



Karen A. Cahill
Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 7
5786 Widewaters Parkway
Syracuse, NY 13214-1867

December 4, 2023

RE: Resubmittal of the Revised Analysis of Alternatives/Remedial Work Plan and Comment Responses - 800 Hiawatha Boulevard West, Syracuse, NY (Former Roth Steel Site)
NYSDEC BCP Site No. C734083

Dear Ms. Cahill,

On behalf of the Onondaga County Industrial Development Agency (OCIDA), JMT of New York, Inc. is resubmitting this Revised Analysis of Alternatives/Remedial Work Plan (AA/RWP) for the 800 Hiawatha Boulevard West (Former Roth Steel) Site in Syracuse, NY. We have also prepared the following responses to NYSDEC's November 2, 2023 comment letter on the August 7, 2023 Revised Alternatives Analysis/Remedial Work Plan for the Site. These responses have been incorporated into the updated AA/RWP. As such, OCIDA/JMT believe that we have addressed all of NYSDEC's concerns on the AA/RWP and that this resubmission (along with the requested "Pre-Design" Workplan, per comment 6) is an acceptable document to facilitate remedy implementation.

The November 2, 2023 NYSDEC comments are presented in italics, followed by the OCIDA/JMT response.

Comment 1: *Section 1.2 General Site Description: It must be stated that the BCP site is bounded to the west by the Former Roth Steel Site DEC Site No. 734083 and Cannon Tire Inc.*

Response: The suggested edits have been made.

Comment 2: *Section 2.4.1 Soil Quality, VOCs and SVOCs: The sixth sentence under OU-2 states that are "two locations (23-B-33, 23-B-33)" with soil cleanup objectives (SCOs) exceedances in the top foot. The sample IDs provided in the parentheses are the same. Please correct this typo.*

Response: The typo has been corrected to "(23-B-33, 23-B-34)".

Comment 3: *Section 3.0 Anticipated Future Use: The use of "vacant" specified for OU-1 is not an approved use per Part 375-1.8(g). This must be modified to state "Industrial". Similarly, per Part 375-1.8(g)(2)(iii), passive recreation is considered a commercial use, therefore the use specified for OU-3 "Trail (Passive Recreational)" must be modified to read "Commercial". The remedial actions previously undertaken in OU-3 meet the requirements for commercial and passive recreational uses.*

Response: Acknowledged. This language has been modified to reflect either Commercial or Industrial, as appropriate.

Comment 4: *Section 6.0 Remedial Action Objectives (RAOs). The RAOs as listed on DEC's public website must be provided verbatim, and RAOs that do not apply to this site must be removed (i.e., sediment).*

Response: Acknowledged. The RAOs were revised to reflect NYSDEC's language verbatim. Sediment and surface water RAOs were excluded since they are not applicable to the Site (per discussion with NYSDEC).

Comment 5: *Section 7.4.1 Selection of Remedial Alternatives, 3rd paragraph:*

- *The first sentence states that Alternative 2 would achieve “Restricted Use” criteria. This must be clarified to comply with Part 375-1.8(g) as stated in Comment 3 above.*

Response: Acknowledged. This has been modified to indicate Commercial or Industrial Use.

- *The fifth sentence states that “Subsurface soils that exceed Industrial Use criteria would require excavation and offsite disposal.” There are several locations within the proposed soil cover area that exceed Industrial Use (IU) SCO in the subsurface, particularly for metals. Additionally, several metals exceed IU SCO in B-9 (4.5-5 feet), 17-B-18 (2-3 feet) and P-13 (4 feet) which are all located beyond the proposed cover area. This must be clarified.*

Response: This sentence refers to OU-1. The intent is to remove PCBs exceeding the industrial use threshold of 25 ppm, as detailed in Section 8.1.2. This has been clarified in the updated AARWP.

Comment 6: *Section 8.1.1 Soil Cap / Cover Systems:*

- *The first paragraph states that additional surface soil sampling will be needed to verify cap limits. This section must be modified to state that the additional surface soil sampling will be conducted as part of a pre-design investigation per an approved work plan to be submitted to and approved by DEC.*

Response: We have indicated that a pre-design workplan will be submitted with the suggested sample locations, depth intervals, and testing parameters. OCIDA firmly believes that no additional sampling is necessary, beyond this subsequent pre-design effort.

- *The proposed surface soil sampling discussed in this section and shown on Figure 12 lacks the resolution needed to determine the limits for the revised site cover as stated in Comment 1 above. The entire site surface, post remedy, will need to meet IU SCO and be certified by a New York State licensed professional engineer (NYSPE). Additional surface soil samples as shown in the attached figure must be collected from 0 to 2 inches and 6 to 12 inches below ground surface and be analyzed for PCBs, metals and polyaromatic hydrocarbons (PAHs). Alternate sampling points may be submitted by the certifying NYSPE within the pre-design investigation work plan specified in Comment 6, first bullet.*

Response: Acknowledged. Upon further discussion with NYSDEC, the future sample depth intervals will be 0 to 2 inches and 2 to 12 inches. This is consistent with prior sampling conducted in 2023. The additional sample locations and parameters suggested by NYSDEC were added to Figure 12.

- *Since sample location (22)B-35 is no longer located within the proposed cover area, surface soil samples will also need to be collected in this location (the previous sample was collected from the entire zero to two foot interval).*

Response: It is JMT's professional opinion that additional PFAS data is unnecessary. The sample was collected in the top 16 inches, which is only slightly deeper than the Part 375 requirement of top 12 inches. Only trace PFAS levels were detected in the sample, 2-3 orders of magnitude below Industrial SCOs. No PFAS soil samples exceed Industrial SCOs. PCBs, metals, and SVOC data will be collected at this location.

Comment 7: *Section 8.1.2 Soil Excavation Areas OU-1: The fourth sentence states that soil between 12 and 35 inches bgs will be considered to have a PCB concentration greater than 25 ppm, “unless pre-excavation*

sampling confirms otherwise.” Please clarify the meaning of this statement. All PCB-contaminated soil excavation on this site will be subject to USEPA approval per TSCA. If the intent is to conduct additional PCB sampling prior implementation of the remedy, then this sampling must be included in the pre-design investigation work plan.

Response: Additional Pre-Design samples from soil intervals 12 to 24” and 24 to 35” for PCB analysis have been included in the updated AARWP.

Comment 8: *Table 5 Groundwater Analytical Results – PCBs: Historical results must be provided in a separate table as was done for the other compound groups.*

Response: The title of Table 5 has been changed to "Historical PCBs". No PCB groundwater table was prepared for Remedial Investigation sampling because all results were for ND. Additional clarifying text was added to the updated AARWP to eliminate confusion.

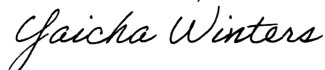
Comment 9: *Figure 12 - This figure must be revised, or another figure provided in the work plan that shows only those locations in which surface soil samples (0 to 1 foot deep or less) were collected per Comment 6 such that the proposed extent of the site cover can be appropriately evaluated by the DEC.*

Response: The additional NYSDEC-recommended sample locations have been added to Figure 12 in the updated AARWP. In the future Pre-Design Investigation workplan, we will provide a new figure that will only include those existing locations with surface soil samples (0 to 1 foot deep or less).

We appreciate the Agencies' review time and consideration of our responses. We look forward to moving this project into the remedy implementation phase. If you wish to discuss anything further, please reach out to us.

Sincerely,

JMT of New York, Inc.



Yaicha Winters
Senior Associate

cc:

R. Petrovich, OCIDA
N. Lowery, OCIDA
N. Stevens, OCIDA
J. Davis, Barclay Damon
M. Sheen, NYSDEC
G. Priscott, NYSDEC
S. McLaughlin, NYSDOH
S. Wagh, NYSDOH
J. Ciampa, JMT



REVISED ANALYSIS OF ALTERNATIVES AND REMEDIAL WORK PLAN: BROWNFIELD CLEANUP PROGRAM

**800 HIAWATHA BOULEVARD WEST, SYRACUSE, NEW YORK
(FORMER ROTH STEEL SITE)**

NYSDEC BCP SITE #C734083

Prepared for:

New York State Department of Environmental Conservation
Region 7
5786 Widewaters Parkway
Syracuse, NY 13214-1867

Prepared by:

JMT of New York, Inc.
19 British American Boulevard
Latham, New York 12110

On behalf of:

Onondaga County Industrial Development Agency
333 West Washington Street, Suite 130
Syracuse, New York 13202

Submitted: August 7, 2023

Resubmitted: December 4, 2023

Project No: 16-S0140N

A decorative graphic in the bottom right corner of the page, consisting of four overlapping triangles pointing towards the top right. The triangles are colored in shades of blue and gray, with the darkest blue triangle at the bottom right and the lightest gray triangle at the top left.



TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	PROJECT AUTHORIZATION AND PURPOSE	1
1.2	GENERAL SITE DESCRIPTION	2
1.3	HISTORICAL SITE USES AND SOURCES OF SITE CONTAMINATION.....	3
1.4	CURRENT SITE USE	3
1.5	REMEDIAL ACTIVITIES CONDUCTED BY OCIDA	3
2.0	ENVIRONMENTAL INVESTIGATION SUMMARY	5
2.1	PREVIOUS ENVIRONMENTAL INVESTIGATIONS.....	5
2.2	BCP REMEDIAL INVESTIGATION AND PRE-REMEDIAL DESIGN SAMPLING	6
2.3	STANDARDS, CRITERIA AND GUIDELINES.....	6
2.3.1	Soils SCGs.....	7
2.3.2	Groundwater SCGs	8
2.4	SUMMARY OF SOIL, GROUNDWATER, AND SOIL VAPOR ANALYTICAL RESULTS.....	8
2.4.1	Soil Quality	8
2.4.2	Groundwater Flow and Quality	12
2.4.3	Sub-Slab Vapor	15
3.0	ANTICIPATED FUTURE USE	16
4.0	QUALITATIVE EXPOSURE ASSESSMENT.....	17
4.1	EXPOSURE SETTING	17
4.2	CURRENT AND FORESEEABLE EXPOSURE PATHWAYS.....	17
4.3	PRELIMINARY EVALUATION OF FATE AND TRANSPORT.....	18
4.4	POTENTIAL FOR OFF-SITE MIGRATION	19
5.0	NEED FOR REMEDIATION AND PROPOSED CLEANUP TRACK	21
5.1	SOIL.....	21
5.1.1	Operable Unit 1	21
5.1.2	Operable Unit 2	22
5.2	GROUNDWATER.....	22
5.3	SUBSURFACE VAPOR	22
6.0	REMEDIAL ACTION OBJECTIVES (RAOS)	24
6.1	REMEDIAL ACTION OBJECTIVES (RAOs)	24
6.1.1	Groundwater	24
6.1.2	Soil	24
6.1.3	Soil Vapor	25
7.0	ANALYSIS OF ALTERNATIVES	26
7.1	INTRODUCTION.....	26



7.2	GENERAL RESPONSE ACTIONS	27
7.2.1	Soil Response Actions	27
7.2.2	Groundwater Response Actions	29
7.3	SUMMARY OF RETAINED RESPONSE ACTIONS	31
7.4	EVALUATION OF REMEDIAL ALTERNATIVES	31
7.4.1	Selection of Remedial Alternatives.....	31
7.4.2	Evaluation Criteria	32
7.4.3	Evaluation of Remedial Alternatives	34
7.4.4	Summary of Alternatives Comparison to Criteria	40
7.5	SELECTED REMEDY	40
8.0	ENGINEERING DESIGN AND IMPLEMENTATION	41
8.1	ENGINEERING CONTROLS	41
8.1.1	Soil Cap / Cover System	41
8.1.2	Soil Excavation Areas	42
8.1.3	Vapor Control System	44
8.2	INSTITUTIONAL CONTROLS	44
9.0	REMEDIAL CONSTRUCTION ACTIVITIES	45
9.1	CONSTRUCTION HEALTH AND SAFETY PLAN	45
9.2	COMMUNITY HEALTH AND SAFETY.....	45
9.2.1	Community Air Monitoring.....	45
9.2.2	Site Access and Traffic Control.....	45
9.3	DATA QUALITY OBJECTIVES QUALITY AND ASSURANCE/QUALITY CONTROL PLAN	45
9.4	STORMWATER POLLUTION PREVENTION PLAN	45
9.5	PERMITS	46
9.6	SITE PLANS AND AS-BUILT DRAWINGS	46
9.7	SITE SECURITY, CONTROL, AND ACCESS	46
9.8	EQUIPMENT AND MATERIAL STORAGE AND LAY DOWN AREAS	46
9.9	PPE, EQUIPMENT AND PERSONNEL DECONTAMINATION PROCEDURES.....	46
9.10	VAPOR, ODOR, AND DUST CONTROLS.....	46
9.11	GROUNDWATER.....	47
9.12	UTILITY DESIGNATION	47
10.0	REPORTING AND DOCUMENTATION.....	48
10.1	MONTHLY PROGRESS REPORT	48
10.2	ON-SITE RECORD KEEPING/DOCUMENTATION	48
10.3	FINAL ENGINEERING REPORT.....	48
10.4	OPERATION, MAINTENANCE, AND MONITORING PLAN.....	49



11.0	PROJECT MANAGEMENT.....	50
11.1	KEY PARTICIPANTS AND RESPONSIBILITIES.....	50
11.2	PROJECT COMMUNICATION AND MANAGEMENT	50
12.0	SCHEDULE.....	51
13.0	REFERENCES.....	52



TABLES

TABLE 1A	Historical Soil Analytical Results - PCBs
TABLE 1B	Remedial Investigation Soil Analytical Results – PCBs
TABLE 1C	Trail-Related Samples - PCBs
TABLE 1D	2023 Supplemental Soil Samples - PCBs
TABLE 2A	Historical Soil Exceedances - Metals
TABLE 2B	Remedial Investigation Soil Analytical Results – Metals
TABLE 2C	Trail-Related Samples – Metals
TABLE 2D	2023 Supplemental Soil Samples - Metals
TABLE 3A	Historical Soil Exceedances -SVOCs
TABLE 3B	Remedial Investigation Soil Analytical Results – SVOCs
TABLE 3C	2023 Supplemental Soil Samples - SVOCs
TABLE 4	Remedial Investigation Soil Analytical Results -VOCs
TABLE 5	Groundwater Analytical Results – Historical PCBs
TABLE 6	Historical Groundwater Analytical Results - SVOCs
TABLE 7A	Historical Groundwater Analytical Results - Metals
TABLE 7B	Remedial Investigation Groundwater Analytical Results - Metals
TABLE 8A	Historical Groundwater Analytical Results - VOCs
TABLE 8B	Remedial Investigation Groundwater Analytical Results - VOCs
TABLE 9	Remedial Investigation Sub-Slab Vapor Analytical Results – VOCs
TABLE 10A	Emerging Contaminants Groundwater Results
TABLE 10B	2023 Emerging Contaminants Soil Results
TABLE 11	Concrete Floor Samples – PCBs

FIGURES

FIGURE 1	Site Location Map
FIGURE 2	Aerial Site Map
FIGURE 3	Operable Units
FIGURE 4	Sample Location Map
FIGURE 5	PCB Concentrations in Soil
FIGURE 6	Metals Concentrations in Soil
FIGURE 7	SVOCs and VOCs Exceedances in Soil
FIGURE 8	PCBs and SVOCs Exceedances in Groundwater
FIGURE 9	Metals Exceedances in Groundwater
FIGURE 10	VOCs Exceedances in Groundwater



FIGURE 11 Emerging Contaminants in Groundwater

FIGURE 12 Proposed Remediation Map

APPENDICES

APPENDIX A Onondaga Lake Trail Related Sample Summary

APPENDIX B Supplemental Test Pits

APPENDIX C General Excavation Plan

APPENDIX D 2023 Supplemental Lab Data

APPENDIX E 2023 DUSR



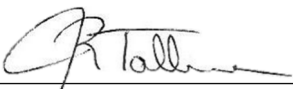
CERTIFICATION

I, Janet Tallman, certify that I am currently a NYS registered professional engineer and that this Remedial Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Certified by:

Janet Tallman, P.E.

Professional Engineer



Signature

December 1, 2023

Date



1.0 INTRODUCTION

1.1 PROJECT AUTHORIZATION AND PURPOSE

This Revised Analysis of Alternatives/Remedial Work Plan (AA/RWP) for the Former Roth Steel Site has been prepared by JMT of New York, Inc. on behalf of Onondaga County Industrial Development Agency (OCIDA). Prior AA/RWPs for the site were submitted on August 13, 2021 and March 25, 2022. This Revised AA/RWP is being submitted to address remaining comments from NYSDEC’s December 21, 2021 letter and present the results of supplemental soil sampling completed in 2023. That soil sampling was completed to address General Comments 4, 5, and 6 presented in the December 21, 2021 letter. Supplemental soil sampling included PFAS, metals, PCBs, and SVOC testing, as proposed by JMT on January 13, 2023 and approved by NYSDEC on January 20, 2023. The Former Roth Steel Site is located at 800 Hiawatha Boulevard West in the City of Syracuse, Onondaga County, New York and initially consisted of approximately 23 acres of land. See Figure 1 for a general site location map. Roth Steel previously operated a scrap-metal processing facility at the Site since 1967 and abandoned the property in 2014 during the bankruptcy process. OCIDA purchased the property from the bankruptcy trustee on October 27, 2015. On behalf of OCIDA, a Brownfield Cleanup Program (BCP) application was submitted to NYSDEC by JMT (formerly Spectra) and accepted. A Brownfield Cleanup Agreement (BCA) was executed for the Site on January 21, 2016, with OCIDA being designated as a “volunteer”. OCIDA subsequently submitted an amendment to the BCP application on April 13, 2021, that removed portions of the site from the BCP program. The amendment was deemed complete on April 27 and executed on August 24; it reduced the site size to 15.1 acres and completely removed one of the prior BCP subareas (Operable Unit 4). The Amendment also significantly reduced the size of prior Operable Unit 1. Operable Unit 2 was unchanged and OCIDA is proposing that Operable Unit 3 be expanded to the northwest for a distance of approximately 300 ft. The revised Operable Unit (OU) areas are shown on Figures 2 and 3.

This AA/RWP is prepared based upon the requirements in ECL 27-1411, 1413 and 1415; 6 NYCRR Part 375 and NYSDEC Technical Guidance for Site Investigation and Remediation (DER-10); and USEPA 40 CFR 761.61. The AA/RWP incorporates the findings of the Remedial Investigation conducted under the BCP by JMT. The scope of work for the Remedial Investigation was approved by NYSDEC, in consultation with USEPA. Those results were presented in a Remedial Investigation Report (RIR) that was initially submitted in March 2018 and subsequently revised in February 2019. NYSDEC conditionally approved the RIR on March 14, 2019. Prior to

the RI, JMT also completed investigation activities as part of an Interim Remedial Measure (IRM), primarily related to the Onondaga Lake Trail Project, which crosses the northern part of the site. Those results were presented in a Self-Implementing Cleanup and Disposal Notification (SICDN) and the Revised IRM Work Plan, dated December 2016 and October 2016, respectively. As a result of design changes to the Trail Project, revised IRM/SICDN plans were submitted in June 2019, September 2019, and June 2020. Remedial activities to allow construction of the Trail were approved by NYSDEC/USEPA and were implemented by OCDOT. A map showing the Trail Project confirmatory samples is included in Appendix A. In May 2021 a limited number of wells were sampled for emerging contaminants. The results are discussed in this report and summarized on Figure 11.

The purpose of the AA/RWP is to evaluate potential remedial measures and recommend a cleanup approach that is protective of human health and the environment, considering the future land use at the site. Since remedial activities for the Trail area (OU-3) have already been completed, this document will focus on remedial alternatives for OU-2 and the small remaining section of OU-1. This report includes discussions on the site history, nature/extent of contamination, remedial action objectives, current/reasonably anticipated land use, a qualitative exposure assessment, and an analysis of alternatives. Since OCIDA is a “volunteer” in the BCP, the remedial evaluation will consider onsite contamination. The Alternatives Analysis will evaluate BCP “Track 1” and “Track 4” remedies. A General Excavation Plan and Community Air Monitoring Plan (CAMP) are also presented.

1.2 GENERAL SITE DESCRIPTION

Although this AA/RWP primarily focuses on the portions of OU-1 and OU-2 that remain in the BCP, some information is also included on the overall Roth property since it provides a broader understanding of physical features and past property usage. The entire former Roth property is approximately 23 acres in size, located at the southern end of Onondaga Lake. As previously indicated, the BCP portion of the site is 15.1 acres in size. It is bounded by Former Roth Steel Site NYSDEC No. 734083 and Cannon Tire, Inc. to the west; CSX Railroad Tracks to the northwest; the Metropolitan Wastewater Treatment Plant owned by Onondaga County to the north/northeast; Hiawatha Boulevard West to the east/southeast; and parcels owned by Glen A. and Christina L. Stewart and Salt City Enterprises, LLC. to the south (see Figures 1 and 2). The property has generally low topographic relief and ranges in elevation from approximately 370 to 375 feet. Regional surface water drainage is to the north-northwest towards Onondaga Lake. The ground

cover at the BCP portion of the Site is primarily unvegetated with dense, packed gravel or fill. Waste debris (Automotive Shredder Residue or ASR, metal fragments, plastic, glass, etc.) are present at the surface and in the subsurface within the remaining section of OU-1 and large portions of OU-2. The BCP property previously contained six abandoned buildings, in varying structural conditions and a railroad spur that is connected to an active rail line. Buildings 1 through 6 were located in OU-2. The six buildings were demolished by OCIDA in Fall 2018, but the slabs remain.

OU-3 is a narrow strip of land located along the north boundary of the Site, immediately south of the Metropolitan Sewage Treatment Plant. It is approximately 1.7 acres in size and has been developed as part of the Onondaga Lake Trail. The Trail is primarily paved with bordering vegetative areas. The northwest section of the Trail on the Roth property contains a pedestrian bridge which rises to span the railroad tracks located just north of the property boundary.

1.3 HISTORICAL SITE USES AND SOURCES OF SITE CONTAMINATION

The Former Roth Steel metal recycling facility operated on the property from 1967 to 2014 in a commercial/industrial zoned area. The facility extracted ferrous and non-ferrous metals from scrap items, primarily automobiles. Vehicles and other scrap materials arrived onsite, were drained of fluids and shredded. The central and west parts of OU-2 were primarily used for vehicle and scrap metal storage. OU-3 was primarily used as a roadway, called Duke Drive. The section of OU-1 remaining in the BCP was undeveloped but partly contains a former ASR Disposal Cell.

1.4 CURRENT SITE USE

Roth Steel was the sole owner of the Site since 1967 until OCIDA's purchase from the bankruptcy trustee in October 2015. Most of the salvage operation equipment was removed prior to OCIDA's purchase. The current BCP Site is vacant and contains the six former building slabs. It is surrounded by a locked fence, other than the northwest perimeter, which is bounded by an active rail-line. As stated previously, the northern strip of the Site (OU-3) was remediated and developed as a pedestrian trail by Onondaga County DOT.

1.5 REMEDIAL ACTIVITIES CONDUCTED BY OCIDA

Since OCIDA purchased the property, it has proactively implemented several Interim Remedial Measures (IRMs) to reduce public and environmental risk. The activities described below were completed on the current BCP site, as well as the larger overall Roth Steel property. In August 2016, a locked fence was installed along Hiawatha Boulevard and a section of damaged fence

along the northwest section of the property was repaired. In November 2015, JMT and its subcontractor (Action Technical Services) performed an initial IRM at the request of the NYSDEC, to consolidate and secure various 55-gallon liquid drums, assorted plastic containers, aerosol cans, paint cans, and abandoned automotive fuel/propane tanks. These inventoried materials were moved, secured within Building 5, and later taken offsite for disposal. The majority of these drums were randomly located throughout the OU-2 portion of the current Site.

In addition, other liquid drums (water and oil) were moved from outside Buildings 1 and 2 into Building 5 for characterization and ultimately, off-site disposal. Those drums were moved by Paragon Environmental Services in June 2016 and included five partially filled oil drums (labeled as hydraulic oil) and one rainwater drum. In addition, a drum of suspected PCB capacitors, found in Building 4, was also removed from the Site.

Between December 22, 2016 and January 23, 2017, Veolia transported these various waste materials to off-site disposal facilities. The majority of the wastes (hazardous and non-hazardous) were taken to the Veolia facility in West Carrollton, Ohio. The capacitors were taken to a U.S. Ecology facility in Belleville, Michigan. In total, 56 drums of “auto waste” liquids were removed, including three that were classified as hazardous waste. Removal also included one drum of mineral spirits, one lab pack of aerosol cans/paints and drilling waste generated by CHA in 2016 (trail-related geotechnical borings). The characterization and disposal of the above-described materials is discussed in a Revised IRM Work Plan (October 2016) and an IRM Completion Report (June 21, 2017).

Former Buildings 1 through 6 on the current BCP site were demolished in Fall 2018, in accordance with plans approved by USEPA, NYSDEC, and NYSDOL. In addition, other miscellaneous drums (containing solids) found around the site (primarily in OU-2) were removed. The drums were characterized and sent for disposal at appropriate facilities. One drum contained hazardous solids (PCBs greater than 50 ppm). In addition, two bins from Building 4, containing apparent process waste (shredded metal and wire), had hazardous levels of cadmium. The drum with elevated PCBs and the two bins were removed from the site and sent for disposal as hazardous waste.

2.0 ENVIRONMENTAL INVESTIGATION SUMMARY

2.1 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Prior to JMT conducting the Remedial Investigation, the Former Roth Steel facility was subject to several investigations since 1968. These investigation activities were discussed in more detail in the Remedial Investigation Report and are briefly summarized below. Since these investigations were completed when the Site was more expansive, they included environmental activities on the entire Former Roth Steel property. In subsequent sections of the report, discussions on analytical data are limited to the current BCP Site.

- **ASR Characterization Report (Baumgartner & Associates, 1993)**

At the request of the NYSDEC, a study was conducted to investigate the chemical characteristics of ASR on the Roth Steel property. Two areas of concern were identified, referred to as ASR Waste Cells #1 and #2. As discussed in the RIR, analytical data from the 1993 investigation is suspect and is not included in this report. A portion of the ASR cells are beneath the pedestrian bridge in OU-3 and extend into a section of OU-1.

- **Limited Phase II Investigation (Passero Associates, 2007)**

Passero Associates conducted a limited Phase II ESA to characterize the condition of soil and groundwater on the Roth Steel property. They installed five soil borings to investigate ASR Waste Cells #1 and #2. Additional borings were drilled in portions of OU-2 and OU-3.

- **Site Investigation Report (O'Brien & Gere, 2013)**

On December 28, 2007, a consent order (D7-1015-11-04) between Roth Steel Corporation and NYSDEC was signed that required a study of ASR disposal Cells #1 and #2 and other portions of the Site. This work was carried out by Brown and Caldwell, AECOM, and O'Brien and Gere. A Site Investigation Report prepared by O'Brien & Gere (2013) summarized these activities.

Historic sample locations in the portion of the Former Roth Site that remains in the BCP, with symbols referenced to the specific study, are shown on Figure 4.

In addition to these studies, JMT and CHA separately completed testing in 2016, as summarized in the IRM Work Plan reports (July, September, October 2016). These investigations primarily focused on soil sampling within the two ASR Waste Cells and along the alignment of the subsequently completed Lake Trail Extension in OU-3. Between 2018 and 2020, Barton & Loguidice and JMT (as part of the Canalway Trail Project) collected additional environmental samples for PCBs analysis. That data is contained within Appendix A.

2.2 BCP REMEDIAL INVESTIGATION AND PRE-REMEDIAL DESIGN SAMPLING

The Remedial Investigation included additional characterization of soil, groundwater, and soil vapor. The scope of work for the Remedial Investigation was approved by NYSDEC on October 26, 2017, in consultation with NYSDOH and USEPA. The complete results for the entire Former Roth Steel Site are presented in the Revised Remedial Investigation Report, submitted to NYSDEC in February 2019. The Remedial Investigation Report was approved by NYSDEC on March 14, 2019, in consultation with NYSDOH. A summary of the RI results, primarily pertaining to the remaining BCP portions of the property is presented in Section 2.4. Although, some aspects of the groundwater investigation results (e.g., groundwater flow) will be discussed on a broader property-wide basis since groundwater is more regional in nature.

Subsequent to submittal of the Revised RIR, three test pits were also completed by JMT in February 2019 (at the request of DEC) to further assess a “free-product” zone encountered in OU-2 (south of Building 1). The result of this supplemental work is discussed in Section 2.4.1 and the test pit logs are presented in Appendix B. Additional soil sampling was also completed in 2023 to address NYSDEC comments presented in a December 21, 2021 letter. That supplemental soil sampling included PFAS, metals, PCBs, and SVOC testing.

2.3 STANDARDS, CRITERIA AND GUIDELINES

To evaluate the significance of the site investigation sampling results, it is useful to identify the applicable NYSDEC and USEPA Standards, Criteria, and Guidelines (SCGs) for the Site. The SCGs identified are used to quantify the extent of contamination at the Site that may require remedial work based on the cleanup goals. The SCGs for soil and groundwater are as follows:

REVISED ANALYSIS OF ALTERNATIVES AND REMEDIAL WORK PLAN
OCIDA – 800 Hiawatha Blvd. (Former Roth Steel Site), Syracuse, NY

2.3.1 Soils SCGs

The SCGs for soil used in this RI are:

- 6NYCRR Subpart 375-6.8(b) Remedial Program Cleanup Objectives for Protection of Groundwater
- 6NYCRR Subpart 375-6.8(b) Remedial Program Cleanup Objectives for Protection of Public Health - Restricted Commercial Use
- 6NYCRR Subpart 375-6.8(b) Remedial Program Cleanup Objectives for Protection of Public Health - Restricted Industrial Use
- NYSDEC Commissioner Policy – 51 (CP 51) Supplemental Soil Cleanup Objectives (SSCOs) for Commercial/Industrial Use
- 40CFR Part 761.61 PCB Remediation Waste (TSCA, federal)

With regard to PCBs in soil, there are multiple established thresholds that are summarized below.

PCB Concentration (ppm)	Scenario	Regulatory Source
Less than 1	Surface soil (Commercial/Passive Recreational Use)	NYSDEC 6NYCRR 375-6
	High Occupancy Area (uncapped)	USEPA 40 CFR 761.61
1 to less than 10	Subsurface soil (Commercial/Passive Recreational Use)	NYSDEC CP-51
	High Occupancy Area (TSCA Cap)	USEPA 40 CFR 761.61
Less than 25	Industrial Use	NYSDEC 6NYCRR 375-6
	Low occupancy Area	USEPA 40 CFR 761.61
Less than 50	Low occupancy Area - fenced	USEPA 40 CFR 761.61
Less than 100	Low occupancy Area – fenced/TSCA cap	USEPA 40 CFR 761.61

Although USEPA would allow PCBs that exceed 50 ppm to remain onsite in a low occupancy area that is fenced and capped, NYSDEC has indicated that a cleanup level exceeding 50 ppm for a BCP site is generally not acceptable. However, PCBs exceeding 50 ppm in the subsurface were allowed to remain in a small section of the remediated trail in OU-3 due to critical infrastructure

that could not be disturbed. Shallow excavation along with a TSCA-approved cap was implemented in this small area, due to extenuating circumstances.

2.3.2 Groundwater SCGs

The SCGs for groundwater use in this RI are:

- NYSDEC 6NYCRR Part 703.5 Water Quality Standards for Groundwater
- NYSDEC Technical and Operational Guidance Series 1.1.1 – Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations dated June 1998, and updated in January 1999, April 2000, and June 2004 (TOGS 1.1.1)

2.4 SUMMARY OF SOIL, GROUNDWATER, AND SOIL VAPOR ANALYTICAL RESULTS

2.4.1 Soil Quality

The following sub-sections discuss the laboratory results obtained from soil samples that have been collected in the remaining OU-1 and OU-2 portion of the BCP Site. For completeness purposes, the OU-3 data are contained on the tables and figures of this report but are not discussed or evaluated in detail since remediation for OU-3 has already been implemented.

This section is organized by contaminant type (i.e., PCBs, metals, VOCs/SVOCs). Data tables and maps have been prepared to support the discussion. Because there is a very large amount of PCBs/metals sampling data, the figures for those compounds were prepared using summary symbols rather than data “call-out” boxes. The symbols use circles that are color-coded to different thresholds, as shown on the map legend. The top half of the circular symbol represents the surface results (top 1 ft.) and the bottom half of the symbol represents the subsurface. If a sample interval extends from the surface to depths below 1 ft., it is generally treated as both a surface and subsurface sample. A solid green color indicates that the analytical results are less than the established regulatory thresholds for Commercial Use. Other colors indicate that certain concentration limits or future-use thresholds are exceeded, as explained in the map legend.

Tables 1, 2, 3, and 4 provide data for PCBs, metals, SVOCs, and VOCs, respectively. Summary maps for the analytical results are provided on Figures 5, 6, and 7.



REVISED ANALYSIS OF ALTERNATIVES AND REMEDIAL WORK PLAN OCIDA – 800 Hiawatha Blvd. (Former Roth Steel Site), Syracuse, NY

PCBs

OU-1

PCBs were sampled at 6 locations in the remaining portion of OU-1 during the RI and previous investigations. In addition, six other samples were collected from the north sidewalls of trail-related excavations in April 2020. These samples immediately border OU-1. Five locations, (16) 2-4, B-32, Comp 1 B North - 1, 2, 3, had PCBs exceeding 1 ppm in the top 1 ft., with the highest concentration of 18.3 ppm at location (16) 2-4. PCBs were detected at concentrations exceeding 10 ppm in the subsurface at multiple locations. The highest individual PCB sample in OU-1 is 38.1 ppm (depth of 35-50 in.) at (16) 2-4. Sample locations exceeding 1 ppm in the surface or 10 ppm in the subsurface are shown in Figure 5.

OU-2

PCBs were sampled at 45 locations in OU-2 during the RI and previous investigations. Ten locations (RI samples B-25, SS-1, TP-5; historical samples B-47, MW-10, B-38, B-18, B-16, B-48, and MW-11) had PCBs exceeding 1 ppm in the top 1 ft., with the highest concentration of 5.78 ppm at location MW-10/10A (0-2 ft.). Three locations ((17) B-19, (17) B-22, and P-17) detected PCBs exceeding 10 ppm in the subsurface. The highest individual PCB sample in OU-2 was 29.47 ppm (depth of 4 ft.) at P-17. During supplemental investigations in 2023, PCBs were collected at three locations (23-B-33, 23-B-34 and 23-B-36). None of the 2023 samples exceeded 1 ppm in the 0-2" or the 2-12" intervals. PCB detections were seen at all three locations, with concentrations ranging from 0.0183 to 0.887 ppm. Sample locations exceeding 1 ppm in the surface or 10 ppm in the subsurface are shown in Figure 5. Refer to Tables 1A through 1D for PCB sample results in soil.

Metals

OU-1 Metals were sampled at 3 locations (B-31, B-32, and B-33) in OU-1 in 2007. B-32 and B-33 exceeded Commercial Use thresholds in the top 1-foot for copper, cadmium, or mercury. Industrial Use SCOs were not exceeded at these locations. There were no exceedances at B-31. See Figure 6.

OU-2

Metals were sampled at 42 locations in OU-2 during the RI and previous investigations. Nineteen locations (RI samples SS-1, B-18, B-19, B-20, B-21, B-24, B-25, TP-2, TP-3, TP-4, TP-5; historical samples B-1, B-9, B-16, B-37, B-48, P-12, P-13, MW-10/10A) exceeded Commercial

Use thresholds (see Figure 6). Seven of these (RI samples B-1, B-18, B-19; historical samples B-9, B-37, P-13, MW-10/10A) also exceeded Industrial Use thresholds. The most common compounds with exceedances were arsenic, cadmium, and copper. The highest metal concentrations were detected at historical sample location P-13/TP-13 (arsenic concentration of 28.4 ppm at a depth of 4 ft.); B-1 (cadmium concentration of 2140 ppm at a depth of 0-0.5 ft.), (lead concentration of 4650 ppm at a depth of 6-8 ft.); B-9 (mercury and zinc concentrations of 6.4 ppm and 21,400 ppm, respectively, at a depth of 4.5-5 ft.).

A TCLP metals test was completed during the RI at location (17) B-21, depth of 6-8 ft. This location was selected due to elevated lead and mercury that had been detected in MW-10 (6-8 ft.) in 2010. The TCLP results of 3.35 mg/L did not exceed the hazardous waste threshold of 5 mg/L. During supplemental investigations in 2023, metals samples were collected at three locations (23-B-33, 23-B-34 and 23-B-36). Detections were identified for every constituent, however no exceedances were identified for any of the Restricted Use SCOs. Refer to Figure 6 for metals exceedances, and Tables 2A through 2D for all metals results in soil.

VOCs and SVOCs

OU-1

VOCs have been sampled at four locations (P/BH-1 through 4) and two depths (0-4 ft. and 4-8 ft.) in and immediately adjacent to OU-1. No exceedances of Restricted Residential SCOs resulted. SVOCs were not sampled in this area.

OU-2

VOCs and SVOCs have been sampled at 43 and 42 locations, respectively, in OU-2. There were 13 sample locations (RI samples B-18, B-23, B-25, B-27, SS-4, TP-5; historical samples B-1, B-9, B-37, B-48, MW-10/10A, MW-11, BH-17) with Commercial Use SVOC exceedances. There were 12 sample locations (RI samples B-18, B-23, B-25, B-27, SS-4, TP-5; historical samples B-1, B-9, B-37, B-48, MW-10/10A, BH-17) with Industrial Use SVOC exceedances. The most common SVOC exceedances were polyaromatic hydrocarbons (PAHs). The location with highest concentrations of SVOCs was B-23 at a depth of 0-1 ft. (benzo-a-pyrene 10 ppm, benzo-a-anthracene 11 ppm, and benzo-b-fluoranthene 13 ppm). During supplemental investigations in 2023, SVOC samples were collected at three locations (23-B-33, 23-B-34 and 23-B-36), each from two depth intervals (0-2" and 2-12"). The results for the 2023 soil sampling identified two locations (23-B-33, 23-B-34) with Commercial and Industrial SCO exceedances in the top 1 foot. The most

common SVOC exceedances in the 2023 samples were polycyclic aromatic hydrocarbons (PAHs). The highest concentrations of SVOCs in the 2023 samples was at 23-B-33 from the 2-12" interval (benzo-a-pyrene, 26 ppm; benzo-a-anthracene, 21 ppm; and benzo-b-fluoranthene, 29 ppm). Refer to Figure 7 for SVOC exceedances at the site and Tables 3A through 3C for all SVOC results in site soil.

There were no commercial or industrial exceedances in VOCs. See Figure 7

PFAS

OU-1

During supplemental investigations in 2023, Perfluorinated Alkyl Substances (PFAS) were sampled at one location in OU-1 (23-B-32) from two different intervals, 0-2" and 2-12". No Commercial or Industrial Use guidance values were exceeded. Perfluorooctanesulfonic Acid (PFOS) exceeded Protection of Groundwater guidance values (0.001 ppm) in 23-B-32 (2-12") with a concentration of 0.00217 ppm. Refer to Table 10B for PFAS results in soil at the site.

OU-2

During supplemental investigations in 2023, PFAS were sampled at four locations in OU-2 (23-B-33, 23-B-34, 23-B-35, and 23-B-36). No Commercial or Industrial Use guidance values were exceeded. Perfluorooctanesulfonic Acid (PFOS) exceeded Protection of Groundwater guidance values (0.001 ppm) in 23-B-33 (0-2" and 2-12"), 23-B-34 (0-2" and 2-12"), and 23-B-35 (0-16") with concentrations ranging from 0.00109 ppm to 0.00536 ppm. Refer to Table 10B for PFAS results in soil at the site.

Soil – Miscellaneous Physical Observations

During the RI, free product was observed in test pit (17) B-20, located south of Building 1. This zone occurred between 2 to 8 ft. BGS. After the test pit was completed, JMT performed a ground penetrating radar (GPR) survey to search for a possible underground storage tank. No indications of a tank were observed in the GPR data. Soil samples collected from (17) B-20 were analyzed for PCBs, VOCs, SVOCs, metals, and included a Total Petroleum Hydrocarbon (TPH) Identification analysis. The TPH Identification test determined that the sample contained a mixture resembling gasoline and used motor oil. Although free product was observed in the test pit, laboratory results indicate that the soil concentrations of VOCs and SVOCs were below Restricted Residential Use standards. Additionally, PCB concentrations ranged from 0.08 ppm to 3.56 ppm (1-2 ft. depth), which is below the CP-51 "presumptive" remedy for Commercial Use soil cleanup objectives. All

metals are also below Restricted Residential Use standards, except for copper (1520 ppm in 0-1 ft.), which is still below Industrial Use SCOs.

On February 28, 2019, three additional test pits were excavated near (17) B-20 (see Figure 4). (19) B-5 and (19) B-6 were excavated to 8 feet bgs, about 4 feet below the groundwater table. (19) B-4 was excavated to 5 feet bgs. The approximate pit dimensions were 6-feet long and 3-feet wide. A PID and visual/olfactory observations were used to screen the soil and determine whether contamination was present at each test pit.

(19) B-4 was completed upgradient of the original test pit. During excavation, free product was observed about 4 ft. BGS. Soil from this depth was screened with the PID and yielded a response of 260 ppm. The elevated PID response along with the physical observations indicates that the area upgradient of the original test pit is impacted by the petroleum contamination similar to (17) B-20.

