3 JA	77.2 JA	5.79 KA	50 UA	3.1 UA
007-Mclouth_DioxFur	1,2,3,7,8-PENTACHLORODIBENZOFURAN	57117-41-6		pg/g	211 UA	219 UA	212 UA	42.4 JKA	29.1 JKA	45.6 JA	21.9 A	46.4 JA	7.71 BKA
007-Mclouth_DioxFur	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN	40321-76-4		pg/g	211 UA	219 UA	212 UA	212 UA	196 UA	212 UA	3.33 UA	50 UA	3.1 UA
007-Mclouth_DioxFur	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN	60851-34-5		pg/g	211 UA	219 UA	212 UA	212 UA	196 UA	212 UA	6.91 A	50 UA	3.1 UA
007-Mclouth_DioxFur	2,3,4,7,8-PENTACHLORODIBENZOFURAN	57117-31-4		pg/g	211 UA	219 UA	212 UA	46 JKA	37.4 JA	54.4 JA	17 KA	32 BJKA	3.1 UA
007-Mclouth_DioxFur	2,3,7,8-TETRACHLORODIBENZOFURAN	51207-31-9		pg/g	135 KA	43.8 UA	59.8 A	62.2 A	33.3 JA	72.3 A	25.5 A	32 A	7.79 BA
007-Mclouth_DioxFur	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	1746-01-6	**0.12**	pg/g	42.1 UA	43.8 UA	42.4 UA	42.4 UA	39.3 UA	42.3 UA	0.667 UA	10 UA	0.62 UA
007-Mclouth_DioxFur	OCTACHLORODIBENZOFURAN	39001-02-0		pg/g	1520 A	1700 A	1160 A	5730 A	2100 A	3050 A	526 A	229 A	64.5 BA
007-Mclouth_DioxFur	OCTACHLORODIBENZO-P-DIOXIN	3268-87-9		pg/g	5260 A	2440 A	3630 A	2110 A	2120 A	2810 A	454 A	448 A	158 A
007-Mclouth_DioxFur	Total Dioxin TEQ (Mammal)	TEQ(M)	**0.12**	pg/g	**296.9525 JA**	**263.9975 JA**	**272.9429 JA**	**333.7133 JA**	**266.512 JA**	**320.1173 JA**	**20.134 A**	**83.7189 JA**	**7.4631 JA**

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

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CAS # - Chemical Abstract Service Number

N - Field sample

PAL - Project Action Limit

A - Unvalidated Result

B - The target analyte was detected in the associated blank.

J - The identification of the analyte is acceptable; the reported value is an estimate

K - Estimated Maximum Possible Concentration

Table D - Dioxins/Furans Detection Results

				Location	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD09	MSTC23-SD09	MSTC23-SD09	MSTC23-SD10	MSTC23-SD12
				Sample #	MSTC23-SD08-SS-0.5	MSTC23-SD08-SS-1.0	MSTC23-SD08-SS-2.0	MSTC23-SD09-SS-0.5	MSTC23-SD09-SS-1.0	MSTC23-SD09-SS-2.0	MSTC23-SD10-SS-0.5	MSTC23-SD12-SS-0.5
				Start Depth	0	0	1	0	0	1	0	0
				End Depth	0.5	1	2	0.5	1	2	0.5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/17/2023	10/17/2023	10/17/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
007-Mclouth_DioxFur	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN	67562-39-4		pg/g	69.3 A	8.56 BA	2.56 BJA	151 JA	125 JA	16.7 BA	224 A	52.7 A
007-Mclouth_DioxFur	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN	35822-46-9		pg/g	30.1 BA	8.74 BA	3.57 BKA	76.6 JA	266 A	17.9 BKA	10.5 BA	37 BA
007-Mclouth_DioxFur	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN	55673-89-7		pg/g	16.7 BA	3.13 UA	3.26 UA	221 UA	206 UA	3.09 UA	79.7 A	12 BA
007-Mclouth_DioxFur	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN	70648-26-9		pg/g	21 BA	2.62 BJKA	3.26 UA	66.8 JA	35.9 JKA	4.39 BA	814 A	56.6 A
007-Mclouth_DioxFur	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN	39227-28-6		pg/g	11.4 BKA	3.13 UA	3.26 UA	221 UA	206 UA	3.09 UA	3.66 UA	3.88 UA
007-Mclouth_DioxFur	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN	57117-44-9		pg/g	25.7 BA	4.51 BA	2.34 BJA	68.7 JKA	39.9 JKA	5 BA	205 A	24.2 BA
007-Mclouth_DioxFur	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN	57653-85-7		pg/g	14 BKA	4.49 BKA	3.26 UA	221 UA	52.5 JA	3.09 UA	3.66 UA	8.73 BA
007-Mclouth_DioxFur	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN	72918-21-9		pg/g	12.9 BA	3.13 UA	3.26 UA	221 UA	206 UA	3.09 UA	106 A	13.3 BA
007-Mclouth_DioxFur	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN	19408-74-3		pg/g	12.6 BA	3.13 UA	2.54 BJA	221 UA	206 UA	3.09 UA	3.66 UA	6.83 BA
007-Mclouth_DioxFur	1,2,3,7,8-PENTACHLORODIBENZOFURAN	57117-41-6		pg/g	13.9 BA	3.13 UA	3.26 UA	42.9 JA	33.3 BJA	3.87 BA	517 A	40 BA
007-Mclouth_DioxFur	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN	40321-76-4		pg/g	9.47 BA	3.13 UA	3.26 UA	221 UA	206 UA	3.09 UA	3.66 UA	5.06 BKA
007-Mclouth_DioxFur	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN	60851-34-5		pg/g	11.4 BA	3.13 UA	3.26 UA	221 UA	206 UA	3.09 UA	45.5 A	7.6 BA
007-Mclouth_DioxFur	2,3,4,7,8-PENTACHLORODIBENZOFURAN	57117-31-4		pg/g	14.6 BA	3.02 BJA	3.26 UA	221 UA	206 UA	2.69 BJKA	246 A	25.4 BA
007-Mclouth_DioxFur	2,3,7,8-TETRACHLORODIBENZOFURAN	51207-31-9		pg/g	7.53 BA	0.626 UA	0.652 UA	30.4 JA	20.8 JA	2.37 BA	212 A	27.8 A
007-Mclouth_DioxFur	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	1746-01-6	**0.12**	pg/g	**2.56 BA**	0.626 UA	0.652 UA	44.2 UA	41.2 UA	0.618 UA	0.732 UA	**2.41 BA**
007-Mclouth_DioxFur	OCTACHLORODIBENZOFURAN	39001-02-0		pg/g	66.2 BA	12.4 BA	6.03 BJA	310 JA	176 JA	36.8 BA	179 A	135 A
007-Mclouth_DioxFur	OCTACHLORODIBENZO-P-DIOXIN	3268-87-9		pg/g	188 A	46.9 BA	19.3 BA	412 JA	473 A	62.7 BA	73.8 BA	293 A
007-Mclouth_DioxFur	Total Dioxin TEQ (Mammal)	TEQ(M)	**0.12**	pg/g	**29.7173 JA**	**5.8124 JA**	**4.3266 JA**	**258.5565 JA**	**238.9994 JA**	**6.2694 JA**	**231.4033 A**	**32.096 JA**

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

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Table D - Dioxins/Furans Detection Results

				Location	MSTC23-SD13	MSTC23-SD13	MSTC23-SD14	MSTC23-SD14	MSTC23-SD14	MSTC23-SD15	MSTC23-SD19	MSTC23-SD19
				Sample #	MSTC23-SD13-SS-0.5	MSTC23-SD13-SS-1.0	MSTC23-SD14-SS-0.5	MSTC23-SD14-SS-1.0	MSTC23-SD14-SS-2.0	MSTC23-SD15-SS-0.5	MSTC23-SD19-SS-0.5	MSTC23-SD19-SS-1.0
				Start Depth	0	0	0	0	1	0	0	0
				End Depth	0.5	1	0.5	1	2	0.5	0.5	1
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/11/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
007-Mclouth_DioxFur	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN	67562-39-4		pg/g	144 A	1.27 BJKA	41.4 A	3.01 UA	5.01 BA	44 BA	173 JA	171 JKA
007-Mclouth_DioxFur	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN	35822-46-9		pg/g	23.2 BA	2.96 UA	66.2 A	3.01 UA	5.04 BA	48 KA	105 JA	44.2 JA
007-Mclouth_DioxFur	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN	55673-89-7		pg/g	45.9 BA	2.96 UA	3.07 UJA	3.01 UA	5.07 BA	3.52 UA	229 UA	225 UA
007-Mclouth_DioxFur	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN	70648-26-9		pg/g	393 A	0.967 BJA	17.7 KA	3.01 UA	4.85 BKA	19.5 BKA	65.1 JKA	235 A
007-Mclouth_DioxFur	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN	39227-28-6		pg/g	3.02 UA	2.96 UA	3.07 UJA	3.01 UA	5.74 BKA	3.52 UJA	229 UA	225 UA
007-Mclouth_DioxFur	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN	57117-44-9		pg/g	110 A	0.798 BJKA	17.1 KA	3.01 UA	4.96 BA	8.24 BKA	66.8 JA	92.5 JA
007-Mclouth_DioxFur	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN	57653-85-7		pg/g	4.09 BA	2.96 UA	3.07 UJA	3.01 UA	4.67 BA	8.93 BKA	229 UA	225 UA
007-Mclouth_DioxFur	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN	72918-21-9		pg/g	37.5 BA	2.96 UA	3.07 UJA	3.01 UA	5.54 BA	3.52 UJA	229 UA	39.6 BJKA
007-Mclouth_DioxFur	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN	19408-74-3		pg/g	3.02 UA	2.96 UA	3.07 UJA	3.01 UA	4.43 BKA	5.07 BKA	229 UA	225 UA
007-Mclouth_DioxFur	1,2,3,7,8-PENTACHLORODIBENZOFURAN	57117-41-6		pg/g	101 A	2.96 UA	10.9 A	3.01 UA	4.74 BA	9.08 BA	229 UA	202 JA
007-Mclouth_DioxFur	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN	40321-76-4		pg/g	3.02 UA	2.96 UA	3.07 UJA	3.01 UA	4.92 BA	3.52 UJA	229 UA	225 UA
007-Mclouth_DioxFur	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN	60851-34-5		pg/g	18 BA	1 BJA	3.07 UJA	3.01 UA	4.87 BA	6.65 BKA	229 UA	25.1 BJKA
007-Mclouth_DioxFur	2,3,4,7,8-PENTACHLORODIBENZOFURAN	57117-31-4		pg/g	29.1 BA	0.771 BJKA	19.5 A	3.01 UA	4.79 BA	9.06 BA	229 UA	124 JA
007-Mclouth_DioxFur	2,3,7,8-TETRACHLORODIBENZOFURAN	51207-31-9		pg/g	13.9 A	1.17 BKA	23 A	0.602 UA	1.5 BKA	11.2 A	34.1 JA	116 A
007-Mclouth_DioxFur	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	1746-01-6	**0.12**	pg/g	0.604 UA	0.591 UA	0.614 UJA	0.602 UA	**1.13 BA**	0.705 UJA	45.8 UA	45 UA
007-Mclouth_DioxFur	OCTACHLORODIBENZOFURAN	39001-02-0		pg/g	107 A	3.45 BJA	180 A	6.02 UA	10.4 BA	96.7 A	325 JA	166 JA
007-Mclouth_DioxFur	OCTACHLORODIBENZO-P-DIOXIN	3268-87-9		pg/g	135 A	8.86 BKA	1090 A	6.02 UA	11.3 BA	378 A	464 A	251 JA
007-Mclouth_DioxFur	Total Dioxin TEQ (Mammal)	TEQ(M)	**0.12**	pg/g	**72.576 A**	**3.9345 JA**	**14.3224 A**	**3.4332 A**	**11.4429 JA**	**14.0585 JA**	**269.7418 JA**	**339.9806 JA**

Notes:

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Table D - Dioxins/Furans Detection Results