Test pits (19) B-5 (NW of B-20) and (19) B-6 (SW of B-20) were completed downgradient of the original test pit. During both excavations, slight sheens were observed on groundwater but only a minimal petroleum odor was noted. PID responses from both test pits ranged to 0.2 ppm in (19) B-6 and 10 ppm in (19) B-5. The minimal PID responses and physical observations indicate that the area downgradient of (17) B-20 is not significantly impacted by petroleum.

2.4.2 Groundwater Flow and Quality

Groundwater Flow

This section includes data on the current BCP Site and the entire Former Roth Steel property to give a more complete picture of local hydrology. Groundwater elevation data were collected from onsite wells in December 2017. Groundwater elevation was determined in 15 wells across the entire 23-acre Roth property. A groundwater elevation-contour map based on measurements for the entire Roth property was prepared by JMT. The groundwater contours are shown on Figures 8-10. Nine of the monitoring wells (MW-2A, MW-3R, MW-6, MW-8A, MW-9, MW-10A, MW-11, MW-13, and MW-14) remain in the BCP portion of the Site. Groundwater elevation in OU-1 is approximately 365 ft. above mean sea level (amsl) or about 10 ft. below ground surface (bgs). The elevation in OU-2 ranged from 368.33 to 369.93 ft. amsl, or 5.19 to 8.35 ft. bgs. Groundwater generally flows northwest towards Onondaga Lake. Downgradient groundwater quality in the BCP portion of the Site is measured primarily by MW-8A, 9, 13 and 14. Groundwater elevations are strongly influenced by the standing water that collects in the topographic low northwest of OU-2.

Groundwater Quality

During sample collection events prior to the RI, lab tests were conducted for PCBs, metals, VOCs, SVOCs, and glycols. Groundwater analytical data are contained in Tables 5 through 8, and any exceedances of 6 NYCRR Part 703 groundwater standards are shown on Figures 8-10.

PCBs

Since 2008, 39 groundwater samples have been collected from the portion of the Site remaining in the BCP boundary and tested for PCBs. Only three samples have had exceedances of the PCB Part 703 standard of 0.09 µg/L. Well locations with prior PCB exceedances include MW-3 (0.21 µg/L); MW-8 (4.8 µg/L); and MW-14 (0.49 µg/L). Those exceedances were obtained in samples collected between 2010 and 2012. PCBs were not detected in groundwater samples collected for the RI. As such, no groundwater table was prepared for the PCB RI results. Table 5 displays historical PCB results in groundwater. Figure 8 presents the locations of the groundwater samples, along with a summary of the PCB exceedances.

Metals

As shown on Table 7A, all of the monitoring wells remaining in the BCP portion of the Site have recorded past exceedances for metals (inorganics). The most common exceedance is for sodium, which is not unexpected considering the presence of Solvay waste beneath the Site. Other frequently occurring metals include barium and iron. Less frequent exceedances occurred for mercury.

As part of the RI, groundwater samples collected from wells MW-2A, MW-3R, MW-6, MW-9, and MW-13 in December 2017, were analyzed for Target Analyte List (TAL) Metals. Similar to the historical results, all of the monitoring wells tested have exceedances for metals (see Table 7B and Figure 9). All wells showed exceedances in sodium, ranging from 182 mg/L (MW-8) to 696 mg/L (MW-10) compared to the standard of 20 mg/L. Barium exceedances are recorded in MW-2A (1.42 mg/L), MW-3R (1.43 mg/L) at concentrations slightly greater than the standard (1 mg/L). Iron exceedances are found in MW-2A (7.01 mg/L), MW-8A (4.4 mg/L), and MW-13 (0.318 mg/L) at concentrations greater than the standard of 0.3 mg/L.

The downgradient perimeter wells (MW-8A, 9, and 13) have metal exceedances only for iron and sodium.

VOCs and SVOCs

Thirty groundwater samples have been tested for VOCs/SVOCs from nine monitoring wells between 2008 and 2013. As shown on Table 6, the vast amount of SVOC compounds have been non-detect. Phenols have been detected in six wells at concentrations exceeding the groundwater standard. Most of these exceedances occurred in 2008 and 2010.

Four groundwater samples, collected from wells MW-3R, MW-6, MW-9, and MW-13 in December 2017, were analyzed for VOCs during this Remedial Investigation. As shown on Table 8B and Figure 10, VOCs were detected above groundwater standards in MW-3R (benzene, ethyl benzene, methyl tert-butyl ether, o-xylene, toluene, and vinyl chloride), and MW-6 (benzene and methyl tert-butyl ether). Similar to historical results, these constituents are primarily related to gasoline compounds. The detected concentrations in 2017 were less than previous detections from the same wells. Downgradient monitoring wells MW-9 and MW-13 did not have any VOC exceedances.

Emerging Contaminants

Additional sampling for “emerging contaminants” was performed in wells MW2A, MW-3R, and MW-6 in May 2021 in accordance with the *Proposal for Sampling of Emerging Contaminants* submitted to NYSDEC in February 2021. Results were submitted to NYSDEC on July 19, 2021.

All three sampling locations (MW-2A, MW-3R and MW-6) had exceedances for 1,4-Dioxane, Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS), when compared to the NYSDEC/NYSDOH Standards (MCLs) (see Table 10 and Figure 11). PFOA was seen with concentrations ranging from 182 ng/L (MW-6) to 382 (MW-2A Duplicate), compared to the MCL of 10 ng/L. PFOS was detected with concentrations ranging from 220 ng/L (MW-3R) to 1560 ng/L (MW-2A Duplicate), compared to the MCL value of 10 ng/L. 1,4-Dioxane had concentrations ranging from 2.1 µg/L (MW-6) to 2.59 µg/L (MW-2A Dup), compared to the MCL of 1 µg/L.

MW-2A, which exhibited the highest concentrations, is near the upgradient edge of the site, next to Hiawatha Boulevard. There are no discrete piles of automobile shredder residue (ASR) near this well but since miscellaneous surface debris are present in the area, it is possible that groundwater quality in MW-2A could be affected by prior site operations. However, due to its upgradient location, it is also possible that contamination could be from off-site sources. Wells MW-3R (located farther downgradient, near the middle of the site) and MW-6 (located near the northern

perimeter) exhibit similar concentrations of 1,4-Dioxane but concentrations of PFOS and PFOA are lower when compared to MW-2A.

The presence of groundwater quality impacts in these three wells is consistent with prior sampling results. As presented in the Remedial Investigation Report (RIR, February 2019), all three wells had some groundwater quality exceedances for metals in the previous sampling event (December 2017). MW-3R and MW-6 also had exceedances for several volatile organic compounds during the same sampling round. As indicated in the RIR, groundwater is not consumed in the area since the City provides drinking water from other sources. In addition, there are no groundwater users downgradient of the site. As such, groundwater does not present a significant threat to human health.

2.4.3 Sub-Slab Vapor

A subsurface soil vapor investigation was conducted at the Site on February 14, 2018. Two points (VP-1 and VP-3) were sampled and analyzed for VOCs via USEPA Method TO-15. VP-1 was installed in Building 1 and VP-3 was installed in Building 4. Both locations were in OU-2, as shown on Figure 4. The soil vapor sample results are presented in Table 9.

3.0 ANTICIPATED FUTURE USE

With respect to soil quality, NYSDEC has established various thresholds for remediation program and Brownfield Cleanup sites, depending upon the future re-use of the Site. The planned end-use for the remaining portions of the BCP Site at this time will be a combination of commercial or industrial.

Operable Unit	Size	Potential Use
1	0.4 acres	Industrial
2	13 acres	Industrial
3	1.7 acres	Commercial

OU-2 is the largest area (13 acres) of the BCP portion of the Site. It borders West Hiawatha Boulevard for approximately 1350 feet. This operable unit is currently unoccupied with no immediate development plans. However, OCIDA proposes to remediate it with the goal of a future Industrial User.

OU-3 is a linear strip (1.7 acres) that includes the Onondaga Lake Trail. The Trail is considered to be a “passive” recreational use within the Brownfield Cleanup Program, which necessitated a cleanup to Commercial Use standards. The remediation for the entire Trail easement was approved by NYSDEC and USEPA as an IRM and Self-Implementing Cleanup Notification. Onondaga County DOT was the remedial party for the Trail and its construction/remedial implementation is complete.

The portion of OU-1 that remains in the BCP is a very small (0.4-acres) and isolated portion of the Site. It will be cleaned-up to an industrial use and will be fenced off and inaccessible for the foreseeable future.

4.0 QUALITATIVE EXPOSURE ASSESSMENT

A qualitative exposure assessment has been prepared to determine the potential exposure of humans and biota to contaminants from the BCP portion of the Site. This assessment considers the current Site conditions and use, as well as the reasonably-anticipated future use of the Site. This qualitative exposure assessment describes the current exposure setting, identifies current and reasonably foreseeable exposure pathways, and discusses contaminant fate and transport.

4.1 EXPOSURE SETTING

As previously described in this document, the Site is currently a vacant former industrial-use property. The current surrounding land uses include vacant property, commercial businesses, rail transport and waste-water treatment in an urban setting. Commercial/industrial businesses include CSX railroad tracks and the Onondaga County Metro Plant to the north; a metals plating facility, a vacant former tank manufacturing site, offices, and a used car dealership are located to the southeast (across from Hiawatha Boulevard West); and an automobile sales/repair shop, truck stop, motel, rubbish removal company, fencing contractor, and industrial waste storage facility are located to the southwest along State Fair Boulevard. Onondaga Lake is located immediately north of the CSX railroad tracks, on the north side of the Site.

Municipal water and sewer are present at the Site and several sewer force mains, and a water line are known to exist near the northern property boundary. The BCP portion of the Site is comprised of previously disturbed, un-vegetated land and vacant buildings. The land surface is generally compact gravel, bare soil, and contains miscellaneous debris (e.g., metal scrap, shredded cloth, plastic, etc.).

4.2 CURRENT AND FORESEEABLE EXPOSURE PATHWAYS

In evaluating the current and foreseeable exposure pathways for the Site, exposure potential is considered for: dermal contact with soil, surface water, and groundwater; ingestion of soil, surface water and groundwater; and inhalation of particulate matter and chemical vapors.

Based upon the exposure setting, including the physical nature of the Site and surrounding land uses, some exposure pathways are unlikely to be significant for current and foreseeable uses. Specifically, given the urban nature of the Site and the surrounding commercial/industrial setting,

it is unlikely that the Site will have an adverse impact on fish and wildlife, since significant habitat does not occur on the Site.

With regard to potential human exposure, there are no current site occupants or workers, so exposure potential is very limited. The vast majority of the Site is fenced with a locked gate. There are limited portions of the Site along the rail tracks (northwest boundary) that are not fenced.

Foreseeable exposure potential considers future site use, which may include Industrial Use and vacant land. In addition, less frequent future exposure could occur to periodic construction or utility workers. For these potential receptor groups, exposure may result from inhalation and dermal contact. In addition, a construction or utility worker might also be potentially exposed to soil by ingestion, in the event that good hygiene practices are not followed.

With respect to the USEPA TSCA criteria, the current use for the site is “low occupancy”, including vacant areas and a paved walkway. If a future industrial user were to construct a building, there is a possibility that certain occupied spaces could be considered “high occupancy”. These would be areas where an individual will be present for more than 335 hours per year or 6.7 hours per week (assuming 50 weeks per year).

With regard to potential human exposure, risk will be mitigated by implementing NYSDEC and USEPA approved remedial measures. These measures would include soil hot-spot excavation and installation of caps (i.e., soil cover, pavement, concrete) in select areas. Other physical site controls could be used, such as fencing to restrict access. In addition, environmental easements (e.g., restrictions on excavation and groundwater use) would be established to further limit future exposure potential.

Although there are some contaminants in groundwater at the Site, municipal drinking water is available so future consumption of groundwater is unlikely. In addition, restrictions on groundwater usage, for any purpose, could be placed on the Site as a condition of future occupancy through the Brownfield Cleanup Program.

Vapors can potentially volatilize from contaminants in groundwater or soil. However, given the nature of past operations, site contaminants are primarily non-volatile metals and PCBs. Furthermore, there are currently no specific plans for occupied buildings.

4.3 PRELIMINARY EVALUATION OF FATE AND TRANSPORT

Various chemical constituents have been detected in the soil and groundwater beneath the Site. The primary compounds detected fall within two major chemical groups, PCBs and metals. To a

lesser extent, VOCs and SVOCs are also found. The VOCs are generally consistent with gasoline or petroleum-related materials. Specific VOC constituents include benzene, ethylbenzene, naphthalene, toluene, xylene, and methyl tert-butyl ether (MTBE). Vinyl chloride is also present in groundwater. VOCs are soluble in groundwater to varying degrees, with MTBE being the most soluble. VOCs also have a tendency to partition into the soil vapor and may move in the vadose zone from their original source area. Over time, many petroleum-related VOCs are subject to natural decomposition in the subsurface by biological and chemical processes. As discussed previously, VOCs were not detected in OU2 soil gas at concentrations that would present a health risk.

SVOCs include heavy hydrocarbons and a series of compounds known as PAHs. These compounds are also associated with coal ash and asphalt. SVOCs are found sporadically in the soil, primarily benzo(a)pyrene. SVOCs are generally not as soluble in groundwater and do not partition to soil vapor as readily as VOCs. SVOCs have a greater tendency to adhere to soil particles within the subsurface and groundwater exceedances for SVOCs at the site is limited to total phenols in some “older” data sets.

PCBs and metals are widespread at the Site and are the primary contaminants. In general, PCBs have a low solubility in water and tend to be adsorbed onto soil particles. In water, a small fraction of PCBs may become dissolved and be transported with groundwater. Recent groundwater samples have not detected PCBs. PCBs attached to soil can become airborne and transported with dust. Metals are soluble in water to varying degrees, depending on the particular inorganic compound, its molecular state, and the physical conditions of the groundwater (e.g., temperature, pH, dissolved oxygen, etc.). Primary metals in groundwater include sodium, iron, and to a lesser extent, barium and lead. Metals that are attached to soil particles can also become airborne as dust. Future risk associated with PCBs and metals within airborne dust will be mitigated by implementing NYSDEC-approved remediation measures (e.g., hot spot removal, capping).

4.4 POTENTIAL FOR OFF-SITE MIGRATION

The primary pathways for off-site migration include groundwater and surface water run-off. As previously discussed, groundwater generally flows in a northwest direction towards Onondaga Lake. Downgradient groundwater quality for the BCP Site is primarily assessed at monitoring wells MW-8A, 9, and 13. At these locations, PCBs were not detected in the most recent 2016/2017 sampling event. The only constituents with groundwater standard exceedances in these perimeter wells during the most recent sampling were iron and sodium. Sodium is a primary by-product

associated with Solvay waste, which is ubiquitous near Onondaga Lake. Iron is a common mineral found in soil and it is primarily a concern in groundwater due to its ability to stain plumbing fixtures and laundry. MW-6 along the perimeter of OU3 had slight exceedances of benzene (3.4 µg/L, compared to a 1 µg/L standard) and MTBE (11.6 µg/L, compared to a guidance value of 10 µg/L). These constituents are only slightly over standards and have decreased substantially at this location since 2008.

Regional surface water drainage in the vicinity of the Site is generally toward Onondaga Lake. However, the vast majority of the Site surface drains inward to a topographic low spot that contains ponded surface water for almost the entire year. This ponded area (just west of OU2) receives direct runoff from the areas of the Site that have the most elevated PCB and metal concentrations in soil. As such, the majority of runoff from the most impacted portions of the property collects onsite and either infiltrates to groundwater in the immediate area or evaporates in the warmer months.

A secondary migration pathway is the potential movement of dust that may be generated during future onsite excavation work (remedial excavations or future development). The potential for dust generation will be addressed by establishing excavation controls, water application and monitoring.

Based on the groundwater/soil sampling results and physical observations at the Site, significant offsite migration of contaminants from the BCP Site is not apparent. Future potential offsite migration associated with ground disturbances can reasonably be avoided with proper planning and monitoring.

5.0 NEED FOR REMEDIATION AND PROPOSED CLEANUP TRACK

As discussed in Section 2.4, there are sections of the BCP Portion of the Former Roth Steel property that have contaminant concentrations exceeding NYSDEC and USEPA soil cleanup objectives. Therefore, Site remediation is necessary. The exceedances primarily occur for PCBs, metals, and SVOCs. In evaluating remedial options, contaminant concentrations, as well as potential future use are considered. The Brownfield Program allows for a Track 4, “Restricted Use” Cleanup using the soil cleanup objectives in 6 NYCRR Part 375-6.8(b) or site-specific cleanup objectives, that must be approved by NYSDEC. For purposes of this evaluation, the Restricted Use SCOs on Table 375-6.8(b) will be considered as well as NYSDEC Policy CP-51 and the PCB cleanup levels established by USEPA in 40CFR Part 761.61 (TSCA). A Track 4 “Restricted Use” Cleanup also allows for long-term institutional or engineering controls to help mitigate future environmental and public health risks. These controls, which will be discussed in subsequent sections of this report, include limitations on soil excavation and restrictions on groundwater use.

A Track 1 “Unrestricted Use” cleanup will also be evaluated in the Analysis of Alternatives.

5.1 SOIL

5.1.1 Operable Unit 1

OU-1 is approximately 0.4 acres in size. It is situated at the very northern boundary of the site and contains a portion of the former ASR disposal cells. It is anticipated that OU-1 will remain undeveloped with restricted access (i.e., fenced). Given this potential scenario, NYSDEC Industrial Use and USEPA “low occupancy” SCOs appear to be most applicable at this time. According to CP-51 and 40 CFR 761.61, a level of 25 ppm for PCBs is acceptable for both surficial and subsurface soils provided that access is limited, and individual occupancy is restricted to less than an average of 6.7 hours per week. That is the anticipated scenario for this area. Based on the existing sampling data, Industrial Use SCOs are not exceeded in the top 1 foot. However, at one location ((16)2-4) PCBs are 38 ppm at a subsurface depth of 35 to 50 inches. The approximate area of the 25 ppm exceedance is shown on Figure 12. It is estimated that the soil volume exceeding 25 ppm is approximately 200 cubic yards. There is some uncertainty with this estimate since the lateral extent is not fully defined, and no samples were collected between the depths of 12 to 35 inches.

5.1.2 Operable Unit 2

OU-2 is about 13 acres in size and is being evaluated for future Industrial Use. As such, a PCB SCO of 25 ppm for the surface soil (top 1 foot) and for subsurface soil is applicable, considering NYSDEC thresholds. This cleanup level also satisfies the USEPA threshold (25 ppm) for “low occupancy” areas. Subsurface PCBs exceed 25 ppm at one location (P-17). Subsurface PCBs also exceed 10 ppm at two other locations ((17) B-19, (17) B-22) in OU-2. Although these two locations do not require excavation for an Industrial Use, OCIDA plans to excavate soil at all three locations to enhance the potential marketability of the site. In total, about 600 cubic yards of soil exceed the 10 ppm threshold (see Figure 12).

Based on existing sampling data, it is estimated that about 2 acres of additional surface area in OU-2 contains PCB, metals, and/or SVOC concentrations that exceed their corresponding Industrial Use thresholds in the top 1 foot. These areas will require a cap.

5.2 GROUNDWATER

As discussed in Section 2.5, there are limited impacts to on-site groundwater and downgradient perimeter wells only have exceedances for iron and sodium. Elevated sodium commonly occurs around Onondaga Lake due to the past disposal of solvay waste in the region. Iron is a common mineral found in groundwater and elevated levels primarily present concerns to plumbing fixtures and laundry. Groundwater is not consumed in the area since the city provides drinking water from other sources. In addition, there are no groundwater users downgradient of the site. As such, groundwater does not present a significant threat to human health, or the environment and active remedial measures do not appear to be warranted. Any future development at the Site will include a restriction on groundwater usage for any purpose.

5.3 SUBSURFACE VAPOR

Two sub-slab soil vapor samples were collected in the northern and southern part of OU-2 during the Remedial Investigation. A variety of VOCs were detected in those samples. However, the NYSDOH does not provide guidance values for sub-slab vapor concentrations for any of those VOCs detected, except for tetrachloroethene and trichloroethene. The concentrations of both those constituents were below the NYSDOH-specified action levels for sub-slab vapor concentrations in their respective decision matrices. No corresponding indoor air samples were collected at that time, and all onsite buildings have been removed. Since no buildings are currently planned, soil

REVISED ANALYSIS OF ALTERNATIVES AND REMEDIAL WORK PLAN
OCIDA – 800 Hiawatha Blvd. (Former Roth Steel Site), Syracuse, NY

vapor mitigation is not needed at this time. However, additional evaluation of the need for soil vapor mitigation should be conducted if new buildings are proposed in the future.



6.0 REMEDIAL ACTION OBJECTIVES (RAOS)

Remedial action objectives (RAOs) are general goals developed for the protection of human health and the environment. Identifying these objectives requires an assessment of the media of concern, potential migration pathways, exposure routes, and potential receptors. These objectives, along with the standards, criteria, and guidelines (SCGs) are used to evaluate remedial options to protect human health and the environment.

6.1 REMEDIAL ACTION OBJECTIVES (RAOS)

Below are the general RAOs for the BCP portion of the Former Roth Steel Site. These RAOs are based on generic RAOs established by NYSDEC for BCP sites. NYSDEC Guidance Document DER-10 4.1 (c) (1) states that RAOs should be established for the remedy selection process, (i) from the generic RAOs as identified by the remedial investigation; or (ii) by developing site-specific RAO(s), where the generic does not address a unique site condition. Site-specific conditions at the Roth Site were considered in developing the RAOs.

6.1.1 Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

6.1.2 Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation exposure to contaminants volatilizing from soil.



REVISED ANALYSIS OF ALTERNATIVES AND REMEDIAL WORK PLAN OCIDA – 800 Hiawatha Blvd. (Former Roth Steel Site), Syracuse, NY

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

6.1.3 Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

7.0 ANALYSIS OF ALTERNATIVES

7.1 INTRODUCTION

This Alternatives Analysis (AA) evaluates remedial measures to address environmental impacts at the remaining BCP portion of the Site (OU-1, OU-2). As previously indicated, a remedy has already been implemented for OU-3. The AA has been prepared based on 6 NYCRR 375 (Sections 1.8, 3.8) and applicable portions of NYSDEC guidance document DER-10. As discussed in the RIR and earlier sections of this report, environmental impacts at the Site consist mainly of PCBs, metals, and SVOCs in soil. Limited groundwater impacts are also present (metals, VOCs).

The AA process includes the identification and screening of potential response actions. Following the initial screening, a detailed evaluation of the most viable remedial measures is then conducted using the following criteria that are listed in 375-1.8 (f).

- Overall protection of public health and the environment;
- Compliance with Standards, Criteria and Guidelines (SCGs);
- Long-term effectiveness;
- Reduction of toxicity, mobility or volume through treatment;
- Short-term effectiveness;
- Implementability;
- Cost effectiveness;
- Community acceptance;
- Land use.

DER-10 guidance identifies the elements that are to be presented in the AA, including an introduction, site description/history, summary of the remedial investigation, exposure assessment, discussion of RAOs, general response actions, screening of technologies, detailed analysis of alternatives, and remedy recommendation. The first five of these elements have already been discussed in prior sections of this document, since they overlap with the requirements for the RWP. The identification of general response actions, screening of technologies, detailed analysis of alternatives, and a remedial recommendation are presented below.

7.2 GENERAL RESPONSE ACTIONS

Based on the results of the remedial investigation activities, PCBs, metals, and SVOCs exceed soil cleanup objectives for Commercial and Industrial Use. In addition, groundwater quality exceedances exist for metals, and to a more limited extent, VOCs. This section describes the potential response actions that are available to address these impacts.

7.2.1 Soil Response Actions

Treatment

Treatment can be applied to soils to alter the physical or chemical nature of the material and to reduce contaminant mass, mobility, or toxicity. Treatment can be accomplished *in situ* or *ex situ* and typically includes physical, chemical, or thermal processes. Examples of soil treatment for metals, PCBs, and SVOCs include thermal methods, solidification/stabilization, and soil flushing or washing.

Soil Washing/Flushing

Soil flushing is the extraction of contaminants from the soil with water or other suitable aqueous solutions. In-situ soil flushing is accomplished by passing the extraction fluid through in-place soils using an injection or infiltration process. Extraction fluids must be recovered from the underlying aquifer and, when possible, they are recycled. Extraction fluids from soil flushing will increase the mobility of the contaminants, so provisions must be made for subsurface recovery. Recovered groundwater and flushing fluids with the desorbed contaminants will need treatment to meet appropriate discharge standards prior to recycle or release to a wastewater treatment works or receiving waterbody. Treatment of the recovered fluids results in process sludges and residual solids, such as spent carbon and spent ion exchange resin, which must be appropriately treated before disposal. Air emissions of volatile contaminants from recovered flushing fluids may need to be collected and treated. Residual flushing additives injected in the soil may also be a concern.

Soil washing can also be an *ex-situ* process to remove contaminants. The process removes contaminants from soils by dissolving or suspending them in the wash solution. Alternatively, contaminants are concentrated into a smaller volume of soil through particle size separation and gravity separation. Complex mixtures of contaminants in the soil (such as a mixture of metals, nonvolatile organics, and SVOCs) and heterogeneous contaminant compositions throughout the soil mixture make it difficult to formulate a single suitable washing solution that will consistently and reliably remove the different types of contaminants. Soil washing is generally considered a

media transfer technology. The contaminated byproducts generated from soil washing require offsite disposal.

Thermal Treatment

Thermal methods are typically *ex-situ*. Incineration uses high temperatures, 870°C to 1,200°C to volatilize and combust (in the presence of oxygen) halogenated and other organics, including PCBs. Often, auxiliary fuels are employed to initiate and sustain combustion. The destruction and removal efficiency for properly operated incinerators exceeds the 99.99% requirement for hazardous waste and can be operated to meet the 99.9999% requirement for PCBs and dioxins. Off gases and combustion residuals generally require treatment. Another thermal treatment method is low temperature thermal desorption. This method is a physical separation process and is not designed to destroy organics. Wastes are heated to volatilize water and organic contaminants. These contaminants are driven from the soil and concentrated in off-gases that are then condensed, producing a high concentration waste that must be disposed of.

Solidification/Stabilization

Contaminant solidification and stabilization are processes that are utilized to prevent contaminants from leaching into the surrounding environment. Solidification is the process by which contaminants are bound into a single mass, which is less permeable keeps the contaminants from migrating. Stabilization of contaminants is completed via a chemical reaction that chemically alters the contaminants, making the chemical less susceptible to leaching. Typically, for both processes, a chemical binding agent is introduced into the zone of contamination by injection and/or subsurface (in-situ) or surficial (ex-situ) soil mixing. Subsurface soil mixing is usually completed with a large auger. Surficial soil mixing would require excavation of the contaminated material and using excavators or windrow machines to mix material together. Subsurface material that has been subjected to solidification or stabilization is typically left in place. However, in some instances it is excavated and incinerated to ensure that no leaching will occur. Similarly, soils remediated ex-situ could be incinerated.

Onsite treatment of soil would require the installation of large treatment systems and staging areas. *Ex situ* treatment of soils would also require extensive handling of the excavated soils which may generate significant air emissions, as well as increased risk of impacts to site workers, adjacent properties, and future trail walkers. Incineration commonly is not well-received by the public.

There is significant uncertainty about the effectiveness of treatment technologies because of the variability in soil characteristics and contamination types at the Roth site.

Treatment residuals from separation techniques will require treatment or disposal, which will add to the total project costs and may require permits. Due to these public health risks, and operational/effectiveness concerns, these treatment technologies will not be further considered at the site.

Containment/Capping

Containment with a cap is an engineering control that effectively isolates contaminated soil. Containment technologies provide protection of public health and the environment by reducing the mobility of contaminants and eliminating exposure. Caps in the form of pavement, building foundations, or 1 ft. of soil or crushed stone are appropriate. Caps for TSCA purposes have specific requirements (e.g., concrete must be 6 inches thick). Institutional controls may also be necessary for long-term effectiveness. This response action is retained.

Excavation and Offsite Disposal

This response action consists of the removal and offsite disposal of impacted soils. Excavation can be accomplished using conventional construction equipment and methods. Excavation would also require the replacement of soil with clean material from offsite sources. Crushed concrete from onsite building demolition activities could also be used to fill excavations, depending upon residual concentrations in the concrete. Excavation and offsite disposal are retained for soil response action.

Institutional Controls

Institutional controls are response actions that establish legal and administrative restrictions on future use. Types of institutional controls include access controls, environmental easements or deed restrictions, and established procedures for managing future ground-intrusive activities (e.g., Site Management Plan, Health and Safety Plans). Periodic certification may be required to document the continued effectiveness of the institutional controls. This response action is retained.

7.2.2 Groundwater Response Actions

Pump and Treat

This response action consists of the removal and treatment of groundwater. Extraction can be accomplished by installing a network of wells to pump water from the ground into a treatment

system. The above-ground treatment system is designed to treat for the known contaminants. The system discharges treated water to a permitted outfall.

Groundwater extraction systems require extensive operations and maintenance activities that may continue for many years without effectively improving groundwater quality. In general, metals and many organic contaminants have low solubility and prefer to adsorb onto soil particles rather than dissolve into groundwater. As such, pump and treat systems are limited by the mass-transfer rates of the compounds.

Since groundwater is not significantly impacted at the Site, nor is it used for drinking. A groundwater extraction system will not be further considered.

Enhanced Bioremediation

Enhanced bioremediation is the process of breaking down contaminants by chemical and biological processes. Remediation processes are conducted by injecting a solution into the contaminant zone in order to chemically remediate the contaminants while also providing a food source for the existing micro-organisms in the soil. The processes by which these organisms are naturally breaking down contaminants onsite will be enhanced by the injection solution. Because the system is setup to enhance the existing subsurface micro-biology, analyses are typically completed on the soil or groundwater to determine if there is existing bioremediation occurring onsite.

This strategy is typically used to remediate VOCs. Samples collected at the Site indicate that VOCs are not significantly elevated in soil and are relatively localized in groundwater. This technology is generally not applicable to PCBs and metals, which are the primary onsite contaminants. This treatment technology will not be further considered at the site.

Institutional Controls – Institutional controls are response actions that establish legal and administrative restrictions on future use. Types of institutional controls include access controls (e.g., restrictions on groundwater use), environmental easements or deed restrictions, and established procedures for managing future ground-intrusive activities (e.g., Site Management Plan, Health and Safety Plans). Municipal groundwater infrastructure is available to the Site which would prevent consumption of the Site's groundwater. Periodic certification may be required to document the continued effectiveness of the institutional controls. This response action is retained.

7.3 SUMMARY OF RETAINED RESPONSE ACTIONS

The table below summarizes the response actions retained for detailed remedial analysis.

Medium	Retained Response Actions
Soil	Excavation, Offsite Disposal, Capping, Institutional Controls
Groundwater	Institutional Controls

7.4 EVALUATION OF REMEDIAL ALTERNATIVES

This section presents the detailed evaluation of the retained remedial technologies discussed in the prior section. Each remedial alternative is evaluated against the nine criteria listed in 6 NYCRR Subpart 375-1.8(f) and Section 4.3 of DER-10.

7.4.1 Selection of Remedial Alternatives

Two alternatives will be presented to remediate environmental impacts at the Site. In accordance with the NYSDEC's Brownfield Cleanup Program requirements, one of these alternatives would achieve conditions necessary for Track 1 Unrestricted Use. The selected alternatives are:

- Alternative 1 – Restoration to Unrestricted Use (Track 1).
- Alternative 2 – Restoration to Industrial Use in OU-2 and in OU-1 (Track 4).

Alternative 1 would achieve Unrestricted Use through the excavation and offsite disposal of all surface and subsurface soil, as well as building slabs with PCB concentrations greater than 1 ppm, that exceeds the Part 375 Unrestricted Use criteria.

Alternative 2 would achieve Industrial Use criteria through a combination of capping and excavation, offsite disposal, institutional and engineering controls. Exposed soils in the top 1 ft. that do not meet the Industrial Use SCOs in OU-2 would be covered with 1 ft. of soil. Subsurface soils deeper than 1 ft. with PCBs of 10 ppm or greater would be excavated from OU-2. In OU-1, surface soils do not exceed the Industrial Use SCOs, and capping is not necessary. Subsurface soils that exceed the PCB Industrial Use SCO would require excavation and offsite disposal. OU-1 will be fenced off and inaccessible. Building slabs in OU-2 with PCB concentrations of less than 1 ppm can be used as a cap, or crushed and used as backfill at the Site. Building slabs with PCBs between 1 and 10 ppm could be crushed and placed onsite in areas that are capped with 1 ft. of clean soil. Building slabs with PCB concentrations greater than 10 ppm will be removed from the Site. An

environmental easement would establish protections and provide notice to properly limit potential human or environmental exposure to contaminants. These are discussed in Section 8.2 in greater detail.

7.4.2 Evaluation Criteria

The detailed evaluation of the remedial alternatives considers the following criteria, consistent with BCP regulation and guidance:

- Overall Protectiveness of Public Health and the Environment
- Compliance with SCGs
- Long-Term Effectiveness and Permanence
- Reduction of Toxicity, Mobility, or Volume of Contamination
- Short-Term Impacts and Effectiveness
- Implementability
- Cost Effectiveness
- Community acceptance
- Land Use

These criteria are further described below.

Overall Protectiveness of Public Health and the Environment

Protection of public health and the environment is evaluated on the basis of estimated reductions in the potential for both human and environmental exposure to contaminants for each remedial alternative. This is a “threshold” criterion that must be met. The evaluation focuses on whether a specific alternative achieves adequate protection under the conditions of the Site’s future use and how risks are eliminated, reduced or controlled through the remedy. This factor evaluates the remedial alternative’s ability to achieve the RAOs and overlaps with other evaluation criteria, particularly long-term effectiveness and permanence, short-term effectiveness, and compliance with SCGs.

Compliance with Standards, Criteria, and Guidance (SCGs)

This criterion is an evaluation of a remedial alternative's ability to comply with applicable environmental laws, regulations, standards, and guidance. The specific remedial alternatives for the Site were evaluated to determine whether the remedial alternative would achieve compliance with the SCGs listed in Section 2.3. This is also a “threshold” factor that must be met.

Long-Term Effectiveness and Permanence

This criterion evaluates the long-term effectiveness of the alternatives after implementation. If contamination remains onsite after the selected remedial alternative has been implemented, the following items are evaluated:

- The magnitude of the remaining risks to human health and the environment; and
- The adequacy of the engineering and institutional controls intended to limit the risk.

Reduction of Toxicity, Mobility, or Volume with Treatment

This criterion evaluates the alternative's ability to reduce the toxicity, mobility, and/or volume of contamination by treatment. Preference is given to remedial alternatives that permanently and significantly reduce the toxicity, mobility, or volume of the wastes, within the following hierarchy: destruction; separation or treatment; solidification or chemical fixation; and control and isolation.

Short-Term Impacts and Effectiveness

This criterion evaluates the potential short-term adverse impacts and risks of the remedial alternative upon the community, the workers, and the environment during remedy construction and/or implementation. Potential short-term impacts to be considered are dust generation, noise increased traffic and general nuisance conditions. The length of time needed to achieve the remedial objectives is estimated and included in the evaluation.

Implementability

This criterion evaluates the technical and administrative feasibility of implementing the remedial alternative. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedial alternative. Administrative feasibility includes the availability of the necessary personnel and material along with potential difficulties in obtaining specific operating approvals, access for construction, permits, etc. for remedial alternative implementation.



REVISED ANALYSIS OF ALTERNATIVES AND REMEDIAL WORK PLAN OCIDA – 800 Hiawatha Blvd. (Former Roth Steel Site), Syracuse, NY

Cost Effectiveness

This criterion includes an evaluation of the overall project. A remedy is cost-effective if its costs are proportioned to its overall effectiveness.

Community Acceptance

Community acceptance evaluates any issues and concerns that the community may have regarding each of the alternatives. Community acceptance will be gauged through the 45-day statutorily required public comment period. Public comments will be considered by NYSDEC and incorporated into the final approval of the RWP.

Land Use

This criterion includes an evaluation of the current, intended and reasonably anticipated future use of the Site and its surroundings, as it relates to the remedial alternative, when unrestricted levels would not be achieved.

7.4.3 Evaluation of Remedial Alternatives

This section compares the alternatives using the evaluation criteria presented in Section 7.4.2. It considers whether an alternative satisfies the criteria, meets the minimum applicable standards and is suitable for the Site. After each individual factor, a summary statement is provided regarding the relative merits of Alternative 1 or 2, compared to that factor. At the end of the section, the most favorable alternative is identified.

Overall Protectiveness of Public Health and Environment

Alternative 1:

- Offers slightly greater overall protectiveness of public health and the environment than Alternative 2.
- Includes the removal of all impacted soil to restore the site to conditions suitable for Unrestricted (residential) Use.
- Requires no institutional controls to address residual contamination at the site.

Alternative 2:

- Protective of public health and the environment under Restricted Use conditions.
- Exposure to contaminated soils eliminated by capping and excavation.



REVISED ANALYSIS OF ALTERNATIVES AND REMEDIAL WORK PLAN OCIDA – 800 Hiawatha Blvd. (Former Roth Steel Site), Syracuse, NY

- Requires institutional controls (Site Management Plan, environmental easement) to address subsurface soil contamination and groundwater use.

Compliance with the SCGs

Alternative 1:

- Offers the greatest ability to comply with the SCGs. All contaminated soils in excess of SCOs for Protection of Groundwater and Protection of Human Health (residential use) would be removed.

Alternative 2:

- Full compliance with SCOs in the top 1 ft., those soils with the greatest exposure potential.
- Some residual contamination at depth (below 1 ft. or cap component). Limited exposure potential to soil, and groundwater cannot be used.

Long-Term Effectiveness and Permanence

Alternative 1:

- Provides long term effectiveness and permanence by achieving complete removal of contaminated media.

Alternative 2:

- Provides long-term effectiveness and permanence; however, requires engineering controls (cap system, site management plan) and institutional controls (environmental easements). Does not achieve complete site cleanup.

Reduction in Toxicity, Mobility, or Volume with Treatment

Alternative 1:

- Excavating and landfilling all impacted soils will not reduce the overall contaminant mass. Rather, the contaminated soils are transferred from onsite to an offsite location. This is a control and isolation technology.

Alternative 2:

- Similar to Alternative 1, Alternative 2 does not reduce the overall contaminant mass. Less soil will be taken offsite, and a cap will be placed. This is also a control and isolation technology.



REVISED ANALYSIS OF ALTERNATIVES AND REMEDIAL WORK PLAN OCIDA – 800 Hiawatha Blvd. (Former Roth Steel Site), Syracuse, NY

Short-Term Impacts and Effectiveness

Alternative 1:

- Would create significant short-term impacts. Extensive soil excavation would cause construction traffic, noise, vibration, dust, and possible impacts to neighboring properties. Large quantities of fill would need to be trucked into the site to replace the excavated material.

Alternative 2:

- Less disruption and reduced short-term impacts to traffic, noise, vibration or dust will occur because the extent of excavation and offsite disposal will be significantly less. The time duration of the remedial activities for Alternative 2 is also less.

Implementability

Alternative 1:

a. Technical Feasibility

- While feasible to implement, this remedy would require the extensive use of excavation equipment and movement of trucks in/out of the site along Hiawatha Blvd. Valuable landfill space will also be consumed.

b. Administrative Feasibility

- Administrative obstacles would be relatively minor, and consistent with commonly employed remediation activities.

Alternative 2:

- This Alternative is technically feasible to implement and requires the use of fewer construction vehicles and resources. Less landfill space will be consumed than Alternative 1 and less backfill will be required at the site.

a. Administrative Feasibility

- Would require more administrative activities associated with the establishment of Environmental Restriction Easements (EREs). However, these controls are commonly used and not problematic to implement.



REVISED ANALYSIS OF ALTERNATIVES AND REMEDIAL WORK PLAN OCIDA – 800 Hiawatha Blvd. (Former Roth Steel Site), Syracuse, NY

Community Acceptance

The RWP will be subject to public comment to more accurately gauge community acceptance. A few key community acceptance considerations are provided below.

Alternative 1:

- Achieves Unrestricted Use objectives
- Eliminates long-term potential health risks to community members interacting with site environment, without the use of engineering/institutional controls.
- Site remediation activities will be more disruptive.

Alternative 2:

- Will take less time to remediate the site
- Less disruptive remedy than Alternative 1 from a traffic, noise, vibration, and dust perspective

Cost Effectiveness

Alternative 1 would involve extensive excavation to achieve Unrestricted Use. Excavation would be required throughout the majority of OU-2, with excavation depths ranging from 2 to 10 feet (max. depth near B21/MW-10A). Approximately 50,000 cy of soil would need excavation and disposal from OU-2. The OU-1 area would require excavation to estimated depths ranging from 2 to 9.5 feet (max depth at (16) 2-4). The removal volume in OU-1 would be approximately 1830 cy, resulting in an OU-1/OU-2 combined soil removal volume of 51,830 cy. Cost estimates below are based on the following assumed unit rates: 1.4 tons/cubic yard; non-hazardous soil (excavation, transport, disposal) \$110/cubic yard; and backfill (purchase, spread) \$55/cubic yard. These unit rates assume prevailing wages.

- Excavation, offsite disposal, and backfill: 51,830 cy x \$165 per cy = \$8,552,000
- Excavation, crushing and offsite disposal of building slabs: \$200,000
- Confirmatory Sampling Cost= \$50,000 (~800 samples)
- Engineering Cost = \$880,000 (10% of capital costs)
- Total Cost = \$9.7 million

REVISED ANALYSIS OF ALTERNATIVES AND REMEDIAL WORK PLAN
OCIDA – 800 Hiawatha Blvd. (Former Roth Steel Site), Syracuse, NY

Alternative 2:

It is estimated that 200 cubic yards in OU-1 and 600 cubic yards in OU-2 will require excavation and offsite disposal at the unit rates provided above. In addition, about 2 acres would require a one foot thick soil cap. Proposed remediation areas are shown on Figure 12. A one ft. thick soil cap would cost about \$95,000 per acre based on \$55 per cubic yard for soil. This includes a geotextile demarcation layer (\$6500 per acre) but does not include topsoil or reseeded. Six former buildings in OU-2 were demolished in 2018, however, the floor slabs still remain. Prior to the demolition activity, PCB tests were made of the concrete floors and the results are listed on Table 11. As shown on that table, three of the former floor slabs (Building 3, 4, 5) had PCB levels less than 1 ppm. As such, these slabs could be crushed and used on-site as unrestricted fill. The “at-grade” parts of the Building 3 and 5 slabs may also be left in place. The Building 2 slab has PCB levels that are between 2.3 and 6.4 ppm. This slab will be crushed and used as backfill beneath a one ft. thick soil cap. Portions of the slabs of Buildings 1 and 6 had PCB levels greater than 10 ppm but less than 25 ppm. These sections of the former slabs could be broken up and used to backfill the proposed soil excavation area in OU-1, since the PCB concentrations are less than the Industrial Use cleanup level of 25 ppm. Alternatively, the concrete from these floor sections could be taken for offsite disposal. Remaining sections of the Buildings 1 and 6 slabs can be crushed and used on site as unrestricted fill (floor sections with PCB samples less than 1 ppm) or used as fill below the soil cap (floor sections with PCBs less than 10 ppm).

Miscellaneous debris and solid waste (e.g., ASR, the former shredder belt, and a pile of large rubber tires) is present on the surface of the site at various locations. The largest accumulation of ASR at the surface is located just east of an existing concrete pad, in the vicinity of sample location P-17. OCIDA proposes to remove the surface ASR from this area and take it for offsite disposal. To the extent possible, the ASR will be raked up to minimize mixing with soil and sampled for disposal purposes. Based on prior experience at the site, it is anticipated that the ASR can be taken to a solid waste landfill. The former shredder belt will be sampled, and disposal options will be discussed with NYSDEC/USEPA after those results are obtained. If possible, the shredder belt and the large rubber tires will be shredded and mixed with crushed concrete (discussed above) and used on site as backfill.

- Soil excavation (hot spot), offsite disposal, and backfill: 800 cy x \$165 per cy = \$132,000
- Soil Cap: 2 acres x \$95,000 = \$190,000



REVISED ANALYSIS OF ALTERNATIVES AND REMEDIAL WORK PLAN
OCIDA – 800 Hiawatha Blvd. (Former Roth Steel Site), Syracuse, NY

- Surface ASR Sampling and Disposal (assumes 75 tons) = \$17,500
- Fencing for OU-1: \$25 per linear ft. x 700 ft. = \$17,500
- Building Foundation Processing/Removal: \$150,000
- Confirmatory/Pre-Design Soil Sampling Cost = \$15,000
- Cap Material Soil Sampling Cost (assumes 3,000 cy per DER-10 Table 5.4(e)10 analyses) = \$4,300
- Engineering, ERE Costs = \$65,000
- Total Cost = \$591,300

Land Use

Alternative 1:

- Site could theoretically be used for residential purposes subject to local zoning ordinance. Given the surrounding land uses, and the choice of alternate residential properties, it is unlikely that the Site would be used for residential purposes.

Alternative 2:

- The site is currently surrounded by commercial, industrial, and recreational (Lake Trail) uses.
- Future uses of the site that are industrial or passive recreational (cleanup goal for Alternative 2) would be consistent with the current surrounding uses.

7.4.4 Summary of Alternatives Comparison to Criteria

Evaluation Criteria	Substantially Meets Criteria	
	Yes	No/Questionable
Overall Protection of Human Health and the Environment	Alternatives 1 & 2	
Compliance with Standards, Criteria, and Guidance (SCGs)	Alternatives 1 & 2	
Short-Term Effectiveness and Impacts	Alternative 2	Alternative 1
Long-Term Effectiveness and Permanence	Alternative 1	Alternative 2
Reduction of Toxicity, Mobility, or Volume with Treatment		Alternatives 1 & 2
Implementability	Alternative 2	Alternative 1
Cost Effectiveness	Alternative 2	Alternative 1
Land Use	Alternatives* 1 & 2	
Notes: *Alternative 1 cleanup would allow residential use, which is not consistent with surrounding land use.		

7.5 SELECTED REMEDY

Each of the two alternatives meet the threshold RAOs for Protection of Public Health and compliance with SCGs. As discussed in the previous sections, Alternative 1 does not meet the evaluation criteria (compared to Alternative 2) for implementability, cost effectiveness, or short-term effectiveness.

Neither Alternative reduces the toxicity, mobility or volume of contamination. Alternative 2 presents a readily implementable and cost-effective solution. It is the preferred alternative because it achieves the RAOs, is most implementable, further eliminates public exposure to contaminants, has a high probability of success, and is the least disruptive to the surrounding community.

The selected Track 4 remedy (Alternative 2) meets the criteria provided by the BCP program (most importantly the protection of public health and the environment) and allows future uses that are consistent with surrounding land uses. An easement to restrict groundwater use and soil disturbance will be in place at the Site that will be maintained with the selected remedy for the site.

8.0 ENGINEERING DESIGN AND IMPLEMENTATION

The selected remedy, Alternative 2, includes engineering and institutional controls. The engineering controls provide “hot-spot” soil removal and capping portions of the Site with clean soil.

The institutional control measure consists of an environmental easement conforming to Article 71 Title 36 of ECL, with deed restrictions prohibiting use of groundwater. A Site Management Plan to control future soil disturbance will also be established. The Site Management Plan, along with submittal of a Change of Use Application, could also be used in the future to facilitate the construction of future buildings on the site.

8.1 ENGINEERING CONTROLS

8.1.1 Soil Cap / Cover System

Areas that exceed the Industrial Use SCOs in the top 1-ft. will be capped with one foot of clean soil, unless they are already covered by concrete. Figure 12 shows the preliminary proposed cap areas. As shown on that figure, a rectangular area just south of MW-10A already has a solid concrete surface that meets the capping requirement. Additional surface sampling (0 to 2 inches, 2-12 inches) will be needed to verify the final cap limits. These additional samples will be analyzed for PCBs, metals, and SVOCs. The preliminary proposed sampling locations are shown on Figure 12. These additional samples will be conducted as part of a pre-design investigation per a work plan to be submitted/approved by NYSDEC. Input from USEPA will also be solicited. The pre-design work plan will be submitted after approval of this RWP is obtained. As requested by NYSDEC, the future pre-design work plan will include a map that shows only those existing sample locations with data in the 0 to 1 foot interval.

The design criteria for soil capping are prescribed in guidance (Final Commissioners Policy CP-51 Soil Clean Up Guidance Section V.B.2). The guidance stipulates soil cap cover thickness (1 foot for Industrial Use) and the required capping soil quality (SCOs in 6NYCRR Table 375-6.8(b)). For material originating from off-site sources, the soil quality criteria will be met by complying with sections of DER-10 Section 5.4(e) that apply to off-site sources, including pre-screening any off-site source of fill material. All material that meets the SCOs is considered clean.

Prior to bringing any material on Site, the “Request to Import/Reuse Fill or Soil” form will be completed and submitted to NYSDEC. As part of that process, OCIDA will work with NYSDEC to determine the necessity for chemical testing of the various materials. According to DER-10, it

does not appear that any testing is required for crushed stone that is obtained from a New York State DOT certified source (per DER-10 Section 5.4 (e)(5)). Sampling is required for all imported soil used as backfill or cover material, including soil from a commercial supplier. Additionally, per NYSDEC guidance, soil imported to a site for use as cover or backfill must be tested for 1,4-dioxane and per- and polyfluorinated substances (PFAS).

8.1.2 Soil Excavation Areas

OU-1

Soil with a PCB concentration greater than the Industrial Use SCO of 25 ppm in OU-1 will be excavated for offsite disposal. Soil at a depth of 35” to 50” bgs at boring (16) 2-4 exceeded this threshold. Initially, a 40 ft. by 40 ft. area centered at this sample location will be excavated. The upper interval of 0 to 12”, which tested below 25 ppm for PCBs, will be removed and temporarily stockpiled on poly sheeting. Additional pre-design PCB soil sampling will be proposed for the 12-24” and 24-35” intervals in a pre-design work plan to be reviewed by NYSDEC and USEPA. If PCB concentrations exceed 25 ppm in these intervals, the soil will be excavated for offsite disposal. Based on existing data, removed soil is non-hazardous waste and will be disposed of at a permitted solid-waste facility. Composite confirmatory samples will be collected from the side walls of the excavation. If necessary, additional lateral excavation will be undertaken to achieve the 25 ppm cleanup level. If additional lateral excavation is required, the extent will be discussed with NYSDEC and USEPA. Confirmatory sidewall excavation samples will be collected at the rate of one sample per 30 linear feet of excavation. Bottom confirmatory samples are not necessary since prior sampling data has indicated that soil below 50” has a PCB concentration less than 25 ppm. The estimated removal volume, assuming a 3.5 ft. cut over a 1600 sq. ft. area, is about 200 cubic yards. The excavation will be backfilled with clean fill from off-site or on-site soil/crushed concrete having PCBs less than 25 ppm. All offsite backfill will be tested per DER-10 and NYSDEC PFAS Guidance.

OU-2

The PCB level of 10 ppm was exceeded in three soil borings, B-19 (2-4’), B-22 (2-4’), and P-17 (4’). Pre-excavation samples may be collected above and below the depth range of exceedance in B-19 and P/BH-17 to establish the vertical exceedance boundaries. Alternatively, the soil will be considered to be greater than the 10 ppm threshold and will be removed. Based on existing data, the excavated soil is non-hazardous waste and will be disposed of at a permitted solid-waste landfill. Soil from 0 to 2’ at B-22 is below 10 ppm; therefore, the upper interval can be excavated



REVISED ANALYSIS OF ALTERNATIVES AND REMEDIAL WORK PLAN OCIDA – 800 Hiawatha Blvd. (Former Roth Steel Site), Syracuse, NY

and placed back in the hole as backfill. Initially, a 40 ft. by 40 ft. area, centered at each of the three sample locations will be excavated to an initial depth of 4 feet below grade. Composite confirmatory samples will be collected from the side walls of all three excavated areas and the bottoms of excavated areas from B-19 and P/BH-17. If necessary, additional vertical and lateral removal will be undertaken to achieve the 10 ppm cleanup level. Confirmatory excavation samples will be collected at the rate of 1 bottom sample per every 400 sq. ft and 1 sidewall sample per 30 linear feet of excavation.

The estimated removal volume, assuming a 2 ft. cut over a 1600 sq. ft. area for B-22, and a 4 ft. cut over a 1600 sq. ft. area for both B-19 and P-17, is about 600 cubic yards. The excavations will be backfilled with clean fill from off-site or on-site crushed concrete having PCBs less than 10 ppm. All offsite backfill will be tested per DER-10 and NYSDEC PFAS Guidance.

Prior to completing any remediation activities, a SICDN will be submitted to USEPA for approval under TSCA. The SICDN may be jointly submitted with a Final Remedial Workplan.

Construction activities will be performed by OSHA Hazwoper trained staff in appropriate PPE. The work will also be subject to a general excavation plan, which is provided in Appendix C.

Equipment Decontamination

Following the excavation activities, the contractor will decontaminate equipment that has contacted PCB containing material. An alternate decontamination method (as specified below) is being requested under 40 CFR 761.79 (h). Initially, this will include the physical removal/brushing (dry conditions) of any debris from excavator/buckets or arms. Following this step, there will be a wiping/wash step using cloths, potable water and a commercial detergent/cleaning agent such as “Simple Green” or “Alconox”. All rags and residues will be containerized for proper offsite disposal. At the completion of these activities, representative portions of equipment (e.g., bucket, arm ends, treads, etc.) that potentially contacted PCB-containing material will have wipe tests performed for PCB analyses. Three wipe samples per equipment type will be tested. The equipment will be determined to be clean if the wipe tests are less than 10 µg per 100 cm². Materials that do not achieve this level will be decontaminated again until satisfactory results are obtained. If necessary, other decontamination fluids such as kerosene or terpene hydrocarbons may be used if a soap/detergent does not achieve the required results.

8.1.3 Vapor Control System

Based on the existing RI data, the need for vapor mitigation at this site has not been established and no buildings are currently planned. The potential for soil vapor intrusion (SVI) will be evaluated if future development plans are identified and a building is proposed.

8.2 INSTITUTIONAL CONTROLS

This RWP provides for the implementation of institutional controls and engineering controls for the Site. The non-physical and physical controls will provide the necessary protections and provide notice to properly limit potential human or environmental exposure to contaminants. Collectively, the controls include establishment of an environmental easement that will:

- Ensure that use of the Site is vacant or limited to Industrial Use in OU-1 and OU-2, and that the engineering controls, as described herein, remain in place;
- Ensure that any future development at the site is subject to a Site Management Plan and submittal of a Change of Use Application;
- Ensure appropriate future use and that future property owners are aware of the existing conditions and restrictions at the BCP site;
- Include a restriction prohibiting use of groundwater;
- Include required notifications prior to commencement of site disturbance activities;
- Include notice of and information relating to an excavation work plan, identifying requirements in the event of any site activities that involve compromising the integrity of any part of the cap, exposing or disturbing soil beneath the cap, which will be included as part of the Site Management Plan;
- Conduct annual inspection and certification program requiring the owner to certify that the institutional and/or engineering controls are in place, have not been altered, and are still effective, which will be described in the Site Management Plan;

The Site Management Plan will include provisions that future construction on the site will be subject to NYSDEC notification through a Change of Use Application and the USEPA will be notified using a Self-Implementing Cleanup and Disposal Notification (SICDN), as necessary. An evaluation of the potential for soil vapor mitigation in any future buildings will also be specified.

9.0 REMEDIAL CONSTRUCTION ACTIVITIES

This RWP provides that remedial construction activities include pre-mobilization work such as obtaining any necessary permits, followed by mobilization, site preparation, traffic control, security, health and safety planning, air monitoring, and off-site transportation and disposal of waste. A description of the remedial construction activities are as follows.

9.1 CONSTRUCTION HEALTH AND SAFETY PLAN

A site-specific Health and Safety Plan (HASP) has previously been prepared and submitted for this site in the September 2016 Remedial Investigation Work Plan. All contractors and subcontractors performing work on the Site are required to comply with the requirements of this HASP and prepare their own activity-specific HASP.

9.2 COMMUNITY HEALTH AND SAFETY

9.2.1 Community Air Monitoring

The selected remedy includes a Community Air Monitoring Plan (CAMP) providing volatile organic compound and particulate monitoring during all ground intrusive remediation activities.

The Community Air Monitoring Program required to implement this remedy is provided in the General Excavation Plan (Appendix C).

9.2.2 Site Access and Traffic Control

See sections 3.0 and 6.0 of the HASP for information regarding site access and designation of responsibilities.

9.3 DATA QUALITY OBJECTIVES QUALITY AND ASSURANCE/QUALITY CONTROL PLAN

Analytical sampling will be used for confirmatory characterization of soils. Sampling will follow the QA/QC protocols presented in Appendix C of the September 2016 Remedial Investigation Work Plan. Samples will be tested using USEPA methods and reporting, along with the NYSDEC Analytical Services Protocol. All analytical data packages will be provided to NYSDEC in Category B (as defined by ASP) deliverable format as part of the Final Engineering Report.

9.4 STORMWATER POLLUTION PREVENTION PLAN

An Erosion and Sediment Control (ESC) Plan will be required to be prepared by the remedial contractor. The controls will be designed in accordance with New York State Standards and

Specifications for Erosion and Sediment Control. A stormwater pollution prevention plan (SWPPP) will also be prepared prior to submitting a Notice of Intent for coverage under the General Stormwater Permit for Construction Activity. The SWPPP will be prepared in accordance with the requirements of the general permit.

9.5 PERMITS

The construction contractor will obtain federal, state, and city permits, as necessary.

9.6 SITE PLANS AND AS-BUILT DRAWINGS

This RWP includes a scaled site map (Figure 12) showing the preliminary limits of the proposed remedial program. As-built drawings will be submitted showing the results of the construction activities as part of the Final Engineering Report (FER). The as-built drawings will show the final limits and elevations of excavations, vapor control system component locations (provided that a VCS is deemed necessary), and limits of backfill. Pre-excavation and confirmatory sampling results will also be provided in the FER.

9.7 SITE SECURITY, CONTROL, AND ACCESS

Site security, control, and access will be governed by the existing HASP.

9.8 EQUIPMENT AND MATERIAL STORAGE AND LAY DOWN AREAS

Storage of equipment and materials will be limited to the contractor lay down areas within the Site. These areas will be identified on future site development plans once a specific use and site design is developed.

9.9 PPE, EQUIPMENT AND PERSONNEL DECONTAMINATION PROCEDURES

The previously submitted HASP in the RIWP provides the general requirements for PPE, equipment and decontamination procedures. The remedial contractor will be required to supplement this with their own activity-specific HASP, along with PPE requirements.

9.10 VAPOR, ODOR, AND DUST CONTROLS

Vapor, odor, and dust controls are addressed in the existing HASP and General Excavation Plan (Appendix C). This RWP includes use of a community air monitoring plan throughout the duration of remedial activities that disturb potentially contaminated soil.

9.11 GROUNDWATER

If groundwater is removed during excavation, it will be sampled, collected and disposed of off-site in accordance with existing regulations, unless permission for onsite disposal is provided by NYSDEC.

9.12 UTILITY DESIGNATION

New York State rules and regulations govern utility mark-out completion. Dig Safely New York will be notified for utility mark out requests at least 72 hours prior to initiating excavation fieldwork. In addition, a review of any existing utility maps will be made prior to any ground disturbance.

10.0 REPORTING AND DOCUMENTATION

This RWP involves periodic progress reporting and maintenance of project records during remedial construction to enable involved parties (e.g., overseeing engineer and project managers) to track the project with respect to schedule and the requirements of the RWP. Additionally, after completion of remedial construction, an FER, including a comprehensive report of remedial action, will be prepared as described below.

10.1 MONTHLY PROGRESS REPORT

Monthly Progress Reports will be prepared and submitted after approval of the RWP, and remediation activities commence.

10.2 ON-SITE RECORD KEEPING/DOCUMENTATION

Throughout implementation of the remedial action, records are maintained by the construction contractor and/or engineer performing construction inspections to document activities completed on the Site.

10.3 FINAL ENGINEERING REPORT

The remedial activities completed pursuant to this RWP by OCIDA in OU-1 and OU-2 will be documented in a Final Engineering Report (FER). An FER for remedial activities performed in OU-3 has already been submitted by OCDOT. The FER will include the following:

1. Description of remedial actions performed;
2. Deviations from the RWP, if any;
3. Copies of records maintained during the remediation;
4. Problems encountered during construction and their resolution;
5. A discussion on the quantification and listing of waste/contaminants treated or removed from the site;
6. Detailed “as-built” drawings showing the surveyed limits of the excavation, the locations of documentation samples, construction details;
7. Copies of all records documenting off-site disposal of waste material;
8. Documentation of sampling results;
9. A summary of visual soil screening results;

10. An estimate of the volume of excavated soil;
11. A summary of laboratory analytical results of soil stockpile sampling and a compilation of laboratory analytical data reports;
12. Documentation including photographs of excavation and cap area; and
13. The FER will include a certification by a Professional Engineer registered in New York State, stating that the work was implemented, and construction activities were completed in substantial conformance with this RWP and that the engineering and institutional controls are implemented according to state and local codes and regulations.

Additionally, the FER will document that the remedial objectives of the remedial program have been or will be achieved. All sampling results will be submitted to EQuIS and successfully loaded prior to approval of the final FER.

10.4 OPERATION, MAINTENANCE, AND MONITORING PLAN

An Operation, Maintenance and Monitoring (OM&M) Plan will be developed for the Site and included in the FER to provide procedures to be followed in order to properly manage any residual contamination left in place following completion of the remedial action. This will include inspection and maintenance of the implemented engineering controls and institutional controls. This plan will also include a section for management of future soil excavations and environmental compliance.

11.0 PROJECT MANAGEMENT

11.1 KEY PARTICIPANTS AND RESPONSIBILITIES

Key participants involved in the remediation and development of this Site under the Brownfield Cleanup Program include the following:

Key Participants	Primary Responsibilities
Site Owner: Onondaga County Industrial Development Agency (OCIDA)	Procure and direct contractors and consultants for design, remedial construction and site development in accordance with approved construction documents.
Regulatory Agencies: NYSDEC, NYSDOH, and USEPA	Regulatory oversight.
Environmental/Engineering Consultant	Provide environmental engineering planning and field oversight with respect to mass excavation and associated soil management activities. Oversee implementation and reporting for remediation and construction in accordance with development plans. Reporting, construction inspection, and record keeping, related to construction of any necessary vapor control system, and preparing the Final Engineering Report.
Primary Contractor and Subcontractors	Furnish labor, material, supplies, etc., for remedial construction and site development in accordance with approved plans.

11.2 PROJECT COMMUNICATION AND MANAGEMENT

This RWP provides that project meetings occur throughout the BCP Project to discuss work progress, plan upcoming activities for the work, and discuss any unanticipated site conditions encountered. The construction contractor's superintendent is required to attend project meetings, as well as the construction contractor's Health and Safety Officer and QA/QC Officer, when discussion of issues related to their responsibilities is required.

12.0 SCHEDULE

A schedule of anticipated activities is shown below.

PROJECT SCHEDULE		
#	TASK	DATE
1	Receive Comments on Revised AA/RWP	November 2, 2023
2	Resubmittal of AA/RWP	December 4, 2023
3	Approval of AA/RWP	Mid-March 2024
4	Submit Pre-Design Sampling Plan	Mid-April 2024
4	Complete Pre-Design Sampling, Submit USEPA SICDN	Mid-June 2024
5	Begin Remediation Activities	September 2024
6	Complete Remediation Activities	November 2024
7	Submittal of Draft Environmental Easement (EE), FER, SMP, and Electronic Data in EQuIS Format	Late Fall 2024
8	Submittal of Final FER and SMP; EE Executed, Recorded, and Notices Provided	February 2025
9	Anticipated COC Issuance Date	April 2025

13.0 REFERENCES

- JMT. “Remedial Investigation Report for Brownfield Cleanup Program – 800 Hiawatha Boulevard West, Syracuse, New York (Former Roth Steel Site), NYSDEC BCP Site #C734083.” Latham, New York. March 2018 (Revised February 2019).
- JMT. “Self-Implementing Cleanup and Disposal Notification: Building Demolition – 800 Hiawatha Boulevard West, Syracuse, New York (Former Roth Steel Site), NYSDEC BCP Site C734083.” Latham, New York. July 2018 (Revised September 18, 2018).
- JMT. “Self-Implementing Cleanup and Disposal Notification and Interim Remedial Measure – 800 Hiawatha Boulevard West, Syracuse, New York (Former Roth Steel Site), NYSDEC BCP Site #C734083.” Latham, New York. April 2019.
- JMT. “Self-Implementing Cleanup and Disposal Notification/Interim Remedial Measure – Supplement (Onondaga County Trail Extension) – 800 Hiawatha Boulevard West, Syracuse, New York (Former Roth Steel Site), NYSDEC BCP Site #C734083.” Latham, New York. June 2019.
- JMT. “Self-Implementing Cleanup and Disposal Notification/Interim Remedial Measure – Revised Supplement (Onondaga County Trail Extension) – 800 Hiawatha Boulevard West, Syracuse, New York (Former Roth Steel Site), NYSDEC BCP Site #C734083.” Latham, New York. September 2019 (Revised June 2020).
- Spectra Environmental Group, Inc. “Interim Remedial Measure Completion Report – 800 Hiawatha Boulevard West (Former Roth Steel Site) City of Syracuse, Onondaga County, New York, BCP# C734083.” Latham, New York. June 2017.
- Spectra Environmental Group, Inc. “Revised Remedial Investigation Work Plan – 800 Hiawatha Boulevard West (Former Roth Steel Site) City of Syracuse, Onondaga County, New York, BCP# C734083.” Latham, New York. October 2017.
- Spectra Environmental Group, Inc. “Revised Interim Remedial Measure Investigation Plan – 800 Hiawatha Boulevard West (Former Roth Steel Site) City of Syracuse, Onondaga County, New York, BCP# C734083.” Latham, New York. May 2016.
- Spectra Environmental Group, Inc. “Revised Interim Remedial Work Plan – 800 Hiawatha Boulevard West (Former Roth Steel Site), BCP# C734083.” Latham, New York. September/October 2016.



REVISED ANALYSIS OF ALTERNATIVES AND REMEDIAL WORK PLAN
OCIDA – 800 Hiawatha Blvd. (Former Roth Steel Site), Syracuse, NY

- Spectra Environmental Group, Inc. “Self-Implementing and Disposal Notification” 800 Hiawatha Boulevard West (Former Roth Steel Site), BCP# C734083.” Latham, New York. December 2016.
- Clough, Harbor & Associates. “Investigative Work Plan: Soil and Contaminant Sampling – Onondaga Lake Canalways Trail Extension Project (PIN3750.49), 800 Hiawatha Boulevard West Brownfield Cleanup Program (BCP) Site.” Syracuse, New York. February 23, 2016.
- Spectra Environmental Group, Inc. “Revised BCP Application – 800 Hiawatha Boulevard West (former Roth Steel) Site BCP# C734083.” Latham, New York. November 6, 2015.
- O’Brien & Gere Engineers, Inc. “Post Removal Letter Report / Compliance with Consent Order (Case No. R7-20121101-89) – Roth Steel Corporation.” September 2013.
- O’Brien & Gere Engineers, Inc. “Site Investigation Report: Roth Steel Facility – Syracuse, New York.” June 2013.
- New York State Department of Environmental Conservation. “DER-10 / Technical Guidance for Site Investigation and Remediation.” Issued May 3, 2010.
- Passero Associates. “Phase II Environmental Site Assessment, Roth Steel Corporation, 800 Hiawatha Boulevard West, Syracuse, New York 13204.” Rochester, New York. November 2007.
- W.Z. Baumgartner & Associates, Inc. “Residue Characterization Report.” Brentwood, Tennessee. December 1993.
- Faltyn, N.E. Oil Contamination Study, Roth Steel Corp., Hiawatha Boulevard, Syracuse, New York. October 1968.



TABLES

Table 1A: Historical Soil Analytical Results - PCBs

Passero Associates (Correspond to "P Locations")																		
PCBs	Soil Cleanup Objectives				October 2007													
	Restricted Residential	Commercial	Industrial	Hazardous Waste Criteria	BH-1 (0'-4')	BH-1 (4'-8')	BH-2 (0'-4')	BH-2 (4'-8')	BH-3 (0'-4')	BH-3 (4'-8')	BH-4 (0'-4')	BH-4 (4'-8')	BH-12 (0'-8')	TP-13 (4')	TP-14 (4')	BH-15 (7'-8')	TP-16	BH-17 (4')
Total PCBs	1	1	25	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.36	3.5	ND	ND	29.47*

O'Brien and Gere, June 2013																			
PCBs	Soil Cleanup Objectives				2008														
	Restricted Residential	Commercial	Industrial	Hazardous Waste Criteria	B01 (0'-0.5')	B06 (0.5'-1.0')	B08 (0'-0.5')	B09 (4.5'-5.0')	B10 (0.5'-1.0')	B12 (0'-0.5')	B13 (0.5'-1.0')	B15 (0'-0.5')	B16 (0.5'-1.0')	B18 (0.5'-1.0')	B19 (0'-0.5')	B22 (0'-0.5')	B24 (1.5'-2.0')	B27 (0'-0.5')	B29 (0'-0.5')
Total PCBs	1	1	25	50	0.513	0.586	0.6	0.203	0.6	0.54	0.236	0.364	2.73	1.64	0.67	0.334	1.84	0.97	0.179

O'Brien and Gere, June 2013														
PCBs	Soil Cleanup Objectives				2010									
	Restricted Residential	Commercial	Industrial	Hazardous Waste Criteria	B37 (0' - 2')	B37 (2' - 4')	B37 (5' - 7')	B38 (0'-1')	B39 (0'-1')	B47 (0'-1')	B48 (0'-1')	MW-10 (0'-2')	MW-10 (6'-8')	MW-11 (0'-2')
Total PCBs	1	1	25	50	0.52	3.4	0.271	1.9	15.2	2.1	3.2	5.78	0.42	1.05

O'Brien and Gere, June 2013									
PCBs	Soil Cleanup Objectives				2010		2011		
	Restricted Residential	Commercial	Industrial	Hazardous Waste Criteria	MW-11 (10'-12')	MW-13 (2'-4')	B31 (0'-1')	B32 (0' - 1')	B33 (0'-1')
Total PCBs	1	1	25	50	0.036	0.611	0.55	2.09	0.81 J

Notes:

1. All results in mg/kg or ppm.
2. **Bold Red** Concentration exceeds Restricted Residential and Commercial Soil Cleanup Objectives.
3. **Bold Red** Concentration exceeds Hazardous Waste Criteria for PCBs (50 ppm).
4. * Concentration exceeds Restricted Residential, Commercial, and Industrial Soil Cleanup Objectives.

Table 1A: Historical Soil Analytical Results - PCBs
May/June 2016 Sample Summary Table - Waste Cell Area

Boring #	Sample ID	Depth (in.)	DTW (in.)	Restricted Residential	Commercial	Industrial	Total PCBs (ppm)	Qual	Material Description
(16) 2-2	SS (16) 2-2	0-12	▽84	1	1	25	12.5	J	ASR & Sandy Soil
	2-2A	17-37					96.6*		ASR & Sandy Soil
	2-2B	37-60					44.4*		ASR & Sandy Soil
	2-2C	70-100					0.0314		Gravel & Fine Soil
	2-2D	100-120					0.0300		Fine Soil
	2-2E	120-134					0.0285		Gravel & Fine Soil
	2-2F	134-157					ND		Solvay Waste & Fill
	2-2G	157-170					ND		Solvay Waste
(16) 2-3	2-3A	40-60	▽90	1	1	25	21.4	J	ASR & Sandy Soil
	2-3B	70-80					0.0753		Gravel & Asphalt Residue
	2-3C	80-104					ND		Gravel & Fine Soil
	2-3D	104-120					ND		Fine Soil with Concretions
	2-3E	120-140					ND	J	Gravel & Fine Soil
	2-3F	140-160					ND		Fine Soil
	2-3G	160-180					0.0513		Solvay Waste
(16) 2-4	SS-2-4	0-12	▽150	1	1	25	18.3	(J)	ASR & Sandy Soil
	SS-2-4 DUP	0-12					22.3	(J)	ASR & Sandy Soil
	2-4A	35-50					38.1*	J	ASR & Sandy Soil
	2-4B	50-60					0.309	J	Fine Soil with Concretions
	2-4C	95-110					13.8		ASR
	2-4D	110-120					0.980		Fine Soil
	2-4E	150-180					0.117	J	Fine Soil with Shells
	2-4F	180-186					0.207	J	Fine Soil with Shells
	2-4F Dup	180-186					0.263	J	Fine Soil with Shells
(16) 2-13	2-13A	0-12	▽75	1	1	25	1.06	J	ASR & Sandy Soil
	2-13B	36-40					2.11	U	ASR & Sandy Soil
	2-13C	48-60					0.0346		ASR & Fine Soil
	2-13D	74-80					0.0461		ASR & Fine Soil
(16) 2-14	2-14A	0-12	▽96	1	1	25	0.364	J	Coarse Sand Only
	2-14B	45-48					12.1		ASR & Sandy Soil
	2-14C	48-60					14.9		ASR & Fine Soil
	2-14D	80-82					0.145		Sand & ASR

Notes:

1. Soil samples were collected between May 24 and June 9, 2016; Results reported in ppm (mg/kg).
2. **Bold Red** Value exceeds Restricted Residential and Commercial Soil Cleanup Objectives
3. **Bold Red** Value exceeds Hazardous Waste Criteria for PCBs (50 ppm)
4. * Value exceeds Restricted Residential, Commercial, and Industrial Soil Cleanup Objectives
5. ND: Non-Detect
6. DTW: Depth to groundwater
7. U: The compound was not detected at the indicated concentration.
8. J: Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.
9. (J): Data qualified based on DUSR evaluation.

Table 1B: Remedial Investigation Soil Analytical Results - PCBs

LOCATION					(17) B-15				(17) B-17						(17) B-18				(17) B-19					
					1-2'		2-4'		0-1'		1-2'		2-4'		4-6'		6-8'		1-2'		2-3'		2-4'	
SAMPLING DATE(S)					11/2/2017				11/29/2017										11/2/2017				11/29/2017	
LAB SAMPLE ID					L1740260-01		L1740260-02		L1743779-07		L1743779-08		L1743779-09		L1743779-10		L1743779-11		L1740260-03		L1740260-04		L1743779-12	
SCOs	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aroclor 1242	3.2	1	1	25	0.205		0.592		8.54*		7.61*		3.57*		2.11		0.439	U	0.157	J	1.66		6.44*	
Aroclor 1254	3.2	1	1	25	0.358		0.309		6.57*	J	5.27*		1.31		0.912		0.439	U	0.54		1.53		5.1*	
Aroclor 1260	3.2	1	1	25	0.114		0.191		1.28	J	1.57	J	0.528	J	0.219	J	2.18		0.638		1.46		1.18	
PCBs, Total	3.2	1	1	25	0.677		1.09		16.4*		14.4*		5.41*		3.24*		2.18		1.34		4.65*		12.7*	

LOCATION					(17) B-20				(17) B-22													
					0-1'		1-2'		2-4'		4-6'		0-1'		1-2'		2-4'		4-6'		6-8'	
SAMPLING DATE(S)					11/2/2017				11/29/2017				10/31/2017									
LAB SAMPLE ID					L1740260-05		L1740260-06		L1743779-13		L1745867-01		L1739764-01		L1739764-02		L1739764-03		L1739764-04		L1739764-05	
SCOs	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aroclor 1242	3.2	1	1	25	0.0369	U	1.32		0.0126	J	0.104		0.207	PJ	0.237		3.06	U	0.427	J	0.0539	U
Aroclor 1254	3.2	1	1	25	0.0417		1.44		0.0324	J	0.0649		0.316		0.282		3.06	U	0.285		0.0539	U
Aroclor 1260	3.2	1	1	25	0.039		0.593		0.0344	J	0.0668		0.214		0.208		21.5*		0.82		0.0539	U
Aroclor 1268	3.2	1	1	25	0.0369	U	0.208	J	0.0409	U	0.0425	U	0.0361	U	0.0353	U	3.06	U	0.296		0.0539	U
PCBs, Total	3.2	1	1	25	0.0807		3.56*		0.0794		0.236		0.737		0.727		21.5*		1.83		0.0539	U

LOCATION					(17) B-23			(17) B-24			(17) B-25					
					0-1'		1-2'	2-4'	0-1'		1-2'	2-4'	0-1'		1-2'	2-4'
SAMPLING DATE(S)					11/1/2017			11/1/2017			10/31/2017					
LAB SAMPLE ID					L1739969-17		L1739969-18	L1739969-19	L1739969-11		L1739969-12	L1739969-13	L1739764-20		L1739764-21	L1739764-22
SCOs	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aroclor 1242	3.2	1	1	25	0.0875		0.0427	U	0.0393	U	0.0667		0.14		0.0721	U
Aroclor 1254	3.2	1	1	25	0.213		0.201		0.0706		0.107		0.316		0.0721	U
Aroclor 1260	3.2	1	1	25	0.0912	J	0.269		0.0296	J	0.0368		0.085	J	0.953	
Aroclor 1268	3.2	1	1	25	0.0336	U	0.0427	U	0.0393	U	0.0351	U	0.036	U	0.0721	U
PCBs, Total	3.2	1	1	25	0.392		0.47		0.1		0.211		0.541		0.953	

Table 1B: Remedial Investigation Soil Analytical Results - PCBs

LOCATION					(17) B-26						(17) B-27							
					0-1'		0-1' DUP 01		1-2'		2-4'		0-1'		1-2'		2-4'	
SAMPLING DATE(S)					10/31/2017						10/31/2017							
LAB SAMPLE ID					L1739764-06		L1739764-11		L1739764-07		L1739764-08		L1739764-14		L1739764-15		L1739764-16	
SCOs	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aroclor 1242	3.2	1	1	25	0.0553	J	0.033	J	0.0562		0.0797		0.226		0.298		0.204	U
Aroclor 1254	3.2	1	1	25	0.0873		0.0566		0.0778		0.11		0.337		0.434		0.856	
Aroclor 1260	3.2	1	1	25	0.0591		0.0409		0.0718		0.203		0.157		0.235		1.48	
PCBs, Total	3.2	1	1	25	0.202		0.131		0.206		0.393		0.72		0.967		2.34	

LOCATION					(17) SS1		(17) SS-4		(17) SS-5		(17) TP-2				(17) TP-3		(17) TP-4		(17) TP-5							
					0-0.5"		0-2"		0-2"		0-1'		1-2'		2-4'		2-4'		1-2'		0-1'		1-2'		2-4'	
SAMPLING DATE(S)					11/30/2017		10/31/2017		11/1/2017		10/30/2017				10/30/2017		10/30/2017		10/30/2017							
LAB SAMPLE ID					L1744014-10		L1739764-12		L1739969-25		L1739503-03		L1739503-04		L1739503-05		L1739503-06		L1739503-07		L1739503-08		L1739503-09		L1739503-10	
SCOs	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aroclor 1242	3.2	1	1	25	0.533	J	0.0936		0.0241	J	0.414	J	0.755	J	0.242		1.7		0.927	PJ	2.42		2.76		0.931	
Aroclor 1254	3.2	1	1	25	0.706		0.388		0.0434		0.448		0.99		0.0418	U	1.5		0.708		1.14		1.12		0.911	
Aroclor 1260	3.2	1	1	25	0.279		0.113		0.0222	J	0.142	J	0.29		0.724		1.89		0.305		0.486		0.509		0.459	
Aroclor 1268	3.2	1	1	25	0.216	U	0.0356	U	0.0339	U	0.176	U	0.205	U	0.0418	U	0.196	U	0.185	U	0.193	U	0.199	U	0.177	U
PCBs, Total	3.2	1	1	25	1.52		0.595		0.0897		1		2.04		0.966		5.09*		1.94		4.05*		4.39*		2.3	

Notes:

1. All detections shown in mg/kg or ppm.
2. **Bold Red** Concentration exceeds Restricted Residential and Commercial Soil Cleanup Objectives.
3. **Bold Red** Concentration exceeds Hazardous Waste level (50 ppm).
4. * Concentration exceeds Restricted Residential, Commercial, and Industrial Soil Cleanup Objectives.
5. * Concentration exceeds Protection of Groundwater Soil Cleanup Objectives.
6. **Blue** Validated Qualifier
7. If any constituent had an initial quantification of "E" (exceeds calibration range), the diluted re-analysis results are shown.

Qualifiers (Q):

- J: Below quantitation limit, estimated concentration. J values are applied to the individual aroclor, but not to the total PCB value.
- P: The RPD between the results for the two columns exceeds the method-specified criteria.
- U: Result below detection limit; the method reporting limit is shown.

Table 1C: Trail Analytical Results - PCBs

Trail Sample Locations							
Sample Location	Date	Depth (feet)	Protection of Groundwater	Restricted Residential	Commercial	Industrial	Total PCBs
(19) B-1	2/2019	0-1	3.2	1	1	25	0.534
		1-2	3.2	1	1	25	0.5
		2-4	3.2	1	1	25	0.532
		4-6	3.2	1	1	25	0.179 J
		6-8	3.2	1	1	25	0.519
B18-4	08/2018	0-1	3.2	1	1	25	3.99*
		0-1 DUP	3.2	1	1	25	3.71*
		1-2	3.2	1	1	25	2.51
		3.5-4	3.2	1	1	25	2.51
		5-6	3.2	1	1	25	41.9**
		7.5-8	3.2	1	1	25	35.2**
(19) B-2	2/2019	3-5	3.2	1	1	25	0.759
		5-7	3.2	1	1	25	0.0379 J
B18-5	08/2018	2-3	3.2	1	1	25	2.51
MW-13A	2/2019	0-1	3.2	1	1	25	6.55
MW-13	2010	2-4	3.2	1	1	25	0.611
(19) B-3	2/2019	0-1	3.2	1	1	25	3.08
		1-2	3.2	1	1	25	3.64*
		2-3	3.2	1	1	25	1.53
SB-2	04/2016	0-2	3.2	1	1	25	ND
		12-14	3.2	1	1	25	ND
SB-3	04/2016	6-8	3.2	1	1	25	ND
SB-3A	2/2019	0-1	3.2	1	1	25	0.65
SB-4	04/2016	10-12	3.2	1	1	25	ND
SB-4A	2/2019	0-1	3.2	1	1	25	0.13 J
SB-5	04/2016	2-4	3.2	1	1	25	ND
SB-5A	2/2019	0-1	3.2	1	1	25	0.327
SB-6	04/2016	0-2	3.2	1	1	25	0.00866 J
SB-6A	2/2019	2-3	3.2	1	1	25	0.226
		4-5	3.2	1	1	25	ND
SB-7	04/2016	3-5	3.2	1	1	25	0.0421 J
SB-7A	2/2019	0-1	3.2	1	1	25	0.0787 J
SB-8	04/2016	3-5	3.2	1	1	25	ND
SB-8A	2/2019	0-1	3.2	1	1	25	0.0975 J
SB-9	04/2016	3-5	3.2	1	1	25	ND
SB-9A	2/2019	0-1	3.2	1	1	25	0.0521 J
SB-10	04/2016	3-5	3.2	1	1	25	0.0816 J
SB-10A	2/2019	0-1	3.2	1	1	25	0.11 J
		0-1 DUP	3.2	1	1	25	0.117 J
SB-11	04/2016	3-5	3.2	1	1	25	ND
SB-11A	2/2019	0-1	3.2	1	1	25	0.0758 J
SB-12	04/2016	3-5	3.2	1	1	25	ND
SB-12A	2/2019	0-1	3.2	1	1	25	0.0451 J
		0-1 DUP	3.2	1	1	25	0.0622 J
SB-13	04/2016	5-10	3.2	1	1	25	ND
SB-13A	2/2019	0-1	3.2	1	1	25	0.0498 J
		2-3	3.2	1	1	25	0.0587
Pier 5-2 Grab	3/2020	3	3.2	1	1	25	0.0723 J
Pier 6 side-N Comp.	3/2020	5	3.2	1	1	25	0.215 J
Comp. 2C-North	4/2020	3	3.2	1	1	25	11.6* J
Comp. 1B-North-3	4/2020	1	3.2	1	1	25	1.53 J
Comp. 1B-North-2	4/2020	1	3.2	1	1	25	12.1* J
Grab 1B-North-1	4/2020	1	3.2	1	1	25	9.54* J

Notes:

1. All results in mg/kg or ppm.
2. **Bold Red** Concentration exceeds Restricted Residential and Commercial Soil Cleanup Objectives.
3. **Bold Red** Concentration exceeds Hazardous Waste Criteria for PCBs (50 ppm).
4. * Concentration exceeds Restricted Residential, Commercial, and Industrial Soil Cleanup Objectives.
5. * Concentration exceeds Protection of Groundwater Soil Cleanup Objectives.