				Location	MSTC23-SD19	MSTC23-SD20	MSTC23-SD20	MSTC23-SD20	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22
				Sample #	MSTC23-SD19-SS-2.0	MSTC23-SD20-SS-0.5	MSTC23-SD20-SS-1.0	MSTC23-SD20-SS-2.0	MSTC23-SD22-SS-0.5	MSTC23-SD22-SS-1.0	MSTC23-SD22-SS-2.0	MSTC23-SD22-SS-3.0
				Start Depth	1	0	0	1	0	0	1	2
				End Depth	2	0.5	1	2	0.5	1	2	3
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/11/2023	10/16/2023	10/16/2023	10/16/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
007-Mclouth_DioxFur	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN	67562-39-4		pg/g	87.1 JA	45.8 A	43.8 A	15.4 A	29 A	24.5 JA	7.1 KA	1.27 JKA
007-Mclouth_DioxFur	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN	35822-46-9		pg/g	195 UA	33.4 A	55.3 A	10.6 A	41.6 A	33.8 JKA	3.98 UA	2.92 UA
007-Mclouth_DioxFur	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN	55673-89-7		pg/g	195 UA	20.4 A	3.09 UJA	2.85 UA	6.34 UJA	168 UA	3.98 UA	2.92 UA
007-Mclouth_DioxFur	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN	70648-26-9		pg/g	67.2 JKA	57.1 A	23.2 A	3.74 A	6.34 UA	17.4 JA	5.51 KA	2.92 UA
007-Mclouth_DioxFur	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN	39227-28-6		pg/g	195 UA	3.46 UA	3.09 UJA	2.85 UA	6.34 UA	168 UA	3.98 UA	2.92 UA
007-Mclouth_DioxFur	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN	57117-44-9		pg/g	53.3 JKA	9.43 A	3.09 UJA	3.76 KA	6.4 KA	13.7 JA	4.71 A	2.92 UA
007-Mclouth_DioxFur	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN	57653-85-7		pg/g	195 UA	5.63 KA	13.3 KA	2.85 UA	7.19 KA	15.8 JKA	3.98 UA	2.92 UA
007-Mclouth_DioxFur	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN	72918-21-9		pg/g	195 UA	7.54 A	3.09 UJA	2.85 UA	6.34 UA	168 UA	3.98 UA	2.92 UA
007-Mclouth_DioxFur	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN	19408-74-3		pg/g	195 UA	3.46 UA	3.09 UJA	2.85 UA	6.34 UA	168 UA	3.98 UA	2.92 UA
007-Mclouth_DioxFur	1,2,3,7,8-PENTACHLORODIBENZOFURAN	57117-41-6		pg/g	63.2 JKA	9.05 A	8.56 KA	2.85 UA	3.78 JKA	168 UA	4.15 A	2.92 UA
007-Mclouth_DioxFur	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN	40321-76-4		pg/g	195 UA	3.46 UA	3.09 UJA	2.85 UA	6.34 UA	168 UA	3.98 UA	2.92 UA
007-Mclouth_DioxFur	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN	60851-34-5		pg/g	195 UA	13.4 A	3.09 UJA	2.85 UA	6.34 UA	168 UA	3.98 UA	2.92 UA
007-Mclouth_DioxFur	2,3,4,7,8-PENTACHLORODIBENZOFURAN	57117-31-4		pg/g	41.9 JA	7.8 A	6.9 A	2.85 UA	4.01 JA	168 UA	3.06 JKA	2.92 UA
007-Mclouth_DioxFur	2,3,7,8-TETRACHLORODIBENZOFURAN	51207-31-9		pg/g	66.3 A	11.4 A	6.58 KA	1.64 KA	5.13 A	33.5 UA	5.08 A	0.754 KA
007-Mclouth_DioxFur	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	1746-01-6	**0.12**	pg/g	38.9 UA	0.692 UJA	0.617 UJA	0.569 UJA	1.27 UJA	33.5 UA	0.795 UJA	0.584 UA
007-Mclouth_DioxFur	OCTACHLORODIBENZOFURAN	39001-02-0		pg/g	45.8 JA	1350 A	120 A	21.9 A	53.8 A	90.4 JA	9.52 A	5.84 UA
007-Mclouth_DioxFur	OCTACHLORODIBENZO-P-DIOXIN	3268-87-9		pg/g	77.6 JKA	172 A	469 A	65 A	275 A	232 JA	22.3 A	7.58 BKA
007-Mclouth_DioxFur	Total Dioxin TEQ (Mammal)	TEQ(M)	**0.12**	pg/g	**251.7296 JA**	**15.8824 A**	**10.9062 JA**	**4.64 JA**	**11.7191 JA**	**179.9493 JA**	**6.9588 JA**	**2.9883 JA**

Notes:

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Table D - Dioxins/Furans Detection Results

				Location	MSTC23-SD22	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23
				Sample #	MSTC23-SD22-SS-5.0	MSTC23-SD23-SS-0.5	MSTC23-SD23-SS-1.0	MSTC23-SD23-SS-2.0	MSTC23-SD23-SS-3.0	MSTC23-SD23-SS-5.0
				Start Depth	4	0	0	1	2	4
				End Depth	5	0.5	1	2	3	5
				Depth Unit	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N
				Parent Sample #						
				Sample Date	10/12/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023
Method Group	Analyte	CAS #	Sed PAL	Units						
007-Mclouth_DioxFur	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN	67562-39-4		pg/g	1.4 JKA	18.8 KA	96.4 A	3.14 UA	3.18 UA	3.04 UA
007-Mclouth_DioxFur	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN	35822-46-9		pg/g	1.72 JKA	21.7 A	7.01 KA	3.14 UA	3.18 UA	3.04 UA
007-Mclouth_DioxFur	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN	55673-89-7		pg/g	3.08 UA	4.24 JA	12.6 A	3.14 UA	3.18 UA	3.04 UA
007-Mclouth_DioxFur	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN	70648-26-9		pg/g	3.08 UA	5.5 KA	9.1 A	3.14 UA	3.18 UA	3.04 UA
007-Mclouth_DioxFur	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN	39227-28-6		pg/g	3.08 UA	5.25 UA	0.914 BJKA	3.14 UA	3.18 UA	3.04 UA
007-Mclouth_DioxFur	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN	57117-44-9		pg/g	3.08 UA	5.81 A	22.5 A	3.14 UA	3.18 UA	3.04 UA
007-Mclouth_DioxFur	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN	57653-85-7		pg/g	3.08 UA	5.25 UA	1.12 BJA	3.14 UA	3.18 UA	3.04 UA
007-Mclouth_DioxFur	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN	72918-21-9		pg/g	3.08 UA	5.25 UA	10.4 A	3.14 UA	3.18 UA	3.04 UA
007-Mclouth_DioxFur	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN	19408-74-3		pg/g	3.08 UA	5.25 UA	1.04 JA	3.14 UA	3.18 UA	3.04 UA
007-Mclouth_DioxFur	1,2,3,7,8-PENTACHLORODIBENZOFURAN	57117-41-6		pg/g	3.08 UA	3.31 JA	2.41 JA	3.14 UA	3.18 UA	3.04 UA
007-Mclouth_DioxFur	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN	40321-76-4		pg/g	3.08 UA	5.25 UA	3.02 UA	3.14 UA	3.18 UA	3.04 UA
007-Mclouth_DioxFur	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN	60851-34-5		pg/g	3.08 UA	5.25 UA	3.02 UA	3.14 UA	3.18 UA	3.04 UA
007-Mclouth_DioxFur	2,3,4,7,8-PENTACHLORODIBENZOFURAN	57117-31-4		pg/g	3.08 UA	3.6 JKA	2.1 JKA	3.14 UA	3.18 UA	3.04 UA
007-Mclouth_DioxFur	2,3,7,8-TETRACHLORODIBENZOFURAN	51207-31-9		pg/g	0.739 A	5.11 A	3.78 KA	0.628 UA	0.636 UA	0.607 UA
007-Mclouth_DioxFur	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	1746-01-6	**0.12**	pg/g	0.616 UA	1.05 UJA	**0.462 JA**	0.628 UA	0.636 UA	0.607 UA
007-Mclouth_DioxFur	OCTACHLORODIBENZOFURAN	39001-02-0		pg/g	27.6 A	77 A	382 A	6.28 UA	6.36 UA	6.07 UA
007-Mclouth_DioxFur	OCTACHLORODIBENZO-P-DIOXIN	3268-87-9		pg/g	12.6 BKA	543 A	114 A	6.28 UA	6.36 UA	6.07 UA
007-Mclouth_DioxFur	Total Dioxin TEQ (Mammal)	TEQ(M)	**0.12**	pg/g	**3.4213 JA**	**9.8261 JA**	**10.4692 A**	**3.5815 A**	**3.6271 A**	**3.4669 A**

Notes:

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Table E - PFAS Detection Results

				Location	MSTC23-SD01	MSTC23-SD02	MSTC23-SD02	MSTC23-SD02	MSTC23-SD03	MSTC23-SD03	MSTC23-SD03	MSTC23-SD06
				Sample #	MSTC23-SD01-SS-0.5	MSTC23-SD02-1.0	MSTC23-SD02-2.0	MSTC23-SD02-SS-0.5	MSTC23-SD03-1.0	MSTC23-SD03-2.0	MSTC23-SD03-SS-0.5	MSTC23-SD06-1.0
				Start Depth	0	0	1	0	0	1	0	0
				End Depth	0.5	1	2	0.5	1	2	0.5	1
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/18/2023	10/19/2023	10/19/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
012-Mclouth_PFAS	11Cl-PF3OUdS	83329-89-9		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	27619-96-1		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	27619-93-8		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	27619-94-9		ng/kg	0.68 BA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	2H,2H,3H,3H-Perfluorooctanoic acid	914637-49-3		ng/kg	38.6 UA	709 A	614 A	43.8 UA	315 A	338 A	54.1 A	41 UA
012-Mclouth_PFAS	3:3 FTCA	356-02-05		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	3-Perfluoroheptyl propanoic acid	812-70-4		ng/kg	38.6 UA	1050 A	207 A	71.2 A	243 A	49.7 UA	53.3 A	108 A
012-Mclouth_PFAS	9Cl-PF3ONS	73606-19-6		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	ADONA	958445-44-8		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	Hexafluoropropylene oxide dimer acid	13252-13-6	23000	ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamide	4151-50-2		ng/kg	38.6 UA	84.2 A	89.4 A	43.8 UA	51.1 UA	62.1 A	40.9 UA	84.7 A
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamidoacetic acid	2991-50-6		ng/kg	239 A	1990 A	1760 A	965 A	1930 A	2300 A	303 A	1880 A
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamidoethanol	1691-99-2		ng/kg	180 A	381 A	765 A	272 A	135 A	142 A	66.4 A	533 A
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamide	31506-32-8		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	781 A	40.9 UA	41 UA
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9		ng/kg	41.6 A	1840 A	1350 A	684 A	3150 A	186 A	230 A	1260 A
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamidoethanol	24448-09-7		ng/kg	76 A	4430 A	4840 A	1260 A	1530 A	49.7 UA	146 A	1510 A
012-Mclouth_PFAS	Nonafluoro-3,6-dioxaheptanoic acid	151772-58-6		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	perfluoro-1-decanesulfonate (PFDS)	2806-15-7		ng/kg	38.6 UA	114 A	44.2 UA	139 A	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	perfluoro-1-heptanesulfonate (PFHpS)	21934-50-9		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	perfluoro-1-nonanesulfonate (PFNS)	98789-57-2		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	perfluoro-1-pentanesulfonate (PFPeS)	630402-22-1		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	Perfluoro-3-methoxypropanoic acid	377-73-1		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	Perfluoro-4-methoxybutanoic acid	863090-89-5		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	Perfluorobutanesulfonic acid	375-73-5	1900000	ng/kg	193 UA	246 UA	221 UA	219 UA	255 UA	249 UA	205 UA	205 UA
012-Mclouth_PFAS	perfluorobutyl sulfonate	29420-49-3		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	Perfluorodecanoic acid	335-76-2		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	Perfluorododecanoic acid	307-55-1		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	Perfluoroheptanoic acid	375-85-9		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	Perfluorohexanoic acid	307-24-4	3200000	ng/kg	77.2 UA	98.6 UA	88.5 UA	87.6 UA	102 UA	99.4 UA	81.9 UA	82 UA
012-Mclouth_PFAS	perfluorohexyl sulfonate	3871-99-6		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	Perfluorononanoic acid	375-95-1	19000	ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	Perfluorooctanesulfonamide	754-91-6		ng/kg	38.6 UA	76.9 A	51.7 A	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	perfluorooctanoate	3825-26-1			38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	perfluorooctyl sulfonate	2795-39-3		ng/kg	46.3 UA	99 A	61.6 A	112 A	61.3 UA	59.7 UA	104 A	49.2 UA
012-Mclouth_PFAS	Perfluoropentanoic acid	2706-90-3		ng/kg	193 UA	246 UA	221 UA	219 UA	255 UA	249 UA	205 UA	205 UA
012-Mclouth_PFAS	Perfluorotetradecanoic acid	376-06-7		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	58 A	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	Perfluorotridecanoic acid	72629-94-8		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	Perfluoroundecanoic acid	2058-94-8		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	PFDoS	1260224-54-1		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA
012-Mclouth_PFAS	PFEESA	117205-07-9		ng/kg	38.6 UA	49.3 UA	44.2 UA	43.8 UA	51.1 UA	49.7 UA	40.9 UA	41 UA

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

Acronyms and Abbreviations:

CAS # - Chemical Abstract Service Number

FD - Field duplicate

N - Field sample

PAL - Project Action Limit

A - Unvalidated Result

B - The target analyte was detected in the associated blank.

U - Not detected

Table E - PFAS Detection Results

				Location	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD07
				Sample #	MSTC23-SD06-2.0	MSTC23-SD06-3.0	MSTC23-SD06-5.0	MSTC23-SD06-7.0	MSTC23-SD06-9.0	MSTC23-SD06A-7.0	MSTC23-SD06-SS-0.5	MSTC23-SD07-SS-0.5
				Start Depth	1	2	3	5	7	5	0	0
				End Depth	2	3	5	7	9	7	0.5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	FD	N	N
				Parent Sample #						MSTC23-SD06-7.0		
				Sample Date	10/18/2023	10/18/2023	10/18/2023	11/17/2023	11/17/2023	11/17/2023	10/18/2023	10/17/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
012-Mclouth_PFAS	11Cl-PF3OUdS	83329-89-9		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	27619-96-1		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	27619-93-8		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	27619-94-9		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	2H,2H,3H,3H-Perfluorooctanoic acid	914637-49-3		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	3:3 FTCA	356-02-05		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	3-Perfluoroheptyl propanoic acid	812-70-4		ng/kg	46.8 A	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	9Cl-PF3ONS	73606-19-6		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	ADONA	958445-44-8		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	Hexafluoropropylene oxide dimer acid	13252-13-6	23000	ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamide	4151-50-2		ng/kg	69.6 A	64 A	36.5 UA	42.7 A	37.9 UA	50.8 A	33.8 UA	50.4 UA
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamidoacetic acid	2991-50-6		ng/kg	1600 A	1530 A	911 A	1180 A	703 A	1450 A	33.8 UA	50.4 UA
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamidoethanol	1691-99-2		ng/kg	306 A	366 A	648 A	527 A	376 A	581 A	33.8 UA	50.4 UA
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamide	31506-32-8		ng/kg	41.3 UA	51.6 A	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9		ng/kg	928 A	1180 A	2500 A	1190 A	39.1 A	1150 A	33.8 UA	50.4 UA
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamidoethanol	24448-09-7		ng/kg	1590 A	2650 A	2150 A	2400 A	56.3 A	1600 A	33.8 UA	50.4 UA
012-Mclouth_PFAS	Nonafluoro-3,6-dioxaheptanoic acid	151772-58-6		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	perfluoro-1-decanesulfonate (PFDS)	2806-15-7		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	perfluoro-1-heptanesulfonate (PFHpS)	21934-50-9		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	perfluoro-1-nonanesulfonate (PFNS)	98789-57-2		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	perfluoro-1-pentanesulfonate (PFPeS)	630402-22-1		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	Perfluoro-3-methoxypropanoic acid	377-73-1		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	Perfluoro-4-methoxybutanoic acid	863090-89-5		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	Perfluorobutanesulfonic acid	375-73-5	1900000	ng/kg	207 UA	211 UA	183 UA	204 UA	190 UA	210 UA	169 UA	252 UA
012-Mclouth_PFAS	perfluorobutyl sulfonate	29420-49-3		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	Perfluorodecanoic acid	335-76-2		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	Perfluorododecanoic acid	307-55-1		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	Perfluoroheptanoic acid	375-85-9		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	Perfluorohexanoic acid	307-24-4	3200000	ng/kg	82.7 UA	84.4 UA	73.1 UA	81.5 UA	75.8 UA	83.9 UA	67.6 UA	101 UA
012-Mclouth_PFAS	perfluorohexyl sulfonate	3871-99-6		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	Perfluorononanoic acid	375-95-1	19000	ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	Perfluorooctanesulfonamide	754-91-6		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	perfluorooctanoate	3825-26-1			41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	61.8 A
012-Mclouth_PFAS	perfluorooctyl sulfonate	2795-39-3		ng/kg	49.6 UA	50.6 UA	43.8 UA	48.9 UA	45.5 UA	50.3 UA	43.6 A	85.1 A
012-Mclouth_PFAS	Perfluoropentanoic acid	2706-90-3		ng/kg	207 UA	211 UA	183 UA	204 UA	190 UA	210 UA	169 UA	252 UA
012-Mclouth_PFAS	Perfluorotetradecanoic acid	376-06-7		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	Perfluorotridecanoic acid	72629-94-8		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	Perfluoroundecanoic acid	2058-94-8		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	PFDoS	1260224-54-1		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA
012-Mclouth_PFAS	PFEESA	117205-07-9		ng/kg	41.3 UA	42.2 UA	36.5 UA	40.7 UA	37.9 UA	41.9 UA	33.8 UA	50.4 UA

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

Acronyms and Abbreviations:

CAS # - Chemical Abstract Service Number

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N - Field sample

PAL - Project Action Limit

A - Unvalidated Result

B - The target analyte was detected in the associated blank.

U - Not detected

Table E - PFAS Detection Results

				Location	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD12	MSTC23-SD14	MSTC23-SD14	MSTC23-SD14
				Sample #	MSTC23-SD08-1.0	MSTC23-SD08-2.0	MSTC23-SD08A-SS-0.5	MSTC23-SD08-SS-0.5	MSTC23-SD12-SS-0.5	MSTC23-SD14-1.0	MSTC23-SD14-2.0	MSTC23-SD14-SS-0.5
				Start Depth	0	1	0	0	0	0	1	0
				End Depth	1	2	0.5	0.5	0.5	1	2	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	FD	N	N	N	N	N
				Parent Sample #			MSTC23-SD08-SS-0.5					
				Sample Date	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/13/2023	10/12/2023	10/12/2023	10/12/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
012-Mclouth_PFAS	11Cl-PF3OUdS	83329-89-9		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	27619-96-1		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	27619-93-8		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	27619-94-9		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	2H,2H,3H,3H-Perfluorooctanoic acid	914637-49-3		ng/kg	32.6 UA	32.3 UA	33.6 A	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	3:3 FTCA	356-02-05		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	3-Perfluoroheptyl propanoic acid	812-70-4		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	9Cl-PF3ONS	73606-19-6		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	ADONA	958445-44-8		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	Hexafluoropropylene oxide dimer acid	13252-13-6	23000	ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamide	4151-50-2		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamidoacetic acid	2991-50-6		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamidoethanol	1691-99-2		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamide	31506-32-8		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamidoethanol	24448-09-7		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	Nonafluoro-3,6-dioxaheptanoic acid	151772-58-6		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	perfluoro-1-decanesulfonate (PFDS)	2806-15-7		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	perfluoro-1-heptanesulfonate (PFHpS)	21934-50-9		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	perfluoro-1-nonanesulfonate (PFNS)	98789-57-2		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	perfluoro-1-pentanesulfonate (PFPeS)	630402-22-1		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	Perfluoro-3-methoxypropanoic acid	377-73-1		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	Perfluoro-4-methoxybutanoic acid	863090-89-5		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	Perfluorobutanesulfonic acid	375-73-5	1900000	ng/kg	163 UA	162 UA	165 UA	161 UA	171 UA	150 UA	149 UA	154 UA
012-Mclouth_PFAS	perfluorobutyl sulfonate	29420-49-3		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	45.5 A
012-Mclouth_PFAS	Perfluorodecanoic acid	335-76-2		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	31.1 A	29.7 UA	30.8 UA
012-Mclouth_PFAS	Perfluorododecanoic acid	307-55-1		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	73.9 A	30 UA	29.7 UA	33.4 A
012-Mclouth_PFAS	Perfluoroheptanoic acid	375-85-9		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	66.7 A	49.2 A	29.7 UA	30.8 UA
012-Mclouth_PFAS	Perfluorohexanoic acid	307-24-4	3200000	ng/kg	65.2 UA	64.6 UA	66 UA	64.3 UA	68.5 UA	68.4 A	59.4 UA	61.5 UA
012-Mclouth_PFAS	perfluorohexyl sulfonate	3871-99-6		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	Perfluorononanoic acid	375-95-1	19000	ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	Perfluorooctanesulfonamide	754-91-6		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	perfluorooctanoate	3825-26-1			32.6 UA	32.3 UA	33 UA	32.1 UA	54.6 A	44.9 A	31.2 A	30.8 UA
012-Mclouth_PFAS	perfluorooctyl sulfonate	2795-39-3		ng/kg	39.1 UA	38.8 UA	45.2 A	38.6 UA	70.6 A	36 UA	35.6 UA	36.9 UA
012-Mclouth_PFAS	Perfluoropentanoic acid	2706-90-3		ng/kg	163 UA	162 UA	165 UA	161 UA	171 UA	150 UA	149 UA	154 UA
012-Mclouth_PFAS	Perfluorotetradecanoic acid	376-06-7		ng/kg	32.6 UA	32.3 UA	42.6 A	32.1 UA	34.2 UA	30 UA	29.7 UA	39 A
012-Mclouth_PFAS	Perfluorotridecanoic acid	72629-94-8		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	39.5 A	30 UA	29.7 UA	215 A
012-Mclouth_PFAS	Perfluoroundecanoic acid	2058-94-8		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	PFDoS	1260224-54-1		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA
012-Mclouth_PFAS	PFEESA	117205-07-9		ng/kg	32.6 UA	32.3 UA	33 UA	32.1 UA	34.2 UA	30 UA	29.7 UA	30.8 UA

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

Acronyms and Abbreviations:

CAS # - Chemical Abstract Service Number

FD - Field duplicate

N - Field sample

PAL - Project Action Limit

A - Unvalidated Result

B - The target analyte was detected in the associated blank.

U - Not detected

Table E - PFAS Detection Results

				Location	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22
				Sample #	MSTC23-SD22-1.0	MSTC23-SD22-2.0	MSTC23-SD22-3.0	MSTC23-SD22-5.0	MSTC23-SD22-SS-0.5
				Start Depth	0	1	2	3	0
				End Depth	1	2	3	5	0.5
				Depth Unit	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N
				Parent Sample #					
				Sample Date	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
Method Group	Analyte	CAS #	Sed PAL	Units					
012-Mclouth_PFAS	11Cl-PF3OUdS	83329-89-9		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	27619-96-1		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	27619-93-8		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	27619-94-9		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	2H,2H,3H,3H-Perfluorooctanoic acid	914637-49-3		ng/kg	58.7 A	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	3:3 FTCA	356-02-05		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	3-Perfluoroheptyl propanoic acid	812-70-4		ng/kg	42.6 A	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	9Cl-PF3ONS	73606-19-6		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	ADONA	958445-44-8		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	Hexafluoropropylene oxide dimer acid	13252-13-6	23000	ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamide	4151-50-2		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamidoacetic acid	2991-50-6		ng/kg	884 A	40.7 UA	31.9 UA	31.5 UA	81.5 A
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamidoethanol	1691-99-2		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamide	31506-32-8		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9		ng/kg	1050 A	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamidoethanol	24448-09-7		ng/kg	38 A	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	Nonafluoro-3,6-dioxaheptanoic acid	151772-58-6		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	perfluoro-1-decanesulfonate (PFDS)	2806-15-7		ng/kg	103 A	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	perfluoro-1-heptanesulfonate (PFHpS)	21934-50-9		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	perfluoro-1-nonanesulfonate (PFNS)	98789-57-2		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	perfluoro-1-pentanesulfonate (PFPeS)	630402-22-1		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	Perfluoro-3-methoxypropanoic acid	377-73-1		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	Perfluoro-4-methoxybutanoic acid	863090-89-5		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	Perfluorobutanesulfonic acid	375-73-5	1900000	ng/kg	177 UA	204 UA	160 UA	158 UA	290 UA
012-Mclouth_PFAS	perfluorobutyl sulfonate	29420-49-3		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	Perfluorodecanoic acid	335-76-2		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	Perfluorododecanoic acid	307-55-1		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	Perfluoroheptanoic acid	375-85-9		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	Perfluorohexanoic acid	307-24-4	3200000	ng/kg	70.9 UA	81.5 UA	63.9 UA	63.1 UA	116 UA
012-Mclouth_PFAS	perfluorohexyl sulfonate	3871-99-6		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	Perfluorononanoic acid	375-95-1	19000	ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	Perfluorooctanesulfonamide	754-91-6		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	perfluorooctanoate	3825-26-1			35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	perfluorooctyl sulfonate	2795-39-3		ng/kg	42.6 UA	48.9 UA	38.3 UA	37.9 UA	167 A
012-Mclouth_PFAS	Perfluoropentanoic acid	2706-90-3		ng/kg	177 UA	204 UA	160 UA	158 UA	290 UA
012-Mclouth_PFAS	Perfluorotetradecanoic acid	376-06-7		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	Perfluorotridecanoic acid	72629-94-8		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	Perfluoroundecanoic acid	2058-94-8		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	PFDoS	1260224-54-1		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA
012-Mclouth_PFAS	PFEESA	117205-07-9		ng/kg	35.5 UA	40.7 UA	31.9 UA	31.5 UA	58 UA

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

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U - Not detected

Table F - Inorganics Detection Results

				Location	MSTC23-SD01	MSTC23-SD02	MSTC23-SD02	MSTC23-SD02	MSTC23-SD03	MSTC23-SD03	MSTC23-SD03	MSTC23-SD05
				Sample #	MSTC23-SD01-SS-0.5	MSTC23-SD02-1.0	MSTC23-SD02-2.0	MSTC23-SD02-SS-0.5	MSTC23-SD03-1.0	MSTC23-SD03-2.0	MSTC23-SD03-SS-0.5	MSTC23-SD05-SS-0.5
				Start Depth	0	0	1	0	0	1	0	0
				End Depth	0.5	1	2	0.5	1	2	0.5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/18/2023	10/19/2023	10/19/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
014-Mclouth_Inorg	Aluminum	7429-90-5	**7700**	mg/kg	5700	6800	**10000**	4400	7300	**8300**	2500	2800
014-Mclouth_Inorg	Antimony	7440-36-0	**2**	mg/kg	**2.1**	1 J	1.7	0.79 J	1.1 J	1.5	1.5	0.53 J
014-Mclouth_Inorg	Arsenic	7440-38-2	**0.68**	mg/kg	**14 J**	**8.4 J**	**14 J**	**7.6 J**	**5.9 J**	**12 J**	**8.5 J**	**8.6 J**
014-Mclouth_Inorg	Barium	7440-39-3	**20**	mg/kg	**0.68 BA**	**120**	**260**	**150**	**84**	**220**	**79**	**61**
014-Mclouth_Inorg	Beryllium	7440-41-7	16	mg/kg	0.56 J	0.57 J	1.3	1.2	0.35 J	0.59 J	0.59 J	0.36 J
014-Mclouth_Inorg	Cadmium	7440-43-9	**0.71**	mg/kg	**8.8 J**	**4.4 J**	**9 J**	**4.2 J**	**7.4 J**	**10 J**	**1.5 J**	**1 J**
014-Mclouth_Inorg	Calcium	7440-70-2		mg/kg	60000	33000	62000	30000	47000	98000	33000	28000
014-Mclouth_Inorg	Chromium	7440-47-3	**0.3**	mg/kg	**780**	**130**	**300**	**160**	**120**	**290**	**110**	**58**
014-Mclouth_Inorg	Cobalt	7440-48-4	**2.3**	mg/kg	**15**	**9.2**	**12**	**8.4**	**5.2**	**8.7**	**9.5**	**9.4**
014-Mclouth_Inorg	Copper	7440-50-8	**31.6**	mg/kg	**180 J**	**85 J**	**130 J**	**70 J**	**82 J**	**140 J**	**120 J**	**47 J**
014-Mclouth_Inorg	CYANIDE	57-12-5	**0.0001**	mg/kg	**0.66 J**	**2.6**	0.99 U	**0.65 J**	1.1 U	**1.3**	0.73 U	**0.35 J**
014-Mclouth_Inorg	Iron	7439-89-6	**5500**	mg/kg	**67000**	**24000**	**44000**	**25000**	**36000**	**48000**	**36000**	**34000**
014-Mclouth_Inorg	Lead	7439-92-1	**35.8**	mg/kg	**310**	**110**	**320**	**97**	**140**	**240**	**56**	**47**
014-Mclouth_Inorg	Magnesium	7439-95-4		mg/kg	8700	9700	14000	6800	12000	14000	7300	8300
014-Mclouth_Inorg	Manganese	7439-96-5	**180**	mg/kg	**5100 J+**	**870 J+**	**2500 J+**	**1200 J+**	**300 J+**	**590 J+**	**2000 J+**	**710 J+**
014-Mclouth_Inorg	Mercury	7439-97-6	**0.174**	mg/kg	**5.3**	**5.3**	**11**	**4.7**	**12**	**7.3**	**1.2**	**1.4**
014-Mclouth_Inorg	Nickel	7440-02-0	**22.7**	mg/kg	**460 J**	**81 J**	**190 J**	**93 J**	**65 J**	**140 J**	**65 J**	**42 J**
014-Mclouth_Inorg	Potassium	7440-09-7		mg/kg	740 J	990	1200	500 J	1100	1100	310 J	300 J
014-Mclouth_Inorg	Selenium	7782-49-2	**0.72**	mg/kg	**1.3 J**	**1.1 J**	**1.3 J**	**0.96 J**	**1.1 J**	**1.3 J**	**0.81 J**	0.61 J
014-Mclouth_Inorg	Silver	7440-22-4	**0.5**	mg/kg	**4.7**	**1.6**	**3.2**	**1.4**	**1.9**	**3.4**	**0.54 J**	0.29 J
014-Mclouth_Inorg	Sodium	7440-23-5		mg/kg	400 J	220 J	440 J	180 J	240 J	570 J	150 J	160 J
014-Mclouth_Inorg	Thallium	7440-28-0	**0.078**	mg/kg	**0.17 J**	**0.2 J**	**0.3 J**	**0.19 J**	**0.21 J**	**0.3 J**	**0.14 J**	**0.12 J**
014-Mclouth_Inorg	Vanadium	7440-62-2	39	mg/kg	38	20	32	14	12	21	12	11
014-Mclouth_Inorg	Zinc	7440-66-6	**121**	mg/kg	**1300**	**380**	**790**	**390**	**440**	**650**	**240**	**240**

Notes:

1. Identifies results that exceed the listed PAL value

2. The Sediment PAL values were sourced from Worksheet #15 of the approved Final Quality Assurance Plan for the McLouth Steel Corp. Superfund Site (October 2023)

Acronyms and Abbreviations:

CAS # - Chemical Abstract Service Number

FD - Field duplicate

N - Field sample

PAL - Project Action Limit

A - Unvalidated Result

B - The target analyte was detected in the associated blank.