Table 1D - 2023 Supplemental Soil Samples - PCBs

LOCATION				23-B-33						23-B-34				23-B-36			
				0-2"		2-12"		2-12" (DUP1)		0-2"		2-12"		0-2"		2-12"	
SAMPLING DATE				4/27/2023						4/27/2023				4/27/2023			
LAB SAMPLE ID																	
Polychlorinated Biphenyls	Prot. of GW	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aroclor 1016	3.2	1	25	0.054	U	0.0502	U	0.0551	U	0.0684	U	0.0523	U	0.0483	U	0.0505	U
Aroclor 1221	3.2	1	25	0.054	U	0.0502	U	0.0551	U	0.0684	U	0.0523	U	0.0483	U	0.0505	U
Aroclor 1232	3.2	1	25	0.054	U	0.0502	U	0.0551	U	0.0684	U	0.0523	U	0.0483	U	0.0505	U
Aroclor 1242	3.2	1	25	0.108		0.107	J	0.165	J	0.113		0.0584		0.0253	J	0.00766	J J+
Aroclor 1248	3.2	1	25	0.054	U	0.0502	U	0.0551	U	0.0684	U	0.0523	U	0.0483	U	0.0505	U
Aroclor 1254	3.2	1	25	0.26		0.215	J	0.513	J	0.332		0.188		0.0199	J	0.0106	J
Aroclor 1260	3.2	1	25	0.108		0.0858	J	0.209	J	0.221	J+	0.17		0.0113	J	0.0505	U
Aroclor 1262	3.2	1	25	0.054	U	0.0502	U	0.0551	U	0.0684	U	0.0523	U	0.0483	U	0.0505	U
Aroclor 1268	3.2	1	25	0.054	U	0.0502	U	0.0551	U	0.0684	U	0.0523	U	0.0483	U	0.0505	U
PCBs, Total	3.2	1	25	0.476		0.408	J	0.887		0.666		0.416		0.0565	J	0.0183	J

Notes:

1. All detections shown in mg/kg or ppm.
2. Blue Validated Qualifier

Qualifiers (Q):

J: Below quantitation limit, estimated concentration

U: Result below detection limit; the method reporting limit is shown.

J: Analyte is present. Reported value may have a higher level of uncertainty than is normally expected with the analytical method.J+: Analyte is present. Reported value may be biased high and have a higher level of uncertainty than is normally expected with the analytical method.

Table 2A: Historical Soil Analytical Results - Metals (Revised)

Passero Associates, October 2007 (Corresponds with "P" locations)								
METALS	Soil Cleanup Objectives			October 2007				
	Restricted Residential	Commercial	Industrial	BH-12 (0-8')	TP-13 (4')	TP-14 (4')	BH-17 (4')	BH-15 (7-8')
Arsenic	16	16	16	---	28.4*	---	---	---
Barium	400	400	10,000	3080	---	---	---	---
Cadmium	4.3	9.3	60	---	22.5	5.33	7.38	---
Chromium	110	400	800	140	360	197	152	---
Copper	270	270	10,000	---	---	---	---	---
Lead	400	1000	3,900	534	2440	---	762	---
Mercury	0.81	2.8	5.7	---	3.68	---	1.01	---
Nickel	310	310	10,000	---	---	---	---	---
Zinc	10,000	10,000	10,000	---	---	---	---	---

O'Brien and Gere, June 2013																
METALS	Soil Cleanup Objectives			2008												
	Restricted Residential	Commercial	Industrial	B01 (0-0.5')	B06 (0.5-1.0')	B08 (0-0.5')	B09 (4.5-5.0')	B10 (0.5-1.0')	B12 (0-0.5')	B13 (0.5-1.0')	B15 (0-0.5')	B16 (0.5-1.0')	B18 (0.5-1.0')	B19 (0-0.5')	B22 (0-0.5')	B24 (1.5-2.0')
Arsenic	16	16	16	---	---	---	26.1*	---	---	---	---	---	---	---	---	---
Barium	400	400	10,000	---	---	---	3010	---	---	---	---	---	---	---	---	---
Cadmium	4.3	9.3	60	2140*	---	---	23.6	---	---	---	---	11	---	---	---	---
Chromium (hex)	110	400	800	---	---	---	208	---	---	185	---	---	---	---	---	---
Copper	270	270	10,000	---	---	---	---	---	---	---	---	5460	---	---	---	---
Lead	400	1000	3,900	---	---	---	1690	---	---	---	---	---	---	830	---	---
Mercury	0.81	2.8	5.7	---	---	---	6.4*	---	---	2.38	---	2.2	---	---	---	---
Nickel	310	310	10,000	---	---	---	---	---	---	---	---	---	---	---	---	---
Zinc	10,000	10,000	10,000	---	---	---	21400*	---	---	---	---	---	---	---	---	---

O'Brien and Gere, June 2013																		
METALS	Soil Cleanup Objectives			2008		2011			2010									
	Restricted Residential	Commercial	Industrial	B27 (0-0.5')	B29 (0-0.5')	B31 (0-1')	B32 (0-1')	B33 (0-1')	B37 (2-4')	B37 (5-7')	B38 (0-1')	B39 (0-1')	B48 (0-1')	MW-10 (0-2')	MW-10 (6-8')	MW-11 (0-2')	MW-10 (10-12')	MW-13 (2-4')
Arsenic	16	16	16	---	---	---	---	---	---	16.1*	---	---	---	---	---	---	---	---
Barium	400	400	10,000	---	---	---	---	---	481	564	---	406	430	---	---	---	---	---
Cadmium	4.3	9.3	60	---	---	---	---	22.3	4.34	---	4.94	22.9	7.80	10.1	---	---	---	---
Chromium (hex)	110	400	800	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Copper	270	270	10,000	---	---	---	472	---	506	473	---	513	1290	363	4840	---	---	---
Lead	400	1000	3,900	---	---	---	---	---	639	650	873	1130	645	---	4650*	---	---	---
Mercury	0.81	2.8	5.7	---	---	---	---	2.9	---	---	0.913	2.39	1.33	1.06	5.74*	---	---	3.88
Nickel	310	310	10,000	---	---	---	---	---	---	320	---	---	---	---	---	---	---	---
Zinc	10,000	10,000	10,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Notes:

1. Exceedances shown; all results in mg/kg or ppm.
2. ^ - Instrument related quality control exceeded the control limits
3. **Red** Concentration exceeds Restricted Residential Soil Cleanup Objectives.
4. **Red** Concentration exceeds both Restricted Residential and Commercial Soil Cleanup Objectives.
5. * Concentration exceeds Restricted Residential, Commercial, and Industrial Soil Cleanup Objectives.
6. Only constituents with exceedances of Restricted Residential, Commercial, and/or Industrial Soil Cleanup Objectives are shown.
7. --- Concentration is below Soil Cleanup Objectives.
8. There are no exceedances in B31 or B36 and are therefore not shown.

Table 2B: Remedial Investigation Soil Analytical Results - Metals
(mg/kg or ppm)

LOCATION					(17)B-18	(17) B-19	(17) B-20	(17) B-21			(17) B-22	(17) B-23					
					2-3'	2-4'	0-1'	4-6'	6-8'	8-10'	0-1'	0-1'					
SAMPLING DATE					11/2/2017	11/29/2017	11/2/2017	12/1/2017			10/31/2017	11/1/2017					
LAB SAMPLE ID					L1740260-04	L1743779-12	L1740260-05	L1744164-01	L1744164-02	L1744164-03	L1739764-01	L1739969-17					
Total Metals	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	
Aluminum, Total	NS	NS	NS	NS	6980		3660		4350		-	-	-		2670		
Antimony, Total	NS	NS	NS	NS	48.7		8.05	J	4.29	J	-	-	-	1.15	J	1.11	J
Arsenic, Total	16	16	16	16	16.8*		16.4*		4.57		-	-	-	5.95		5.1	
Barium, Total	820	400	400	10000	339		228	J	89.6		-	-	-	130		76.5	
Beryllium, Total	47	72	590	2700	0.365	J	0.335	J	0.233	J	-	-	-	0.434	U	0.425	U
Cadmium, Total	7.5	4.3	9.3	60	10.8*		27.2*		2.96		-	-	-	2.64		2.86	
Calcium, Total	NS	NS	NS	NS	275000		156000		481000		-	-	-	235000		225000	
Chromium, Total	NS	NS	NS	NS	498		178		42		-	-	-	37.2		15.3	
Cobalt, Total	NS	NS	NS	NS	23.5		10.1	J	5.98		-	-	-	5.45		5.13	
Copper, Total	1720	270	270	10000	1490		473		1520		-	-	-	157		188	
Iron, Total	NS	NS	NS	NS	226000		73700		12800		-	-	-	17900		8400	
Lead, Total	450	400	1000	3900	731*		444		376		889*	1780*	1020*	137		105	
Magnesium, Total	NS	NS	NS	NS	32600		11300	J-	32400		-	-	-	17000		10300	
Manganese, Total	2000	2000	10000	10000	1780		527		413		-	-	-	330		298	
Mercury, Total	0.73	0.81	2.8	5.7	1.3*		1.5*		0.2	0.41		3.4*	0.86*	0.25		0.18	
Nickel, Total	130	310	310	10000	348*		96.8	J	61.8		-	-	-	30.6		19.2	
Potassium, Total	NS	NS	NS	NS	880		388	J	775		-	-	-	557		384	
Selenium, Total	4	180	1500	6800	0.481	J	4.59*		1.09	J	-	-	-	0.738	J	0.484	J
Silver, Total	8.3	180	1500	6800	1.89		1.54		0.707	J	-	-	-	0.538	J	0.85	U
Sodium, Total	NS	NS	NS	NS	649		183	J-	304		-	-	-	207		267	
Thallium, Total	NS	NS	NS	NS	2.82		0.45	J-	1.79	U	-	-	-	1.74	U	1.7	U
Vanadium, Total	NS	NS	NS	NS	36.5		14.2		18.6		-	-	-	16.1		8.57	
Zinc, Total	2480	10000	10000	10000	2160		2160		259		-	-	-	566		188	

Table 2B: Remedial Investigation Soil Analytical Results - Metals
(mg/kg or ppm)

LOCATION					(17) B-24		(17) B-25	(17) B-26	(17) B-27		(17) SS-1		(17) SS-4		(17) SS-5							
					0-1'	5-6'	0-1'	0-1'	0-1'	2 1/2'	0-2"	0-2"	0-2"									
SAMPLING DATE					11/1/2017		10/31/2017	10/31/2017	10/31/2017		11/30/2017		10/31/2017	11/1/2017								
LAB SAMPLE ID					L1739969-11		L1739969-16		L1739764-20		L1739764-06		L1739764-14		L1739764-19		L1744014-10		L1739764-12		L1739969-25	
Total Metals	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q		
Aluminum, Total	NS	NS	NS	NS	1370		4820		4990		2180		1670	3830	4030		3290		1330			
Antimony, Total	NS	NS	NS	NS	4.21	U	5.3	U	2.79	J	4.37	U	1.15	J	5.92	J	0.369	J	0.465	J		
Arsenic, Total	16	16	16	16	2.6		9.59		13.8		3.33		4.1	5.52	4.43	J	5.04		3.27			
Barium, Total	820	400	400	10000	34.5		132		430		63.9		75.5	91.9	169		71.2		39.3			
Beryllium, Total	47	72	590	2700	0.421	U	0.191	J	0.131	J	0.437	U	0.406	U	0.09	J	0.074	U	0.114	J	0.415	U
Cadmium, Total	7.5	4.3	9.3	60	0.548	J	2		8.36*		0.813	J	2.34	1.1	4		2.58		0.673	J		
Calcium, Total	NS	NS	NS	NS	230000		13300		142000		267000		272000	173000	186000		191000		211000			
Chromium, Total	NS	NS	NS	NS	12		44.7		215		12.1		25.1	10.9	77.7	J	84.9		13.6			
Cobalt, Total	NS	NS	NS	NS	2.33		7.32		16.6		2.45		3.65	5.36	8.45		5.75		2.77			
Copper, Total	1720	270	270	10000	67.1		286		581		35.7		94.7	33.4	384		176		258			
Iron, Total	NS	NS	NS	NS	7780		71700		124000		7360		13900	9460	41200	J	26000		6550			
Lead, Total	450	400	1000	3900	37.2		38.7		972*		27.9		98.5	80.9	439	J	120		40.8			
Magnesium, Total	NS	NS	NS	NS	17200		2040		13200		35000		18800	40100	25100	J-	15000		15000			
Manganese, Total	2000	2000	10000	10000	265		450		1340		157		223	439	508		322		231			
Mercury, Total	0.73	0.81	2.8	5.7	0.14		0.2		0.68		0.15		0.4	0.13	1.1*		0.29		0.07			
Nickel, Total	130	310	310	10000	10.2		54.3		107		10.8		32	13.5	71	J	35.8		17.3			
Potassium, Total	NS	NS	NS	NS	295		683		536		343		341	791	558		342		298			
Selenium, Total	4	180	1500	6800	1.68	U	1.26	J	2.89		1.75	U	0.584	J	0.605	J	2.13	U	0.702	J	0.341	J
Silver, Total	8.3	180	1500	6800	0.842	U	1.06	U	0.788	J	0.874	U	0.812	U	0.563	J	0.272	J	0.831	U		
Sodium, Total	NS	NS	NS	NS	165	J	391		731		223		189	197	242		162	J	165	J		
Thallium, Total	NS	NS	NS	NS	1.68	U	2.12	U	1.51	J	1.75	U	1.62	U	1.63	U	2.13	U	1.76	U	1.66	U
Vanadium, Total	NS	NS	NS	NS	13.7		18.3		20.8		21.8		10.8	10.9	17	J	67.2		30.4			
Zinc, Total	2480	10000	10000	10000	98.6		343		1200		132		331	56.4	1090	J	682		158			

Table 2B: Remedial Investigation Soil Analytical Results - Metals
(mg/kg or ppm)

LOCATION					(17) TP-2		(17) TP-3		(17) TP-4	(17) TP-5					
					0-1'	2-4'	0-0.5"	2-4'	1-2'	0-1'	2-4'				
SAMPLING DATE					10/30/2017		11/29/2017	10/30/2017	10/30/2017	10/30/2017					
LAB SAMPLE ID					L1739503-03		L1739503-05		L1743779-21	L1739503-06	L1739503-07	L1739503-08	L1739503-10		
Total Metals	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	
Aluminum, Total	NS	NS	NS	NS	4210		2830		-	4200	3930	6110	3750		
Antimony, Total	NS	NS	NS	NS	4.33	U	5.16	U	-	5	U	4.63	U	4.35	U
Arsenic, Total	16	16	16	16	4.67		9.75		-	11.7		8.2	15.9	8.99	
Barium, Total	820	400	400	10000	120		193		-	464	143	292	167		
Beryllium, Total	47	72	590	2700	0.165	J	0.103	J	-	0.14	J	0.056	J	0.07	J
Cadmium, Total	7.5	4.3	9.3	60	3.21		4.03		4.34	14.7	8.67*	15*	7.56*		
Calcium, Total	NS	NS	NS	NS	252000		265000		-	50300	156000	139000	185000		
Chromium, Total	NS	NS	NS	NS	13.6		24.5		-	138	67.8	347	1220		
Cobalt, Total	NS	NS	NS	NS	5.72		4.03		-	12.3	7.87	24.7	19.5		
Copper, Total	1720	270	270	10000	49.4		1990*		-	1240	606	670	639		
Iron, Total	NS	NS	NS	NS	14000		13900		-	85300	90500	183000	72300		
Lead, Total	450	400	1000	3900	39.2		425		-	672*	409	609*	351		
Magnesium, Total	NS	NS	NS	NS	16900		10800		-	6460	11200	14200	21100		
Manganese, Total	2000	2000	10000	10000	433		216		-	431	597	1350	696		
Mercury, Total	0.73	0.81	2.8	5.7	0.38		0.52		-	1.4*	1.6*	1.9*	2.1*		
Nickel, Total	130	310	310	10000	21.3		33.8		-	178*	64.7	244*	587*		
Potassium, Total	NS	NS	NS	NS	509		428		-	423	318	646	450		
Selenium, Total	4	180	1500	6800	1.09	J	1.63	J	-	2.07	0.389	J	2.37	1.15	J
Silver, Total	8.3	180	1500	6800	0.866	U	0.589	J	-	1.93	6.94	2.1	1.01		
Sodium, Total	NS	NS	NS	NS	192		242		-	1170	184	J	413	333	
Thallium, Total	NS	NS	NS	NS	0.424	J	0.362	J	-	0.78	J	0.593	J	1.74	U
Vanadium, Total	NS	NS	NS	NS	11.1		12.1		-	29.2	15.2	27.9	29.2		
Zinc, Total	2480	10000	10000	10000	215		508		-	1630	1350	1290	860		

Notes:

1. All detections shown in mg/kg or ppm.
2. **Bold Red** Concentration exceeds Restricted Residential Soil Cleanup Objectives.
3. **Bold Red** Concentration exceeds both Restricted Residential and Commercial Soil Cleanup Objectives.
4. * Concentration exceeds Restricted Residential, Commercial, and Industrial Soil Cleanup Objectives.
5. * Concentration exceeds Protection of Groundwater Soil Cleanup Objectives.
7. If any constituent had an initial quantification of "E" (exceeds calibration range), the diluted re-analysis results are shown.
8. NS Not Specified
9. **Blue** Validated Qualifier

Qualifiers (Q):

- J: Below quantitation limit, estimated concentration
U: Result below detection limit; the method reporting limit is shown.

**Table 2B: Remedial Investigation Soil Analytical Results - TCLP Metals
(mg/L or ppm)**

LOCATION		(17) B-21
		6-8'
SAMPLING DATE		12/1/2017
LAB SAMPLE ID		L1745765-03
TCLP Metals	Regulatory Limits	Results Q
Arsenic	5	-
Barium	100	-
Cadmium	1	-
Chromium	5	-
Lead	5	3.35
Mercury	0.2	-

Notes:

1. All detections shown in mg/L.
2. - Indicates that the sample was not analyzed for the constituent.

Qualifiers (Q):

- J: Below quantitation limit, estimated concentration
 U: Result below detection limit; the method reporting limit is shown.

Table 2C: Trail Analytical Results - Metals

CHA Trailways, April 2016								
METALS	Soil Cleanup Objectives			April 2016				
	Restricted Residential	Commercial	Industrial	SB-3	SB-7	SB-10	SB-11	SB-13
				6-8'	3-5'	3-5'	3-5'	5-10'
Arsenic	16	16	16	---	---	---	---	---
Barium	400	400	10,000	---	---	---	---	1600
Cadmium	4.3	9.3	60	---	---	---	---	---
Chromium (hex)	110	400	800	---	---	---	---	---
Copper	270	270	10,000	---	---	---	---	---
Lead	400	1000	3,900	---	---	---	---	---
Mercury	0.81	2.8	5.7	3.5	3.2	3.4	5.5	3.3
Nickel	310	310	10,000	---	---	---	---	---
Zinc	10,000	10,000	10,000	---	---	---	---	---

Source: O'Brien and Gere, September 2013

Notes:

1. Exceedances shown; all results in mg/kg or ppm.
2. ^ - Instrument related quality control exceeded the control limits
3. **Bold Red** Concentration exceeds Restricted Residential Soil Cleanup Objectives.
4. **Bold Red** Concentration exceeds both Restricted Residential and Commercial Soil Cleanup Objectives.
5. * Concentration exceeds Restricted Residential, Commercial, and Industrial Soil Cleanup Objectives.
6. Only constituents with exceedances of Restricted Residential, Commercial, and/or Industrial Soil Cleanup Objectives are shown.
7. --- Concentration is below Soil Cleanup Objectives.
8. There are no exceedances in B31 or B36 and are therefore not shown.

Table 2D- 2023 Supplemental Soil Samples- Metals

LOCATION				23-B-33						23-B-34				23-B-36			
				0-2"		2-12"		2-12" (DUP1)		0-2"		2-12"		0-2"		2-12"	
SAMPLING DATE				4/27/2023						4/27/2023				4/27/2023			
LAB SAMPLE ID																	
Total Metals	Prot. of GW	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum, Total	NS	NS	NS	2310		2770		2440		2640		1990		1770		1170	
Antimony, Total	NS	NS	NS	1.1	J	0.499	J	0.525	J	0.897	J	0.718	J	4.07	U	4.06	U
Arsenic, Total	16	16	16	7.45	J+	5.25	J+	5.66	J+	5.42	J+	5.98	J+	5.86	J+	3.56	J+
Barium, Total	820	400	10000	85.4		71.4		81		113		68.6		35.5		51.3	
Beryllium, Total	47	590	2700	0.195	J	0.195	J	0.191	J	0.198	J	0.216	J	0.28	J	0.168	J
Cadmium, Total	7.5	9.3	60	2.21		2.51		3		2.78		1.35		0.377	J	0.14	J
Calcium, Total	NS	NS	NS	261000		253000		294000		304000		285000		284000		282000	
Chromium, Total	NS	NS	NS	27	J+	39.9	J+	31	J+	33.6	J+	16.9	J+	9.04	J+	7.66	J+
Cobalt, Total	NS	NS	NS	4.81		5.1		4.66		5.33		5.41		5.1		2.15	
Copper, Total	1720	270	10000	136	J-	168	J-	182	J-	147	J-	84.4	J-	37	J-	15	J-
Iron, Total	NS	NS	NS	20800		22800		19500		22700		15200		7430		4980	
Lead, Total	450	1000	3900	125		135		150		152		90.2		24.7		12.1	
Magnesium, Total	NS	NS	NS	49500		40000		34700		46800		47000		26100		33400	
Manganese, Total	2000	10000	10000	346		298		269		334		341		265		149	
Mercury, Total	0.73	2.8	5.7	0.458		0.684		0.545		0.303		0.158		0.073	U	0.078	U
Nickel, Total	130	310	10000	29	J+	34.6	J+	34.9	J+	34.2	J+	19.9	J+	14.9	J+	7.54	J+
Potassium, Total	NS	NS	NS	323		292		326		383		454		682		351	
Selenium, Total	4	1500	6800	0.73	J J+	0.762	J J+	0.872	J J+	0.641	J J+	0.464	J J+	0.298	J J+	0.303	J J+
Silver, Total	8.3	1500	6800	0.466	U	0.431	U	0.835	J+	0.407	J J+	0.425	U	0.407	U	0.406	U
Sodium, Total	NS	NS	NS	226		173		205		233		215		196		175	
Thallium, Total	NS	NS	NS	0.346	J	0.492	J	0.382	J	0.521	J	0.274	J	1.63	U	1.62	U
Vanadium, Total	NS	NS	NS	21.7		43.2	J	15.8	J	18		15.4		9.83		19.6	
Zinc, Total	2480	10000	10000	450	J-	514	J-	502	J-	660	J-	263	J-	91.7	J-	32.4	J-

Notes:

1. All detections shown in mg/kg or ppm.
2. NS Not Specified
3. Blue Validated Qualifier

Qualifiers (Q):

J: Below quantitation limit, estimated concentration

U: Result below detection limit; the method reporting limit is shown.

J: Analyte is present. Reported value may have a higher level of uncertainty than is normally expected with the analytical method.

J-: Analyte is present. Reported value may be biased low and have a higher level of uncertainty than is normally expected with the analytical method.

J+: Analyte is present. Reported value may be biased high and have a higher level of uncertainty than is normally expected with the analytical method.

Table 3A: Historical Soil Exceedances - SVOCs

SVOCs	Soil Cleanup Objectives			October 2007			2008					2010	
	Restricted Residential	Commercial	Industrial	TP-14 (4')	TP-16	BH-17 (4')	B01 (0-0.5')	B09 (4.5-5.0')	B10 (0.5-1.0')	B13 (0.5-1.0')	B16 (0.5-1.0')	B37 (2-4')	B37 (5-7')
Benzo (a) anthracene	1	5.6	11	1.040	7.750	2.990	3 J	--	--	--	--	4.7	1.3 J
Benzo (a) pyrene	1	1	1.1	--	5.19*	1.43*	*3.4 J	*1.4 J	--	--	--	*3.7	*1.2 J
Benzo (b) fluoranthene	1	5.6	11	--	4.670	1.910	5.3	--	1.1 J	1.3 J	1.1 J	3.5	1.2 J
Benzo (k) fluoranthene	3.9	56	110	--	3.930	--	--	--	--	--	--	--	--
Chrysene	3.9	56	110	--	6.080	--	--	--	--	--	--	--	--
Dibenz[a,h]anthracene	0.33	0.56	1.1	--	0.638	--	--	--	--	--	--	0.6 J	--
Indeno (1,2,3-cd) pyrene	0.5	5.6	11	--	2.360	1.070	1.8 J	0.53 J	--	--	--	--	0.62 J

SVOCs	Soil Cleanup Objectives			2010				
	Restricted Residential	Commercial	Industrial	B48 (0-1')	MW-10 (6-8')	MW-11 (0-2')	MW-11 (10-12')	MW-13 (2-4')
Benzo[a]anthracene	1	5.6	11	2.6	3.5	5	1.2	--
Benzo[a]pyrene	1	1	1.1	*2.3	*3.1	*3.8	--	--
Benzo[b]fluoranthene	1	5.6	11	2.7	3.7	4.5	--	1.1 J
Benzo (k) fluoranthene	3.9	56	110	--	--	--	--	--
Chrysene	3.9	56	110	--	5.5		--	--
Dibenz[a,h]anthracene	0.33	0.56	1.1	0.41 J	0.59 J	0.58 J	--	--
Indeno[1,2,3-cd]pyrene	0.5	5.6	11	1.2 J	1.7 J	1.9	--	0.55 J

Notes:

1. Exceedances shown; all results in mg/kg or ppm.
2. **Bold Red** Concentration exceeds Restricted Residential Soil Cleanup Objectives.
3. **Bold Red** Concentration exceeds both Restricted Residential and Commercial Soil Cleanup Objectives
4. * Concentration exceeds Restricted Residential, Commercial and Industrial Soil Cleanup Objectives.
5. Only Constituents with Exceedances of Restricted Residential, Comercial, and/or Industrial Soil Cleanup Objectives are Shown.
6. The October 2007 Passero samples with the "BH" and "TP" prefixes correspond to the "P" sample locations on Figure 6.
7. -- Concentration is below Soil Cleanup Objectives.

Table 3B: Remedial Investigation Soil Analytical Results - SVOCs
(mg/kg or ppm)

LOCATION					(17) B-18		(17) B-20				(17) B-22		(17) B-23			
					2-3'		4-6'		4-6' DUP		0-1'		0-1'		0-1' DUP	
SAMPLING DATE					11/2/2017		11/29/2017				10/31/2017		11/2/2017			
LAB SAMPLE ID					L1740260-04		L1743779-14		L1743779-16		L1739764-01		L1740260-16		L1740260-13	
SVOCs	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
2,4-Dimethylphenol	NS	NS	NS	NS	0.58	J	0.24	U	0.22	U	0.18	U	1.7	U	1.8	U
2-Methylnaphthalene	NS	NS	NS	NS	0.88	J	0.58	J	1.6	J	0.059	J	0.45	J	0.56	J
2-Methylphenol	0.33	100	500	1000	0.28	J	0.24	U	0.22	U	0.18	U	1.7	U	1.8	U
3-Methylphenol/4-Methylphenol	0.33	100	500	1000	2.1*		0.34	U	0.062	J	0.26	U	2.5	U	2.6	U
Acenaphthene	98	100	500	1000	2.8		0.19	U	0.086	J	0.061	J	0.41	J	0.52	J
Acenaphthylene	107	100	500	1000	0.74	U	0.048	J	0.18		0.37		4.6		5.1	
Acetophenone	NS	NS	NS	NS	0.92	U	0.24	U	0.22	U	0.032	J	1.7	U	1.8	U
Anthracene	1000	100	500	1000	4.6		0.048	J	0.2		0.36		5.6		6.4	
Benzaldehyde	NS	NS	NS	NS	1.2	U	0.31	U	0.29	U	0.24	U	2.3	U	2.4	U
Benzo(a)anthracene	1	1	5.6	11	6.9*		0.1	J	0.45	J	0.65		11**		11**	
Benzo(a)pyrene	22	1	1	1.1	5.4*		0.095	J	0.46	J	0.77		10*		11*	
Benzo(b)fluoranthene	1.7	1	5.6	11	7.1*		0.13	J	0.58	J	0.99		13**		13**	
Benzo(ghi)perylene	1000	100	500	1000	3.2		0.072	J	0.32		0.81		6.2		6.5	
Benzo(k)fluoranthene	1.7	3.9	56	110	2.5*		0.044	J	0.18		0.34		4.2*		4.2*	
Biphenyl	NS	NS	NS	NS	2.1	U	0.54	U	0.5	U	0.42	U	4	U	4.1	U
Bis(2-ethylhexyl)phthalate	NS	NS	NS	NS	18		0.19	J	0.19	J	1.6		1.7	U	1.8	U
Butyl benzyl phthalate	NS	NS	NS	NS	0.92	U	0.24	U	0.22	U	0.25		1.7	U	1.8	U
Caprolactam	NS	NS	NS	NS	0.92	U	0.24	U	0.22	U	0.18	U	1.7	U	1.8	U
Carbazole	NS	NS	NS	NS	2.2		0.24	U	0.034	J	0.097	J	0.62	J	0.77	J
Chrysene	1	3.9	56	110	6.3*		0.11	J	0.46	J	0.7		9.3*		9.8*	
Di-n-butylphthalate	NS	NS	NS	NS	0.92	U	0.24	U	0.22	U	0.044	J	1.7	U	1.8	U
Dibenzo(a,h)anthracene	1000	0.33	0.56	1.1	0.83		0.14	U	0.077	J	0.16		2*		2*	
Dibenzofuran	210	59	350	1000	1.6		0.24	U	0.07	J	0.051	J	0.88	J	1.1	J
Diethyl phthalate	NS	NS	NS	NS	0.92	U	0.24	U	0.058	J	0.18	U	1.7	U	1.8	U
Dimethyl phthalate	NS	NS	NS	NS	0.81	J	0.24	U	0.22	U	0.13	J	1.7	U	1.8	U
Fluoranthene	1000	100	500	1000	17		0.21	J	0.84		1.2		20		22	
Fluorene	386	100	500	1000	2.9		0.048	J	0.17	J	0.088	J	2.6		3.1	
Indeno(1,2,3-cd)pyrene	8.2	0.5	5.6	11	3.7		0.072	J	0.31		0.73		7.3		7.6	
Naphthalene	12	100	500	1000	0.87	J	0.34	J	0.82	J	0.076	J	0.5	J	0.57	J
Phenanthrene	1000	100	500	1000	16		0.16	J	0.6	J	0.61		13		16	
Phenol	0.33	100	500	1000	0.92	U	0.24	U	0.22	U	0.18	U	1.7	U	1.8	U
Pyrene	1000	100	500	1000	13		0.2	J	0.75	J	1.1		18		19	

Table 3B: Remedial Investigation Soil Analytical Results - SVOCs
(mg/kg or ppm)

LOCATION					(17) B-24		(17) B-25			(17) B-26		(17) B-27		
					0-1'		0-1'	46"		0-1'		0-1'	2 1/2'	
SAMPLING DATE					11/1/2017		10/31/2017			10/31/2017		10/31/2017		
LAB SAMPLE ID					L1739969-11		L1739764-20		L1739764-25	L1739764-06		L1739764-14		L1739764-19
SVOCs	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
2,4-Dimethylphenol	NS	NS	NS	NS	0.72	U	0.19	U	0.18	U	0.18	U	0.17	U
2-Methylnaphthalene	NS	NS	NS	NS	0.86	U	0.047	J	0.24		0.22	U	0.04	J
2-Methylphenol	0.33	100	500	1000	0.72	U	0.19	U	0.18	U	0.18	U	0.17	U
3-Methylphenol/4-Methylphenol	0.33	100	500	1000	1	U	0.066	J	0.038	J	0.26	U	0.25	U
Acenaphthene	98	100	500	1000	0.58	U	0.022	J	0.27		0.15	U	0.02	J
Acenaphthylene	107	100	500	1000	0.58	U	0.11	J	0.39		0.15	U	0.15	
Acetophenone	NS	NS	NS	NS	0.72	U	0.072	J	0.18	U	0.024	J	0.17	U
Anthracene	1000	100	500	1000	0.43	U	0.13		0.91		0.11	U	0.14	
Benzaldehyde	NS	NS	NS	NS	0.95	U	0.22	J	0.24	U	0.24	U	0.23	U
Benzo(a)anthracene	1	1	5.6	11	0.21	J	0.3		1.6*		0.029	J	0.2	
Benzo(a)pyrene	22	1	1	1.1	0.4	J	0.36		1.5*		0.15	U	0.22	
Benzo(b)fluoranthene	1.7	1	5.6	11	0.43		0.59		1.9*		0.04	J	0.33	
Benzo(ghi)perylene	1000	100	500	1000	0.3	J	0.37		0.94		0.027	J	0.2	
Benzo(k)fluoranthene	1.7	3.9	56	110	0.12	J	0.16		0.6		0.11	U	0.1	
Biphenyl	NS	NS	NS	NS	1.6	U	0.43	U	0.061	J	0.42	U	0.39	U
Bis(2-ethylhexyl)phthalate	NS	NS	NS	NS	0.72	U	0.7		0.33		0.18	U	3.1	
Butyl benzyl phthalate	NS	NS	NS	NS	0.72	U	0.19	U	0.18	U	0.18	U	0.36	
Caprolactam	NS	NS	NS	NS	0.72	U	0.081	J	0.18	U	0.18	U	0.17	U
Carbazole	NS	NS	NS	NS	0.72	U	0.039	J	0.28		0.18	U	0.17	U
Chrysene	1	3.9	56	110	0.24	J	0.32		1.6*		0.03	J	0.27	
Di-n-butylphthalate	NS	NS	NS	NS	0.72	U	0.19	U	0.18	U	0.18	U	0.17	U
Di-n-octylphthalate	NS	NS	NS	NS	0.72	U	0.19	U	0.18	U	0.18	U	0.17	U
Dibenzo(a,h)anthracene	1000	0.33	0.56	1.1	0.43	U	0.083	J	0.25		0.11	U	0.043	J
Dibenzofuran	210	59	350	1000	0.72	U	0.03	J	0.28		0.18	U	0.17	U
Diethyl phthalate	NS	NS	NS	NS	0.72	U	0.19	U	0.18	U	0.18	U	0.17	U
Dimethyl phthalate	NS	NS	NS	NS	0.72	U	0.35		0.18	U	0.18	U	0.17	U
Fluoranthene	1000	100	500	1000	0.32	J	0.48		3.2		0.054	J	0.32	
Fluorene	386	100	500	1000	0.72	U	0.19	U	0.48		0.18	U	0.04	J
Indeno(1,2,3-cd)pyrene	8.2	0.5	5.6	11	0.28	J	0.36		0.95		0.026	J	0.18	
Naphthalene	12	100	500	1000	0.72	U	0.061	J	0.47		0.18	U	0.035	J
Phenanthrene	1000	100	500	1000	0.23	J	0.25		2.9		0.031	J	0.2	
Phenol	0.33	100	500	1000	0.72	U	0.053	J	0.12	J	0.18	U	0.17	U
Pyrene	1000	100	500	1000	0.4	J	0.44		2.8		0.05	J	0.51	

Table 3B: Remedial Investigation Soil Analytical Results - SVOCs
(mg/kg or ppm)

LOCATION					(17) SS-4		(17) SS-5		(17) TP-5	
					2-6"		2-6"		0-1'	
SAMPLING DATE					10/31/2017		11/1/2017		10/30/2017	
LAB SAMPLE ID					L1739764-13		L1739969-26		L1739503-08	
SVOCs	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q
2-Methylnaphthalene	NS	NS	NS	NS	0.082	J	0.22	U	2.4	U
3-Methylphenol/4-Methylphenol	0.33	100	500	1000	0.27	U	0.27	U	0.83*	J
Acenaphthene	98	100	500	1000	0.063	J	0.15	U	0.3	J
Acenaphthylene	107	100	500	1000	1.1		0.058	J	1.6	U
Acetophenone	NS	NS	NS	NS	0.077	J	0.18	U	2	U
Anthracene	1000	100	500	1000	0.99		0.073	J	0.96	J
Benzaldehyde	NS	NS	NS	NS	0.25	U	0.24	U	2.6	U
Benzo(a)anthracene	1	1	5.6	11	0.94		0.11		1.8*	
Benzo(a)pyrene	22	1	1	1.1	1.6*		0.19		1.8*	
Benzo(b)fluoranthene	1.7	1	5.6	11	2.4*		0.23		2.6*	
Benzo(ghi)perylene	1000	100	500	1000	1.6		0.21		1.4	J
Benzo(k)fluoranthene	1.7	3.9	56	110	0.51		0.073	J	0.78	J
Biphenyl	NS	NS	NS	NS	0.43	U	0.42	U	4.5	U
Bis(2-ethylhexyl)phthalate	NS	NS	NS	NS	2.1		0.54			
Butyl benzyl phthalate	NS	NS	NS	NS	0.09	J	0.18	U	9.2	
Carbazole	NS	NS	NS	NS	0.1	J	0.024	J	0.34	J
Chrysene	1	3.9	56	110	0.98		0.15		1.9*	
Di-n-butylphthalate	NS	NS	NS	NS	0.14	J	0.18	U	2	U
Dibenzo(a,h)anthracene	1000	0.33	0.56	1.1	0.35		0.044	J	0.37	J
Dibenzofuran	210	59	350	1000	0.059	J	0.18	U	0.19	J
Dimethyl phthalate	NS	NS	NS	NS	0.19		0.18	U	1.7	J
Fluoranthene	1000	100	500	1000	1.4		0.22		3.9	
Fluorene	386	100	500	1000	0.14	J	0.18	U	0.36	J
Indeno(1,2,3-cd)pyrene	8.2	0.5	5.6	11	1.5		0.15		1.4	J
Naphthalene	12	100	500	1000	0.099	J	0.18	U	0.24	J
Phenanthrene	1000	100	500	1000	0.45		0.13		2.2	
Pyrene	1000	100	500	1000	1.9		0.22		3.9	

Notes:

1. All detections shown in mg/kg or ppm.
2. **Bold Red** Concentration exceeds Restricted Residential Soil Cleanup Objectives.
3. **Bold Red** Concentration exceeds both Restricted Residential and Commercial Soil Cleanup Objectives.
4. * Concentration exceeds Restricted Residential, Commercial, and Industrial Soil Cleanup Objectives.
5. * Concentration exceeds Protection of Groundwater Soil Cleanup Objectives.
6. If any constituent had an initial quantification of "E" (exceeds calibration range), the diluted re-analysis results are shown with an "R" qualifier (for re-analysis).
7. NS Not Specified
8. Blue Validated Qualifier

Qualifiers (Q):

- J: Below quantitation limit, estimated concentration
- U: Result below detection limit; the method reporting limit is shown.