J - The identification of the analyte is acceptable; the reported value is an estimate

J+ - The result is an estimated quantity, but the results may be biased high

J- - The result is an estimated quantity, but the results may be biased low

U - Not detected

Table F - Inorganics Detection Results

				Location	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD07
				Sample #	MSTC23-SD06-1.0	MSTC23-SD06-2.0	MSTC23-SD06-3.0	MSTC23-SD06-5.0	MSTC23-SD06-7.0	MSTC23-SD06-9.0	MSTC23-SD06A-7.0	MSTC23-SD06-SS-0.5	MSTC23-SD07-SS-0.5
				Start Depth	0	1	2	3	5	7	5	0	0
				End Depth	1	2	3	5	7	9	7	0.5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	FD	N	N
				Parent Sample #							MSTC23-SD06-7.0		
				Sample Date	10/18/2023	10/18/2023	10/18/2023	10/18/2023	11/17/2023	11/17/2023	11/17/2023	10/18/2023	10/17/2023
Method Group	Analyte	CAS #	Sed PAL	Units									
014-Mclouth_Inorg	Aluminum	7429-90-5	**7700**	mg/kg	7600	4400	7000	5000	**7800**	6900	**7900**	1700	5700
014-Mclouth_Inorg	Antimony	7440-36-0	**2**	mg/kg	**2.3**	**2.2**	1.8	1.3	1.3 J	0.95 J	1.4	0.85 J	1.9 U
014-Mclouth_Inorg	Arsenic	7440-38-2	**0.68**	mg/kg	**5.8 J**	**12 J**	**12 J**	**8 J**	**12**	**10**	**13**	**11 J**	**7.7**
014-Mclouth_Inorg	Barium	7440-39-3	**20**	mg/kg	**140**	**230**	**270**	**130**	**210**	**160**	**230**	**49**	**69**
014-Mclouth_Inorg	Beryllium	7440-41-7	16	mg/kg	0.37 J	0.59 J	0.77	0.48 J	0.76 U	0.68 U	0.7 J+	0.32 J	0.64 J
014-Mclouth_Inorg	Cadmium	7440-43-9	**0.71**	mg/kg	**8.7 J**	**13 J**	**14 J**	**9 J**	**13 J-**	**8.2 J-**	**14 J-**	**0.76 J**	**1.2**
014-Mclouth_Inorg	Calcium	7440-70-2		mg/kg	38000	29000	42000	24000	88000	97000	74000	41000	39000
014-Mclouth_Inorg	Chromium	7440-47-3	**0.3**	mg/kg	**220**	**370**	**320**	**210**	**330**	**250**	**340**	**87**	**87 J**
014-Mclouth_Inorg	Cobalt	7440-48-4	**2.3**	mg/kg	**6**	**10**	**12**	**6.9**	**10**	**8.2**	**10**	**9.9**	**8.9**
014-Mclouth_Inorg	Copper	7440-50-8	**31.6**	mg/kg	**86 J**	**150 J**	**160 J**	**100 J**	**190**	**130**	**190**	**62 J**	**52**
014-Mclouth_Inorg	CYANIDE	57-12-5	**0.0001**	mg/kg	1.1 U	**0.82 J**	0.87 U	**1.2**	**0.79 J**	**0.51 J**	**0.41 J**	0.63 U	0.92 U
014-Mclouth_Inorg	Iron	7439-89-6	**5500**	mg/kg	**35000**	**30000**	**40000**	**25000**	**46000**	**50000**	**63000**	**45000**	**69000**
014-Mclouth_Inorg	Lead	7439-92-1	**35.8**	mg/kg	**160**	**290**	**320**	**200**	**340 J+**	**220 J+**	**400 J+**	**52**	**71**
014-Mclouth_Inorg	Magnesium	7439-95-4		mg/kg	13000	8500	12000	7200	13000	17000	15000	17000	11000
014-Mclouth_Inorg	Manganese	7439-96-5	**180**	mg/kg	**400 J+**	**930 J+**	**870 J+**	**620 J+**	**840**	**950**	**1200**	**900 J+**	**1400**
014-Mclouth_Inorg	Mercury	7439-97-6	**0.174**	mg/kg	**1.5**	**1.8**	**2**	**5**	**4.2**	**3.9**	**4.8**	**0.39**	**0.99**
014-Mclouth_Inorg	Nickel	7440-02-0	**22.7**	mg/kg	**97 J**	**190 J**	**160 J**	**130 J**	**190 J-**	**120 J-**	**190 J-**	**68 J**	**53 J-**
014-Mclouth_Inorg	Potassium	7440-09-7		mg/kg	1200	670	1000	760	1100	890	1100	170 J	710
014-Mclouth_Inorg	Selenium	7782-49-2	**0.72**	mg/kg	4.6 U	**1.3 J**	**2 J**	0.65 J	3.8 U	3.4 U	3 U	0.53 J	4.7 UJ
014-Mclouth_Inorg	Silver	7440-22-4	**0.5**	mg/kg	**3.1**	**4.8**	**4.7**	**2.7**	**5.4**	**3.3**	**5.2**	0.27 J	0.41 J
014-Mclouth_Inorg	Sodium	7440-23-5		mg/kg	280 J	200 J	320 J	210 J	530 J	480 J	440 J	160 J	350 J
014-Mclouth_Inorg	Thallium	7440-28-0	**0.078**	mg/kg	**0.18 J**	**0.29 J**	**0.44 J**	**0.22 J**	**0.24 J**	**0.19 J**	**0.22 J**	**0.086 J**	**0.21 J**
014-Mclouth_Inorg	Vanadium	7440-62-2	39	mg/kg	13	21	27	19	22	21	26	14	18
014-Mclouth_Inorg	Zinc	7440-66-6	**121**	mg/kg	**440**	**850**	**820**	**530**	**930 J+**	**640 J+**	**960 J+**	**240**	**380 J+**

Notes:

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U - Not detected

Table F - Inorganics Detection Results

				Location	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD09	MSTC23-SD09	MSTC23-SD09	MSTC23-SD10
				Sample #	MSTC23-SD08-1.0	MSTC23-SD08-2.0	MSTC23-SD08A-SS-0.5	MSTC23-SD08-SS-0.5	MSTC23-SD09-1.0	MSTC23-SD09-2.0	MSTC23-SD09-SS-0.5	MSTC23-SD10-SS-0.5
				Start Depth	0	1	0	0	0	1	0	0
				End Depth	1	2	0.5	0.5	1	2	0.5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	FD	N	N	N	N	N
				Parent Sample #			MSTC23-SD08-SS-0.5					
				Sample Date	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
014-Mclouth_Inorg	Aluminum	7429-90-5	**7700**	mg/kg	3000	4200	2300	2200	**8900**	6800	5600	3000
014-Mclouth_Inorg	Antimony	7440-36-0	**2**	mg/kg	1.1 U	0.1 J	1 U	1.2 U	**3.6 J+**	1.1 U	**3.9 J+**	1.2 U
014-Mclouth_Inorg	Arsenic	7440-38-2	**0.68**	mg/kg	**6.5**	**2.4**	**3.9**	**1.9**	**22 J**	**6.8 J**	**18 J**	**6.9 J**
014-Mclouth_Inorg	Barium	7440-39-3	**20**	mg/kg	**26**	**20**	**25**	13	**150 J**	**61 J**	**130 J**	**50 J**
014-Mclouth_Inorg	Beryllium	7440-41-7	16	mg/kg	0.27 J	0.27 J	0.31 J	0.15 J	0.96 U	0.56 U	0.87 U	0.61 U
014-Mclouth_Inorg	Cadmium	7440-43-9	**0.71**	mg/kg	**0.79**	0.12 J	0.48 J	0.14 J	**12**	0.48 J	**11**	**0.96**
014-Mclouth_Inorg	Calcium	7440-70-2		mg/kg	25000	25000	16000	17000	160000	74000	78000	40000
014-Mclouth_Inorg	Chromium	7440-47-3	**0.3**	mg/kg	**19 J**	**10 J**	**18 J**	**10 J**	**240 J**	**20 J**	**210 J**	**49 J**
014-Mclouth_Inorg	Cobalt	7440-48-4	**2.3**	mg/kg	**5.1**	**5.2**	**6.1**	**3.5**	**9.6**	**8.5**	**8.7**	**7**
014-Mclouth_Inorg	Copper	7440-50-8	**31.6**	mg/kg	15	6.9	16	7.6	**200**	21	**160**	**41**
014-Mclouth_Inorg	CYANIDE	57-12-5	**0.0001**	mg/kg	0.71 U	0.56 U	0.71 U	0.7 U	0.92 U	0.58 U	**0.51 J**	0.71 U
014-Mclouth_Inorg	Iron	7439-89-6	**5500**	mg/kg	**11000**	**12000**	**14000**	**14000**	**100000**	**19000**	**50000**	**37000**
014-Mclouth_Inorg	Lead	7439-92-1	**35.8**	mg/kg	31	4.7	15	7	**470 J+**	15 J+	**440 J+**	**43 J+**
014-Mclouth_Inorg	Magnesium	7439-95-4		mg/kg	9400	11000	6100	7000	27000	17000	8600	8700
014-Mclouth_Inorg	Manganese	7439-96-5	**180**	mg/kg	**240**	**300**	**310**	150	**1600 J**	**400 J**	**1400 J**	**760 J**
014-Mclouth_Inorg	Mercury	7439-97-6	**0.174**	mg/kg	**0.33**	0.12 U	0.094 J	0.082 J	**6.1**	**0.18**	**4.7**	**0.94**
014-Mclouth_Inorg	Nickel	7440-02-0	**22.7**	mg/kg	17 J-	12 J-	15 J-	9.3 J-	**110**	**27**	**84**	**34**
014-Mclouth_Inorg	Potassium	7440-09-7		mg/kg	500 J	750	280 J	270 J	940	1300	650 J	350 J
014-Mclouth_Inorg	Selenium	7782-49-2	**0.72**	mg/kg	2.9 UJ	2.4 UJ	2.6 UJ	3 UJ	4.8 U	2.8 U	4.3 U	3.1 U
014-Mclouth_Inorg	Silver	7440-22-4	**0.5**	mg/kg	0.16 J	0.49 U	0.52 U	0.6 U	**3.8**	0.14 J	**3**	0.26 J
014-Mclouth_Inorg	Sodium	7440-23-5		mg/kg	140 J	140 J	150 J	160 J	840	190 J	520 J	140 J
014-Mclouth_Inorg	Thallium	7440-28-0	**0.078**	mg/kg	**0.25 J**	**0.11 J**	**0.14 J**	**0.09 J**	**0.52 J**	**0.26 J**	**0.35 J**	**0.1 J**
014-Mclouth_Inorg	Vanadium	7440-62-2	39	mg/kg	12	15	9.3	5	26	21	22	11
014-Mclouth_Inorg	Zinc	7440-66-6	**121**	mg/kg	81 J+	30 J+	110 J+	51 J+	**1100**	68	**1100**	**250**

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Table F - Inorganics Detection Results

				Location	MSTC23-SD12	MSTC23-SD13	MSTC23-SD13	MSTC23-SD14	MSTC23-SD14	MSTC23-SD14	MSTC23-SD15	MSTC23-SD19
				Sample #	MSTC23-SD12-SS-0.5	MSTC23-SD13-1.0	MSTC23-SD13-SS-0.5	MSTC23-SD14-1.0	MSTC23-SD14-2.0	MSTC23-SD14-SS-0.5	MSTC23-SD15-SS-0.5	MSTC23-SD19-1.0
				Start Depth	0	0	0	0	1	0	0	0
				End Depth	0.5	1	0.5	1	2	0.5	0.5	1
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/13/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
014-Mclouth_Inorg	Aluminum	7429-90-5	**7700**	mg/kg	6700	**7700**	2800	**7900**	7300	3200	2800	6000
014-Mclouth_Inorg	Antimony	7440-36-0	**2**	mg/kg	1.3 U	1.2 U	1 U	0.82 U	0.97 U	1.5 J+	0.9 U	**2.3 J+**
014-Mclouth_Inorg	Arsenic	7440-38-2	**0.68**	mg/kg	**4.5 J**	**7.8 J**	**4.8 J**	**6.4 J**	**7.5 J**	**3.7 J**	**6.6 J**	**9.9 J**
014-Mclouth_Inorg	Barium	7440-39-3	**20**	mg/kg	**36 J**	**81 J**	**23 J**	**61 J**	**75 J**	**27 J**	**44 J**	**160 J**
014-Mclouth_Inorg	Beryllium	7440-41-7	16	mg/kg	0.67 U	0.58 U	0.5 U	0.43 J+	0.49 U	0.67 U	0.45 U	0.82 U
014-Mclouth_Inorg	Cadmium	7440-43-9	**0.71**	mg/kg	0.55 J	0.31 J	0.47 J	0.37 J	0.2 J	0.45 J	0.62	**9.1**
014-Mclouth_Inorg	Calcium	7440-70-2		mg/kg	54000	85000	55000	69000	68000	35000	41000	130000
014-Mclouth_Inorg	Chromium	7440-47-3	**0.3**	mg/kg	**34 J**	**16 J**	**15 J**	**15 J**	**17 J**	**18 J**	**43 J**	**150 J**
014-Mclouth_Inorg	Cobalt	7440-48-4	**2.3**	mg/kg	**6.3**	**9.3**	**3.2**	**8.7**	**11**	**3.4**	**6.2**	**6.5**
014-Mclouth_Inorg	Copper	7440-50-8	**31.6**	mg/kg	27	18	21	17	19	**57**	**46**	**190**
014-Mclouth_Inorg	CYANIDE	57-12-5	**0.0001**	mg/kg	0.86 U	0.57 U	0.61 U	0.59 U	0.59 U	0.67 U	0.63 U	0.86 U
014-Mclouth_Inorg	Iron	7439-89-6	**5500**	mg/kg	**24000**	**17000**	**18000**	**17000**	**16000**	**15000**	**21000**	**31000**
014-Mclouth_Inorg	Lead	7439-92-1	**35.8**	mg/kg	26 J+	7.5 J+	26 J+	6.9 J+	8.1 J+	**70 J+**	**46 J+**	**180 J+**
014-Mclouth_Inorg	Magnesium	7439-95-4		mg/kg	16000	17000	19000	19000	15000	9600	15000	12000
014-Mclouth_Inorg	Manganese	7439-96-5	**180**	mg/kg	**450 J**	**410 J**	**280 J**	**370 J**	**370 J**	**270 J**	**510 J**	**430 J**
014-Mclouth_Inorg	Mercury	7439-97-6	**0.174**	mg/kg	**0.34**	0.12 U	**0.25**	0.12 U	0.11 U	0.083 J	**0.53**	**4.9**
014-Mclouth_Inorg	Nickel	7440-02-0	**22.7**	mg/kg	20	**27**	13	**25**	**29**	**25**	**28**	**63**
014-Mclouth_Inorg	Potassium	7440-09-7		mg/kg	680	1500	370 J	1500	1500	240 J	300 J	770 J
014-Mclouth_Inorg	Selenium	7782-49-2	**0.72**	mg/kg	3.3 U	2.9 U	2.5 U	2.1 U	2.4 U	3.3 U	2.3 U	4.1 U
014-Mclouth_Inorg	Silver	7440-22-4	**0.5**	mg/kg	0.21 J	0.58 U	0.5 U	0.41 U	0.49 U	0.11 J	0.25 J	**2.8**
014-Mclouth_Inorg	Sodium	7440-23-5		mg/kg	250 J	160 J	140 J	150 J	180 J	87 J	98 J	870
014-Mclouth_Inorg	Thallium	7440-28-0	**0.078**	mg/kg	**0.11 J**	**0.26 J**	0.5 U	**0.18 J**	**0.23 J**	0.067 J	**0.14 J**	**0.25 J**
014-Mclouth_Inorg	Vanadium	7440-62-2	39	mg/kg	11	22	7.4	21	24	8.6	9.7	14
014-Mclouth_Inorg	Zinc	7440-66-6	**121**	mg/kg	**170**	65	110	63	50	**380**	**260**	**570**

Notes:

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Table F - Inorganics Detection Results

				Location	MSTC23-SD19	MSTC23-SD19	MSTC23-SD20	MSTC23-SD20	MSTC23-SD20	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22
				Sample #	MSTC23-SD19-2.0	MSTC23-SD19-SS-0.5	MSTC23-SD20-1.0	MSTC23-SD20-2.0	MSTC23-SD20-SS-0.5	MSTC23-SD22-1.0	MSTC23-SD22-2.0	MSTC23-SD22-3.0
				Start Depth	1	0	0	1	0	0	1	2
				End Depth	2	0.5	1	2	0.5	1	2	3
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N
				Parent Sample #								
				Sample Date	10/11/2023	10/11/2023	10/16/2023	10/16/2023	10/16/2023	10/12/2023	10/12/2023	10/12/2023
Method Group	Analyte	CAS #	Sed PAL	Units								
014-Mclouth_Inorg	Aluminum	7429-90-5	**7700**	mg/kg	5400	4200	3000	2000	2800	2700	5000	3600
014-Mclouth_Inorg	Antimony	7440-36-0	**2**	mg/kg	**4.3 J+**	**2 J+**	0.89 U	0.78 U	0.062 J	0.96 J+	**2.1 J+**	1 U
014-Mclouth_Inorg	Arsenic	7440-38-2	**0.68**	mg/kg	**11 J**	**7.9 J**	**3.1**	**3**	**6.2**	**7.1 J**	**7.6 J**	**2.4 J**
014-Mclouth_Inorg	Barium	7440-39-3	**20**	mg/kg	**160 J**	**110 J**	**36**	14	**83**	**68 J**	**88 J**	19 J
014-Mclouth_Inorg	Beryllium	7440-41-7	16	mg/kg	0.58 U	0.64 U	0.2 J	0.13 J	0.36 J	0.47 U	0.64 U	0.52 U
014-Mclouth_Inorg	Cadmium	7440-43-9	**0.71**	mg/kg	**14**	**6.4**	**0.84**	0.18 J	0.3 J	**2.8**	**4.6**	0.16 J
014-Mclouth_Inorg	Calcium	7440-70-2		mg/kg	120000	80000	33000	33000	37000	42000	130000	30000
014-Mclouth_Inorg	Chromium	7440-47-3	**0.3**	mg/kg	**110 J**	**140 J**	**22 J**	**8 J**	**33 J**	**80 J**	**36 J**	**9.3 J**
014-Mclouth_Inorg	Cobalt	7440-48-4	**2.3**	mg/kg	**6.5**	**5.6**	**3.1**	**2.7**	**4.9**	**5.7**	**4.9**	**6**
014-Mclouth_Inorg	Copper	7440-50-8	**31.6**	mg/kg	**270**	**140**	13	5.3	13	**54**	**100**	11
014-Mclouth_Inorg	CYANIDE	57-12-5	**0.0001**	mg/kg	**0.63 J**	0.75 U	0.62 U	0.56 U	0.55 U	0.66 U	0.78 U	0.64 U
014-Mclouth_Inorg	Iron	7439-89-6	**5500**	mg/kg	**27000**	**29000**	**8400**	**7300**	**42000**	**21000**	**15000**	**7400**
014-Mclouth_Inorg	Lead	7439-92-1	**35.8**	mg/kg	**170 J+**	**180 J+**	27	6.4	28	**110 J+**	**89 J+**	10 J+
014-Mclouth_Inorg	Magnesium	7439-95-4		mg/kg	16000	6700	13000	12000	17000	9500	15000	13000
014-Mclouth_Inorg	Manganese	7439-96-5	**180**	mg/kg	**440 J**	**480 J**	**210**	**260**	**690**	**460 J**	**330 J**	150 J
014-Mclouth_Inorg	Mercury	7439-97-6	**0.174**	mg/kg	**1.3**	**4.4**	**0.2**	0.046 J	**2.3**	**0.62**	**0.58**	0.092 J
014-Mclouth_Inorg	Nickel	7440-02-0	**22.7**	mg/kg	**55**	**55**	15 J-	7.7 J-	22 J-	**44**	**25**	11
014-Mclouth_Inorg	Potassium	7440-09-7		mg/kg	720	550 J	630	250 J	300 J	340 J	700	550
014-Mclouth_Inorg	Selenium	7782-49-2	**0.72**	mg/kg	2.9 U	3.2 U	2.2 UJ	2 UJ	1.9 UJ	2.4 U	3.2 U	2.6 U
014-Mclouth_Inorg	Silver	7440-22-4	**0.5**	mg/kg	**1.7**	**2**	0.22 J	0.39 U	0.13 J	**0.99**	**0.65**	0.52 U
014-Mclouth_Inorg	Sodium	7440-23-5		mg/kg	770	590 J	140 J	120 J	230 J	150 J	660	140 J
014-Mclouth_Inorg	Thallium	7440-28-0	**0.078**	mg/kg	**0.32 J**	**0.2 J**	**0.084 J**	0.051 J	0.062 J	**0.23 J**	**0.21 J**	**0.098 J**
014-Mclouth_Inorg	Vanadium	7440-62-2	39	mg/kg	16	12	11	8.8	9.4	13	12	11
014-Mclouth_Inorg	Zinc	7440-66-6	**121**	mg/kg	**630**	**440**	100 J+	28 J+	**160 J+**	**370**	**300**	38

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Table F - Inorganics Detection Results

				Location	MSTC23-SD22	MSTC23-SD22	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23
				Sample #	MSTC23-SD22-5.0	MSTC23-SD22-SS-0.5	MSTC23-SD23-1.0	MSTC23-SD23-2.0	MSTC23-SD23-3.0	MSTC23-SD23-5.0	MSTC23-SD23-SS-0.5
				Start Depth	3	0	0	1	2	3	0
				End Depth	5	0.5	1	2	3	5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N
				Parent Sample #							
				Sample Date	10/12/2023	10/12/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023
Method Group	Analyte	CAS #	Sed PAL	Units							
014-Mclouth_Inorg	Aluminum	7429-90-5	**7700**	mg/kg	2800	4300	2200	3500	3400	3400	3500
014-Mclouth_Inorg	Antimony	7440-36-0	**2**	mg/kg	0.92 U	1.7 U	1.1 U	1.1 U	0.92 U	0.9 U	1.7 U
014-Mclouth_Inorg	Arsenic	7440-38-2	**0.68**	mg/kg	**2 J**	**3.3 J**	**3**	**3.7**	**4.9**	**3.2**	**3.4**
014-Mclouth_Inorg	Barium	7440-39-3	**20**	mg/kg	11 J	**31 J**	16	**27**	**20**	**21**	**33**
014-Mclouth_Inorg	Beryllium	7440-41-7	16	mg/kg	0.46 U	0.87 U	0.21 J	0.39 J	0.3 J	0.26 J	0.33 J
014-Mclouth_Inorg	Cadmium	7440-43-9	**0.71**	mg/kg	0.092 J	**0.84 J**	0.33 J	0.18 J	0.12 J	0.11 J	0.49 J
014-Mclouth_Inorg	Calcium	7440-70-2		mg/kg	24000	30000	15000	24000	45000	39000	21000
014-Mclouth_Inorg	Chromium	7440-47-3	**0.3**	mg/kg	**7.4 J**	**29 J**	**13 J**	**13 J**	**9.1 J**	**9 J**	**23 J**
014-Mclouth_Inorg	Cobalt	7440-48-4	**2.3**	mg/kg	**4.4**	**5.4**	**5.3**	**6.2**	**5**	**4.8**	**6.7**
014-Mclouth_Inorg	Copper	7440-50-8	**31.6**	mg/kg	5.8	**32**	11	13	9.4	9.6	27
014-Mclouth_Inorg	CYANIDE	57-12-5	**0.0001**	mg/kg	0.56 U	1.1 U	0.61 U	0.62 U	0.58 U	0.6 U	0.96 U
014-Mclouth_Inorg	Iron	7439-89-6	**5500**	mg/kg	**5800**	**17000**	**8500**	**7700**	**7800**	**7400**	**15000**
014-Mclouth_Inorg	Lead	7439-92-1	**35.8**	mg/kg	3.3 J+	29 J+	13	6.2	5	4.8	18
014-Mclouth_Inorg	Magnesium	7439-95-4		mg/kg	13000	10000	7300	12000	12000	12000	7800
014-Mclouth_Inorg	Manganese	7439-96-5	**180**	mg/kg	120 J	**270 J**	160	**300**	**220**	**220**	**260**
014-Mclouth_Inorg	Mercury	7439-97-6	**0.174**	mg/kg	0.098 U	**0.42**	0.076 J	0.11 U	0.12 U	0.12 U	**0.19 J**
014-Mclouth_Inorg	Nickel	7440-02-0	**22.7**	mg/kg	8.8	21	13 J-	17 J-	12 J-	13 J-	21 J-
014-Mclouth_Inorg	Potassium	7440-09-7		mg/kg	430	720 J	360 J	560	550	540	620 J
014-Mclouth_Inorg	Selenium	7782-49-2	**0.72**	mg/kg	2.3 U	4.3 U	2.8 UJ	2.7 UJ	2.3 UJ	2.3 UJ	4.1 UJ
014-Mclouth_Inorg	Silver	7440-22-4	**0.5**	mg/kg	0.46 U	0.26 J	0.18 J	0.54 U	0.46 U	0.45 U	0.82 U
014-Mclouth_Inorg	Sodium	7440-23-5		mg/kg	81 J	140 J	160 J	130 J	120 J	110 J	170 J
014-Mclouth_Inorg	Thallium	7440-28-0	**0.078**	mg/kg	0.069 J	**0.15 J**	**0.14 J**	**0.11 J**	**0.1 J**	**0.13 J**	**0.13 J**
014-Mclouth_Inorg	Vanadium	7440-62-2	39	mg/kg	9	10	9.9	17	12	12	13
014-Mclouth_Inorg	Zinc	7440-66-6	**121**	mg/kg	26	**160**	57 J+	37 J+	29 J+	29 J+	110 J+

Notes:

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B - The target analyte was detected in the associated blank.
J - The identification of the analyte is acceptable; the reported value is an estimate
J+ - The result is an estimated quantity, but the results may be biased high
J- - The result is an estimated quantity, but the results may be biased low
U - Not detected

Table G - AVS/SEM Detection Results

				Location	MSTC23-SD01	MSTC23-SD02	MSTC23-SD02	MSTC23-SD02	MSTC23-SD03	MSTC23-SD03	MSTC23-SD03
				Sample #	MSTC23-SD01-SS-0.5	MSTC23-SD02-1.0	MSTC23-SD02-2.0	MSTC23-SD02-SS-0.5	MSTC23-SD03-1.0	MSTC23-SD03-2.0	MSTC23-SD03-SS-0.5
				Start Depth	0	0	1	0	0	1	0
				End Depth	0.5	1	2	0.5	1	2	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N
				Parent Sample #							
				Sample Date	10/18/2023	10/19/2023	10/19/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
Method	Analyte	CAS #	Sed PAL	Units							
AVS	ACID VOLITILE SULFIDES	AVS		umol/g	25 A	13 A	9.6 A	7.2 A	1.8 JA	1.7 JA	3.8 A
SW6020B	CADMIUM	7440-43-9	**0.00178**	umol/g	**0.032 BA**	**0.078 BA**	**0.081 BA**	**0.03 BA**	**0.061 A**	**0.042 BA**	**0.013 A**
SW6020B	COPPER	7440-50-8	**0.0157**	umol/g	**0.68 JA**	**1.2 JA**	**0.86 JA**	**0.59 JA**	**0.81 JA**	**1 JA**	**0.31 JA**
SW6020B	LEAD	7439-92-1	**0.00965**	umol/g	**0.68 BA**	**0.82 BA**	**0.71 BA**	**0.34 BA**	**0.65 A**	**0.59 BA**	**0.21 JA**
SW6020B	NICKEL	7440-02-0	**0.0341**	umol/g	10 UA	10 UA	10 UA	10 UA	**0.72 J^2A**	**1.2 ^2A**	1 UA
SW6020B	ZINC	7440-66-6	**0.0306**	umol/g	**5.2 JBA**	**7.3 JBA**	**5.9 JBA**	**3.5 JBA**	**5.3 JBA**	**5.5 JBA**	**2.4 JBA**
SW7470	MERCURY	7439-97-6		umol/g	0.00041 UA	0.0004 UA	0.0004 UA	0.0004 UA	0.0004 UA	0.00041 UA	0.00041 UA

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Table G - AVS/SEM Detection Results

				Location	MSTC23-SD05	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD07	MSTC23-SD08
				Sample #	MSTC23-SD05-SS-0.5	MSTC23-SD06-1.0	MSTC23-SD06-2.0	MSTC23-SD06-3.0	MSTC23-SD06-5.0	MSTC23-SD06-7.0	MSTC23-SD06-9.0	MSTC23-SD06A-7.0	MSTC23-SD06-SS-0.5	MSTC23-SD07-SS-0.5	MSTC23-SD08A-SS-0.5
				Start Depth	0	0	1	2	3	5	7	5	0	0	0
				End Depth	0.5	1	2	3	5	7	9	7	0.5	0.5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	FD	N	N	FD
				Parent Sample #								MSTC23-SD06-7.0			MSTC23-SD08-SS-0.5
				Sample Date	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	11/17/2023	11/17/2023	11/17/2023	10/18/2023	10/17/2023	10/17/2023
Method	Analyte	CAS #	Sed PAL	Units											
AVS	ACID VOLITILE SULFIDES	AVS		umol/g	2.9 UF1A	3.6 A	8.1 A	4.2 A	4.5 A	1.8 JF1A	2.1 JA	3.7 A	2.6 UA	14 A	2 JA
SW6020B	CADMIUM	7440-43-9	**0.00178**	umol/g	**0.007 BA**	**0.032 BA**	**0.073 BA**	**0.046 BA**	**0.067 BA**	**0.044 F1A**	**0.031 A**	**0.042 A**	**0.0041 BA**	**0.006 A**	**0.0018 A**
SW6020B	COPPER	7440-50-8	**0.0157**	umol/g	**0.3 A**	**0.57 JA**	**1.1 JA**	**0.86 JA**	**1 JA**	**0.87 JA**	**0.78 JA**	**0.71 JA**	**0.26 A**	**0.23 A**	**0.097 A**
SW6020B	LEAD	7439-92-1	**0.00965**	umol/g	**0.16 BA**	**0.52 BA**	**0.81 BA**	**0.67 BA**	**0.74 BA**	**0.54 A**	**0.44 A**	**0.52 A**	**1.5 BA**	**0.23 JA**	**0.054 ^2A**
SW6020B	NICKEL	7440-02-0	**0.0341**	umol/g	**0.23 A**	**0.73 J^2A**	**0.94 J^2A**	**0.85 J^2A**	**0.84 J^2A**	**0.81 JA**	**0.71 JA**	**0.75 JA**	1.1 UA	**0.22 A**	**0.11 A**
SW6020B	ZINC	7440-66-6	**0.0306**	umol/g	**1.9 BA**	**4.5 JBA**	**6.4 JBA**	**4.9 JBA**	**6.1 JBA**	**5.8 JBA**	**4.1 JBA**	**5.8 JBA**	**4.7 JBA**	**2.5 JBA**	**0.59 JBA**
SW7470	MERCURY	7439-97-6		umol/g	0.00041 UF1A	0.0004 UA	0.00041 UA	0.00041 UA	0.00041 UA	0.00041 UF1A	0.00041 UA	0.00041 UA	0.00042 UA	0.00041 UA	0.00041 UA

Notes:

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U - Not detected

Table G - AVS/SEM Detection Results

				Location	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD09	MSTC23-SD09	MSTC23-SD09	MSTC23-SD10	MSTC23-SD12	MSTC23-SD13	MSTC23-SD13
				Sample #	MSTC23-SD08-SS-0.5	MSTC23-SD08-SS-1.0	MSTC23-SD08-SS-2.0	MSTC23-SD09-SS-0.5	MSTC23-SD09-SS-1.0	MSTC23-SD09-SS-2.0	MSTC23-SD10-SS-0.5	MSTC23-SD12-SS-0.5	MSTC23-SD13-SS-0.5	MSTC23-SD13-SS-1.0
				Start Depth	0	0	1	0	0	1	0	0	0	0
				End Depth	0.5	1	2	0.5	1	2	0.5	0.5	0.5	1
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N	N	N
				Parent Sample #										
				Sample Date	10/17/2023	10/17/2023	10/17/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/12/2023	10/12/2023
Method	Analyte	CAS #	Sed PAL	Units										
AVS	ACID VOLITILE SULFIDES	AVS		umol/g	2.2 JA	4.6 A	2.5 UA	3.5 JA	3.2 JA	2.4 UA	2.9 UA	3.6 F1A	2.5 UF1A	2.4 UA
SW6020B	CADMIUM	7440-43-9	**0.00178**	umol/g	**0.0019 A**	0.0013 A	0.00058 A	**0.024 A**	**0.046 A**	0.00087 A	**0.0045 A**	**0.0048 A**	**0.0024 A**	0.00047 A
SW6020B	COPPER	7440-50-8	**0.0157**	umol/g	**0.19 A**	**0.054 JA**	**0.041 JA**	**0.79 JA**	**1.1 JA**	**0.057 JA**	**0.23 A**	**0.13 A**	**0.11 JF1A**	**0.053 JA**
SW6020B	LEAD	7439-92-1	**0.00965**	umol/g	**0.049 ^2A**	**0.028 ^2A**	**0.013 ^2A**	**0.5 A**	**1 A**	**0.019 ^2A**	**0.11 A**	**0.066 ^2A**	**0.097 A**	**0.016 ^2A**
SW6020B	NICKEL	7440-02-0	**0.0341**	umol/g	**0.51 JA**	**0.29 A**	**0.042 JA**	**0.5 JA**	**0.63 J^2A**	**0.058 JA**	**0.18 A**	**0.22 F1A**	**0.1 JA**	**0.058 JA**
SW6020B	ZINC	7440-66-6	**0.0306**	umol/g	**0.6 JBA**	**0.31 BA**	**0.14 BA**	**3.8 JA**	**6.4 JBA**	**0.15 BA**	**1.2 BA**	**1.2 BF1A**	**1.1 F1A**	**0.12 A**
SW7470	MERCURY	7439-97-6		umol/g	0.00042 UA	0.00041 UA	0.00042 UA	0.00042 UA	0.0004 UA	0.00042 UA	0.00041 UA	0.0004 UF1A	0.00042 UF1A	0.00041 UA

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Table G - AVS/SEM Detection Results

				Location	MSTC23-SD14	MSTC23-SD14	MSTC23-SD14	MSTC23-SD15	MSTC23-SD19	MSTC23-SD19	MSTC23-SD19	MSTC23-SD20	MSTC23-SD20	MSTC23-SD20
				Sample #	MSTC23-SD14-SS-0.5	MSTC23-SD14-SS-1.0	MSTC23-SD14-SS-2.0	MSTC23-SD15-SS-0.5	MSTC23-SD19-SS-0.5	MSTC23-SD19-SS-1.0	MSTC23-SD19-SS-2.0	MSTC23-SD20-SS-0.5	MSTC23-SD20-SS-1.0	MSTC23-SD20-SS-2.0
				Start Depth	0	0	1	0	0	0	1	0	0	1
				End Depth	0.5	1	2	0.5	0.5	1	2	0.5	1	2
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N	N	N
				Parent Sample #										
				Sample Date	10/12/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/16/2023	10/16/2023	10/16/2023
Method	Analyte	CAS #	Sed PAL	Units										
AVS	ACID VOLITILE SULFIDES	AVS		umol/g	1.2 JH3A	2.4 UA	2.4 UA	2.6 UA	2.4 JA	1.4 JA	3 UA	2.8 UA	110 A	2.5 UA
SW6020B	CADMIUM	7440-43-9	**0.00178**	umol/g	**0.0033 A**	0.00049 A	0.00053 A	**0.0032 A**	**0.033 A**	**0.039 A**	**0.058 A**	**0.0024 A**	**0.034 A**	0.00088 A
SW6020B	COPPER	7440-50-8	**0.0157**	umol/g	**0.51 JA**	**0.06 JA**	**0.07 JA**	**0.21 A**	**1.2 A**	**1 A**	**1.2 A**	**0.14 A**	**0.66 JA**	**0.06 JA**
SW6020B	LEAD	7439-92-1	**0.00965**	umol/g	**0.2 A**	**0.015 ^2A**	**0.015 ^2A**	**0.16 A**	**0.66 A**	**0.62 A**	**1.2 A**	**0.12 A**	**0.73 A**	**0.017 ^2A**
SW6020B	NICKEL	7440-02-0	**0.0341**	umol/g	**0.16 A**	**0.063 JA**	**0.069 JA**	**0.17 A**	**0.75 JA**	**0.45 JA**	**0.29 A**	**0.33 A**	1.1 UA	**0.16 A**
SW6020B	ZINC	7440-66-6	**0.0306**	umol/g	**3.7 JA**	**0.11 A**	**0.11 A**	**1.9 A**	**4.9 JA**	**5.7 JA**	**4.9 JA**	**1.6 BA**	**5.8 JBA**	**0.17 BA**
SW7470	MERCURY	7439-97-6		umol/g	0.00041 UA	0.0004 UA	0.00041 UA	0.00042 UA	0.00041 UA	0.0004 UA	0.0004 UA	0.00041 UA	0.00042 UA	0.0004 UA

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Table G - AVS/SEM Detection Results

				Location	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23
				Sample #	MSTC23-SD22-SS-0.5	MSTC23-SD22-SS-1.0	MSTC23-SD22-SS-2.0	MSTC23-SD22-SS-3.0	MSTC23-SD22-SS-5.0	MSTC23-SD23-SS-0.5	MSTC23-SD23-SS-1.0	MSTC23-SD23-SS-2.0	MSTC23-SD23-SS-3.0	MSTC23-SD23-SS-5.0
				Start Depth	0	0	1	2	4	0	0	1	2	4
				End Depth	0.5	1	2	3	5	0.5	1	2	3	5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N	N	N
				Parent Sample #										
				Sample Date	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023
Method	Analyte	CAS #	Sed PAL	Units										
AVS	ACID VOLITILE SULFIDES	AVS		umol/g	2.3 JA	6 A	3.4 A	2.6 UA	2.6 UA	12 A	2.4 UA	2.4 UA	2.6 UA	2.4 UA
SW6020B	CADMIUM	7440-43-9	**0.00178**	umol/g	**0.0036 A**	**0.019 A**	**0.0051 A**	0.00076 A	0.00072 A	**0.0019 A**	0.00063 A	0.00041 A	0.0005 A	0.00033 A
SW6020B	COPPER	7440-50-8	**0.0157**	umol/g	**0.13 A**	**0.54 JA**	**0.37 JA**	**0.054 JA**	**0.049 JA**	**0.096 JA**	**0.036 JA**	**0.074 JA**	**0.07 JA**	**0.033 JA**
SW6020B	LEAD	7439-92-1	**0.00965**	umol/g	**0.069 ^2A**	**0.22 A**	**0.2 A**	**0.015 ^2A**	**0.016 ^2A**	**0.041 ^2A**	**0.012 ^2A**	0.0093 ^2A	**0.011 ^2A**	**0.0098 ^2A**
SW6020B	NICKEL	7440-02-0	**0.0341**	umol/g	**0.31 A**	**0.61 JA**	**0.07 JA**	**0.093 JA**	**0.047 JA**	**0.064 JA**	**0.038 JA**	**0.36 A**	**0.31 A**	0.1 UA
SW6020B	ZINC	7440-66-6	**0.0306**	umol/g	**0.99 A**	**2.3 A**	**1.4 A**	**0.15 A**	**0.16 A**	**0.42 JBA**	**0.14 BA**	**0.1 BA**	**0.11 BA**	**0.081 JBA**
SW7470	MERCURY	7439-97-6		umol/g	0.00041 UA	0.00041 UA	0.00041 UA	0.00041 UA	0.00041 UA	0.00042 UA	0.0004 UA	0.00042 UA	0.00042 UA	0.00041 UA