Table 3C - 2023 Supplemental Soil Samples - SVOCs

LOCATION				23-B-33 Re-Extraction				23-B-34 Re-Extraction				23-B-36 Re-Extraction			
SAMPLING DATE				0-2"		2-12"		0-2"		2-12"		0-2"		2-12"	
LAB SAMPLE ID				4/27/2023		4/27/2023		4/27/2023		4/27/2023		4/27/2023		4/27/2023	
Semivolatile Organics by GC/MS	Prot. of GW	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Acephenanthrene	98	500	1000	0.36	J	1.2	J	0.34	J	0.27	J	0.7	U	0.17	U
Hexachlorobenzene	3.2	6	12	1.2	U	3.2	U	1.2	U	0.7	U	0.53	U	0.21	U
Bis(2-chloroethyl)ether	NS	NS	NS	1.7	U	4.8	U	1.7	U	1	U	0.79	U	0.18	U
2-Chloronaphthalene	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.17	U
3,3-Dichlorobenzidine	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.49	U
2,4-Dinitrotoluene	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.14	U
2,5-Dinitrotoluene	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.15	U
Fluoranthene	1000	500	1000	7.9	J	32	J	9.8	J	5.5	J	1.8	J	0.17	U
4-Chlorophenyl phenyl ether	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.15	U
4-Bromophenyl phenyl ether	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.14	U
Bis(2-chloroisopropyl)ether	NS	NS	NS	2.3	U	6.4	U	2.3	U	1.4	U	1	U	0.17	U
Bis(2-chloroethoxy)methane	NS	NS	NS	2.1	U	5.8	U	2.1	U	1.3	U	0.95	U	0.17	U
Hexachlorobutadiene	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.17	U
Hexachlorocyclopentadiene	NS	NS	NS	5.5	U	15	U	5.5	U	3.4	U	2.5	U	0.17	U
Hexachloroethane	NS	NS	NS	1.5	U	4.3	U	1.5	U	0.94	U	0.7	U	0.17	U
Isophorone	NS	NS	NS	1.7	U	4.8	U	1.7	U	1	U	0.79	U	0.17	U
Naphthalene	12	500	1000	0.68	J	3.9	J	1.9	J	0.14	J	0.88	U	0.17	U
Nitrobenzene	NS	NS	NS	1.7	U	4.8	U	1.7	U	1	U	0.79	U	0.1	U
NDPA/OPA	NS	NS	NS	1.5	U	4.3	U	1.5	U	0.94	U	0.7	U	0.13	J
n-Nitrosodi-n-propylamine	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.17	J
Bis(2-ethylhexyl)phthalate	NS	NS	NS	1.9	U	5.4	U	1.9	U	0.48	J	0.45	J	0.052	J
Butyl benzyl phthalate	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	1.1	J	0.11	J
Di-n-butylphthalate	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.06	J
Di-n-octylphthalate	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.044	J
Diethyl phthalate	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.12	J
Dimethyl phthalate	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.17	U
Benzo(a)anthracene	1	5.6	11	5*	J	21*	J	7	J	2.6*	J	0.92	J	0.069	J
Benzo(a)pyrene	22	1	1.1	7.2*	J	26*	J	9.4*	J	2.6*	J	0.94	J	0.024	J
Benzo(b)fluoranthene	1.7	5.6	11	8.3*	J	29*	J	11*	J	3.6*	J	1.2	J	0.11	J
Benzo(k)fluoranthene	1.7	5.6	11	2.9*	J	10*	J	3.1*	J	1	J	0.45	J	0.15	J
Chrysene	1	56	110	5.3*	J	21*	J	7.5*	J	2.7*	J	1*	J	0.39	U
Acephenanthylene	107	500	1000	3.5	J	12	J	5	J	0.93	J	0.39	J	0.17	U
Anthracene	1000	500	1000	2.9	J	9.5	J	3.6	J	1	J	0.5	J	0.17	U
Benzo(g,h)perylene	1000	500	1000	4	J	16	J	5.9	J	1.5	J	0.81	J	0.17	U
Fluorene	386	500	1000	0.64	J	2.4	J	0.78	J	0.31	J	0.11	J	0.17	U
Phenanthrene	1000	500	1000	2.9	J	10	J	2.7	J	2.7	J	1.2	J	0.17	U
Dibenzo(a,h)anthracene	1000	0.56	1.1	3	J	3.9*	J	1.5*	J	0.37	J	0.17	J	0.21	U
Indeno(1,2,3-cd)pyrene	8.2	5.6	11	4.8	J	18*	J	6.4	J	1.9	J	0.82	J	0.17	U
Pyrene	1000	500	1000	8.9	J	39	J	13	J	4.4	J	1.5	J	0.17	U
Biphenyl	NS	NS	NS	4.4	U	12	U	4.4	U	2.7	U	2	U	0.1	U
4-Chloroaniline	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.17	U
2-Nitroaniline	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.17	U
3-Nitroaniline	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.15	U
4-Nitroaniline	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.17	U
Dibenzofuran	210	350	1000	0.26	J	1.2	J	0.46	J	0.15	J	0.88	U	0.37	U
2-Methylnaphthalene	NS	NS	NS	0.45	J	2.2	J	1.2	J	1.4	U	1	U	0.24	U
1,2,4,5-Tetrachlorobenzene	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.82	U
Acetophenone	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.45	U
2,4,6-Trichlorophenol	NS	NS	NS	1.2	U	3.2	U	1.2	U	0.7	U	0.53	U	0.14	U
p-Chloro-m-cresol	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.17	U
2-Chlorophenol	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.17	U
2,4-Dichlorophenol	NS	NS	NS	1.7	U	4.8	U	1.7	U	1	U	0.79	U	0.25	U
2,4-Dimethylphenol	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	0.17	U
2-Nitrophenol	NS	NS	NS	4.2	U	12	U	4.1	U	2.5	U	1.9	U	0.17	U
4-Nitrophenol	NS	NS	NS	2.7	U	7.5	U	2.7	U	1.6	U	1.2	U	0.14	U
2,4-Dinitrophenol	NS	NS	NS	9.3	U	26	U	9.2	U	5.6	U	4.2	U	0.23	U
4,6-Dinitro-o-cresol	NS	NS	NS	5	U	14	U	5	U	3	U	2.3	U	0.17	U
Pentachlorophenol	0.8	6.7	55	1.5	U	4.3	U	1.5	U	0.94	U	0.7	U	0.17	U
Phenol	0.33	500	1000	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	1.7	U
2-Methylphenol	0.33	500	1000	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	1.7	U
3-Methylphenol/4-Methylphenol	0.33	500	1000	2.8	U	7.7	U	2.8	U	1.7	U	1.3	U	2.5	U
2,4,5-Trichlorophenol	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	1.7	U
Carbazole	NS	NS	NS	0.37	J	1.4	J	0.54	J	0.4	J	0.17	J	1.7	U
Atrazine	NS	NS	NS	1.5	U	4.3	U	1.5	U	0.94	U	0.7	U	1.4	U
Benzaldehyde	NS	NS	NS	7.1	U	21	U	2.5	U	1.6	U	1.2	U	2.3	U
Caprolactam	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	1.7	U
2,3,4,6-Tetrachlorophenol	NS	NS	NS	1.9	U	5.4	U	1.9	U	1.2	U	0.88	U	1.7	U

Notes:

- All detections shown in mg/kg or ppm.
- Red** Concentration exceeds NYCRR Part 375 Commercial Soil Cleanup Objectives.
- *** Concentration exceeds NYCRR Part 375 Commercial and Industrial Soil Cleanup Objectives.
- *** Concentration exceeds NYCRR Part 375 Protection of Groundwater Soil Cleanup Objectives.
- NS Not Specified
- Blue** Validated Qualifier

Qualifiers (Q):

- J: Below quantitation limit, estimated concentration
- U: Result below detection limit; the method reporting limit is shown.
- F: The ratio of quantifier ion response to qualifier ion response falls outside of lab criteria. Result is an estimated maximum concentration.
- *: Analyte is present. Reported value may have a higher level of uncertainty than is normally expected with the analytical method.
- J*: Analyte is present. Reported value may be biased low and have a higher level of uncertainty than is normally expected with the analytical method.
- UJ: Not detected, quantitation limit may be inaccurate or imprecise
- R: Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample.

Table 4: Remedial Investigation Soil Analytical Results - VOCs
(mg/kg or ppm)

LOCATION					(17) B-18		(17) B-20				(17) B-22 ¹	
					2-3'		4-6'		4-6' DUP		0-1'	
SAMPLING DATE					11/2/2017		11/29/2017				10/31/2017	
LAB SAMPLE ID					L1740260-04		L1743779-14		L1743779-16		L1739764-01	
VOCs	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q
1,2,4-Trichlorobenzene	NS	NS	NS	NS	0.02	J	0.32	U	0.42	U	0.0045	U
1,2,4-Trimethylbenzene	3.6	52	190	380	2		0.26	J	0.24	J	0.0045	U
1,2-Dichlorobenzene	1.1	100	500	1000	0.31	U	0.026	J	0.022	J	0.0045	U
1,3,5-Trimethylbenzene	8.4	52	190	380	0.63		0.11	J	0.11	J	0.00016	J
1,3-Dichlorobenzene	2.4	49	280	560	0.31	U	0.014	J	0.42	U	0.0045	U
1,4-Dichlorobenzene	1.8	13	130	250	0.31	U	0.32	U	0.42	U	0.0045	U
2-Butanone	0.12	100	500	1000	4.6*		0.63	U	0.84	U	0.0091	U
Acetone	0.05	100	500	1000	1.6*		0.63	U	0.84	U	0.012	J+
Benzene	0.06	4.8	44	89	0.093*		0.39*		0.42*		0.00091	U
Bromomethane	NS	NS	NS	NS	0.12	U	0.13	U	0.17	U	0.0018	U
Carbon disulfide	NS	NS	NS	NS	0.62	U	0.63	U	0.84	U	0.0091	U
Chlorobenzene	1.1	100	500	1000	0.062	U	0.063	U	0.084	U	0.00091	U
Cyclohexane	NS	NS	NS	NS	0.064	J	4		5.1		0.018	U
Ethylbenzene	1	41	390	780	1.6*		0.96	J	0.5	J	0.00091	U
Isopropylbenzene	NS	NS	NS	NS	0.34		1.6		1.3		0.00091	U
Methyl Acetate	NS	NS	NS	NS	0.26	J	1.3	U	1.7	U	0.018	U
Methyl cyclohexane	NS	NS	NS	NS	0.074	J	6		7		0.0036	U
Methyl tert butyl ether	0.93	100	500	1000	0.12	U	0.13	U	0.17	U	0.0018	U
Methylene chloride	0.05	100	500	1000	0.2*	J	0.63	U	0.84	U	0.0091	U
n-Butylbenzene	12	100	500	1000	0.092		3		2.4		0.00091	U
n-Propylbenzene	3.9	100	500	1000	0.52		7.3*		5.2*		0.00091	U
Naphthalene	12	100	500	1000	1.7		2.6		1.3		0.00013	J
o-Xylene	NS	NS	NS	NS	2.1		0.049	J	0.052	J	0.0018	U
p-Isopropyltoluene	NS	NS	NS	NS	0.17		0.16		0.12		0.00052	J
p/m-Xylene	NS	NS	NS	NS	4		0.36		0.36		0.0018	U
sec-Butylbenzene	11	100	500	1000	0.07		1.1		0.95		0.00091	U
Styrene	NS	NS	NS	NS	12		0.13	U	0.17	U	0.0018	U
tert-Butylbenzene	5.9	100	500	1000	0.31	U	0.026	J	0.027	J	0.0045	U
Tetrachloroethene	1.3	19	150	300	0.038	J	0.063	U	0.084	U	0.00091	U
Toluene	0.7	100	500	1000	2.5*		0.068	J	0.067	J	0.00018	J+
Trichlorofluoromethane	NS	NS	NS	NS	19	U	0.32	U	0.42	U	0.00073	J+

Table 4: Remedial Investigation Soil Analytical Results - VOCs
(mg/kg or ppm)

LOCATION					(17) B-23		(17) B-23		(17) B-24		(17) B-25	
					0-1'		0-1' (DUP 02)		0-1'		0-1'	
SAMPLING DATE					11/1/2017						10/31/2017	
LAB SAMPLE ID					L1739969-17		L1739969-27		L1739969-11		L1739764-20	
VOCs	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q
1,2,4-Trimethylbenzene	3.6	52	190	380	0.0054	U	0.00035	J	0.0005	J	0.0049	U
1,3,5-Trimethylbenzene	8.4	52	190	380	0.0054	U	0.00016	J	0.00024	J	0.0049	U
2-Butanone	0.12	100	500	1000	0.0071	J	0.0037	J	0.011	U	0.0098	U
Acetone	0.05	100	500	1000	0.034		0.022		0.011	U	0.0098	U
Benzene	0.06	4.8	44	89	0.00032	J	0.00029	J	0.00032	J	0.00098	U
cis-1,2-Dichloroethene	0.25	100	500	1000	0.00043	J	0.00065	J	0.0011	U	0.00098	U
Cyclohexane	NS	NS	NS	NS	0.00082	J	0.00051	J	0.023	U	0.02	U
Ethylbenzene	1	41	390	780	0.0011	U	0.00079	U	0.00035	J	0.00098	U
Methyl cyclohexane	NS	NS	NS	NS	0.0014	J	0.0009	J	0.00039	J	0.0039	U
Naphthalene	12	100	500	1000	0.00039	J	0.00035	J	0.00044	J	0.0049	U
o-Xylene	NS	NS	NS	NS	0.0022	U	0.0016	U	0.00044	J	0.002	U
p/m-Xylene	NS	NS	NS	NS	0.0022	U	0.0016	U	0.00042	J	0.002	U
Toluene	0.7	100	500	1000	0.00031	J	0.0012	U	0.00028	J	0.0015	U
Vinyl chloride	0.02	0.9	13	27	0.0022	U	0.00031	J	0.0023	U	0.002	U

Table 4: Remedial Investigation Soil Analytical Results - VOCs
(mg/kg or ppm)

LOCATION					(17) B-25		(17) B-26		(17) B-27			
					46"		0-1'		0-1'		2 1/2'	
SAMPLING DATE					10/31/2017							
LAB SAMPLE ID					L1739764-25		L1739764-06		L1739764-14		L1739764-19	
VOCs	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q
1,2,4-Trimethylbenzene	3.6	52	190	380	0.00074	J	0.004	U	0.0025	J	2.7	
1,3,5-Trimethylbenzene	8.4	52	190	380	0.0003	J	0.004	U	0.0014	J	1.1	
2-Butanone	0.12	100	500	1000	0.029		0.0081	U	0.0088	U	0.56	U
Acetone	0.05	100	500	1000	0.17*		0.0029	J	0.026		0.56	U
Benzene	0.06	4.8	44	89	0.00064	J	0.00081	U	0.00022	J	0.056	U
Bromomethane	NS	NS	NS	NS	0.0029	U	0.0016	U	0.0018	U	0.11	
Carbon disulfide	NS	NS	NS	NS	0.0044	J	0.0081	U	0.00098	J	0.56	U
Cyclohexane	NS	NS	NS	NS	0.029	U	0.016	U	0.00086	J	0.079	J
Ethylbenzene	1	41	390	780	0.0015	U	0.00081	U	0.00086	J	0.083	
Isopropylbenzene	NS	NS	NS	NS	0.0015	U	0.00081	U	0.00029	J	0.04	J
Methyl Acetate	NS	NS	NS	NS	0.0041	J	0.016	U	0.018	U	1.1	U
Methyl cyclohexane	NS	NS	NS	NS	0.0013	J	0.0032	U	0.002	J	0.21	J
Methyl tert butyl ether	0.93	100	500	1000	0.0029	U	0.0016	U	0.0018	U	0.0089	J
n-Butylbenzene	12	100	500	1000	0.0015	U	0.00081	U	0.00088	U	0.25	
n-Propylbenzene	3.9	100	500	1000	0.0015	U	0.00081	U	0.00037	J	0.23	
Naphthalene	12	100	500	1000	0.0097		0.004	U	0.0016	J	3.6	
o-Xylene	NS	NS	NS	NS	0.0029	U	0.0016	U	0.0019		0.28	
p-Isopropyltoluene	NS	NS	NS	NS	0.00056	J	0.00026	J	0.00022	J	0.055	J
p/m-Xylene	NS	NS	NS	NS	0.0029	U	0.0016	U	0.0014	J	0.34	
sec-Butylbenzene	11	100	500	1000	0.0015	U	0.00081	U	0.0002	J	0.072	
Styrene	NS	NS	NS	NS	0.0029	U	0.0016	U	0.00036	J	0.11	U
Tetrachloroethene	1.3	19	150	300	0.0015	U	0.00081	U	0.00029	J	0.056	U
Toluene	0.7	100	500	1000	0.00047	J	0.00018	J	0.00067	J	0.044	J

Table 4: Remedial Investigation Soil Analytical Results - VOCs
(mg/kg or ppm)

LOCATION					(17) SS-4		(17) SS-5		(17) TP-5		MW3R	
					2-6"		2-6"		0-1'		6-8'	
SAMPLING DATE					11/1/2017				10/30/2017		12/1/2017	
LAB SAMPLE ID					L1739764-13		L1739969-26		L1739503-08		L1744164-04	
VOCs	Prot. of GW	Restricted Residential	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q
1,2,4-Trichlorobenzene	NS	NS	NS	NS	0.0067	U	0.0056	U	0.019	J	0.3	U
1,2,4-Trimethylbenzene	3.6	52	190	380	0.0067	U	0.0056	U	0.12	J	8.3*	
1,2-Dichlorobenzene	1.1	100	500	1000	0.0067	U	0.0056	U	0.33	U	0.3	U
1,3,5-Trimethylbenzene	8.4	52	190	380	0.0067	U	0.0056	U	0.049	J	0.38	
1,4-Dichlorobenzene	1.8	13	130	250	0.0067	U	0.0056	U	0.33	U	0.014	J
2-Butanone	0.12	100	500	1000	0.013	U	0.011	U	0.22*	J	0.6	U
Acetone	0.05	100	500	1000	0.0038	J	0.011	U	0.25*	J	0.6	U
Benzene	0.06	4.8	44	89	0.0013	U	0.0011	U	0.032	J	1.8*	
Carbon disulfide	NS	NS	NS	NS	0.013	U	0.011	U	0.09	J	0.6	U
Chlorobenzene	1.1	100	500	1000	0.0013	U	0.0011	U	0.066	U	0.06	U
Cyclohexane	NS	NS	NS	NS	0.027	U	0.022	U	1.3	U	1.2	U
Ethylbenzene	1	41	390	780	0.0013	U	0.0011	U	0.26		1.5*	
Isopropylbenzene	NS	NS	NS	NS	0.0013	U	0.0011	U	0.042	J	1.4	
Methyl Acetate	NS	NS	NS	NS	0.027	U	0.022	U	0.28	J	1.4	
Methyl cyclohexane	NS	NS	NS	NS	0.0053	U	0.0045	U	0.056	J	2.8	
Methyl tert butyl ether	0.93	100	500	1000	0.0027	U	0.0022	U	0.13	U	0.061	J
Methylene chloride	0.05	100	500	1000	0.013	U	0.011	U	0.66	U	0.6	U
n-Butylbenzene	12	100	500	1000	0.0013	U	0.0011	U	0.018	J	1.7	
n-Propylbenzene	3.9	100	500	1000	0.0013	U	0.0011	U	0.038	J	4.3*	
Naphthalene	12	100	500	1000	0.00048	J	0.0056	U	0.27	J	3.5	
o-Xylene	NS	NS	NS	NS	0.0027	U	0.0022	U	0.28		0.75	
p/m-Xylene	NS	NS	NS	NS	0.0027	U	0.0022	U	0.4		3.5	
sec-Butylbenzene	11	100	500	1000	0.0013	U	0.0011	U	0.066	U	0.69	
Styrene	NS	NS	NS	NS	0.0027	U	0.0022	U	0.3		0.12	U
tert-Butylbenzene	5.9	100	500	1000	0.0067	U	0.0056	U	0.33	U	0.3	U
Tetrachloroethene	1.3	19	150	300	0.0013	U	0.0011	U	0.066		0.06	U
Toluene	0.7	100	500	1000	0.002	U	0.0017	U	0.21		0.99*	

Notes:

1. All detections shown in mg/kg or ppm.
2. **Bold Red** Concentration exceeds Restricted Residential Soil Cleanup Objectives.
3. **Bold Red** Concentration exceeds both Restricted Residential and Commercial Soil Cleanup Objectives.
4. * Concentration exceeds Restricted Residential, Commercial, and Industrial Soil Cleanup Objectives.
5. * Concentration exceeds Protection of Groundwater Soil Cleanup Objectives.
6. - Analyte not sampled for
7. If any constituent had an initial quantification of "E" (exceeds calibration range), the diluted re-analysis results are shown.
8. NS Not Specified
9. Blue Validated Qualifier
10. ¹ A re-analysis of this sample occurred. Initial results are reported due to a QC exceedance in the re-analyzed sample.

Qualifiers (Q):

J: Below quantitation limit, estimated concentration
U: Result below detection limit; the method reporting limit is shown.

Table 5: Groundwater Analytical Results - Historical PCBs

PCBs	Groundwater Standard (Part 703)	September 28, 2007				October 11, 2007
		GW-1	GW-2	GW-3	GW-4	GW-15
Total PCBs	0.09	U	U	U	4.11	U

Source: Passero Associates, October 2007 (The Passero sample prefixes "GW" correspond to the "P" location on the Figure 9)

PCBs	Groundwater Standard (Part 703)	MW-1		MW-2			MW-3				MW-4		
		Aug 2008	Jul 2010	Aug 2008	Jul 2010	Feb 2013	Aug 2008	Jul 2010	Jul 2012	Feb 2013	Aug 2008	Jul 2010	Jul 2010 D
Total PCBs	0.09	U	U	U	U	U	U	U	0.21 J	U	0.0003 J	U	U

PCBs	Groundwater Standard (Part 703)	MW-5		MW-6				MW-8				
		Aug 2008	Sep 2008 D	Aug 2008	Jul 2010	Jul 2012	Feb 2013	Sep 2008	Sep 2008 D	Jul 2010	Jul 2012	Feb 2013
Total PCBs	0.09	U	U	U	U	U	U	U	U	U	4.8	U

PCBs	Groundwater Standard (Part 703)	MW-9				MW-10			MW-11		
		Sep 2008	Jul 2010	Jul 2012	Feb 2013	Jul 2010	Jul 2012	Feb 2013	Jul 2010	Jul 2012	Feb 2013
Total PCBs	0.09	U	U	U	U	U	U	U	U	U	U

PCBs	Groundwater Standard (Part 703)	MW-13			MW-14		
		Jul 2010	Jul 2012	Feb 2013	Jul 2012	Feb 2013	Feb 2013 D
Total PCBs	0.09	U	U	U	0.49	U	U

Source: O'Brien and Gere, June 2013

Notes:

1. All Results in ug/L (ppb)
2. U: Result under detection limit.
3. **Bold Red** Concentration exceeds NYSDEC Part 703 Water Quality Standard for Ambient Groundwater
4. D: Indicates duplicate sample
5. F: Indicates filtered sample
6. R: Indicates replacement well

Qualifiers:

- U Result below the detection limit
- J Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.

****NOTE****
The following wells on the BCP site were sampled for PCBs during the RI in 2016/2017, and were all non-detect:
MW-3R, MW-6, MW-8A, MW-9, MW-13

Table 6: Historical Groundwater Analytical Results - SVOCs

SVOCs	Groundwater Standard (Part 703)	MW-1			MW-2			MW-3				MW-4			MW-5		MW-6				MW-8										
		Aug 2008	Jul 2010	Jul 2013	Aug 2008	Jul 2010	Feb 2013	Aug 2008	Jul 2010	Jul 2012	Feb 2013	Aug 2008	Jul 2010	Jul 2010 D	Aug 2008 ¹	Sep 2008 D	Aug 2008	Jul 2010	Jul 2012	Feb 2013	Sep 2008	Sep 2008 D	Jul 2010	Jul 2012	Feb 2013						
Total Phenols	1	5	J	U	2	J	U	U	62	13.9	U	U	22	9.68	J	10.3	J	9	15.5	21	7.6	J	U	U	U	0.8	0.4	U	U	U	U
2,4-Dinitrotoluene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
2,6-Dinitrotoluene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
2-Chloronaphthalene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
2-Nitroaniline	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	10	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
3,3'-Dichlorobenzidine	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
3-Nitroaniline	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	10	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
4-Chloroaniline	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
4-Nitroaniline	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	10	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Bis(2-chloroethoxy)methane	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Bis(2-chloroethyl)ether	1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Bis(2-ethylhexyl) phthalate	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Hexachlorobenzene	0.04	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Hexachlorobutadiene	0.5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Hexachlorocyclopentadiene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Hexachloroethane	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Nitrobenzene	0.4	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	

SVOCs	Groundwater Standard (Part 703)	MW-9				MW-10			MW-11			MW-13			MW-14		
		Sep 2008	Jul 2010	Jul	Feb 2013	Jul 2010	Jul 2012	Feb 2013	Jul 2010	Jul 2012	Feb 2013	Jul 2010	Jul 2012	Feb 2013	Jul 2012	Feb 2013	Feb 2013
Total Phenols	1	3	J	U	U	41	U	U	8.4	J	U	U	U	U	U	U	U
2,4-Dinitrotoluene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
2,6-Dinitrotoluene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
2-Chloronaphthalene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
2-Nitroaniline	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
3,3'-Dichlorobenzidine	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
3-Nitroaniline	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
4-Chloroaniline	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
4-Nitroaniline	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Bis(2-chloroethoxy)methane	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Bis(2-chloroethyl)ether	1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Bis(2-ethylhexyl) phthalate	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Hexachlorobenzene	0.04	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Hexachlorobutadiene	0.5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Hexachlorocyclopentadiene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Hexachloroethane	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Nitrobenzene	0.4	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

Source: O'Brien and Gere, June 2013

Notes:

- Exceedances shown; all results in ug/L (ppb)
- U: Result under detection limit.
- Red** Concentration exceeds NYSDEC Part 703 Water Quality Standard for Ambient Groundwater
- The listed results for MW-5 (August 2008) were taken from OBG summary tables. The reported values are suspect but the original lab report was not available.

Qualifiers:

- J Below quantitation limit, estimated concentration
B Analyte found in associated blank.

Table 7A: Historical Groundwater Analytical Results - Metals

Metals	Groundwater Standard (Part 703)	MW-1		MW-2			MW-3				MW-4			MW-5	
		Aug 2008	Jul 2010	Aug 2008	Jul 2010	Feb 2013	Aug 2008	Jul 2010	Jul 2012	Feb 2013	Aug 2008	Jul 2010	Jul 2010 D	Aug 2008	Sep 2008 D
Antimony	0.003	U	U	U	U	U	U	U	U	U	U	U	U	0.0055	0.0055
Arsenic	0.025	0.008	U	U	U	U	0.0041 B	U	0.026	0.0084 J	0.0049 B	U	U	0.0037	0.0037
Barium	1	1.98	1.09	0.616	1.67	1.9	2.39	1.94	0.94 B	0.64	1.29	0.223	0.231	1.7	1.7
Cadmium	0.005	U	U	U	U	U	U	U	U	U	U	U	U	0.0027	0.0027
Copper	0.2	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Iron	0.3	1.19	1.99 J	1.64	9.22 J	8.6	0.333	1.13 J	0.12 B	0.074	0.355	0.035 J	0.023 J	16.4	16.6
Lead	0.025	0.0052	U	0.0084	0.0036	U	0.018	U	0.0033	U	0.0051	U	U	0.0067	0.0081
Manganese	0.3	0.0262	0.315	0.0204	0.0501	0.033	0.0076	0.0775	0.0026 J	0.0047	0.0086	0.0003 J	0.0002 J	0.138	0.139
Mercury	0.0007	U	0.0001 J	U	0.0001 J	U	0.0017	0.0002	U	U	U	U	U	0.00012	0.00012
Selenium	0.01	U	U	U	U	U	U	U	U	U	U	U	U	0.0061	0.0061
Sodium	20	432	180 J	189	228 J	208	328	229 J	353 B	564	174	225 J	234 J	300	312

Metals	Groundwater Standard (Part 703)	MW-6				MW-8			
		Aug 2008	Jul 2010	Jul 2012	Feb 2013	Sep 2008	Sep 2008 D	Jul 2010	Feb 2013
Antimony	0.003	U	0.02	U	U	0.0055	0.0055	U	U
Arsenic	0.025	U	0.01	U	U	U	U	U	U
Barium	1	0.169	0.245	0.18 B	0.22	0.0646	0.0657	0.0408	0.038 B
Cadmium	0.005	U	U	U	U	0.00033	0.00033	U	U
Copper	0.2	0.002 B	0.0044 J	U	0.0069 J	0.0013	0.0013	0.0029 J	0.0046 J
Iron	0.3	0.19	U	0.21 B	0.022 J	1.69	1.63	0.096 J	0.06 B
Lead	0.025	U	U	0.0065	U	0.0029	0.0029	U	U
Manganese	0.3	0.0115	0.0008 J	0.0028	0.0004 J	0.188	0.183	0.0264	0.016 B
Mercury	0.0007	0.001	0.0003	0.00085	0.00081	0.00012	0.00012	0.0001 J	U
Selenium	0.01	U	U	U	U	0.0061	0.0061	U	U
Sodium	20	262	214 J	312	310	182	190	203 J	201 B

Metals	Groundwater Standard (Part 703)	MW-9				MW-10			MW-11			MW-13		
		Sep 2008	Jul 2010	Jul 2012	Feb 2013	Jul 2010	Jul 2012	Feb 2013	Jul 2010	Jul 2012	Feb 2013	Jul 2010	Jul 2012	Feb 2013
Antimony	0.003	U	U	U	U	0.0076 J	U	U	U	U	U	U	U	U
Arsenic	0.025	U	U	U	U	0.0154	U	U	U	U	U	U	U	U
Barium	1	0.0936	0.108	0.088 B	0.087	1.7600	0.89 B	1.3	0.576	0.07 B	0.61	0.0496	U	0.063
Cadmium	0.005	U	U	U	U	U	0.0006 J	U	U	U	U	U	U	U
Copper	0.2	U	0.0024 J	U	0.0035 J	0.0032 J	0.0018 J	0.0056 J	0.0047 J	U	0.0025 J	0.0045	U	0.0028 J
Iron	0.3	0.0736	0.042 J	0.071 B	0.044 J	0.0700 J	2.1 B	3	2.03 J	0.24 B	1.7	0.246 J	U	0.14
Lead	0.025	U	U	U	U	0.0072	U	0.0086	0.0115	0.0039 J	U	0.0049 J	U	U
Manganese	0.3	0.0036 B	0.0009 J	0.00094 JB	U	0.0035	0.053 B	0.041	0.0707	0.02 B	0.11	0.0209	U	0.038
Mercury	0.0007	0.00467	0.0009	0.00036	0.0006	0.0001 J	U	U	U	U	U	0.0006	U	U
Selenium	0.01	U	U	U	U	U	U	U	U	U	U	U	U	U
Sodium	20	246	264 J	214 B	287	696 J	480 B	474	287 J	288 B	243	251 J	U	200

Metals	Groundwater Standard (Part 703)	MW-14		
		Jul 2012	Feb 2013	Feb 2013 D
Antimony	0.003	U	U	U
Arsenic	0.025	U	U	U
Barium	1	U	0.05	0.05
Cadmium	0.005	U	U	U
Copper	0.2	U	0.0049 J	0.0032 J
Iron	0.3	U	U	U
Lead	0.025	U	U	U
Manganese	0.3	U	U	U
Mercury	0.0007	U	U	U
Selenium	0.01	U	U	0.01 J
Sodium	20	U	217	222

Source: O'Brien and Gere, June 2013

Notes:

1. Exceedances shown; all results in mg/L (ppm)
2. U: Result under detection limit.
3. **Bold Red** Concentration exceeds NYSDEC Part 703 Water Quality Standard for Ambient Groundwater

Qualifiers:

- J Below quantitation limit, estimated concentration
 B Analyte found in associated blank.

Table 7B: Remedial Investigation Groundwater Analytical Results - Metals
(mg/L or ppm)

Sample ID		MW-2A	MW-2A (DUP1)	MW-3R	MW-6	MW-8A	MW-9		MW-13
Lab Sample Number		I6833-01	I6833-02	I7053-02	I6833-04	H3312-03	H3312-02	I6833-08	I6833-07
Sampling Date		12/6/2017	12/6/2017	12/20/2017	12/7/2017	5/25/2016	5/25/2016	12/7/2017	12/7/2017
Constituent	Groundwater Standard (Part 703)	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	NS	0.0398	J	0.0178	J	0.0125	U	0.0125	U
Arsenic	0.025	0.00708	J	0.00728	J	0.00306	J	0.01	U
Barium	1	1.33		1.42		0.162		0.0914	
Cadmium	0.005	0.00075	U	0.00075	U	0.00075	U	0.003	U
Calcium	NS	51.5		54.7		1040		519	
Chromium	0.05	0.00589		0.0086		0.0126	J	0.00282	J
Copper	0.2	0.0025	U	0.00204	J	0.0025	U	0.00256	J
Iron	0.3	6.54		7.01		0.0587		0.0519	
Lead	0.025	0.00561	J	0.00647		0.0015	U	0.00283	J
Magnesium	NS	17.2		18.3		0.006	U	0.006	U
Manganese	0.3	0.0468		0.0504		0.00283	J	0.006	U
Mercury	0.0007	0.0468		0.0504		0.0025	U	0.168	
Nickel	0.1	0.0001	U	0.0001	U	0.0002	U	0.01	U
Potassium	0.3	0.0001	U	0.0001	U	0.0002	U	0.01	U
Sodium	20	0.00111		0.000277		0.0002	U	0.00111	
Vanadium	NS	0.00513	J	0.00841	J	0.0148	J	0.005	U
Zinc	NS	0.00513	J	0.00841	J	0.0148	J	0.005	U
		52.6		56.1		42.1		27.2	
		209		222		344		207	
		0.005	U	0.005	U	0.005	U	0.005	U
		0.00537	J	0.00768	J	0.0189	J	0.0107	J
		0.005		0.005		0.005		0.005	
		0.02	U	0.005	U	0.005		0.02	U
		0.005	U	0.005	U	0.005		0.005	U
		0.314		0.00252	J	0.0294	J	0.0025	U
		0.00075	U	0.000705	J	0.00075	U	0.00075	U
		51.5		54.7		1040		519	
		0.00589		0.0086		0.0126	J	0.00282	J
		0.0025	U	0.00204	J	0.0025	U	0.00256	J
		6.54		7.01		0.0587		0.0519	
		0.00561	J	0.00647		0.0015	U	0.00283	J
		17.2		18.3		0.006	U	0.006	U
		0.0468		0.0504		0.0025	U	0.168	
		0.0001	U	0.0001	U	0.0002	U	0.00111	
		0.00513	J	0.00841	J	0.0148	J	0.005	U
		52.6		56.1		42.1		27.2	
		209		222		344		207	
		0.005	U	0.005	U	0.005	U	0.005	U
		0.00537	J	0.00768	J	0.0189	J	0.0107	J
		0.005		0.005		0.005		0.005	
		0.02	U	0.005	U	0.005		0.02	U
		0.005	U	0.005	U	0.005		0.005	U
		0.314		0.00252	J	0.0294	J	0.0025	U
		0.00075	U	0.000705	J	0.00075	U	0.00075	U
		51.5		54.7		1040		519	
		0.00589		0.0086		0.0126	J	0.00282	J
		0.0025	U	0.00204	J	0.0025	U	0.00256	J
		6.54		7.01		0.0587		0.0519	
		0.00561	J	0.00647		0.0015	U	0.00283	J
		17.2		18.3		0.006	U	0.006	U
		0.0468		0.0504		0.0025	U	0.168	
		0.0001	U	0.0001	U	0.0002	U	0.00111	
		0.00513	J	0.00841	J	0.0148	J	0.005	U
		52.6		56.1		42.1		27.2	
		209		222		344		207	
		0.005	U	0.005	U	0.005	U	0.005	U
		0.00537	J	0.00768	J	0.0189	J	0.0107	J
		0.005		0.005		0.005		0.005	
		0.02	U	0.005	U	0.005		0.02	U
		0.005	U	0.005	U	0.005		0.005	U
		0.314		0.00252	J	0.0294	J	0.0025	U
		0.00075	U	0.000705	J	0.00075	U	0.00075	U
		51.5		54.7		1040		519	
		0.00589		0.0086		0.0126	J	0.00282	J
		0.0025	U	0.00204	J	0.0025	U	0.00256	J
		6.54		7.01		0.0587		0.0519	
		0.00561	J	0.00647		0.0015	U	0.00283	J
		17.2		18.3		0.006	U	0.006	U
		0.0468		0.0504		0.0025	U	0.168	
		0.0001	U	0.0001	U	0.0002	U	0.00111	
		0.00513	J	0.00841	J	0.0148	J	0.005	U
		52.6		56.1		42.1		27.2	
		209		222		344		207	
		0.005	U	0.005	U	0.005	U	0.005	U
		0.00537	J	0.00768	J	0.0189	J	0.0107	J
		0.005		0.005		0.005		0.005	
		0.02	U	0.005	U	0.005		0.02	U
		0.005	U	0.005	U	0.005		0.005	U
		0.314		0.00252	J	0.0294	J	0.0025	U
		0.00075	U	0.000705	J	0.00075	U	0.00075	U
		51.5		54.7		1040		519	
		0.00589		0.0086		0.0126	J	0.00282	J
		0.0025	U	0.00204	J	0.0025	U	0.00256	J
		6.54		7.01		0.0587		0.0519	
		0.00561	J	0.00647		0.0015	U	0.00283	J
		17.2		18.3		0.006	U	0.006	U
		0.0468		0.0504		0.0025	U	0.168	
		0.0001	U	0.0001	U	0.0002	U	0.00111	
		0.00513	J	0.00841	J	0.0148	J	0.005	U
		52.6		56.1		42.1		27.2	
		209		222		344		207	
		0.005	U	0.005	U	0.005	U	0.005	U
		0.00537	J	0.00768	J	0.0189	J	0.0107	J
		0.005		0.005		0.005		0.005	
		0.02	U	0.005	U	0.005		0.02	U
		0.005	U	0.005	U	0.005		0.005	U
		0.314		0.00252	J	0.0294	J	0.0025	U
		0.00075	U	0.000705	J	0.00075	U	0.00075	U
		51.5		54.7		1040		519	
		0.00589		0.0086		0.0126	J	0.00282	J
		0.0025	U	0.00204	J	0.0025	U	0.00256	J
		6.54		7.01		0.0587		0.0519	
		0.00561	J	0.00647		0.0015	U	0.00283	J
		17.2		18.3		0.006	U	0.006	U
		0.0468		0.0504		0.0025	U	0.168	
		0.0001	U	0.0001	U	0.0002	U	0.00111	
		0.00513	J	0.00841	J	0.0148	J	0.005	U
		52.6		56.1		42.1		27.2	
		209		222		344		207	
		0.005	U	0.005	U	0.005	U	0.005	U
		0.00537	J	0.00768	J	0.0189	J	0.0107	J
		0.005		0.005		0.005		0.005	
		0.02	U	0.005	U	0.005		0.02	U
		0.005	U	0.005	U	0.005		0.005	U
		0.314		0.00252	J	0.0294	J	0.0025	U
		0.00075	U	0.000705	J	0.00075	U	0.00075	U
		51.5		54.7		1040		519	
		0.00589		0.0086		0.0126	J	0.00282	J
		0.0025	U	0.00204	J	0.0025	U	0.00256	J
		6.54		7.01		0.0587		0.0519	
		0.00561	J	0.00647		0.0015	U	0.00283	J
		17.2		18.3		0.006	U	0.006	U
		0.0468		0.0504		0.0025	U	0.168	
		0.0001	U	0.0001	U	0.0002	U	0.00111	
		0.00513	J	0.00841	J	0.0148	J	0.005	U
		52.6		56.1		42.1		27.2	
		209		222		344		207	
		0.005	U	0.005	U	0.005	U	0.005	U
		0.00537	J	0.00768	J	0.0189	J	0.0107	J
		0.005		0.005		0.005		0.005	
		0.02	U	0.005	U	0.005		0.02	U
		0.005	U	0.005	U	0.005		0.005	U
		0.314		0.00252	J	0.0294	J	0.0025	U
		0.00075	U	0.000705	J	0.00075	U	0.00075	U
		51.5		54.7		1040		519	
		0.00589		0.0086		0.0126	J	0.00282	J
		0.0025	U	0.00204	J	0.0025	U	0.00256	J
		6.54		7.01		0.0587		0.0519	
		0.00561	J	0.00647		0.0015	U	0.00283	J
		17.2		18.3		0.006	U	0.006	U
		0.0468		0.0504		0.0025	U	0.168	
		0.0001	U	0.0001	U	0.0002	U	0.00111	
		0.00513	J	0.00841	J	0.0148	J	0.005	U
		52.6		56.1		42.1		27.2	
		209		222		344		207	
		0.005	U	0.005	U	0.005	U	0.005	U
		0.00537	J	0.00768	J	0.0189	J	0.0107	J
		0.005		0.005		0.005		0.005	
		0.02	U	0.005	U	0.005		0.02	U
		0.005	U	0.005	U	0.005		0.005	U
		0.314		0.00252	J	0.0294	J	0.0025	U
		0.00075	U	0.000705	J	0.00075	U	0.00075	U
		51.5		54.7		1040		519</	

Table 8A: Historical Groundwater Analytical Results - VOCs

VOCs	Groundwater Standard (Part 703)	Sep 2007			
		GW-1	GW-2	GW-3	GW-4
1,1,2-Trichloroethane	1	U	U	U	U
1,2-Dibromo-3-chloropropane	0.04	U	U	U	U
1,2-Dichloroethane	0.6	U	U	U	U
1,2-Dichloropropane	1	U	U	U	U
Benzene	1	U	U	U	2.01
Chloroethane	5	U	U	U	U
Total Dichloropropene	0.4	U	U	U	U
Ethylbenzene	5	U	U	U	U
Isopropylbenzene	5	U	U	U	U
Methyl tert-Butyl Ether	10	U	U	U	U
Methylene Chloride	5	U	U	U	U
Styrene	5	U	U	U	U
Toluene	5	U	U	U	U
Trichlorofluoromethane	5	U	U	U	4.99
Vinyl chloride	2	U	U	U	U
Xylenes, total	5	U	U	U	U