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Table H - General Chemistry Detection Results

				Location	MSTC23-SD01	MSTC23-SD02	MSTC23-SD02	MSTC23-SD02	MSTC23-SD03	MSTC23-SD03	MSTC23-SD03
				Sample #	MSTC23-SD01-SS-0.5	MSTC23-SD02-1.0	MSTC23-SD02-2.0	MSTC23-SD02-SS-0.5	MSTC23-SD03-1.0	MSTC23-SD03-2.0	MSTC23-SD03-SS-0.5
				Start Depth	0	0	1	0	0	1	0
				End Depth	0.5	1	2	0.5	1	2	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N
				Parent Sample #							
				Sample Date	10/18/2023	10/19/2023	10/19/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
Method Group	Analyte	CAS #	Sed PAL	Units							
025-Mclouth_GenChem	Moisture, Percent	MOIST		%	45 A	52 A	48 A	49 A	49 A	49 A	38 A
025-Mclouth_GenChem	pH	PH		su	7 HA	7 HA	8 HA	7 HA	7 HA	7 HA	7 HA
025-Mclouth_GenChem	Temperature	TEMP		deg c	23 HA	23 HA	23 HA	23 HA	23 HA	23 HA	23 HA
025-Mclouth_GenChem	Total Inorganic Carbon	TIC		mg/kg	5200 UA	5000 UA	7100 UA	6400 UA	7600 UHA	5800 UHA	4500 UA
025-Mclouth_GenChem	Total Organic Carbon	7440-44-0		mg/kg	3100 UA	3000 UA	4300 UA	3800 UA	4500 UHA	3500 UHA	2700 UA
025-Mclouth_GenChem	Total Organic Carbon	TOC		mg/kg	91000 A	66000 A	110000 A	160000 A	95000 HA	100000 HA	99000 A

Notes:

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Table H - General Chemistry Detection Results

				Location	MSTC23-SD05	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD06	MSTC23-SD07	MSTC23-SD08
				Sample #	MSTC23-SD05-SS-0.5	MSTC23-SD06-1.0	MSTC23-SD06-2.0	MSTC23-SD06-3.0	MSTC23-SD06-5.0	MSTC23-SD06-7.0	MSTC23-SD06-9.0	MSTC23-SD06A-7.0	MSTC23-SD06-SS-0.5	MSTC23-SD07-SS-0.5	MSTC23-SD08-1.0
				Start Depth	0	0	1	2	3	5	7	5	0	0	0
				End Depth	0.5	1	2	3	5	7	9	7	0.5	0.5	1
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	FD	N	N	N
				Parent Sample #								MSTC23-SD06-7.0			
				Sample Date	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	11/17/2023	11/17/2023	11/17/2023	10/18/2023	10/17/2023	10/17/2023
Method Group	Analyte	CAS #	Sed PAL	Units											
025-Mclouth_GenChem	Moisture, Percent	MOIST		%	33 A	47 A	45 A	47 A	40 A	43 A	38 A	42 A	25 A	53 A	26 A
025-Mclouth_GenChem	pH	PH		su	7 HA	7 HA	7 HA	7 HA	7 HA	8 A	8 A	8 A	7 HA	7 A	8 A
025-Mclouth_GenChem	Temperature	TEMP		deg c	23 HA	23 HA	23 HA	22 HA	23 HA	21 A	20 A	21 A	23 HA	24 A	23 A
025-Mclouth_GenChem	Total Inorganic Carbon	TIC		mg/kg	3300 UHA	4600 UHA	4000 UHA	3800 UHA	3500 UHA	3700 UHA	3700 UHA	3700 UHA	3900 UHA	5600 UHA	5200 UHA
025-Mclouth_GenChem	Total Organic Carbon	7440-44-0		mg/kg	2000 UHA	2800 UHA	2400 UHA	2300 UHA	2100 UHA	2200 UHA	2200 UHA	2200 UHA	2300 UHA	3400 UHA	3100 UHA
025-Mclouth_GenChem	Total Organic Carbon	TOC		mg/kg	3700 HA	32000 HA	40000 HA	34000 HA	37000 HA	75000 HA	67000 HA	71000 HA	23000 HA	110000 HA	24000 HA

Notes:

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Table H - General Chemistry Detection Results

				Location	MSTC23-SD08	MSTC23-SD08	MSTC23-SD08	MSTC23-SD09	MSTC23-SD09	MSTC23-SD09	MSTC23-SD10	MSTC23-SD12	MSTC23-SD13	MSTC23-SD13
				Sample #	MSTC23-SD08-2.0	MSTC23-SD08A-SS-0.5	MSTC23-SD08-SS-0.5	MSTC23-SD09-1.0	MSTC23-SD09-2.0	MSTC23-SD09-SS-0.5	MSTC23-SD10-SS-0.5	MSTC23-SD12-SS-0.5	MSTC23-SD13-SS-0.5	MSTC23-SD13-SS-1.0
				Start Depth	1	0	0	0	1	0	0	0	0	0
				End Depth	2	0.5	0.5	1	2	0.5	0.5	0.5	0.5	1
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	FD	N	N	N	N	N	N	N	N
				Parent Sample #		MSTC23-SD08-SS-0.5								
				Sample Date	10/17/2023	10/17/2023	10/17/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/12/2023	10/12/2023
Method Group	Analyte	CAS #	Sed PAL	Units										
025-Mclouth_GenChem	Moisture, Percent	MOIST		%	25 A	27 A	29 A	44 A	16 A	44 A	35 A	35 A	23 A	16 A
025-Mclouth_GenChem	pH	PH		su	7 A	7 A	7 A	7 A	8 A	7 A	7 A	7 A	7 A	8 A
025-Mclouth_GenChem	Temperature	TEMP		deg c	23 A	24 A	24 A	24 A	24 A	24 A	24 A	25 A	25 A	24 A
025-Mclouth_GenChem	Total Inorganic Carbon	TIC		mg/kg	4800 UHA	4500 UHA	4700 UA	7100 UA	4100 UA	6000 UA	3800 UA	2900 UA	3700 UA	3300 UA
025-Mclouth_GenChem	Total Organic Carbon	7440-44-0		mg/kg	2900 UHA	2700 UHA	2800 UA	4300 UA	2500 UA	3600 UA	2300 UA	1700 UA	2200 UA	2000 UA
025-Mclouth_GenChem	Total Organic Carbon	TOC		mg/kg	19000 HA	18000 HA	18000 A	100000 A	28000 A	100000 A	53000 A	42000 A	16000 A	33000 A

Notes:

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Table H - General Chemistry Detection Results

				Location	MSTC23-SD14	MSTC23-SD14	MSTC23-SD14	MSTC23-SD15	MSTC23-SD19	MSTC23-SD19	MSTC23-SD19	MSTC23-SD20	MSTC23-SD20	MSTC23-SD20
				Sample #	MSTC23-SD14-1.0	MSTC23-SD14-2.0	MSTC23-SD14-SS-0.5	MSTC23-SD15-SS-0.5	MSTC23-SD19-1.0	MSTC23-SD19-2.0	MSTC23-SD19-SS-0.5	MSTC23-SD20-1.0	MSTC23-SD20-2.0	MSTC23-SD20-SS-0.5
				Start Depth	0	1	0	0	0	1	0	0	1	0
				End Depth	1	2	0.5	0.5	1	2	0.5	1	2	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N	N	N
				Parent Sample #										
				Sample Date	10/12/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/16/2023	10/16/2023	10/16/2023
Method Group	Analyte	CAS #	Sed PAL	Units										
025-Mclouth_GenChem	Moisture, Percent	MOIST		%	18 A	20 A	23 A	29 A	44 A	35 A	48 A	23 A	15 A	27 A
025-Mclouth_GenChem	pH	PH		su	8 A	8 A	8 A	7 A	7 A	7 A	7 A	8 A	8 A	7 A
025-Mclouth_GenChem	Temperature	TEMP		deg c	23 A	23 A	24 A	23 A	24 A	24 A	23 A	23 A	23 A	23 A
025-Mclouth_GenChem	Total Inorganic Carbon	TIC		mg/kg	2700 UA	3200 UA	2700 UA	3400 UHA	4700 UHA	11000 UHA	9200 UHA	6000 UHA	6300 UHA	4500 UHA
025-Mclouth_GenChem	Total Organic Carbon	7440-44-0		mg/kg	1600 UA	1900 UA	1600 UA	2000 UHA	2800 UHA	6500 UHA	5500 UHA	3600 UHA	3800 UHA	2700 UHA
025-Mclouth_GenChem	Total Organic Carbon	TOC		mg/kg	36000 A	24000 A	16000 A	28000 HA	110000 HA	38000 HA	86000 HA	36000 HA	25000 HA	63000 HA

Notes:

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Table H - General Chemistry Detection Results

				Location	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD22	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23	MSTC23-SD23
				Sample #	MSTC23-SD22-1.0	MSTC23-SD22-2.0	MSTC23-SD22-3.0	MSTC23-SD22-5.0	MSTC23-SD22-SS-0.5	MSTC23-SD23-1.0	MSTC23-SD23-2.0	MSTC23-SD23-3.0	MSTC23-SD23-5.0	MSTC23-SD23-SS-0.5
				Start Depth	0	1	2	3	0	0	1	2	3	0
				End Depth	1	2	3	5	0.5	1	2	3	5	0.5
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Type	N	N	N	N	N	N	N	N	N	N
				Parent Sample #										
				Sample Date	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023
Method Group	Analyte	CAS #	Sed PAL	Units										
025-Mclouth_GenChem	Moisture, Percent	MOIST		%	36 A	34 A	27 A	22 A	61 A	20 A	22 A	28 A	20 A	57 A
025-Mclouth_GenChem	pH	PH		su	7 A	7 A	8 A	8 A	7 A	7 A	8 A	7 A	8 A	7 A
025-Mclouth_GenChem	Temperature	TEMP		deg c	24 A	24 A	24 A	23 A	24 A	24 A	24 A	23 A	24 A	23 A
025-Mclouth_GenChem	Total Inorganic Carbon	TIC		mg/kg	8300 UHA	12000 UHA	3100 UHA	3900 UHA	4000 UHA	4600 UHA	4800 UHA	4400 UHA	4600 UHA	5000 UHA
025-Mclouth_GenChem	Total Organic Carbon	7440-44-0		mg/kg	5000 UHA	7400 UHA	1800 UHA	2300 UHA	2400 UHA	2700 UHA	2900 UHA	2600 UHA	2700 UHA	3000 UHA
025-Mclouth_GenChem	Total Organic Carbon	TOC		mg/kg	56000 HA	20000 HA	30000 HA	22000 HA	52000 HA	7100 HA	10000 HA	23000 HA	13000 HA	44000 HA

Notes:

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Table I - QC Sample Results

				Sample #	EB-SD-Y1-01	EB-SD-Y1-02	EB-SD-Y1-03	FB-SD-Y1-01	FB-SD-Y1-02	FB-SD-Y1-03	TB-SD-Y1-01	TB-SD-Y1-02	TB-SD-Y1-03
				Sample Type	EB	EB	EB	FB	FB	FB	TB	TB	TB
				Sample Date	10/16/2023	10/17/2023	10/18/2023	10/16/2023	10/17/2023	10/18/2023	10/16/2023	10/17/2023	10/18/2023
Method Group	Analyte	CAS #	Units										
001-Mclouth_VOC	1,1,1-TRICHLOROETHANE	71-55-6	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,1,2,2-TETRACHLOROETHANE	79-34-5	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,1,2-TRICHLOROETHANE	79-00-5	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,1-DICHLOROETHANE	75-34-3	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,1-DICHLOROETHENE	75-35-4	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,2,3-TRICHLOROBENZENE	87-61-6	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,2,3-TRICHLOROPROPANE	96-18-4	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,2,4-TRICHLOROBENZENE	120-82-1	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,2,4-TRIMETHYLBENZENE	95-63-6	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	106-93-4	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,2-DICHLOROBENZENE	95-50-1	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,2-DICHLOROETHANE	107-06-2	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,2-DICHLOROPROPANE	78-87-5	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,3-DICHLOROBENZENE	541-73-1	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	1,4-DICHLOROBENZENE	106-46-7	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	2-HEXANONE	591-78-6	ug/l								10 U	10 U	10 U
001-Mclouth_VOC	ACETONE	67-64-1	ug/l								7 J	8.3 J	9.6 J
001-Mclouth_VOC	BENZENE	71-43-2	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	BROMOCHLOROMETHANE	74-97-5	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	BROMODICHLOROMETHANE	75-27-4	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	BROMOFORM	75-25-2	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	BROMOMETHANE	74-83-9	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	CARBON DISULFIDE	75-15-0	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	CARBON TETRACHLORIDE	56-23-5	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	CHLOROBENZENE	108-90-7	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	CHLOROETHANE	75-00-3	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	CHLOROFORM	67-66-3	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	CHLOROMETHANE	74-87-3	ug/l								5 U	5 U	1.7 J
001-Mclouth_VOC	CIS-1,2-DICHLOROETHYLENE	156-59-2	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	CIS-1,3-DICHLOROPROPENE	10061-01-5	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	CYCLOHEXANE	110-82-7	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	DIBROMOCHLOROMETHANE	124-48-1	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	DICHLORODIFLUOROMETHANE	75-71-8	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	ETHYLBENZENE	100-41-4	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	ISOPROPYLBENZENE (CUMENE)	98-82-8	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	m,p-Xylene	179601-23-1	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	METHYL ACETATE	79-20-9	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	METHYL ETHYL KETONE (2-BUTANONE)	78-93-3	ug/l								10 U	10 U	10 U
001-Mclouth_VOC	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	108-10-1	ug/l								10 U	10 U	10 U
001-Mclouth_VOC	METHYLCYCLOHEXANE	108-87-2	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	METHYLENE CHLORIDE	75-09-2	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	O-XYLENE (1,2-DIMETHYLBENZENE)	95-47-6	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	STYRENE	100-42-5	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	TERT-BUTYL METHYL ETHER	1634-04-4	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	TETRACHLOROETHENE (PCE)	127-18-4	ug/l								0.63 J	5 U	5 U
001-Mclouth_VOC	TOLUENE	108-88-3	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	TRANS-1,2-DICHLOROETHENE	156-60-5	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	TRANS-1,3-DICHLOROPROPENE	10061-02-6	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	TRICHLOROETHENE (TCE)	79-01-6	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	TRICHLOROFLUOROMETHANE	75-69-4	ug/l								5 U	5 U	5 U
001-Mclouth_VOC	VINYL CHLORIDE	75-01-4	ug/l								5 U	5 U	5 U
003-Mclouth_PestPCB	ALDRIN	309-00-2	ug/l		0.05 UJ	0.053 UJ							
003-Mclouth_PestPCB	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	319-84-6	ug/l		0.05 UJ	0.053 UJ							
003-Mclouth_PestPCB	ALPHA ENDOSULFAN	959-98-8	ug/l		0.05 UJ	0.053 UJ							
003-Mclouth_PestPCB	ALPHA-CHLORDANE	5103-71-9	ug/l		0.05 UJ	0.053 UJ							

Table I - QC Sample Results

				Sample #	EB-SD-Y1-01	EB-SD-Y1-02	EB-SD-Y1-03	FB-SD-Y1-01	FB-SD-Y1-02	FB-SD-Y1-03	TB-SD-Y1-01	TB-SD-Y1-02	TB-SD-Y1-03
				Sample Type	EB	EB	EB	FB	FB	FB	TB	TB	TB
				Sample Date	10/16/2023	10/17/2023	10/18/2023	10/16/2023	10/17/2023	10/18/2023	10/16/2023	10/17/2023	10/18/2023
Method Group	Analyte	CAS #	Units										
003-Mclouth_PestPCB	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	319-85-7	ug/l		0.05 UJ	0.053 UJ							
003-Mclouth_PestPCB	BETA ENDOSULFAN	33213-65-9	ug/l		0.1 UJ	0.11 UJ							
003-Mclouth_PestPCB	BETA-CHLORDANE	5103-74-2	ug/l		0.05 UJ	0.053 UJ							
003-Mclouth_PestPCB	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	319-86-8	ug/l		0.05 UJ	0.0074 J-							
003-Mclouth_PestPCB	DIELDRIN	60-57-1	ug/l		0.1 UJ	0.003 J-							
003-Mclouth_PestPCB	ENDOSULFAN SULFATE	1031-07-8	ug/l		0.1 UJ	0.11 UJ							
003-Mclouth_PestPCB	ENDRIN	72-20-8	ug/l		0.1 UJ	0.11 UJ							
003-Mclouth_PestPCB	ENDRIN ALDEHYDE	7421-93-4	ug/l		0.1 UJ	0.11 UJ							
003-Mclouth_PestPCB	ENDRIN KETONE	53494-70-5	ug/l		0.1 UJ	0.0097 J-							
003-Mclouth_PestPCB	GAMMA BHC (LINDANE)	58-89-9	ug/l		0.05 UJ	0.053 UJ							
003-Mclouth_PestPCB	HEPTACHLOR	76-44-8	ug/l		0.05 UJ	0.053 UJ							
003-Mclouth_PestPCB	HEPTACHLOR EPOXIDE	1024-57-3	ug/l		0.05 UJ	0.053 UJ							
003-Mclouth_PestPCB	METHOXYCHLOR	72-43-5	ug/l		0.5 UJ	0.53 UJ							
003-Mclouth_PestPCB	P,P'-DDD	72-54-8	ug/l		0.1 UJ	0.11 UJ							
003-Mclouth_PestPCB	P,P'-DDE	72-55-9	ug/l		0.1 UJ	0.11 UJ							
003-Mclouth_PestPCB	P,P'-DDT	50-29-3	ug/l		0.1 UJ	0.11 UJ							
003-Mclouth_PestPCB	PCB-1016 (AROCLOR 1016)	12674-11-2	ug/l		1 UJ	1.1 UJ							
003-Mclouth_PestPCB	PCB-1221 (AROCLOR 1221)	11104-28-2	ug/l		1 UJ	1.1 UJ							
003-Mclouth_PestPCB	PCB-1232 (AROCLOR 1232)	11141-16-5	ug/l		1 UJ	1.1 UJ							
003-Mclouth_PestPCB	PCB-1242 (AROCLOR 1242)	53469-21-9	ug/l		1 UJ	1.1 UJ							
003-Mclouth_PestPCB	PCB-1248 (AROCLOR 1248)	12672-29-6	ug/l		1 UJ	1.1 UJ							
003-Mclouth_PestPCB	PCB-1254 (AROCLOR 1254)	11097-69-1	ug/l		1 UJ	1.1 UJ							
003-Mclouth_PestPCB	PCB-1260 (AROCLOR 1260)	11096-82-5	ug/l		1 UJ	1.1 UJ							
003-Mclouth_PestPCB	PCB-1262 (AROCLOR 1262)	37324-23-5	ug/l		1 UJ	1.1 UJ							
003-Mclouth_PestPCB	PCB-1268 (AROCLOR 1268)	11100-14-4	ug/l		1 UJ	1.1 UJ							
003-Mclouth_PestPCB	TOXAPHENE	8001-35-2	ug/l		5 UJ	5.3 UJ							
012-Mclouth_PFAS	11Cl-PF3OUdS	83329-89-9	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	27619-96-1	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	27619-93-8	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	27619-94-9	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	2H,2H,3H,3H-Perfluorooctanoic acid	914637-49-3	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	3:3 FTCA	356-02-05	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	3-Perfluoroheptyl propanoic acid	812-70-4	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	9Cl-PF3ONS	73606-19-6	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	ADONA	958445-44-8	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	FHUEA	70887-88-6	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	FOUEA	70887-84-2	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	Hexafluoropropylene oxide dimer acid	13252-13-6	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	HQ-115	90076-65-6	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamide	4151-50-2	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamidoacetic acid	2991-50-6	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	N-ethyl perfluorooctanesulfonamidoethanol	1691-99-2	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamide	31506-32-8	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	N-methyl perfluorooctanesulfonamidoethanol	24448-09-7	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	Nonafluoro-3,6-dioxaheptanoic acid	151772-58-6	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	perfluoro-1-decanesulfonate (PFDS)	2806-15-7	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	perfluoro-1-heptanesulfonate (PFHpS)	21934-50-9	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	perfluoro-1-nonanesulfonate (PFNS)	98789-57-2	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	perfluoro-1-pentanesulfonate (PFPeS)	630402-22-1	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	Perfluoro-3-methoxypropanoic acid	377-73-1	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	Perfluoro-4-methoxybutanoic acid	863090-89-5	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	Perfluorobutanesulfonic acid	375-73-5	ng/l	49.6 UA	51.6 UA	49.3 UA	50.4 UA	49.7 UA	49.8 UA				
012-Mclouth_PFAS	perfluorobutyl sulfonate	29420-49-3	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	Perfluorodecanoic acid	335-76-2	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	Perfluorododecanoic acid	307-55-1	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	Perfluoroheptanoic acid	375-85-9	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				
012-Mclouth_PFAS	Perfluorohexanoic acid	307-24-4	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA				

Table I - QC Sample Results

				Sample #	EB-SD-Y1-01	EB-SD-Y1-02	EB-SD-Y1-03	FB-SD-Y1-01	FB-SD-Y1-02	FB-SD-Y1-03	TB-SD-Y1-01	TB-SD-Y1-02	TB-SD-Y1-03
				Sample Type	EB	EB	EB	FB	FB	FB	TB	TB	TB
				Sample Date	10/16/2023	10/17/2023	10/18/2023	10/16/2023	10/17/2023	10/18/2023	10/16/2023	10/17/2023	10/18/2023
Method Group	Analyte	CAS #	Units										
012-Mclouth_PFAS	perfluorohexyl sulfonate	3871-99-6	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA			
012-Mclouth_PFAS	Perfluorononanoic acid	375-95-1	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA			
012-Mclouth_PFAS	Perfluorooctanesulfonamide	754-91-6	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA			
012-Mclouth_PFAS	perfluorooctanoate	3825-26-1	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA			
012-Mclouth_PFAS	perfluorooctyl sulfonate	2795-39-3	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA			
012-Mclouth_PFAS	Perfluoropentanoic acid	2706-90-3	ng/l	49.6 UA	51.6 UA	49.3 UA	50.4 UA	49.7 UA	49.8 UA			
012-Mclouth_PFAS	Perfluorotetradecanoic acid	376-06-7	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA			
012-Mclouth_PFAS	Perfluorotridecanoic acid	72629-94-8	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA			
012-Mclouth_PFAS	Perfluoroundecanoic acid	2058-94-8	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA			
012-Mclouth_PFAS	PFDoS	1260224-54-1	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA			
012-Mclouth_PFAS	PFEESA	117205-07-9	ng/l	9.91 UA	10.3 UA	9.85 UA	10.1 UA	9.94 UA	9.96 UA			
012-Mclouth_PFAS	PFPrA	422-64-0	ng/l	49.6 UA	51.6 UA	49.3 UA	50.4 UA	49.7 UA	49.8 UA			
014-Mclouth_Inorg	Aluminum	7429-90-5	ug/l	20 U	20 U	14 J						
014-Mclouth_Inorg	Antimony	7440-36-0	ug/l	2 U	2 U	2 U						
014-Mclouth_Inorg	Arsenic	7440-38-2	ug/l	1 U	1 U	1 U						
014-Mclouth_Inorg	Barium	7440-39-3	ug/l	10 U	10 U	10 U						
014-Mclouth_Inorg	Beryllium	7440-41-7	ug/l	1 U	1 U	1 U						
014-Mclouth_Inorg	Cadmium	7440-43-9	ug/l	1 U	1 U	1 U						
014-Mclouth_Inorg	Calcium	7440-70-2	ug/l	500 U	500 U	500 U						
014-Mclouth_Inorg	Chromium	7440-47-3	ug/l	2 U	2 U	2 U						
014-Mclouth_Inorg	Cobalt	7440-48-4	ug/l	1 U	1 U	1 U						
014-Mclouth_Inorg	Copper	7440-50-8	ug/l	2 U	2 U	2 U						
014-Mclouth_Inorg	CYANIDE	57-12-5	ug/l	10 U	10 U	10 U						
014-Mclouth_Inorg	Iron	7439-89-6	ug/l	200 U	200 U	200 U						
014-Mclouth_Inorg	Lead	7439-92-1	ug/l	1 U	1 U	1 U						
014-Mclouth_Inorg	Magnesium	7439-95-4	ug/l	500 U	500 U	500 U						
014-Mclouth_Inorg	Manganese	7439-96-5	ug/l	1 U	1 U	1 U						
014-Mclouth_Inorg	Mercury	7439-97-6	ug/l	0.2 U	0.2 U	0.2 U						
014-Mclouth_Inorg	Nickel	7440-02-0	ug/l	1 UJ	1 UJ	1 UJ						
014-Mclouth_Inorg	Potassium	7440-09-7	ug/l	500 U	500 U	500 U						
014-Mclouth_Inorg	Selenium	7782-49-2	ug/l	5 U	5 U	5 U						
014-Mclouth_Inorg	Silver	7440-22-4	ug/l	1 U	1 U	1 U						
014-Mclouth_Inorg	Sodium	7440-23-5	ug/l	500 U	500 U	500 U						
014-Mclouth_Inorg	Thallium	7440-28-0	ug/l	1 U	1 U	1 U						
014-Mclouth_Inorg	Vanadium	7440-62-2	ug/l	5 U	5 U	5 U						
014-Mclouth_Inorg	Zinc	7440-66-6	ug/l	5 U	5 U	5 U						

Acronyms:

CAS # - Chemical Abstract Service Number

EB - Equipment Blank

FB - Field Blank

TB - Trip Blank

A - Unvalidated Result

J - The identification of the analyte is acceptable; the reported value is an estimate

J- - The result is an estimated quantity, but the results may be biased low

U - Not Detected

Attachment C

Geotechnical Data

CDM Smith Geotechnical Laboratory Testing Summary Sheet

Client: EPA Region 5 | Project Number: 107178-281860 | Reviewed By: M. Polsky - Lab Manager

Project Name: McLouth Steel Superfund Site, OU3 Y1 | Task: 3501-5F0033-0001.2.1.2

Project Location: Trenton, MI | Assigned By: T. Bennett | Date Reviewed: 11/2/2023

Sample Date	Sample	Identification Tests												Soil Description
		Water Content %	LL %	PL %	Gravel %	Sand %	Fines %	Organic Content %	Shear Strength (psf)	Remolded Shear Strength (psf)	Por-osity %	Perm-eability	Spec. Grav.	
10/18/2023	MSTC23 SD02 0-1.0	98.0	76	33	0.0	3.1	96.9	8.7	63.1	59.9			2.588	Gray organic clay
10/19/2023	MSTC23 SD03 0-1.0	91.3	69	32	0.8	12.3	86.9	7.4	21.4	1.1			2.324	Gray organic clay
10/18/2023	MSTC23 SD20 0-1.0	17.1	NP	NP	3.1	59.2	37.7	0.7	441.2	17.9			2.621	Gray silty sand
10/18/2023	MSTC23 SD01-SS 0-0.5	56.3			22.9	50.0	27.1							Gray silty sand with gravel
10/18/2023	MSTC23 SD05-SS 0-0.5	60.6			0.0	81.8	18.2							Gray-brown silty sand
10/17/2023	MSTC23 SD07-SS 0-0.5	96.4			1.5	56.8	41.7							Gray silty sand
10/16/2023	MSTC23 SD20-SS 0-0.5	25.4			9.3	84.0	6.7							Gray-brown poorly graded sand with silt
10/16/2023	MSTC23 SD20 0-1.0	31.2			6.3	81.4	12.3							Gray-brown silty sand
10/16/2023	MSTC23 SD20 1.0-2.0	16.7			12.5	77.3	10.2							Gray-brown poorly graded sand with silt