VOCs	Groundwater Standard (Part 703)	Oct 2007		
		GW-12	GW-15	GW-19
1,1,2-Trichloroethane	1	U	U	U
1,2-Dibromo-3-chloropropane	0.04	U	U	U
1,2-Dichloroethane	0.6	U	U	U
1,2-Dichloropropane	1	U	U	U
Total Dichloropropene	0.4	U	U	U
Benzene	1	U	U	44.4
Chloroethane	5	U	U	U
Ethylbenzene	5	U	U	17.7
Isopropylbenzene	5	U	U	U
Methyl tert-Butyl Ether	10	5.36	3.71	86.9
Methylene Chloride	5	U	U	U
Styrene	5	U	U	U
Toluene	5	U	U	220
Trichlorofluoromethane	5	U	U	U
Vinyl chloride	2	U	U	U
Xylenes, total	5	U	U	88

Source: Passero Associates, October 2007 (The Passero sample prefixes "GW" correspond to the "P" location on the Figure 11)

VOCs	Groundwater Standard (Part 703)	MW-1		MW-2			MW-3				MW-4			MW-5		MW-6			
		Aug 2008	Jul 2010	Aug 2008	Jul 2010	Feb 2013	Aug 2008	Jul 2010	Jul 2012	Feb 2013	Aug 2008	Jul 2010	Jul 2010 D	Aug 2008	Sep 2008 D	Aug 2008	Jul 2010	Jul 2012	Feb 2013
1,1,2-Trichloroethane	1	U	U	U	UJ	U	U	U	U	U	U	U	U	1	U	U	U	U	U
1,2-Dibromo-3-chloropropane	0.04	U	UJ	U	UJ	U	U	UJ	U	U	U	UJ	UJ	1	U	U	UJ	U	U
1,2-Dichloroethane	0.6	U	U	U	U	U	0.94 J	U	U	U	U	U	U	1	U	U	U	U	U
1,2-Dichloropropane	1	U	U	U	U	U	U	U	U	U	U	U	U	1	U	U	U	U	U
Total Dichloropropene	0.4	U	U	U	U	U	U	U	U	U	U	U	U	2	U	U	U	U	U
Benzene	1	3.9	0.85 J	1.7	0.58 J	U	12	90	130	570	2.6 J	2.0	1.9	0.7 J	0.68 J	U	2.3	8.1 J	7.8
Chloroethane	5	U	U	U	U	U	U	U	U	U	U	U	U	1	U	U	U	U	U
Ethylbenzene	5	0.92 J	0.98 J	U	U	U	12	5.0	150	250	6	2.6	2.6	0.59 J	0.57 J	1.8	U	U	U
Isopropylbenzene	5	U	U	U	U	U	U	U	U	12	U	0.85 J	0.86 J	1	U	U	U	U	U
Methyl tert-Butyl Ether	10	110	1.7	24	17	14	80	13	67	93	24	26	27	25	25	32	9.5	21	23
Methylene Chloride	5	U	U	U	U	U	U	52	U	U	U	U	U	1	U	U	U	U	U
Styrene	5	U	U	U	U	U	U	U	U	U	U	U	U	1	U	U	U	U	U
Toluene	5	1.2	U	U	U	U	7.3	71	500	610	16	11	11	1.1	0.1 J	4.7	1.4	U	4.9 J
Trichlorofluoromethane	5	U	U	U	U	U	U	U	U	U	U	U	U	1	U	U	U	U	U
Vinyl chloride	2	1.1	U	U	U	U	2.7	1.4	U	18	10	9.5	10	1	U	0.98 J	U	U	U
Xylenes, total	5	4.9	U	U	U	U	56	29	680	930	33	15	15	3.9	3.7	7.4	2.7	U	5.6 J

Table 8A: Historical Groundwater Analytical Results - VOCs

VOCs	Groundwater Standard (Part 703)	MW-8					MW-9				MW-10			MW-11
		Sep 2008	Sep 2008 D	Jul 2010	Jul 2012	Feb 2013	Sep 2008	Jul 2010	Jul 2012	Feb 2013	Jul 2010	Jul 2012	Feb 2013	Jul 2010
1,1,2-Trichloroethane	1	U	U	U	U	U	U	U	U	U	U	UJ	U	U
1,2-Dibromo-3-chloropropane	0.04	U	U	UJ	U	U	U	UJ	U	U	UJ	U	U	UJ
1,2-Dichloroethane	0.6	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloropropane	1	U	U	U	U	U	U	U	U	U	U	U	U	U
Total Dichloropropene	0.4	U	U	U	U	U	U	U	U	U	U	U	U	U
Benzene	1	U	U	U	U	U	U	U	U	U	7.5	2.9 J	U	0.96 J
Chloroethane	5	U	U	U	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	5	U	U	U	U	U	U	U	U	U	6.4	U	U	U
Isopropylbenzene	5	U	U	U	U	U	U	U	U	U	U	U	U	U
Methyl tert-Butyl Ether	10	1.8 J	1.8 J	2.6	2.1 J	2.5	1.2 J	2.5	1.7 J	2.8	38	24	18 J	3.8
Methylene Chloride	5	5.4	9.1 B	U	U	U	5.4 B	U	U	U	U	U	U	U
Styrene	5	U	U	U	U	U	U	U	U	U	2.9	U	U	U
Toluene	5	U	U	U	U	U	U	U	U	U	12	3.4 J	U	U
Trichlorofluoromethane	5	U	U	U	U	U	U	U	U	U	U	U	U	U
Vinyl chloride	2	U	U	U	U	U	U	U	U	U	U	U	U	U
Xylenes, total	5	U	U	U	U	U	U	U	U	U	20	4.1 J	U	U

VOCs	Groundwater Standard (Part 703)	MW-11		MW-13			MW-14		
		Jul 2012	Feb 2013	Jul 2010	Jul 2012	Feb 2013	Jul 2012	Feb 2013	Feb 2013 D
1,1,2-Trichloroethane	1	U	U	UJ	UJ	U	U	U	U
1,2-Dibromo-3-chloropropane	0.04	U	U	U	U	U	U	U	U
1,2-Dichloroethane	0.6	U	U	U	U	U	U	U	U
1,2-Dichloropropane	1	U	U	U	U	U	U	U	U
Total Dichloropropene	0.4	U	U	U	U	U	U	U	U
Benzene	1	U	U	0.61 J	U	U	U	1.2	1.2
Chloroethane	5	U	U	0.61 J	U	U	U	U	U
Ethylbenzene	5	U	U	U	U	U	U	U	U
Isopropylbenzene	5	U	U	U	U	U	U	U	U
Methyl tert-Butyl Ether	10	11	2.7 J	9.6	4.3 J	4.3	12	13	13
Methylene Chloride	5	U	U	U	U	U	U	U	U
Styrene	5	U	U	U	U	U	U	U	U
Toluene	5	U	U	U	U	U	U	U	U
Trichlorofluoromethane	5	U	U	U	U	U	U	U	U
Vinyl chloride	2	U	U	U	U	U	U	1.4	1.4
Xylenes, total	5	U	U	U	U	U	U	U	U

Source: O'Brien and Gere, June 2013

Notes:

1. Exceedances shown; all results in ug/L (ppb)
2. U: Result under detection limit.
3. **Bold Red** Concentration exceeds NYSDEC Part 703 Water Quailty Standard for Ambient Groundwater

Qualifiers:

- J Below quantitation limit, estimated concentration
- B Analyte found in associated blank.

Table 8B: Remedial Investigation Groundwater Analytical Results - VOCs
(µg/L or ppb)

Sample ID		MW-3R		MW-6		MW-6 (DUP2)		MW-9		MW-13	
Lab Sample Number		I7053-02		I6833-04		I6833-03		I6833-08		I6833-07	
Sampling Date		12/20/2017		12/7/2017		12/7/2017		12/7/2017		12/7/2017	
Constituent	Groundwater Standard (Part 703)	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,2-Dichlorobenzene	3	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
1,4-Dichlorobenzene	3	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
2-Butanone	NS	9.8		2.5	U	2.5	U	2.5	U	2.5	U
4-Methyl-2-Pentanone	NS	1.7	J	1	U	1	U	1	U	1	U
Acetone	NS	51.6		6.3		1.4	J	7.4		1.4	J
Benzene	1	25.5		3.4	J	0.2	U	0.2	U	0.2	U
Chlorobenzene	5	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Chloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,2-Dichloroethene	5	0.58	J	0.2	U	0.2	U	0.2	U	0.2	U
Cyclohexane	NS	1.8	J	0.2	U	0.2	U	0.2	U	0.2	U
Ethyl Benzene	5	19.7		0.9	J	0.2	U	0.2	U	0.2	U
Isopropylbenzene	5	1.6		0.2	J	0.2	U	0.2	U	0.2	U
m/p-Xylenes	NS	56.9		2.2		0.4	U	0.4	U	0.4	U
Methyl tert-butyl Ether	10	39.8		11.6	J	0.5	U	0.5	U	0.5	U
Methylcyclohexane	NS	3.8		0.2	U	0.2	U	0.2	U	0.2	U
Methylene Chloride	5	0.2	U	0.41	J	0.33	J	0.2	U	0.24	J
o-Xylene	5	22.8		1.2		0.2	U	0.2	U	0.2	U
Styrene	5	0.2	U	0.28	J	0.2	U	0.2	U	0.2	U
Toluene	5	40.6		1.8	J	0.2	U	0.2	U	0.2	U
Trichloroethene	5	0.28	J	0.2	U	0.2	U	0.2	U	0.2	U
Vinyl Chloride	2	2.9		0.2	U	0.2	U	0.2	U	0.2	U

Notes:

1. Table shows detections; detections reported in µg/L.
2. **Bold Red** Concentration exceeds NYSDEC Part 703 Water Quality Standard for Ambient Groundwater
3. NS Not Specified
4. **Blue** Validated Qualifier

Qualifiers (Q):

- U: The compound was not detected at the indicated concentration.
 J: Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.

Table 9: Remedial Investigation Soil Vapor Results

LOCATION	VP-1		VP-3		VP-3 DUP	
SAMPLING DATE			2/14/2018			
LAB SAMPLE ID	L1805293-03		L1805293-01		L1805293-02	
VOCs	Results	Q	Results	Q	Results	Q
1,2,4-Trimethylbenzene	0.983	U	1.04		1.11	
2-Butanone	1.47	U	2.52		1.47	U
Acetone	36.3	J	13		11.4	
Benzene	6.87		3.67		3.87	
Carbon disulfide	3.64		2.13		2.27	
Cyclohexane	42.3		7.4		7.74	
Dichlorodifluoromethane	3.4		14		14.6	
Ethyl Alcohol	17.6		9.42	U	9.42	U
Heptane	39.5		18.7		20.1	
iso-Propyl Alcohol	2.14		1.23	U	1.23	U
n-Hexane	70.8		49		52.9	
p/m-Xylene	1.74	U	1.74	U	1.76	
Tetrachloroethene	1.36	U	7.39		7.46	
Toluene	5.65		4.11		4.15	
Trichloroethene	1.07	U	2.06		2.12	
Trichlorofluoromethane	2.18		1.12	U	1.12	U

Notes:

1. Table shows detections only; results reported in $\mu\text{g}/\text{m}^3$
2. Analysis: TO-15
3. **Blue**: Validated Qualifier

Table 10A: Emerging Contaminants Groundwater Results

LOCATION			MW-2A		MW-2A (DUPLICATE)		MW-3R		MW-6		FIELD BLANK		EQUIPMENT BLANK	
SAMPLING DATE			5/21/2021											
	NY MCL	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
1,4 Dioxane by 8270D-SIM														
1,4-Dioxane	1	µg/l	2.37		2.59		2.41		2.1		0.144	U	0.144	U
Perfluorinated Alkyl Acids by Isotope Dilution														
Perfluorobutanoic Acid (PFBA)		ng/l	116		135		80.1		52.8		1.8	U	1.81	U
Perfluoropentanoic Acid (PFPeA)		ng/l	176	J	190	J	122		79.5		1.8	U	1.81	U
Perfluorobutanesulfonic Acid (PFBS)		ng/l	39.9		36.3		31.9		37		1.8	U	1.81	U
Perfluorohexanoic Acid (PFHxA)		ng/l	174	J	193	J	134		90.2		0.439	J	0.41	J
Perfluoroheptanoic Acid (PFHpA)		ng/l	80.9		88.1		63.6		52		1.8	U	1.81	U
Perfluorohexanesulfonic Acid (PFHxS)		ng/l	187		193		135		93.5		1.8	U	1.81	U
Perfluorooctanoic Acid (PFOA)	10	ng/l	334		382		199		182		1.8	U	1.81	U
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)		ng/l	56.9	J	59.6	J	58.6	J	45.8		1.8	U	1.81	U
Perfluoroheptanesulfonic Acid (PFHpS)		ng/l	19.4		22		6.17		7.31		1.8	U	1.81	U
Perfluorononanoic Acid (PFNA)		ng/l	21		23.5		10.8		12.2		1.8	U	1.81	U
Perfluorooctanesulfonic Acid (PFOS)	10	ng/l	1510	D	1560	D	220		444		1.8	U	1.81	U
Perfluorodecanoic Acid (PFDA)		ng/l	0.544	J	0.562	J	2.3		1.53	J	1.8	U	1.81	U
Perfluorooctanesulfonamide (FOSA)		ng/l	1.82	U	1.84	U	0.97	JF	1.86	U	1.8	U	1.81	U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)		ng/l	1.82	U	1.84	U	1.2	JF	1.86	U	1.8	U	1.81	U
PFOA/PFOS, Total		ng/l	1840		1940		419		626		1.8	U	1.81	U

Notes:

1. Maximum Concentration Level (MCL) based on Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS), June 2021.
2. **Yellow Highlight** - Concentration exceeds NY MCL
3. D: Concentration of analyte was quantified from diluted analysis.
4. U - Not detected at the reported detection limit for the sample. Reporting level is listed.
5. JF - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
6. J - Estimated Value. The target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL)
7. Data qualifiers in black were provided by the laboratory, data qualifiers in red were provided by the Data Validation Firm (Alpha Geoscience)

Table 10B - 2023 Emerging Contaminants Soil Results

LOCATION				23-B-32				23-B-33				23-B-34				23-B-35				23-B-36								
				0-2"		2-12"		0-2"		2-12"		2-12" (DUP1)		0-2"		2-12"		0-16"		0-2"		2-12"						
SAMPLING DATE				4/27/2023				4/27/2023				4/27/2023				4/27/2023				4/27/2023								
LAB SAMPLE ID																												
Perfluorinated Alkyl Acids by EPA 1633				Prot. of GW	Commercial	Industrial	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Perfluorobutanoic Acid (PFBA)				NS	NS	NS	0.000799	U	0.000062	J	0.000789	U	0.000783	U	0.000787	U	0.000796	U	0.000784	U	0.000094	J	0.000794	U	0.000788	U		
Perfluoropentanoic Acid (PFPeA)				NS	NS	NS	0.0004	U	0.000062	J	0.000394	U	0.000392	U	0.000394	U	0.000398	U	0.000392	U	0.000204	J	0.000397	U	0.000394	U		
Perfluorohexanoic Acid (PFHxA)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000196	U	0.000198	U	0.000197	U		
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)				NS	NS	NS	0.000799	U	0.000779	U	0.000789	U	0.000783	U	0.000787	U	0.000796	U	0.000784	U	0.000786	U	0.000784	U	0.000794	U	0.000788	U
Perfluoroheptanoic Acid (PFHxA)				NS	NS	NS	0.0002	U	0.000055	JF	0.000055	J	0.000196	U	0.000197	U	0.000064	J	0.000196	U	0.000134	J	0.000198	U	0.000197	U		
Perfluorooctanesulfonic Acid (PFPeS)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000196	U	0.000196	U	0.000198	U	0.000197	U
Perfluoroheptanoic Acid (PFHpA)				NS	NS	NS	0.00032	J	0.000031	J	0.000197	U	0.000196	U	0.000197	U	0.000048	J	0.000196	U	0.000102	J	0.000198	U	0.000197	U		
Perfluorohexanesulfonic Acid (PFHxS)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000072	J	0.000196	U	0.000086	J	0.000198	U	0.000197	U		
Perfluorooctanoic Acid (PFOA)				0.0008	0.5	0.6	0.000144	J	0.000156	J	0.000197	U	0.000086	J	0.000197	U	0.000191	J	0.000055	J	0.000228		0.000198	U	0.000197	U		
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)				NS	NS	NS	0.000799	U	0.000779	U	0.000789	U	0.000783	U	0.000787	U	0.000796	U	0.000784	U	0.000786	U	0.000786	U	0.000794	U	0.000788	U
Perfluorooctanesulfonic Acid (PFHpS)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000039	JF	0.000198	U	0.000197	U		
Perfluorononanoic Acid (PFNA)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000181	J	0.000198	U	0.000197	U		
Perfluorooctanesulfonic Acid (PFOS)				0.001	0.44	0.44	0.000927		0.00217*		0.00168*		0.00166*		0.00166*		0.00109*		0.00536*		0.000135	JF	0.000276					
Perfluorodecanoic Acid (PFDA)				NS	NS	NS	0.0002	U	0.000148	J	0.000197	U	0.000196	U	0.000197	U	0.000103	J	0.000196	U	0.000471		0.000198	U	0.000197	U		
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)				NS	NS	NS	0.000799	U	0.000779	U	0.000789	U	0.000783	U	0.000787	U	0.000796	U	0.000784	U	0.000786	U	0.000794	U	0.000788	U		
Perfluorononanesulfonic Acid (PFNS)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000196	U	0.000198	U	0.000197	U		
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000196	U	0.000198	U	0.000197	U		
Perfluoroundecanoic Acid (PFUnA)				NS	NS	NS	0.0002	U	0.000062	J	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000188	J	0.000198	U	0.000197	U		
Perfluorodecanesulfonic Acid (PFDS)				NS	NS	NS	0.0002	U	0.000031	J	0.000197	U	0.000039	J	0.000197	U	0.000199	U	0.000196	U	0.000188	J	0.000198	U	0.000197	U		
Perfluorooctanesulfonamide (PFOSA)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000196	U	0.000198	U	0.000197	U		
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NtFOSAA)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000119	JF	0.000196	U	0.000086	JF	0.000198	U	0.000197	U		
Perfluorododecanoic Acid (PFDoA)				NS	NS	NS	0.0002	U	0.000195	U	0.000047	J	0.000196	U	0.000197	U	0.00008	J	0.000196	U	0.000212		0.000198	U	0.000197	U		
Perfluorotridecanoic Acid (PFTeDA)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000079	J	0.000198	U	0.000197	U		
Perfluorotetradecanoic Acid (PFTeDA)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.00011	J	0.000198	U	0.000197	U		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)				NS	NS	NS	0.000799	U	0.000779	U	0.000789	U	0.000783	U	0.000787	U	0.000796	U	0.000784	U	0.000786	U	0.000794	U	0.000788	U		
4,8-Dioxo-3H-Perfluorononanoic Acid (ADONA)				NS	NS	NS	0.000799	U	0.000779	U	0.000789	U	0.000783	U	0.000787	U	0.000796	U	0.000784	U	0.000786	U	0.000794	U	0.000788	U		
Perfluorododecanesulfonic Acid (PFDoS)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000196	U	0.000198	U	0.000197	U		
9-Chlorohexadecafluoro-3-Oxanon-1-Sulfonic Acid (9CI-PF3ONS)				NS	NS	NS	0.000799	U	0.000779	U	0.000789	U	0.000783	U	0.000787	U	0.000796	U	0.000784	U	0.000786	U	0.000794	U	0.000788	U		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11CI-PF30Uds)				NS	NS	NS	0.000799	U U	0.000779	U U	0.000789	U U	0.000783	U U	0.000787	U	0.000796	U U	0.000784	U U	0.000786	U U	0.000794	U	0.000788	U		
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000196	U	0.000198	U	0.000197	U		
N-Ethyl Perfluorooctane Sulfonamide (NtFOSA)				NS	NS	NS	0.0002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000196	U	0.000198	U	0.000197	U		
N-Methyl Perfluorooctanesulfonamide Ethanol (NMeFOSE)				NS	NS	NS	0.002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000196	U	0.000198	U	0.000197	U		
N-Ethyl Perfluorooctanesulfonamide Ethanol (NtFOSE)				NS	NS	NS	0.002	U	0.000195	U	0.000197	U	0.000196	U	0.000197	U	0.000199	U	0.000196	U	0.000196	U	0.000198	U	0.000197	U		
Perfluoro-3-Methoxypropanoic Acid (PFMPA)				NS	NS	NS	0.0004	U	0.00039	U	0.000394	U	0.000392	U	0.000394	U	0.000398	U	0.000392	U	0.000393	U	0.000397	U	0.000394	U		
Perfluoro-4-Methoxybutanoic Acid (PFMBa)				NS	NS	NS	0.0004	U	0.00039	U	0.000394	U	0.000392	U	0.000394	U	0.000398	U	0.000392	U	0.000393	U	0.000397	U	0.000394	U		
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEA)				NS	NS	NS	0.0004	U	0.00039	U	0.000394	U	0.000392	U	0.000394	U	0.000398	U	0.000392	U	0.000393	U	0.000397	U	0.000394	U		
Nonafluoro-3,6-Dioxahexanoic Acid (NFDHA)				NS	NS	NS	0.0004	U	0.00039	U	0.000394	U	0.000392	U	0.000394	U	0.000398	U	0.000392	U	0.000393	U	0.000397	U	0.000394	U		
3-Perfluoropropyl Propanoic Acid (3:3FTCA)				NS	NS	NS	0.000999	U	0.000974	U	0.000986	U	0.000979	U	0.000984	U	0.000995	U	0.00098	U	0.000982	U	0.000992	U	0.000986	U		
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)				NS	NS	NS	0.00499	U	0.00487	U	0.00493	U	0.00489	U	0.00492	U	0.00497	U	0.0049	U	0.00491	U	0.00496	U	0.00493	U		
3-Perfluorheptyl Propanoic Acid (7:3FTCA)				NS	NS	NS	0.00499	U	0.00487	U	0.00493	U	0.00489	U	0.00492	U	0.00497	U	0.0049	U	0.00491	U	0.00496	U	0.00493	U		

TABLE 11: BUILDING FLOOR SAMPLES			
Building 1			
Sample ID	Location	PCBs	Material Description
F1-3	Floor	24.9	Concrete
F1-5	Floor	20.4	Concrete
F1-6	Floor	ND	Concrete

Building 2			
Sample ID	Location	PCBs	Material Description
F2-2	Floor	2.3	Concrete
F2-3	Floor	6.4	Concrete
F2-4	Floor	2.7	Concrete
F2-6	Floor	4.2	Concrete
F2-8	Floor	2.8	Concrete

Building 3			
Sample ID	Location	PCBs	Material Description
F3-1	Floor	ND	Concrete
F3-2	Floor	ND	Concrete
F3-6	Floor	ND	Concrete

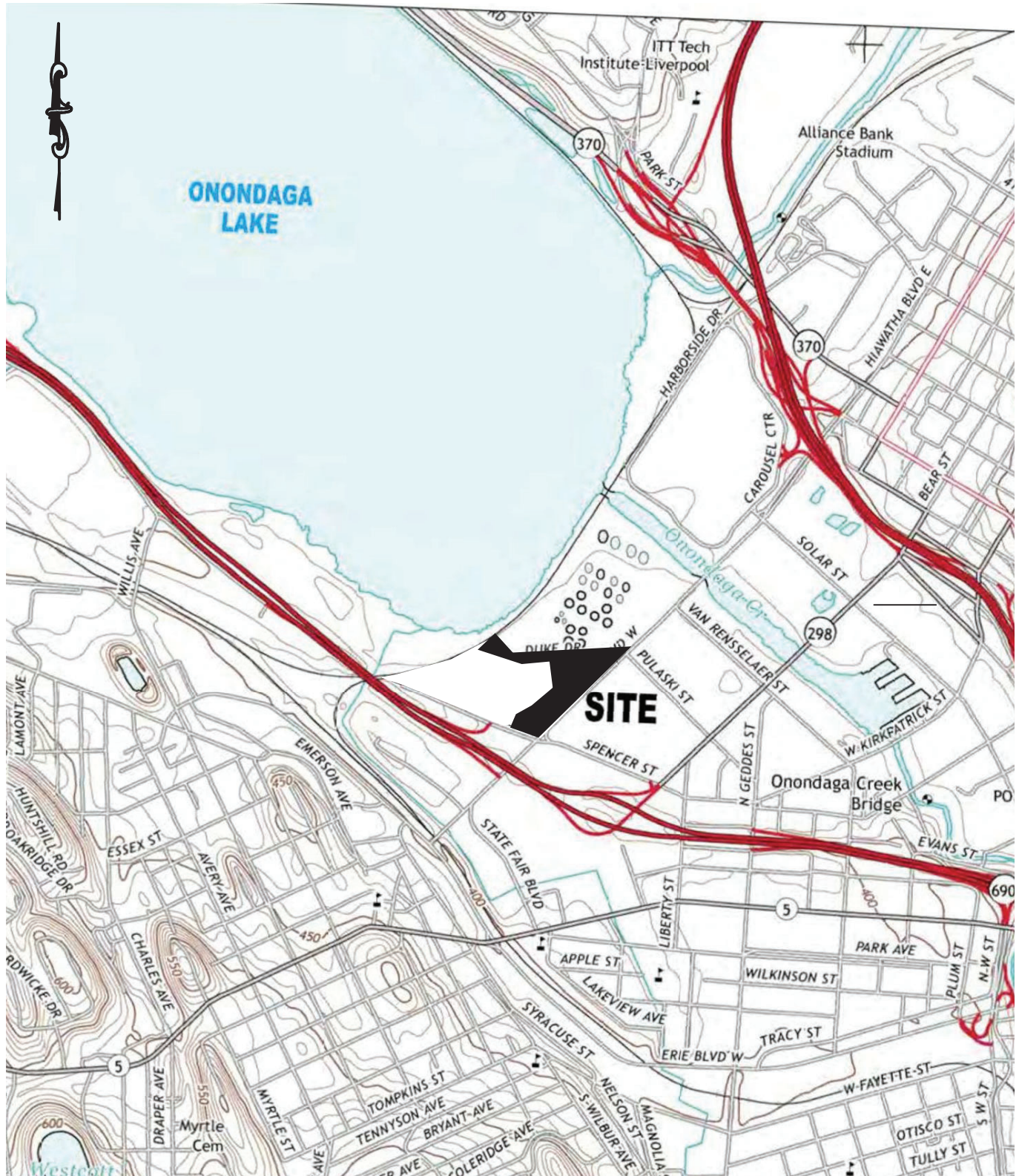
Building 4			
Sample ID	Location	PCBs	Material Description
F4-1	Floor	ND	Concrete
F4-2	Floor	0.52	Concrete
F4-3	Floor	0.71	Concrete

Building 5			
Sample ID	Location	PCBs	Material Description
F5-1	Floor	0.9 J	Concrete
F5-4	Floor	0.27 J	Concrete

Building 6			
Sample ID	Location	PCBs	Material Description
F6-1	Floor	5.6	Concrete
F6-2	Floor	6.8	Concrete
F6-4	Floor	2.4	Concrete
F6-7	Floor	12	Concrete
F6-8	Floor	0.82	Concrete



FIGURES



REF.: USGS - SYRACUSE WEST (NY) QUAD., 2013



19 British American Blvd., Latham, New York 12110
P: (518) 782-0882 F: (518) 782-0973 www.jmt.com

Site Location Map 800 Hiawatha Boulevard Site Syracuse, New York

CITY OF SYRACUSE

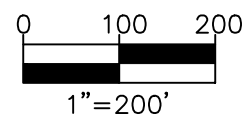
ONONDAGA CO., NY

PROJ. #:	16140	DATE:	06/08/2021	SCALE:	NTS	DWG. NO.	RIR	FIGURE	1



LEGEND

- — APPROXIMATE PROPERTY BOUNDARY
- — ELEVATED PORTION OF WALKING TRAIL
- — GROUND LEVEL PORTION OF WALKING TRAIL
- — BCP BOUNDARY



Note:
The buildings were removed in 2018. Only slabs remain.



19 British American Blvd., Latham, New York 12110
P: (518) 782-0882 F: (518) 782-0973 www.jmt.com

Aerial Site Map
800 Hiawatha Blvd
Syracuse, New York

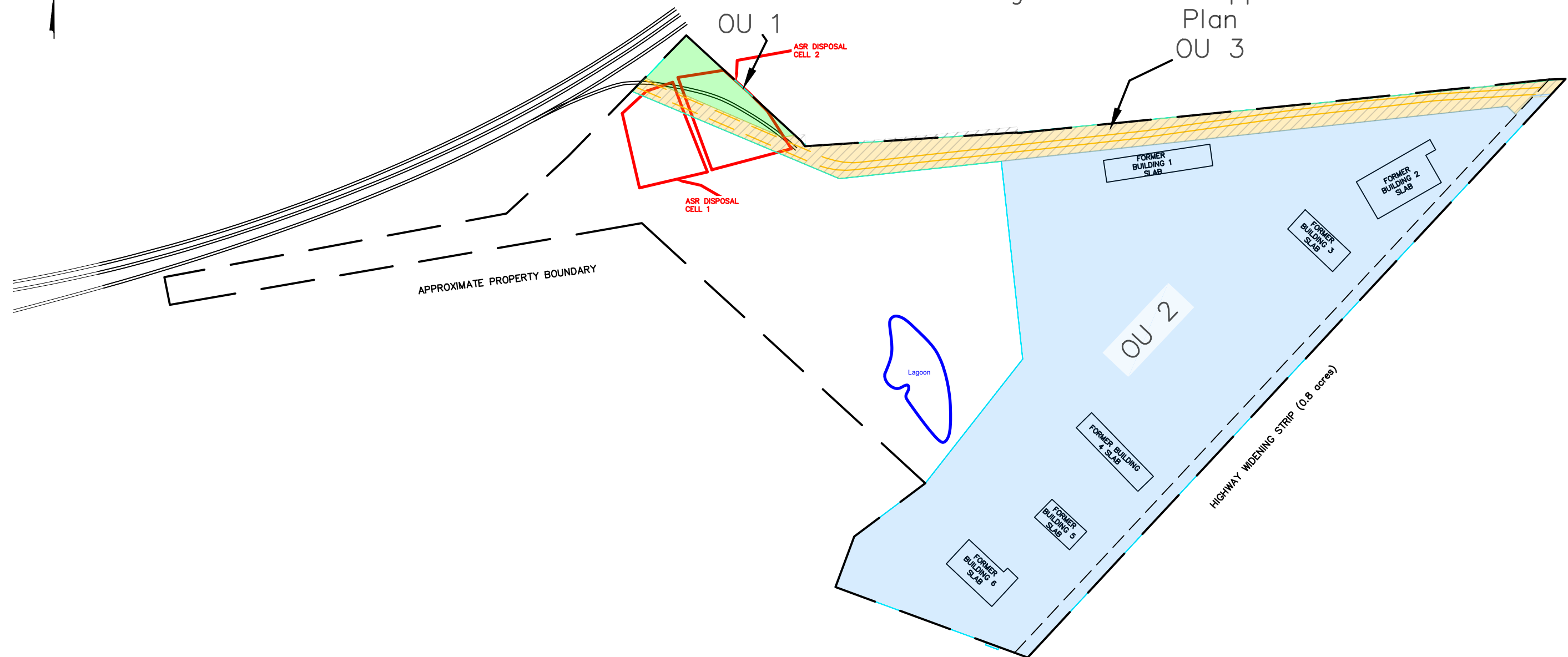
CITY OF SYRACUSE

ONONDAGA CO., NY

PROJ. No.: 16140 | DATE: 4/19/2023 | SCALE: 1"=200' | DWG. NO. RIR | FIGURE 2



Onondaga Lake Trail—Approved Remediation Plan



LEGEND

BCP SITE

- OPERABLE UNIT 1 (0.4 ACRES)
- OPERABLE UNIT 2 (13 ACRES)
- OPERABLE UNIT 3 (1.7 ACRES)
- APPROVED REMEDIATION PLAN

Note:
The buildings were removed in 2018. Only slabs remain.



1"=200'

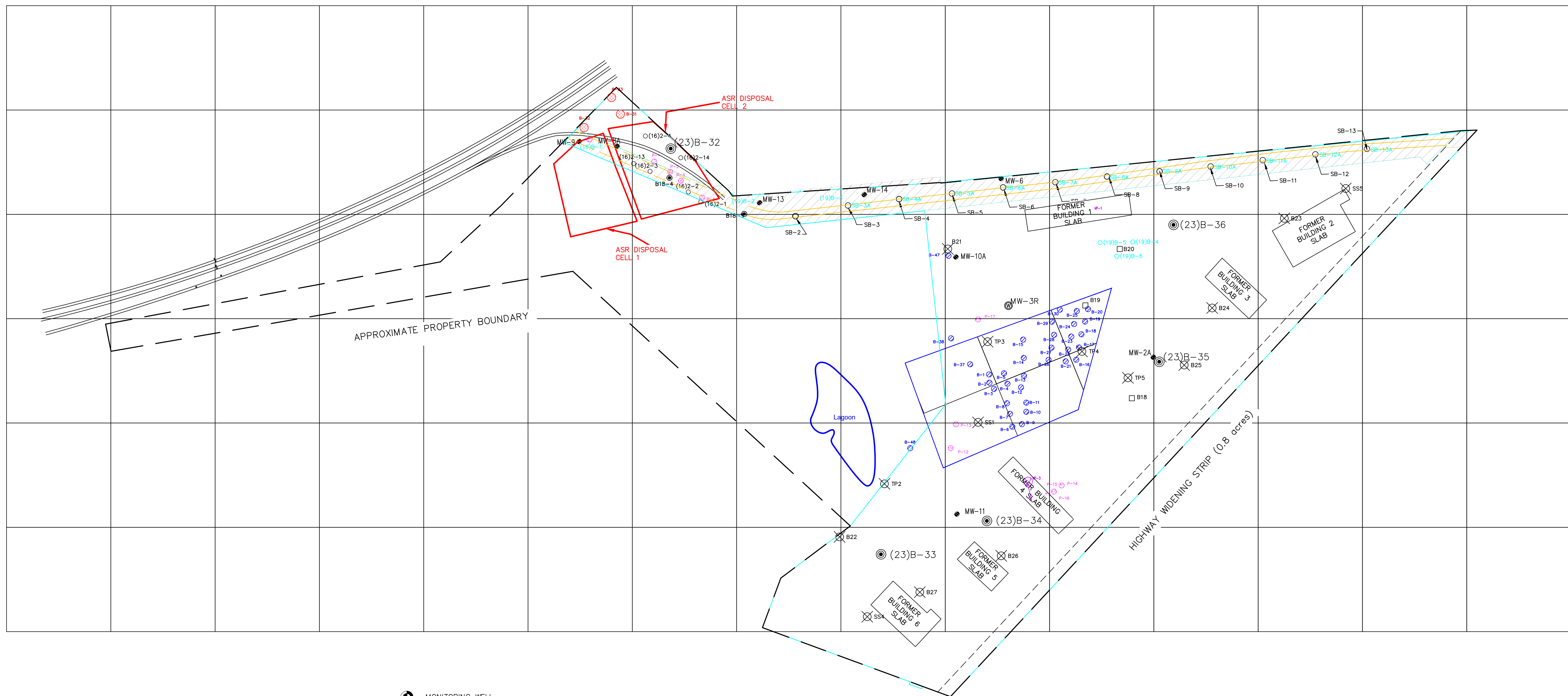


19 British American Blvd., Latham, New York 12110
P: (518) 782-0882 F: (518) 782-0973 www.jmt.com

BCP Site and Operable Units
800 Hiawatha Blvd
Syracuse, New York

CITY OF SYRACUSE ONONDAGA CO., NY

PROJ. No.: 16140	DATE: 4/19/2023	SCALE: 1"=200'	DWG. NO. RWP	FIGURE 3



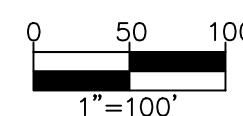
LEGEND

- APPROXIMATE WASTE CELL LOCATIONS
- PASSERO SAMPLE LOCATIONS
- BROWN AND CALDWELL SAMPLE LOCATIONS
- AECOM SAMPLE LOCATIONS
- VAPOR POINT SAMPLE LOCATION (2018)
- CLOUGH HARBOR and ASSOCIATES SAMPLE LOCATIONS (SB 1 – SB 13)
- JMT SAMPLE LOCATIONS (2017; B prefix denotes Boring and TP prefix denotes Test Pit)
- JMT SAMPLE LOCATIONS (2017; Originally proposed as Boring but completed as Test Pit)
- GEOTECHNICAL BORINGS (2016 and 2018)
- JMT SAMPLE LOCATIONS (2019)
- JMT SOIL SAMPLE LOCATIONS (2023)

- MONITORING WELL
- 200' SAMPLING GRID
- 150' SAMPLING GRID
- TRAIL AREA – APPROVED REMEDIATION AREA
- ELEVATED PORTION OF WALKING TRAIL
- GROUND LEVEL PORTION OF WALKING TRAIL
- BCP SITE BOUNDARY

NOTES:

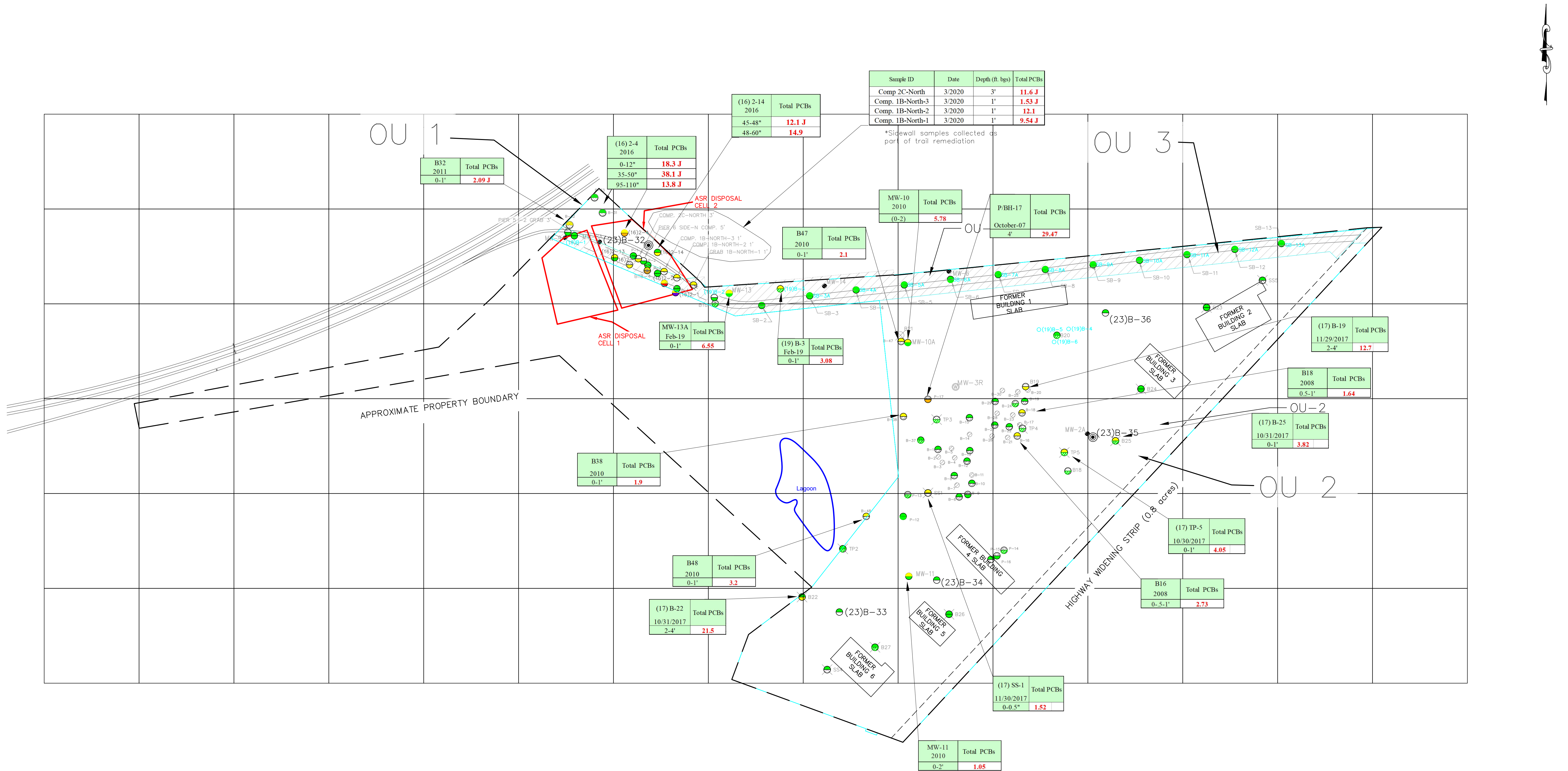
- All historic sample locations are approximate.
- The 2017 Remedial Investigation sample locations have the nomenclature (17)[Sample Number] in the RIR text and data tables. The (17) prefix was omitted from this map for clarity.
- The buildings were removed in 2018. Only slabs remain.



SAMPLE LOCATION MAP
800 Hiawatha Blvd
Syracuse, New York

CITY OF SYRACUSE ONONDAGA CO., NY

PROJ. No.: 16140 | DATE: 7/19/2023 | SCALE: 1"=100' | DWG. NO. RIR | FIGURE 4



LEGEND

- APPROXIMATE WASTE CELL LOCATIONS

PASSERO SAMPLE LOCATIONS

BROWN AND CALDWELL SAMPLE LOCATIONS

AECOM SAMPLE LOCATIONS

CLOUGH HARBOR and ASSOCIATES' SAMPLE LOCATIONS (SB 1 – SB 13)

JMT SAMPLE LOCATIONS (2017; B prefix denotes Boring and TP prefix denotes Test Pit)

JMT SAMPLE LOCATIONS (2017; Originally proposed as Boring but completed as Test Pit)

GEOTECHNICAL BORINGS (2016 and 2018)

JMT SOIL SAMPLE LOCATION (2023)
- PROPERTY BOUNDARY

BCP OPERABLE UNIT BOUNDARIES

PROPOSED ELEVATED TRAIL

PROPOSED GROUND-LEVEL TRAIL

MONITORING WELL
- SUBSURFACE PCB CONCENTRATIONS (BELOW 1 FOOT)

SURFACE PCB CONCENTRATIONS (TOP FOOT)
- <1 ppm

1–<25 ppm

25–<50 ppm

50–<100 ppm

≥100 ppm

<1 ppm

1–<10 ppm

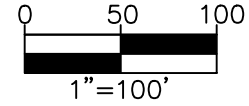
10–<25 ppm

25–<50 ppm

50–<100 ppm

>100 ppm

- NOTES:
- All historic sample locations are approximate.
 - The 2017 Remedial Investigation sample locations have the nomenclature (17)[Sample Number] in the RIR text and data tables. The (17) prefix was omitted from this map for clarity.
 - All depths are in feet unless otherwise noted.
 - The buildings were removed in 2018. Only slabs remain.
 - Call-out boxes show exceedances of the NYSDEC Commercial Use SCO (1.0 ppm)



19 British American Blvd, Latham, New York 12110
P: (518) 782-0882 F: (518) 782-0973 www.jmt.com

PCB Concentrations in Soil
800 Hiawatha Blvd
Syracuse, New York

CITY OF SYRACUSE

ONONDAGA CO., NY

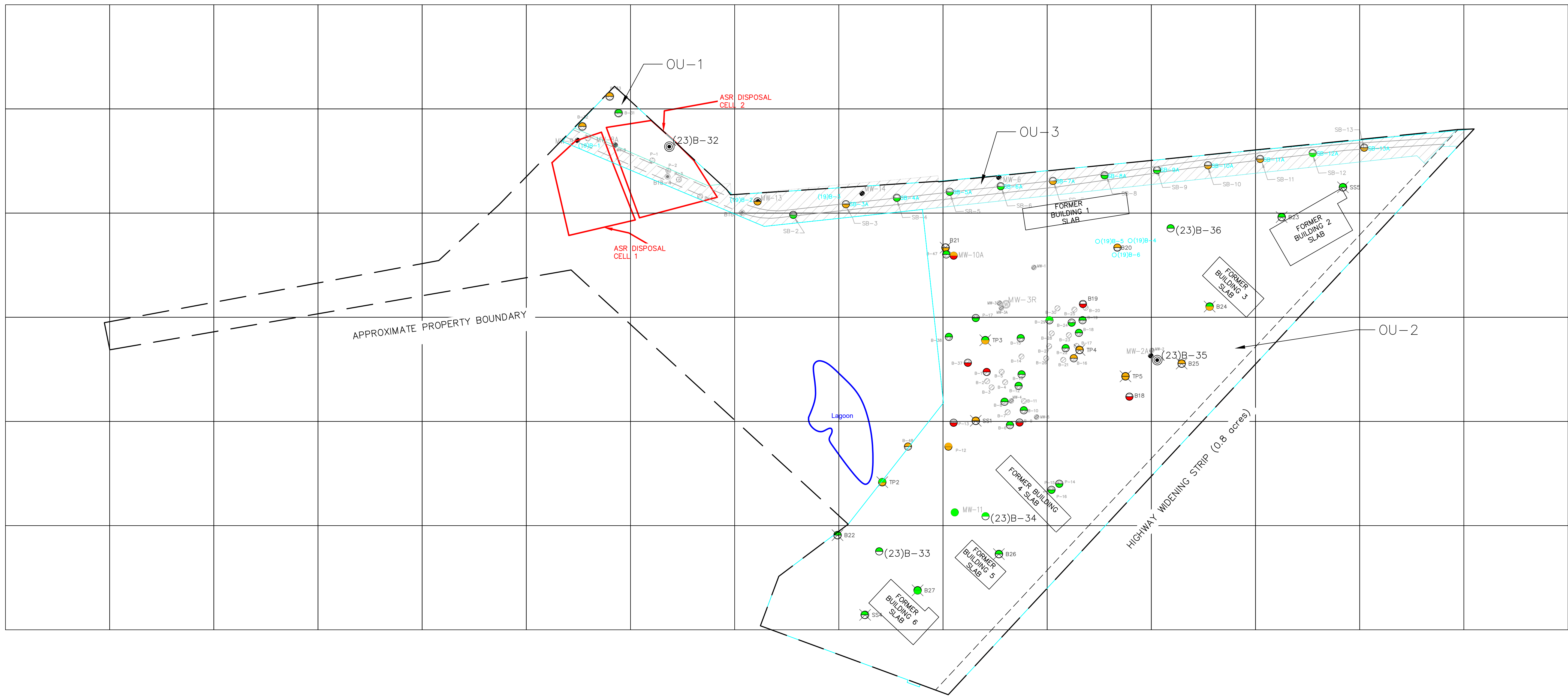
PROJ. No.: 16140

DATE: 7/19/2023

SCALE: 1"=100'

DWG. NO. RWP

FIGURE 5



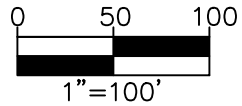
LEGEND

	APPROXIMATE WASTE CELL LOCATIONS		BCP OPERABLE UNIT BOUNDARIES
	PASSERO SAMPLE LOCATIONS		PROPOSED ELEVATED TRAIL
	BROWN AND CALDWELL SAMPLE LOCATIONS		PROPOSED GROUND-LEVEL TRAIL
	AECOM SAMPLE LOCATIONS		MONITORING WELL
	CLOUGH HARBOR and ASSOCIATES SAMPLE LOCATIONS (SB 1 – SB 13)		
	JMT SAMPLE LOCATIONS (2017; B prefix denotes Boring and TP prefix denotes Test Pit)		
	JMT SAMPLE LOCATIONS (2017; Originally proposed as Boring but completed as Test Pit)		
	GEOTECHNICAL BORINGS (2016 and 2018)		
	JMT SOIL SAMPLE LOCATIONS (2023)		

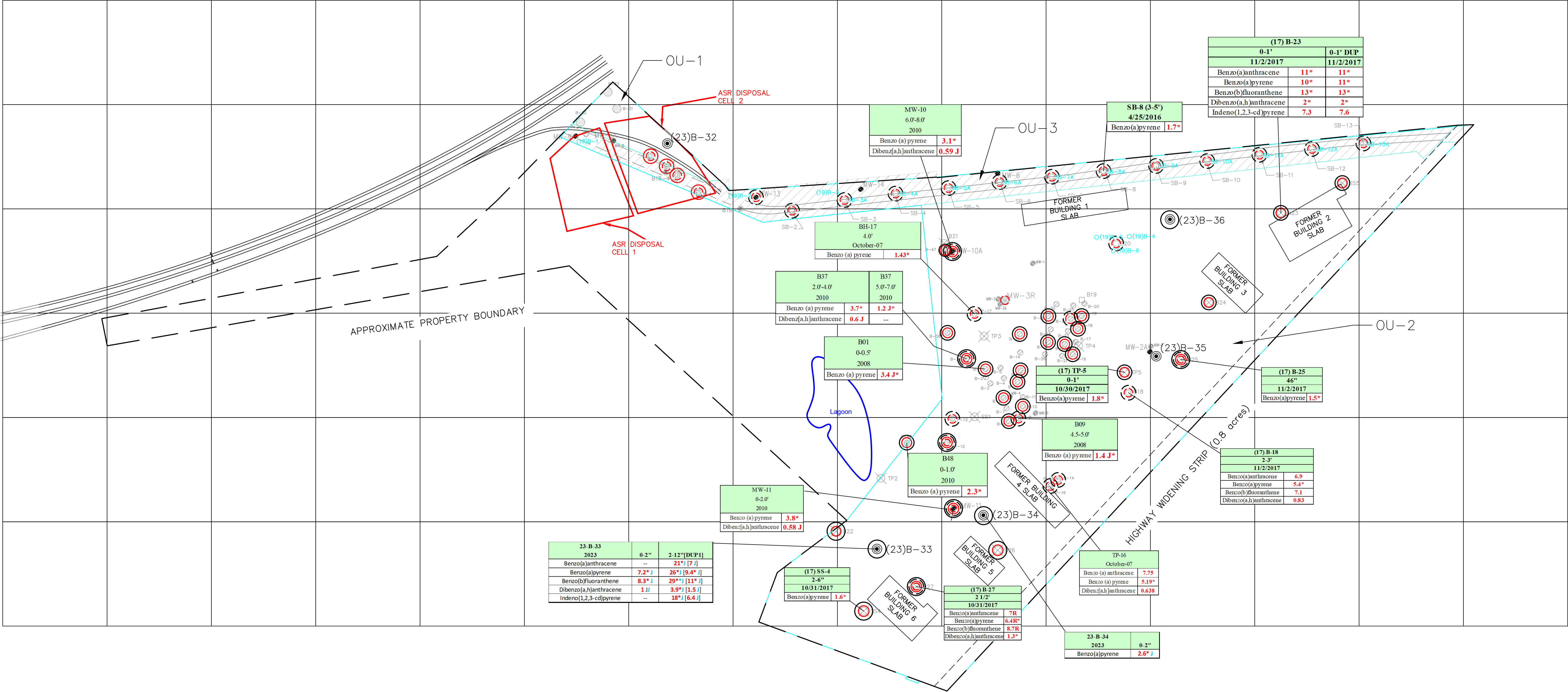
- METALS CONCENTRATIONS 0-1 FOOT BGS
- No Exceedance
 - Exceeds Commercial Soil Cleanup Objectives
 - Exceeds Industrial Soil Cleanup Objectives
- METALS CONCENTRATIONS >1 FOOT BGS
- No Exceedance
 - Exceeds Commercial Soil Cleanup Objectives
 - Exceeds Industrial Soil Cleanup Objectives

NOTES:

- All historic sample locations are approximate.
- The 2017 Remedial Investigation sample locations have the nomenclature (17)[Sample Number] in the RIR text and data tables. The (17) prefix was omitted from this map for clarity.
- The buildings were removed in 2018. Only slabs remain.



		Metals Concentrations in Soil 800 Hiawatha Blvd Syracuse, New York	
19 British American Blvd., Latham, New York 12110 P: (518) 782-0882 F: (518) 782-0973 www.jmt.com		CITY OF SYRACUSE ONONDAGA CO., NY	
PROJ. No.: 16140	DATE: 5/3/2023	SCALE: 1"=100'	DWG. NO. RWP
FIGURE 6			

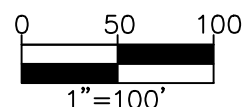


LEGEND

- APPROXIMATE WASTE CELL LOCATIONS
- PASSERO SAMPLE LOCATIONS
- BROWN AND CALDWELL SAMPLE LOCATIONS
- AECOM SAMPLE LOCATIONS
- CLOUGH HARBOR and ASSOCIATES SAMPLE LOCATIONS (SB 1 – SB 13)
- JMT SAMPLE LOCATIONS (2017; B prefix denotes Boring and TP prefix denotes Test Pit)
- JMT SAMPLE LOCATIONS (2017; Originally proposed as Boring but completed as Test Pit)
- GEOTECHNICAL BORINGS (2016 and 2018)
- JMT SOIL SAMPLE LOCATIONS (2023)
- BCP OPERABLE UNIT BOUNDARIES
- PROPOSED ELEVATED TRAIL
- PROPOSED GROUND-LEVEL TRAIL
- MONITORING WELL
- CONCENTRATION EXCEEDS COMMERCIAL USE SOIL CLEANUP OBJECTIVES
- CONCENTRATION EXCEEDS INDUSTRIAL USE SOIL CLEANUP OBJECTIVES
- SVOCs SAMPLES COLLECTED FROM SOIL DEEPER THAN 1FT BGS
- SVOCs SAMPLES COLLECTED FROM SOIL LESS THAN 1FT BGS
- VOCs SAMPLES COLLECTED FROM SOIL DEEPER THAN 1FT BGS
- VOCs SAMPLES COLLECTED FROM SOIL LESS THAN 1FT BGS

NOTES:

- All historic sample locations are approximate.
- The 2017 Remedial Investigation sample locations have the nomenclature (17)[Sample Number] in the RIR text and data tables. The (17) prefix was omitted from this map for clarity.
- Only exceedance values are shown.
- Sample results are in mg/kg (ppm).
- The buildings were removed in 2018. Only slabs remain.
- Results shown for sample locations within the historic ASR Cell Areas and the BCP Operable Units. Results are also shown within 50 feet of the BCP Operable Unit boundaries for potential remedial design purposes.



19 British American Blvd., Latham, New York 12110
P: (518) 782-0882 F: (518) 782-0973 www.jmt.com

Soil VOCs and SVOCs Exceedances

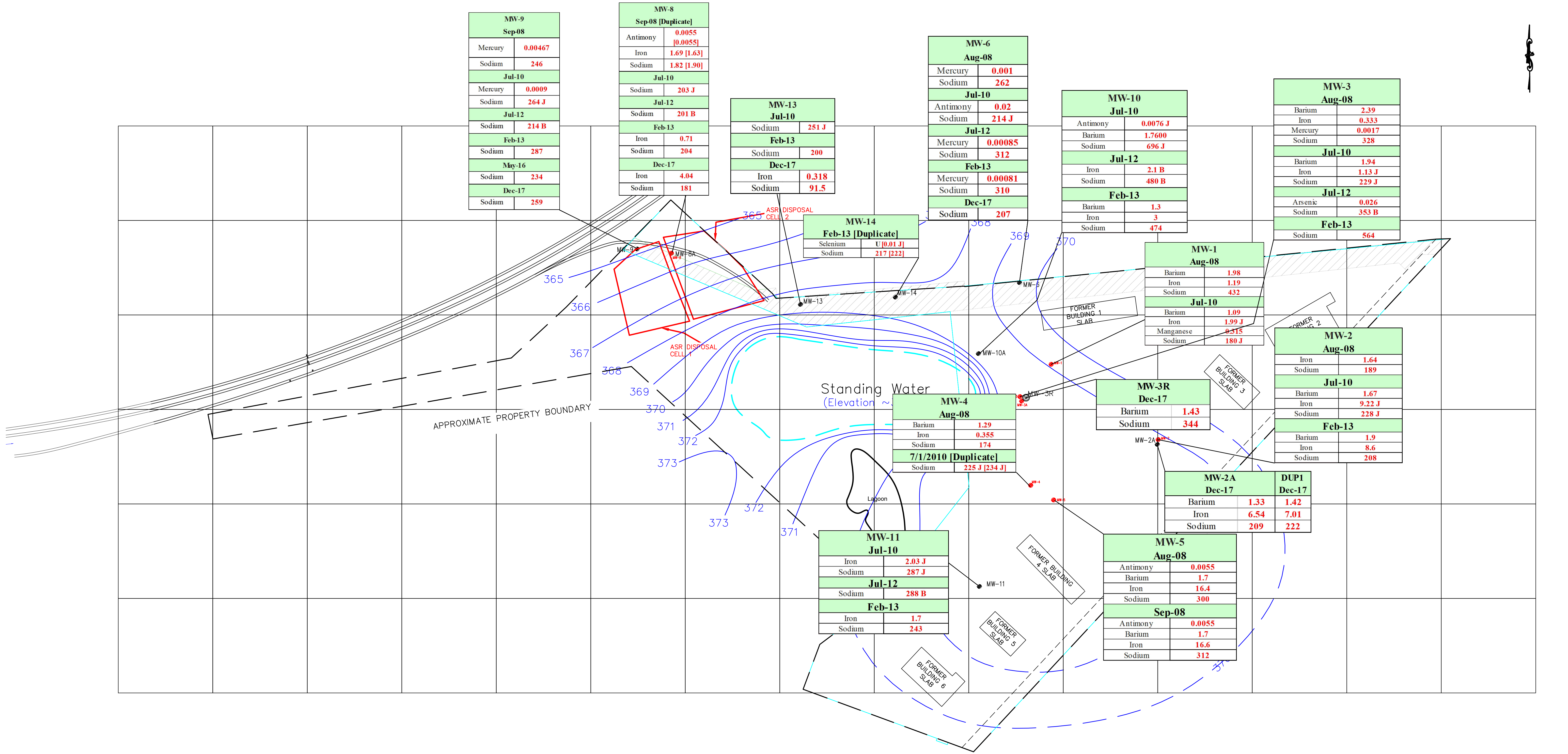
800 Hiawatha Blvd

Syracuse, New York

CITY OF SYRACUSE

ONONDAGA CO., NY

PROJ. No.: 16140 | DATE: 7/19/2023 | SCALE: 1"=100' | DWG. NO. RWP | FIGURE 7

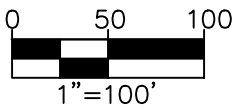


LEGEND

- ASR DISPOSAL CELL LOCATIONS
- PROPERTY BOUNDARY
- GROUNDWATER CONTOUR (ft. above mean sea level)
- APPROXIMATE EXTENT OF STANDING WATER
- EXISTING GROUNDWATER MONITORING WELL
- MONITORING WELL - DAMAGED OR MISSING
- 12.2 CONCENTRATION EXCEEDS NYSDEC PART 703 WATER QUALITY STANDARDS FOR AMBIENT GROUNDWATER

NOTES:

- All historic sample locations are approximate.
- Sample results are in ug/L (ppb).
- The buildings were removed in 2018. Only slabs remain.
- Results shown for sample locations within the historic ASR Cell Areas and the BCP Operable Units. Results are also shown within 50 feet of the BCP Operable Unit boundaries for potential remedial design purposes.



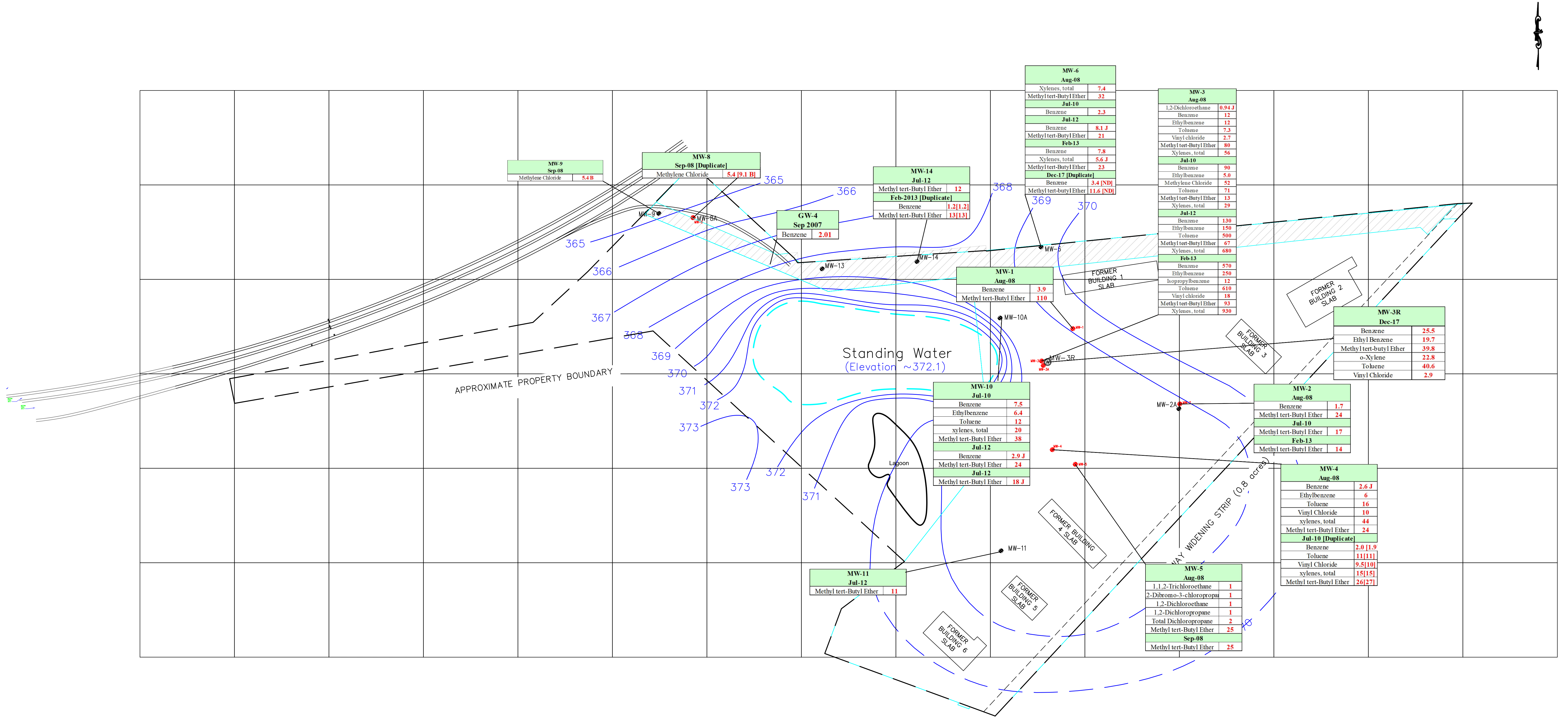
19 British American Blvd., Latham, New York 12110
P: (518) 782-0882 F: (518) 782-0973 www.jmt.com

GROUNDWATER METALS EXCEEDANCES

800 Hiawatha Blvd
Syracuse, New York

CITY OF SYRACUSE ONONDAGA CO., NY

PROJ. No.: 16140 | DATE: 5/5/2023 | SCALE: 1"=100' | DWG. NO. RWP | FIGURE 9

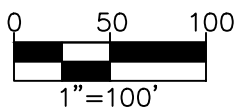


LEGEND

- ASR DISPOSAL CELL LOCATIONS
- PROPERTY BOUNDARY
- GROUNDWATER CONTOUR (ft. above mean sea level)
- APPROXIMATE EXTENT OF STANDING WATER
- EXISTING GROUNDWATER MONITORING WELL
- MONITORING WELL - DAMAGED OR MISSING
- 12.2 CONCENTRATION EXCEEDS NYSDEC PART 703 WATER QUALITY STANDARDS FOR AMBIENT GROUNDWATER

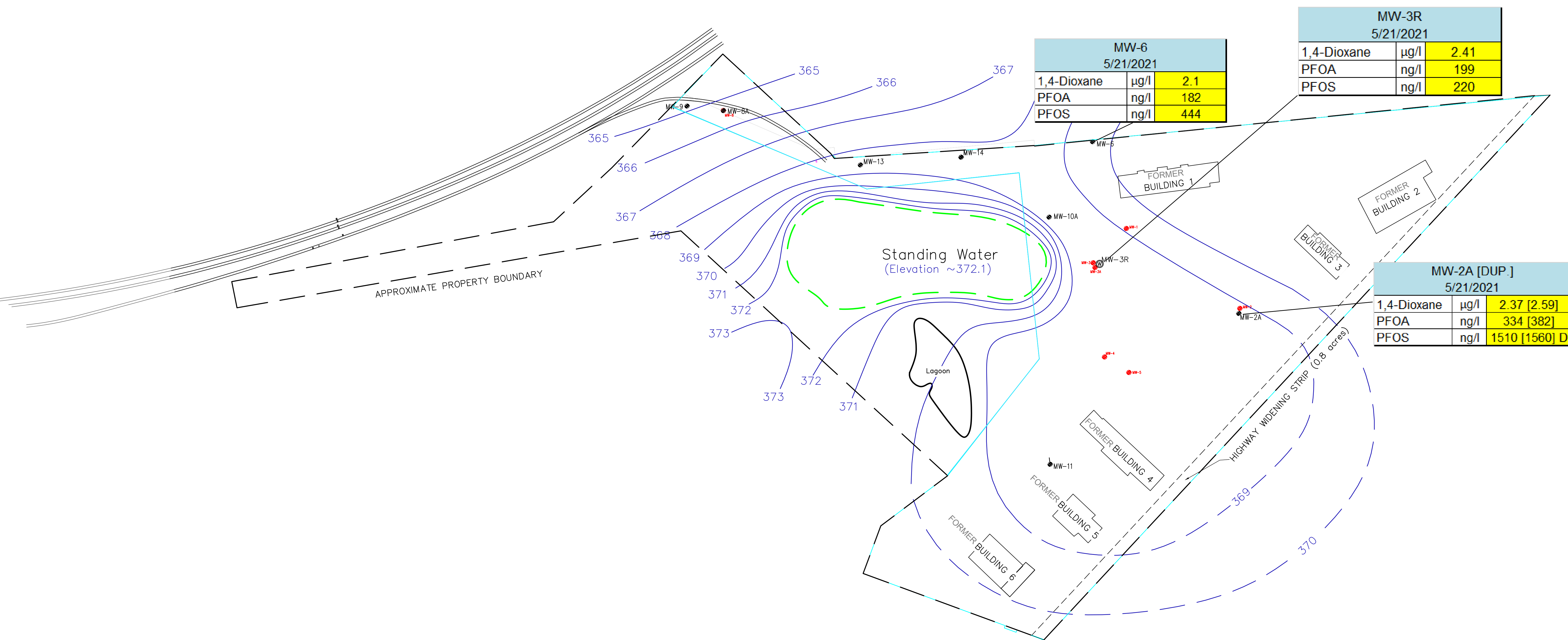
NOTES:

- All historic sample locations are approximate.
- Sample results are in ug/L (ppb).
- The buildings were removed in 2018. Only slabs remain.
- Results shown for sample locations within the historic ASR Cell Areas and the BCP Operable Units. Results are also shown within 50 feet of the BCP Operable Unit boundaries for potential remedial design purposes.



GROUNDWATER VOC EXCEEDANCES
800 Hiawatha Blvd
Syracuse, New York

CITY OF SYRACUSE ONONDAGA CO., NY



MW-6 5/21/2021		
1,4-Dioxane	µg/l	2.1
PFOA	ng/l	182
PFOS	ng/l	444

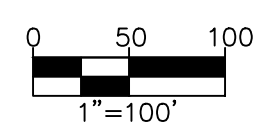
MW-3R 5/21/2021		
1,4-Dioxane	µg/l	2.41
PFOA	ng/l	199
PFOS	ng/l	220

MW-2A [DUP.] 5/21/2021		
1,4-Dioxane	µg/l	2.37 [2.59]
PFOA	ng/l	334 [382]
PFOS	ng/l	1510 [1560] D

LEGEND

- PROPERTY BOUNDARY
- GROUNDWATER CONTOUR (ft. above mean sea level) - Based on December 2017 data
- APPROXIMATE EXTENT OF STANDING WATER (Fall 2017)
- EXISTING GROUNDWATER MONITORING WELL
- MONITORING WELL - DAMAGED OR MISSING
- AMMENDED BCP SITE BOUNDARY

NOTES:
1. All historic sample locations are approximate.
2. The buildings were removed in 2018. Only slabs remain.
3. Yellow highlight indicates NY MCL exceedance.



19 British American Blvd., Latham, New York 12110
P: (518) 782-0882 F: (518) 782-0973 www.jmt.com

GROUNDWATER EMERGING CONTAMINANT EXCEEDANCES

800 Hiawatha Blvd
Syracuse, New York

CITY OF SYRACUSE ONONDAGA CO., NY

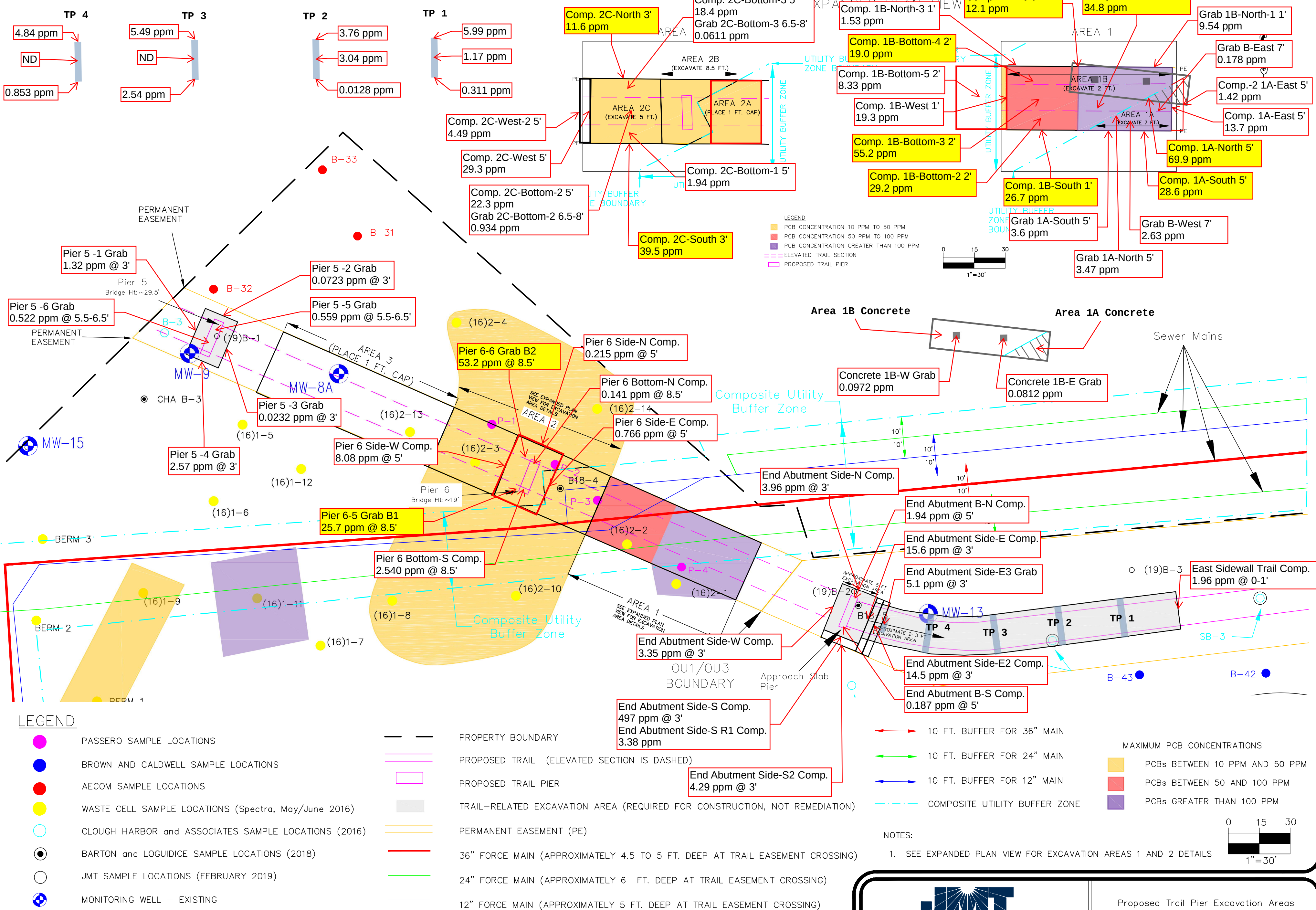
PROJ. No.: 16140	DATE: 7/1/2021	SCALE: As Shown	DWG. NO.	RWP	FIGURE 11



APPENDIX A

ONONDAGA LAKE TRAIL SAMPLE SUMMARY

Approach Test Pit North and South Sidewall and Bottom Grab Samples @ el: 370' (approximately @ 3')



19 British American Blvd., Latham, New York 12110
P: (518) 782-0882 F: (518) 782-0973 www.jmt.com

Proposed Trail Pier Excavation Areas
800 Hiawatha Blvd
Syracuse, New York
CITY OF SYRACUSE ONONDAGA CO., NY



APPENDIX B

SUPPLEMENTAL TEST PITS



TEST PIT LOG

Test Pit ID: (19) B-4

Project Name:	<u>Roth Steel BCP Site</u>	Project No:	<u>16-S0140N-001</u>
Client Name:	<u>OCIDA</u>	Date:	<u>2/28/2019</u>
Location:	<u>800 Hiawatha Blvd. West, Syracuse, NY</u>	Logged By:	<u>J. Krikorian</u>
Weather/Temp:	<u>-5°F, overcast</u>	Checked By:	<u>Y. Winters</u>

Drilling Co:	<u>NYEG Drilling Inc./Paragon</u>	Depth:	<u>8'</u>
Driller:	<u>Rick</u>	Equipment:	<u>sk-140SR Excavator</u>
Date Started:	<u>2/28/2019</u>	Method:	<u>Excavator</u>
Date Ended:	<u>2/28/2019</u>		

Depth	Recovery	PID (ppm)	DESCRIPTIVE LOG color, grain size and amount, texture, moisture DEPOSITIONAL UNIT outwash, till, lacustrine, muck, fill	REMARKS
0-5'	--	0.2	0-2' Dark brown sand and gravel	
		50	2-4' Brown sand and some silt and gravels, fill material	
		260	4-5' Dark brown sand and gravel, asphalt layers	Strong odor and sheen on water

Additional Comments:



TEST PIT LOG

Test Pit ID: (19) B-5

Project Name:	<u>Roth Steel BCP Site</u>	Project No:	<u>16-S0140N-001</u>
Client Name:	<u>OCIDA</u>	Date:	<u>2/28/2019</u>
Location:	<u>800 Hiawatha Blvd. West, Syracuse, NY</u>	Logged By:	<u>J. Krikorian</u>
Weather/Temp:	<u>-5°F, overcast</u>	Checked By:	<u>Y. Winters</u>

Drilling Co:	<u>NYEG Drilling Inc./Paragon</u>	Depth:	<u>8'</u>
Driller:	<u>Rick</u>	Equipment:	<u>sk-140SR Excavator</u>
Date Started:	<u>2/28/2019</u>	Method:	<u>Excavator</u>
Date Ended:	<u>2/28/2019</u>		

Depth	Recovery	PID (ppm)	DESCRIPTIVE LOG color, grain size and amount, texture, moisture DEPOSITIONAL UNIT outwash, till, lacustrine, muck, fill	REMARKS
0-8'	-	0.2	0-2' Dark brown sand and gravel	Slight petroleum odor
		0.1	2-4' Brown sand and some silt and gravels, fill material	Asphalt at bottom
		0	4-5' Brown sand and gravel, asphalt layers	Asphalt odor
		0.1	5-8' Dark brown sand and fill material	No odor

Additional Comments:



TEST PIT LOG

Test Pit ID: (19) B-6

Project Name:	Roth Steel BCP Site	Project No:	16-S0140N-001
Client Name:	OCIDA	Date:	2/28/2019
Location:	800 Hiawatha Blvd. West, Syracuse, NY	Logged By:	J. Krikorian
Weather/Temp:	-5°F, overcast	Checked By:	Y. Winters

Drilling Co:	NYEG Drilling Inc./Paragon	Depth:	8'
Driller:	Rick	Equipment:	sk-140SR Excavator
Date Started:	2/28/2019	Method:	Excavator
Date Ended:	2/28/2019		

Depth	Recovery	PID (ppm)	DESCRIPTIVE LOG color, grain size and amount, texture, moisture DEPOSITIONAL UNIT outwash, till, lacustrine, muck, fill	REMARKS
0-8'	-	10.1	0-2' Dark brown sand and gravel	Slight petroleum odor
		2	2-3' Brown sand and some silt and gravels, fill material	No odor
		1.5	3-7' Dark brown to dark gray sand and silt, fill material	No odor, slight sheen on water
		2	7-8' Gray to brown sand and gravel	No odor, slight sheen on water

Additional Comments:



APPENDIX C

GENERAL EXCAVATION PLAN

GENERAL EXCAVATION PLAN

1.0 INTRODUCTION

This General Excavation Plan is being prepared to guide soil excavation work that will be conducted under the Remedial Work Plan. The purpose of this plan is to present procedures to manage the excavation of materials that may be contaminated. These procedures will reduce the potential for migration of contaminated materials, ensure that these materials are managed/disposed of properly, and that site workers are protected from potential exposure.

2.0 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter contaminated subsurface material, a Site representative will notify the New York State Department of Environmental Conservation Region 7 office at:

Division of Environmental Remediation
NYSDEC Region 7
615 Erie Blvd. West
Syracuse, NY 13204

This notification will include the following:

- A description of the work to be performed, including the location and areal extent, plans for site restoration, intrusive elements or structures to be installed in the subsurface, estimated volumes of contaminated soil to be excavated;
- A summary of environmental conditions anticipated in the work areas, including the nature of contaminants of concern expected to be encountered;
- A schedule for the work, detailing the start and completion of all intrusive work;
- A statement that the work will be performed in compliance with CFR 1910.120, along with a copy of the contractor's health and safety plan; and
- Identification of disposal plans for excavated materials.

3.0 SOIL SCREENING FIELD METHODS

Visual, olfactory and/or instrument-based soil screening will be performed by a qualified professional during all excavations into known or potentially contaminated materials. A photo-ionization detection (PID) will be used to monitor air quality in the immediate vicinity of the excavation. The PID readings will be utilized to verify organic vapor concentrations and document whether respiratory protection is warranted for onsite workers. The field screening will be in addition to the monitoring requirements for the Community Air Monitoring Plan (CAMP), which is attached to this plan. If any petroleum contaminated soils are encountered, NYSDEC will be

notified within 2 hours of discovery. In addition, petroleum impacted materials will be separately stockpiled on polyethylene (poly) sheeting and will also be covered by poly at the end of the day. Sampling of the petroleum impacted soils will be completed to assess disposal alternatives.

4.0 GENERAL EXCAVATION PROCEDURES

This section presents general procedures for conducting soil excavations.

Since excavation activities can present unique hazards, added control measures to include the following are warranted:

- a. Prior to conducting ground disturbance activities, “Dig Safe NY” and the Onondaga County Sewer/Water Authority will be contacted to identify and mark-out any known utilities. If warranted, additional investigation using non-destructive geophysical methods, such as ground penetrating radar, may also be conducted. Excavations will avoid subsurface utilities to the extent possible. If the utilities cannot be avoided, additional control measures such as hand-digging or air knife/vacuum excavation procedures will be utilized.
- b. Precautions will be taken when positioning equipment with respect to the presence of known buried objects. Where possible, power to underground electrical lines should be turned off while excavation activities are in process or until the area is secure from entrance of personnel.
- c. Heavy equipment, vehicles and construction materials will not be staged within the footprint of Waste Cells 1 and 2. Ground disturbance of the waste cells will be minimized to the extent possible.
- d. Controlled digging will be performed under careful observation of an oversight inspector who has clear communication with the equipment operator. The inspector will be alert to notice the presence of (unknown) buried objects by visual inspection or metal detection surveyance of the immediate excavation area.
- e. In the event an excavation becomes a confined space, appropriate actions will be implemented to ensure safety of Site personnel, and excavating personnel will be advised if confined space conditions become present. According to OSHA, a confined space can be defined as the following:
 - A space that has limited or restricted means for entry or exit, and is not designed for continuous employee occupancy; and

- Included but not limited to underground vaults, tanks, storage bins, manholes, pits, silos, process vessels, and pipelines.

Site personnel should not enter any excavation unless a PID and LEL are present to monitor the ambient air.

- f. OSHA provisions regarding shoring and sloping of trench sides may apply. Personnel must be aware of provisions under 29 CFR 1926 (See Table 1 below, Maximum Allowable Slopes from 29CFR 1926 Subpart P Appendix B provided by OSHA), regarding slope stability. Excavation side walls shall not be approached unless a stable slope has been established.

TABLE 1
MAXIMUM ALLOWABLE SLOPES

SOIL OR ROCK TYPE	MAXIMUM ALLOWABLE SLOPES (H:V) ¹ FOR EXCAVATIONS LESS THAN 20 FEET DEEP ³
Stable Rock	Vertical (90°)
Type A ²	3/4:1 (53°)
Type B	1:1 (45°)
Type C	1 ½:1 (34°)

Footnote 1: Numbers shown in parentheses next to maximum allowable slopes are angles expressed in degrees from the horizontal. Angles have been rounded off.

Footnote 2: A short-term maximum allowable slope of 1/2H:1V (63°) is allowed in excavations in Type A soil that are 12 feet (3.67 m) or less in depth. Short-term maximum allowable slopes for excavations greater than 12 feet (3.67 m) in depth shall be 3/4H:1V (53°).

Footnote 3: Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer.

Soil Types

Type A: Cohesive soils with an unconfined, compressive strength of 1.5 ton per square foot (tsf) or greater. Soil examples include clay, silty clay, sandy clay, and clay loam.

Type B: Cohesive soils with an unconfined, compressive strength greater than 0.5 tsf, but less than 1.5 tsf; or granular cohesionless soils including angular gravel, silt, silt loam, sandy loam.

Type C: Cohesive soils with an unconfined compressive strength of 0.5 tsf or less; or granular soils including gravel, sand, and loamy sand; or submerged soil or soil from which water is freely seeping; or submerged rock that is not stable.

- g. Excavations should be inspected daily for evidence of cracks, slides or scaling. Inspection should be more frequent if it is raining.
- h. Site personnel shall keep a safe distance from heavy equipment near the sides of excavations. If use of equipment is required to work near the edge of an excavation, a warning system must be put in place (hand signals, cones, barricades, etc.).
- i. Means of egress for employees working in excavations are necessary if excavations are 4 feet deep or greater (e.g., steps, ladders, ramped side slopes).
- j. Excavations should be back filled as soon as possible upon completion of work. Prior to backfilling, a geosynthetic fabric will be placed at the base of the excavation and along the sidewalls to provide a physical demarcation.

5.0 SOIL DISPOSAL OFF-SITE

If excavated soil is known to contain PCBs at concentrations of 50 ppm or greater, it will be disposed of off-site as TSCA/RCRA regulated material and will be transported and disposed in accordance with all local, State and Federal regulations. If excavated soil is known to contain PCBs at concentrations of less than 50 ppm, it may be disposed of off-site as NYSDEC permitted solid waste landfills. Regulated material and will be transported and disposed in accordance with all local, State and Federal regulations.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements). All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

6.0 SOIL REUSE ONSITE

Excavated material with PCB concentrations less than 10 ppm and greater than 1 ppm, may be used as on site fill providing it is placed beneath a minimum of one foot of clean soil, asphalt or concrete. Clean soil is defined in this plan as any soil that does not exceed the 6 NYCRR Part 375-6 Soil Cleanup objectives for a restricted commercial use.

7.0 GROUNDWATER MANAGEMENT

Groundwater depth at the site was encountered at depths generally ranging from 5.5 ft. to 7.5 ft. For the most part, the zones with PCBs exceeding 10 ppm are located within the unsaturated zone (i.e., above the groundwater table). However, it is possible that groundwater could be encountered during the excavation activities. If groundwater is encountered in small quantities, the excavation will continue and the removed soil will be staged next to the excavation in a manner that allows groundwater to drain back into the excavation. If necessary, groundwater may need to be pumped into drums (or other appropriate containers) to facilitate soil removal to target depths. If groundwater rapidly returns and prevents continued excavation, or the excavation sidewalls become unstable, DEC will be advised, and a mutually agreeable decision will be made regarding the need to continue excavation. Any containerized groundwater will be sampled for PCBs and metals (at a minimum) to determine disposal options.

8.0 COMMUNITY AIR MONITORING PLAN AND DUST CONTROL

The details of the Community Air Monitoring Plan are provided in the attached CAMP. Air monitoring locations will be determined on a case by case basis. Monitoring of particulates will be stationed at the perimeter of the work area or where there may be a sensitive receptor, (i.e., public contact). Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

Dust suppression measures during invasive on-site work are provided in the attached CAMP.

Attachment D-1

Community Air Monitoring Plan (CAMP)

Overview

A Community Air Monitoring Plan (CAMP) establishes real-time monitoring for designated areas when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminants as a direct result of work activities that disturb potentially contaminated soils. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities do not spread contamination off-site through the air.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the work area may be necessary. Based on extensive soil sampling data at the former Roth Steel site, VOCs are not constituents of concern for the proposed IRM Work Plan activities. While VOC monitoring will be performed as part of worker-safety monitoring (as specified in the Health and Safety Plan), additional VOC monitoring for the CAMP is not warranted.

Continuous health and safety monitoring (using a hand-held PID) will be performed for intrusive activities that include soil/waste excavation and handling.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the work zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all soil/waste disturbance work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m³) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM-10 particulate

levels do not exceed 150 mcg/m³ above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m³ above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m³ of the upwind level and in preventing visible dust migration.
3. All readings will be recorded and will be available for NYSDEC, NYSDOH and County Health personnel to review.

Fugitive Dust and Particulate Monitoring

The following fugitive dust suppression and particulate monitoring measures will be employed during intrusive and soil/waste handling activities:

1. Reasonable fugitive dust suppression techniques will be employed during site activities which may generate fugitive dust;
2. Particulate monitoring will be employed during excavation, the handling of waste or contaminated soil, or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities will also include the unloading, grading, or placement of clean fill. These control measures will not be considered necessary for those activities involving clean fill; and
3. Particulate monitoring will be performed using real-time particulate monitors and will monitor particulate matter less than ten microns (PM₁₀) with the following minimum performance standards:
 - a) Objects to be measured: Dust, mists or aerosols;
 - b) Measurement Ranges: 0.001 to 400 mg/m³ (1 to 400,000 :ug/m³);
 - c) Precision (2-sigma) at constant temperature: +/- 10 :g/m³ for one second averaging; and +/- 1.5 g/m³ for sixty second averaging;
 - d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
 - e) Resolution: 0.1% of reading or 1g/m³, whichever is larger;
 - f) Particle Size Range of Maximum Response: 0.1-10;

- g) Total Number of Data Points in Memory: 10,000;
 - h) Logged Data: Each data point with average concentration, time/date and data point number;
 - i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
 - j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
 - k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
 - l) Operating Temperature: -10 to 50o C (14 to 122o F); and
 - m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.
4. In order to ensure the validity of the fugitive dust measurements performed, there will be appropriate Quality Assurance/Quality Control (QA/QC). QA/QC measures will include: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.
 5. The action level will be established at 150 ug/m³ (15 minutes average). While conservative, this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m³, the upwind background level will be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m³ above the background level, additional dust suppression techniques will be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures will include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m³ continue to be exceeded, work will stop and NYSDEC will be notified. The notification will include a description of the control measures implemented to prevent further exceedances.
 6. It is recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. Since there may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM₁₀ at or above the action level, it is appropriate to rely on visual

observation. If dust is observed leaving the working site, additional dust suppression techniques will be employed.

7. The following techniques will be used for controlling the generation and migration of dust during remediation activities, as warranted:

Applying water on haul roads;

- a) Wetting equipment and excavation faces;
 - b) Spraying water on buckets during excavation and dumping;
 - c) Hauling materials in properly tarped containers;
 - d) Restricting vehicle speeds to 10 mph or less;
 - e) Covering excavated areas and material after excavation activity ceases; and
 - f) Reducing the excavation size and/or number of excavations.
8. The evaluation of weather conditions is also important for fugitive dust control. When extreme wind conditions make dust control ineffective, remedial actions may need to be suspended.



APPENDIX D

2023 SUPPLEMENTAL LAB DATA



ANALYTICAL REPORT

Lab Number:	L2323052
Client:	JMT, Inc. 19 British American Blvd. Latham, NY 12110
ATTN:	Matthew Gaffuri
Phone:	(518) 782-0882
Project Name:	FORMER ROTH STEEL SITE
Project Number:	16-S0140N
Report Date:	05/26/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2323052-01	23-B-32 (0-2")	SOIL	SYRACUSE, NY	04/27/23 15:30	04/27/23
L2323052-02	23-B-32 (2-12")	SOIL	SYRACUSE, NY	04/27/23 15:35	04/27/23
L2323052-03	23-B-33 (0-2")	SOIL	SYRACUSE, NY	04/27/23 14:50	04/27/23
L2323052-04	23-B-33 (2-12")	SOIL	SYRACUSE, NY	04/27/23 15:00	04/27/23
L2323052-05	23-B-34 (0-2")	SOIL	SYRACUSE, NY	04/27/23 14:00	04/27/23
L2323052-06	23-B-34 (2-12")	SOIL	SYRACUSE, NY	04/27/23 14:10	04/27/23
L2323052-07	23-B-35 (0-16")	SOIL	SYRACUSE, NY	04/27/23 13:10	04/27/23
L2323052-08	23-B-36 (0-2")	SOIL	SYRACUSE, NY	04/27/23 11:45	04/27/23
L2323052-09	23-B-36 (2-12")	SOIL	SYRACUSE, NY	04/27/23 11:50	04/27/23
L2323052-10	DUP 1	SOIL	SYRACUSE, NY	04/27/23 12:00	04/27/23

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Case Narrative (continued)

Report Submission

May 26, 2023: This final report includes the results of all requested analyses.

May 15, 2023: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2323052-01: The collection date and time on the chain of custody was 27-APR-23 15:30; however, the collection date/time on the container label was 27-APR-23 15:35. At the client's request, the collection date/time is reported as 27-APR-23 15:30.

L2323052-02: The collection date and time on the chain of custody was 27-APR-23 15:35; however, the collection date/time on the container label was 27-APR-23 15:30. At the client's request, the collection date/time is reported as 27-APR-23 15:35.

L2323052-07: The sample identified as "23-B-35 (0-2)" on the chain of custody was identified as "23-B-35 (0-16)" on the container label. At the client's request, the sample is reported as "23-B-35 (0-16)".

Semivolatile Organics

L2323052-03D, -03RE\D, -04RE\D, -05D, -05RE\D, -06D, -06RE\D, -09D, -09RE\D, -10D, and -10RE\D:

The sample has elevated detection limits due to the dilution required by the sample matrix.

L2323052-04D: The sample has elevated detection limits due to the dilution required by the matrix interferences encountered during the concentration of the sample and the analytical dilution required by the sample matrix.

L2323052-04D and -04RE\D: The surrogate recoveries are below the acceptance criteria for 2-fluorophenol (0%), phenol-d6 (0%), nitrobenzene-d5 (0%), 2-fluorobiphenyl (0%), 2,4,6-tribromophenol (0%) and 4-terphenyl-d14 (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Case Narrative (continued)

The WG1776405-3 LCSD recoveries, associated with L2323052-03D, -04D, -05D, -06D, -08D, -09D, and -10D, were outside the individual acceptance criteria for acenaphthene (28%), hexachlorobenzene (22%), bis(2-chloroethyl)ether (30%), 2-chloronaphthalene (18%), 3,3'-dichlorobenzidine (20%), 2,4-dinitrotoluene (30%), 2,6-dinitrotoluene (18%), fluoranthene (29%), 4-chlorophenyl phenyl ether (28%), 4-bromophenyl phenyl ether (26%), bis(2-chloroisopropyl)ether (30%), bis(2-chloroethoxy)methane (30%), hexachlorobutadiene (24%), hexachlorocyclopentadiene (14%), hexachloroethane (30%), isophorone (31%), naphthalene (26%), nitrobenzene (35%), nitrosodiphenylamine(ndpa)/dpa (28%), bis(2-ethylhexyl)phthalate (37%), butyl benzyl phthalate (32%), di-n-butylphthalate (32%), di-n-octylphthalate (36%), diethyl phthalate (30%), dimethyl phthalate (18%), benzo(a)anthracene (30%), benzo(a)pyrene (34%), benzo(b)fluoranthene (33%), benzo(k)fluoranthene (30%), chrysene (30%), acenaphthylene (19%), anthracene (31%), benzo(ghi)perylene (30%), fluorene (29%), phenanthrene (29%), dibenzo(a,h)anthracene (29%), indeno(1,2,3-cd)pyrene (29%), pyrene (30%), biphenyl (17%), 4-chloroaniline (28%), 2-nitroaniline (18%), 3-nitroaniline (23%), 4-nitroaniline (30%), dibenzofuran (29%), 2-methylnaphthalene (18%), 1,2,4,5-tetrachlorobenzene (15%), 2,4,6-trichlorophenol (18%), p-chloro-m-cresol (20%), 2-nitrophenol (29%), 2-methylphenol (28%), 2,4,5-trichlorophenol (18%), carbazole (32%), atrazine (26%), benzaldehyde (35%), and 2,3,4,6-tetrachlorophenol (27%); however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported.

The WG1776405-4/-5 MS/MSD recoveries, performed on L2323052-06, are below the acceptance criteria for hexachlorocyclopentadiene (0%/0%), 2,4-dinitrophenol (0%/0%) and 4,6-dinitro-o-cresol (0%/0%) due to the concentrations of these compounds in the MS/MSD falling below the reported detection limits.

The WG1778352-4/-5 MS/MSD recoveries, performed on L2323052-06, are below the acceptance criteria for 3,3'-dichlorobenzidine (MS 0%), hexachlorocyclopentadiene (0%/0%), 4-nitrophenol (0%/0%), 2,4-dinitrophenol (0%/0%), and 4,6-dinitro-o-cresol (0%/0%) due to the concentration of these compounds in the MS/MSD falling below the reported detection limits.

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Case Narrative (continued)

Perfluorinated Alkyl Acids by 1633

L2323052-04, -07, WG1782785-2, and WG1782785-3: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details. The WG1782785-4/5 MS/MSD RPD, performed on L2323052-06, is outside the acceptance criteria for n-ethyl perfluorooctanesulfonamidoacetic acid (netfosaa) (31%).

Total Metals

L2323052-03 through -06, -08 through -10: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by the sample matrix.

The WG1775240-1 Method Blank, associated with L2323052-03, -04, -05, -06, -08, -09, and -10, has a concentration above the reporting limit for iron. Since the associated sample concentrations are either greater than 10x the blank concentration or non-detect to the RL for this target analyte, no corrective action is required. Any results detected below the reporting limit are qualified with a "B".

The WG1775240-3/-4 MS/MSD recoveries, performed on L2323052-06, are outside the acceptance criteria for arsenic (130%/141), chromium (MS 335%), nickel (MS 214%), selenium (MSD 126%) and silver (MSD 132%). A post digestion spike was performed and was within acceptance criteria.

The WG1775240-3/-4 MS/MSD recoveries for aluminum (0%/192%), copper (MS 43%), manganese (0%/0%) and zinc (47%/70%), performed on L2323052-06, do not apply because the sample concentrations are greater than four times the spike amounts added.

The WG1775240-3/-4 MS/MSD recoveries for calcium (8180%/7450%), iron (237%/5120%) and magnesium (0%/0%), performed on L2323052-06, do not apply because the sample concentrations are greater than four times the spike amounts added.

The WG1775240-3/-4 MS/MSD RPDs for aluminum (23%), chromium (67%), iron (24%), manganese (22%) and nickel (52%), performed on L2323052-06, are above the acceptance criteria.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative

Date: 05/26/23

ORGANICS

SEMIVOLATILES

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-01
Client ID: 23-B-32 (0-2")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 15:30
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 144,1633
Analytical Date: 05/25/23 16:50
Analyst: RS
Percent Solids: 85%

Extraction Method: EPA 1633
Extraction Date: 05/24/23 16:27
Cleanup Method: EPA 1633
Cleanup Date: 05/25/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/g	0.799	0.050	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	0.400	0.056	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.200	0.043	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	0.799	0.081	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.200	0.046	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	0.200	0.023	1
Perfluoroheptanoic Acid (PFHpA)	0.032	J	ng/g	0.200	0.023	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.200	0.059	1
Perfluorooctanoic Acid (PFOA)	0.144	J	ng/g	0.200	0.052	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.799	0.280	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.200	0.037	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.200	0.078	1
Perfluorooctanesulfonic Acid (PFOS)	0.927		ng/g	0.200	0.079	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	0.200	0.075	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.799	0.387	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	0.200	0.042	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.200	0.100	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	0.200	0.051	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.200	0.032	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/g	0.200	0.043	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.200	0.082	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.200	0.041	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.200	0.053	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/g	0.200	0.106	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/g	0.799	0.098	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	0.799	0.146	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/g	0.200	0.038	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-01
 Client ID: 23-B-32 (0-2")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 15:30
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	0.799	0.196	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	0.799	0.167	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/g	0.200	0.100	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/g	0.200	0.112	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/g	2.00	0.250	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/g	2.00	0.510	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/g	0.400	0.041	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/g	0.400	0.031	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND		ng/g	0.400	0.083	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/g	0.400	0.095	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/g	0.999	0.144	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/g	4.99	0.504	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/g	4.99	1.76	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-01**Date Collected:** 04/27/23 15:30**Client ID:** 23-B-32 (0-2")**Date Received:** 04/27/23**Sample Location:** SYRACUSE, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	70		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	74		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	80		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	75		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	76		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	70		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	72		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	74		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	68		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	74		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	69		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	79		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	77		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	134		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	79		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	59		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	59		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	82		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	83		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	73		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	46		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	53		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	75		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	68		20-150

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-02
 Client ID: 23-B-32 (2-12")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 15:35
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 144,1633
 Analytical Date: 05/25/23 17:03
 Analyst: RS
 Percent Solids: 87%

Extraction Method: EPA 1633
 Extraction Date: 05/24/23 16:27
 Cleanup Method: EPA 1633
 Cleanup Date: 05/25/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.062	J	ng/g	0.779	0.049	1
Perfluoropentanoic Acid (PFPeA)	0.062	J	ng/g	0.390	0.055	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.195	0.042	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	0.779	0.079	1
Perfluorohexanoic Acid (PFHxA)	0.055	JF	ng/g	0.195	0.045	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	0.195	0.023	1
Perfluoroheptanoic Acid (PFHpA)	0.031	J	ng/g	0.195	0.023	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.195	0.058	1
Perfluorooctanoic Acid (PFOA)	0.156	J	ng/g	0.195	0.051	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.779	0.273	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.195	0.036	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.195	0.076	1
Perfluorooctanesulfonic Acid (PFOS)	2.17		ng/g	0.195	0.077	1
Perfluorodecanoic Acid (PFDA)	0.148	J	ng/g	0.195	0.073	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.779	0.377	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	0.195	0.041	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.195	0.097	1
Perfluoroundecanoic Acid (PFUnA)	0.062	J	ng/g	0.195	0.050	1
Perfluorodecanesulfonic Acid (PFDS)	0.031	J	ng/g	0.195	0.031	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/g	0.195	0.042	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.195	0.080	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.195	0.040	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.195	0.051	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/g	0.195	0.104	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/g	0.779	0.096	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	0.779	0.143	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/g	0.195	0.037	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-02
 Client ID: 23-B-32 (2-12")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 15:35
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	0.779	0.191	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	0.779	0.163	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/g	0.195	0.097	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/g	0.195	0.109	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/g	1.95	0.244	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/g	1.95	0.497	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/g	0.390	0.040	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/g	0.390	0.030	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND		ng/g	0.390	0.081	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/g	0.390	0.093	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/g	0.974	0.140	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/g	4.87	0.492	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/g	4.87	1.71	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-02**Date Collected:** 04/27/23 15:35**Client ID:** 23-B-32 (2-12")**Date Received:** 04/27/23**Sample Location:** SYRACUSE, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	64		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	67		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	71		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	65		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	65		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	65		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	67		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	65		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	59		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	66		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	64		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	62		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	51		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	88		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	54		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	50		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	53		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	56		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	59		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	69		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	42		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	47		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	64		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	62		20-150

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-03
 Client ID: 23-B-33 (0-2")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:50
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 144,1633
 Analytical Date: 05/25/23 17:16
 Analyst: RS
 Percent Solids: 85%

Extraction Method: EPA 1633
 Extraction Date: 05/24/23 16:27
 Cleanup Method: EPA 1633
 Cleanup Date: 05/25/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/g	0.789	0.050	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	0.394	0.055	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.197	0.043	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	0.789	0.080	1
Perfluorohexanoic Acid (PFHxA)	0.055	J	ng/g	0.197	0.046	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	0.197	0.023	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	0.197	0.023	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.197	0.058	1
Perfluorooctanoic Acid (PFOA)	ND		ng/g	0.197	0.051	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.789	0.276	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.197	0.036	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.197	0.077	1
Perfluorooctanesulfonic Acid (PFOS)	1.68		ng/g	0.197	0.078	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	0.197	0.074	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.789	0.382	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	0.197	0.042	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.197	0.099	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	0.197	0.051	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.197	0.032	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/g	0.197	0.043	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.197	0.081	1
Perfluorododecanoic Acid (PFDoA)	0.047	J	ng/g	0.197	0.040	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/g	0.197	0.052	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/g	0.197	0.105	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/g	0.789	0.097	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	0.789	0.144	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/g	0.197	0.038	1

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-03
Client ID: 23-B-33 (0-2")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:50
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	0.789	0.193	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	0.789	0.165	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/g	0.197	0.099	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/g	0.197	0.110	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/g	1.97	0.247	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/g	1.97	0.503	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/g	0.394	0.040	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/g	0.394	0.031	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND		ng/g	0.394	0.082	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/g	0.394	0.094	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/g	0.986	0.142	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/g	4.93	0.498	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/g	4.93	1.74	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-03**Date Collected:** 04/27/23 14:50**Client ID:** 23-B-33 (0-2")**Date Received:** 04/27/23**Sample Location:** SYRACUSE, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	77		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	82		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	77		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	69		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	78		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	78		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	74		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	77		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	67		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	72		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	77		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	76		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	121		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	78		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	75		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	64		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	82		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	70		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	90		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	82		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	44		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	60		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	92		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	74		20-150

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-03 RE\D
Client ID: 23-B-33 (0-2")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:50
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 05/13/23 16:26
Analyst: IM
Percent Solids: 85%

Extraction Method: EPA 3546
Extraction Date: 05/12/23 14:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	360	J	ug/kg	1500	200	10
Hexachlorobenzene	ND		ug/kg	1200	220	10
Bis(2-chloroethyl)ether	ND		ug/kg	1700	260	10
2-Chloronaphthalene	ND		ug/kg	1900	190	10
3,3'-Dichlorobenzidine	ND		ug/kg	1900	510	10
2,4-Dinitrotoluene	ND		ug/kg	1900	390	10
2,6-Dinitrotoluene	ND		ug/kg	1900	330	10
Fluoranthene	7900		ug/kg	1200	220	10
4-Chlorophenyl phenyl ether	ND		ug/kg	1900	210	10
4-Bromophenyl phenyl ether	ND		ug/kg	1900	300	10
Bis(2-chloroisopropyl)ether	ND		ug/kg	2300	330	10
Bis(2-chloroethoxy)methane	ND		ug/kg	2100	190	10
Hexachlorobutadiene	ND		ug/kg	1900	280	10
Hexachlorocyclopentadiene	ND		ug/kg	5500	1800	10
Hexachloroethane	ND		ug/kg	1500	310	10
Isophorone	ND		ug/kg	1700	250	10
Naphthalene	680	J	ug/kg	1900	240	10
Nitrobenzene	ND		ug/kg	1700	290	10
NDPA/DPA	ND		ug/kg	1500	220	10
n-Nitrosodi-n-propylamine	ND		ug/kg	1900	300	10
Bis(2-ethylhexyl)phthalate	ND		ug/kg	1900	670	10
Butyl benzyl phthalate	ND		ug/kg	1900	490	10
Di-n-butylphthalate	ND		ug/kg	1900	370	10
Di-n-octylphthalate	ND		ug/kg	1900	660	10
Diethyl phthalate	ND		ug/kg	1900	180	10
Dimethyl phthalate	ND		ug/kg	1900	410	10
Benzo(a)anthracene	5000		ug/kg	1200	220	10
Benzo(a)pyrene	7200		ug/kg	1500	470	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-03 RE\D

Date Collected: 04/27/23 14:50

Client ID: 23-B-33 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	8300		ug/kg	1200	320	10
Benzo(k)fluoranthene	2900		ug/kg	1200	310	10
Chrysene	5300		ug/kg	1200	200	10
Acenaphthylene	3500		ug/kg	1500	300	10
Anthracene	2900		ug/kg	1200	380	10
Benzo(ghi)perylene	4000		ug/kg	1500	230	10
Fluorene	640	J	ug/kg	1900	190	10
Phenanthrene	2900		ug/kg	1200	240	10
Dibenzo(a,h)anthracene	1000	J	ug/kg	1200	220	10
Indeno(1,2,3-cd)pyrene	4800		ug/kg	1500	270	10
Pyrene	8900		ug/kg	1200	190	10
Biphenyl	ND		ug/kg	4400	250	10
4-Chloroaniline	ND		ug/kg	1900	350	10
2-Nitroaniline	ND		ug/kg	1900	370	10
3-Nitroaniline	ND		ug/kg	1900	360	10
4-Nitroaniline	ND		ug/kg	1900	800	10
Dibenzofuran	260	J	ug/kg	1900	180	10
2-Methylnaphthalene	450	J	ug/kg	2300	230	10
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	1900	200	10
Acetophenone	ND		ug/kg	1900	240	10
2,4,6-Trichlorophenol	ND		ug/kg	1200	370	10
p-Chloro-m-cresol	ND		ug/kg	1900	290	10
2-Chlorophenol	ND		ug/kg	1900	230	10
2,4-Dichlorophenol	ND		ug/kg	1700	310	10
2,4-Dimethylphenol	ND		ug/kg	1900	640	10
2-Nitrophenol	ND		ug/kg	4200	730	10
4-Nitrophenol	ND		ug/kg	2700	790	10
2,4-Dinitrophenol	ND		ug/kg	9300	900	10
4,6-Dinitro-o-cresol	ND		ug/kg	5000	930	10
Pentachlorophenol	ND		ug/kg	1500	420	10
Phenol	ND		ug/kg	1900	290	10
2-Methylphenol	ND		ug/kg	1900	300	10
3-Methylphenol/4-Methylphenol	ND		ug/kg	2800	300	10
2,4,5-Trichlorophenol	ND		ug/kg	1900	370	10
Carbazole	370	J	ug/kg	1900	190	10
Atrazine	ND		ug/kg	1500	680	10
Benzaldehyde	ND		ug/kg	2600	520	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-03 RE\ID

Date Collected: 04/27/23 14:50

Client ID: 23-B-33 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	1900	590	10
2,3,4,6-Tetrachlorophenol	ND		ug/kg	1900	390	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	26		25-120
Phenol-d6	24		10-120
Nitrobenzene-d5	24		23-120
2-Fluorobiphenyl	32		30-120
2,4,6-Tribromophenol	28		10-136
4-Terphenyl-d14	28		18-120

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-03 D
Client ID: 23-B-33 (0-2")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:50
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 05/12/23 08:35
Analyst: JG
Percent Solids: 85%

Extraction Method: EPA 3546
Extraction Date: 05/08/23 19:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	460	J	ug/kg	1500	200	10
Hexachlorobenzene	ND		ug/kg	1100	210	10
Bis(2-chloroethyl)ether	ND		ug/kg	1700	260	10
2-Chloronaphthalene	ND		ug/kg	1900	190	10
3,3'-Dichlorobenzidine	ND		ug/kg	1900	510	10
2,4-Dinitrotoluene	ND		ug/kg	1900	380	10
2,6-Dinitrotoluene	ND		ug/kg	1900	330	10
Fluoranthene	12000		ug/kg	1100	220	10
4-Chlorophenyl phenyl ether	ND		ug/kg	1900	200	10
4-Bromophenyl phenyl ether	ND		ug/kg	1900	290	10
Bis(2-chloroisopropyl)ether	ND		ug/kg	2300	330	10
Bis(2-chloroethoxy)methane	ND		ug/kg	2100	190	10
Hexachlorobutadiene	ND		ug/kg	1900	280	10
Hexachlorocyclopentadiene	ND		ug/kg	5500	1700	10
Hexachloroethane	ND		ug/kg	1500	310	10
Isophorone	ND		ug/kg	1700	250	10
Naphthalene	4100		ug/kg	1900	230	10
Nitrobenzene	ND		ug/kg	1700	280	10
NDPA/DPA	ND		ug/kg	1500	220	10
n-Nitrosodi-n-propylamine	ND		ug/kg	1900	300	10
Bis(2-ethylhexyl)phthalate	4000		ug/kg	1900	660	10
Butyl benzyl phthalate	ND		ug/kg	1900	480	10
Di-n-butylphthalate	ND		ug/kg	1900	360	10
Di-n-octylphthalate	ND		ug/kg	1900	650	10
Diethyl phthalate	ND		ug/kg	1900	180	10
Dimethyl phthalate	ND		ug/kg	1900	400	10
Benzo(a)anthracene	8700		ug/kg	1100	220	10
Benzo(a)pyrene	12000		ug/kg	1500	470	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-03 D

Date Collected: 04/27/23 14:50

Client ID: 23-B-33 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	14000		ug/kg	1100	320	10
Benzo(k)fluoranthene	4800		ug/kg	1100	310	10
Chrysene	10000		ug/kg	1100	200	10
Acenaphthylene	5500		ug/kg	1500	300	10
Anthracene	5300		ug/kg	1100	370	10
Benzo(ghi)perylene	7800		ug/kg	1500	220	10
Fluorene	960	J	ug/kg	1900	180	10
Phenanthrene	4700		ug/kg	1100	230	10
Dibenzo(a,h)anthracene	1900		ug/kg	1100	220	10
Indeno(1,2,3-cd)pyrene	8400		ug/kg	1500	270	10
Pyrene	14000		ug/kg	1100	190	10
Biphenyl	390	J	ug/kg	4400	250	10
4-Chloroaniline	ND		ug/kg	1900	350	10
2-Nitroaniline	ND		ug/kg	1900	370	10
3-Nitroaniline	ND		ug/kg	1900	360	10
4-Nitroaniline	ND		ug/kg	1900	790	10
Dibenzofuran	820	J	ug/kg	1900	180	10
2-Methylnaphthalene	1700	J	ug/kg	2300	230	10
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	1900	200	10
Acetophenone	ND		ug/kg	1900	240	10
2,4,6-Trichlorophenol	ND		ug/kg	1100	360	10
p-Chloro-m-cresol	ND		ug/kg	1900	280	10
2-Chlorophenol	ND		ug/kg	1900	230	10
2,4-Dichlorophenol	ND		ug/kg	1700	310	10
2,4-Dimethylphenol	ND		ug/kg	1900	630	10
2-Nitrophenol	ND		ug/kg	4100	720	10
4-Nitrophenol	ND		ug/kg	2700	780	10
2,4-Dinitrophenol	ND		ug/kg	9200	890	10
4,6-Dinitro-o-cresol	ND		ug/kg	5000	920	10
Pentachlorophenol	ND		ug/kg	1500	420	10
Phenol	320	J	ug/kg	1900	290	10
2-Methylphenol	ND		ug/kg	1900	300	10
3-Methylphenol/4-Methylphenol	340	J	ug/kg	2800	300	10
2,4,5-Trichlorophenol	ND		ug/kg	1900	370	10
Carbazole	660	J	ug/kg	1900	180	10
Atrazine	ND		ug/kg	1500	670	10
Benzaldehyde	ND		ug/kg	2500	520	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-03 D

Date Collected: 04/27/23 14:50

Client ID: 23-B-33 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	1900	580	10
2,3,4,6-Tetrachlorophenol	ND		ug/kg	1900	390	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		25-120
Phenol-d6	41		10-120
Nitrobenzene-d5	34		23-120
2-Fluorobiphenyl	42		30-120
2,4,6-Tribromophenol	44		10-136
4-Terphenyl-d14	46		18-120

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-04
Client ID: 23-B-33 (2-12")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 15:00
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 144,1633
Analytical Date: 05/25/23 17:29
Analyst: RS
Percent Solids: 92%

Extraction Method: EPA 1633
Extraction Date: 05/24/23 16:27
Cleanup Method: EPA 1633
Cleanup Date: 05/25/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/g	0.783	0.049	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	0.392	0.055	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.196	0.042	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	0.783	0.079	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.196	0.045	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	0.196	0.023	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	0.196	0.023	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.196	0.058	1
Perfluorooctanoic Acid (PFOA)	0.086	J	ng/g	0.196	0.051	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.783	0.274	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.196	0.036	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.196	0.077	1
Perfluorooctanesulfonic Acid (PFOS)	1.66		ng/g	0.196	0.078	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	0.196	0.074	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.783	0.379	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	0.196	0.042	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.196	0.098	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	0.196	0.050	1
Perfluorodecanesulfonic Acid (PFDS)	0.039	J	ng/g	0.196	0.031	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/g	0.196	0.042	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.196	0.081	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.196	0.040	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.196	0.052	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/g	0.196	0.104	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/g	0.783	0.096	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	0.783	0.143	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/g	0.196	0.038	1

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-04
Client ID: 23-B-33 (2-12")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 15:00
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	0.783	0.192	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	0.783	0.164	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/g	0.196	0.098	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/g	0.196	0.110	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/g	1.96	0.245	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/g	1.96	0.500	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/g	0.392	0.040	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/g	0.392	0.031	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND		ng/g	0.392	0.081	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/g	0.392	0.093	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/g	0.979	0.141	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/g	4.89	0.494	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/g	4.89	1.72	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-04**Date Collected:** 04/27/23 15:00**Client ID:** 23-B-33 (2-12")**Date Received:** 04/27/23**Sample Location:** SYRACUSE, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Surrogate	% Recovery			Qualifier	Acceptance Criteria	
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	70				20-150	
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	70				20-150	
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	76				20-150	
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	77				20-150	
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	70				20-150	
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	70				20-150	
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	73				20-150	
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	72				20-150	
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	71				20-150	
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	72				20-150	
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	72				20-150	
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	74				20-150	
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	158			Q	20-150	
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	86				20-150	
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	70				20-150	
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	60				20-150	
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	85				20-150	
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	71				20-150	
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	94				20-150	
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	73				20-150	
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	36				20-150	
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	46				20-150	
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	76				20-150	
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	58				20-150	

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-04 RE\D
Client ID: 23-B-33 (2-12")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 15:00
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 05/15/23 13:15
Analyst: JG
Percent Solids: 92%

Extraction Method: EPA 3546
Extraction Date: 05/12/23 14:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	810	J	ug/kg	2900	370	20
Hexachlorobenzene	ND		ug/kg	2200	400	20
Bis(2-chloroethyl)ether	ND		ug/kg	3200	490	20
2-Chloronaphthalene	ND		ug/kg	3600	360	20
3,3'-Dichlorobenzidine	ND		ug/kg	3600	950	20
2,4-Dinitrotoluene	ND		ug/kg	3600	720	20
2,6-Dinitrotoluene	ND		ug/kg	3600	620	20
Fluoranthene	25000		ug/kg	2200	410	20
4-Chlorophenyl phenyl ether	ND		ug/kg	3600	380	20
4-Bromophenyl phenyl ether	ND		ug/kg	3600	550	20
Bis(2-chloroisopropyl)ether	ND		ug/kg	4300	610	20
Bis(2-chloroethoxy)methane	ND		ug/kg	3900	360	20
Hexachlorobutadiene	ND		ug/kg	3600	520	20
Hexachlorocyclopentadiene	ND		ug/kg	10000	3200	20
Hexachloroethane	ND		ug/kg	2900	580	20
Isophorone	ND		ug/kg	3200	460	20
Naphthalene	850	J	ug/kg	3600	440	20
Nitrobenzene	ND		ug/kg	3200	530	20
NDPA/DPA	ND		ug/kg	2900	410	20
n-Nitrosodi-n-propylamine	ND		ug/kg	3600	550	20
Bis(2-ethylhexyl)phthalate	ND		ug/kg	3600	1200	20
Butyl benzyl phthalate	ND		ug/kg	3600	900	20
Di-n-butylphthalate	ND		ug/kg	3600	680	20
Di-n-octylphthalate	ND		ug/kg	3600	1200	20
Diethyl phthalate	ND		ug/kg	3600	330	20
Dimethyl phthalate	ND		ug/kg	3600	750	20
Benzo(a)anthracene	16000		ug/kg	2200	400	20
Benzo(a)pyrene	22000		ug/kg	2900	880	20

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-04 RE\D

Date Collected: 04/27/23 15:00

Client ID: 23-B-33 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	25000		ug/kg	2200	600	20
Benzo(k)fluoranthene	8200		ug/kg	2200	570	20
Chrysene	16000		ug/kg	2200	370	20
Acenaphthylene	12000		ug/kg	2900	550	20
Anthracene	7900		ug/kg	2200	700	20
Benzo(ghi)perylene	12000		ug/kg	2900	420	20
Fluorene	1600	J	ug/kg	3600	350	20
Phenanthrene	7200		ug/kg	2200	440	20
Dibenzo(a,h)anthracene	3100		ug/kg	2200	410	20
Indeno(1,2,3-cd)pyrene	14000		ug/kg	2900	500	20
Pyrene	30000		ug/kg	2200	360	20
Biphenyl	ND		ug/kg	8200	470	20
4-Chloroaniline	ND		ug/kg	3600	650	20
2-Nitroaniline	ND		ug/kg	3600	690	20
3-Nitroaniline	ND		ug/kg	3600	680	20
4-Nitroaniline	ND		ug/kg	3600	1500	20
Dibenzofuran	540	J	ug/kg	3600	340	20
2-Methylnaphthalene	720	J	ug/kg	4300	430	20
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	3600	370	20
Acetophenone	ND		ug/kg	3600	440	20
2,4,6-Trichlorophenol	ND		ug/kg	2200	680	20
p-Chloro-m-cresol	ND		ug/kg	3600	530	20
2-Chlorophenol	ND		ug/kg	3600	420	20
2,4-Dichlorophenol	ND		ug/kg	3200	580	20
2,4-Dimethylphenol	ND		ug/kg	3600	1200	20
2-Nitrophenol	ND		ug/kg	7700	1300	20
4-Nitrophenol	ND		ug/kg	5000	1500	20
2,4-Dinitrophenol	ND		ug/kg	17000	1700	20
4,6-Dinitro-o-cresol	ND		ug/kg	9300	1700	20
Pentachlorophenol	ND		ug/kg	2900	790	20
Phenol	ND		ug/kg	3600	540	20
2-Methylphenol	ND		ug/kg	3600	560	20
3-Methylphenol/4-Methylphenol	ND		ug/kg	5200	560	20
2,4,5-Trichlorophenol	ND		ug/kg	3600	690	20
Carbazole	880	J	ug/kg	3600	350	20
Atrazine	ND		ug/kg	2900	1200	20
Benzaldehyde	ND		ug/kg	4700	970	20

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-04 RE\D

Date Collected: 04/27/23 15:00

Client ID: 23-B-33 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	3600	1100	20
2,3,4,6-Tetrachlorophenol	ND		ug/kg	3600	720	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	0	Q	25-120
Phenol-d6	0	Q	10-120
Nitrobenzene-d5	0	Q	23-120
2-Fluorobiphenyl	0	Q	30-120
2,4,6-Tribromophenol	0	Q	10-136
4-Terphenyl-d14	0	Q	18-120

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-04 D

Date Collected: 04/27/23 15:00

Client ID: 23-B-33 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: EPA 3546

Analytical Method: 1,8270E

Extraction Date: 05/08/23 19:01

Analytical Date: 05/12/23 12:21

Analyst: IM

Percent Solids: 92%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	1200	J	ug/kg	4300	550	30
Hexachlorobenzene	ND		ug/kg	3200	600	30
Bis(2-chloroethyl)ether	ND		ug/kg	4800	720	30
2-Chloronaphthalene	ND		ug/kg	5400	530	30
3,3'-Dichlorobenzidine	ND		ug/kg	5400	1400	30
2,4-Dinitrotoluene	ND		ug/kg	5400	1100	30
2,6-Dinitrotoluene	ND		ug/kg	5400	920	30
Fluoranthene	32000		ug/kg	3200	610	30
4-Chlorophenyl phenyl ether	ND		ug/kg	5400	570	30
4-Bromophenyl phenyl ether	ND		ug/kg	5400	820	30
Bis(2-chloroisopropyl)ether	ND		ug/kg	6400	910	30
Bis(2-chloroethoxy)methane	ND		ug/kg	5800	540	30
Hexachlorobutadiene	ND		ug/kg	5400	780	30
Hexachlorocyclopentadiene	ND		ug/kg	15000	4800	30
Hexachloroethane	ND		ug/kg	4300	860	30
Isophorone	ND		ug/kg	4800	690	30
Naphthalene	3900	J	ug/kg	5400	650	30
Nitrobenzene	ND		ug/kg	4800	790	30
NDPA/DPA	ND		ug/kg	4300	610	30
n-Nitrosodi-n-propylamine	ND		ug/kg	5400	830	30
Bis(2-ethylhexyl)phthalate	ND		ug/kg	5400	1800	30
Butyl benzyl phthalate	ND		ug/kg	5400	1300	30
Di-n-butylphthalate	ND		ug/kg	5400	1000	30
Di-n-octylphthalate	ND		ug/kg	5400	1800	30
Diethyl phthalate	ND		ug/kg	5400	500	30
Dimethyl phthalate	ND		ug/kg	5400	1100	30
Benzo(a)anthracene	21000		ug/kg	3200	600	30
Benzo(a)pyrene	26000		ug/kg	4300	1300	30

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-04 D

Date Collected: 04/27/23 15:00

Client ID: 23-B-33 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	29000		ug/kg	3200	900	30
Benzo(k)fluoranthene	10000		ug/kg	3200	860	30
Chrysene	21000		ug/kg	3200	560	30
Acenaphthylene	12000		ug/kg	4300	830	30
Anthracene	9500		ug/kg	3200	1000	30
Benzo(ghi)perylene	16000		ug/kg	4300	630	30
Fluorene	2400	J	ug/kg	5400	520	30
Phenanthrene	10000		ug/kg	3200	650	30
Dibenzo(a,h)anthracene	3900		ug/kg	3200	620	30
Indeno(1,2,3-cd)pyrene	18000		ug/kg	4300	750	30
Pyrene	39000		ug/kg	3200	530	30
Biphenyl	ND		ug/kg	12000	700	30
4-Chloroaniline	ND		ug/kg	5400	970	30
2-Nitroaniline	ND		ug/kg	5400	1000	30
3-Nitroaniline	ND		ug/kg	5400	1000	30
4-Nitroaniline	ND		ug/kg	5400	2200	30
Dibenzofuran	1200	J	ug/kg	5400	510	30
2-Methylnaphthalene	2200	J	ug/kg	6400	650	30
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	5400	560	30
Acetophenone	ND		ug/kg	5400	660	30
2,4,6-Trichlorophenol	ND		ug/kg	3200	1000	30
p-Chloro-m-cresol	ND		ug/kg	5400	800	30
2-Chlorophenol	ND		ug/kg	5400	630	30
2,4-Dichlorophenol	ND		ug/kg	4800	860	30
2,4-Dimethylphenol	ND		ug/kg	5400	1800	30
2-Nitrophenol	ND		ug/kg	12000	2000	30
4-Nitrophenol	ND		ug/kg	7500	2200	30
2,4-Dinitrophenol	ND		ug/kg	26000	2500	30
4,6-Dinitro-o-cresol	ND		ug/kg	14000	2600	30
Pentachlorophenol	ND		ug/kg	4300	1200	30
Phenol	ND		ug/kg	5400	810	30
2-Methylphenol	ND		ug/kg	5400	830	30
3-Methylphenol/4-Methylphenol	ND		ug/kg	7700	840	30
2,4,5-Trichlorophenol	ND		ug/kg	5400	1000	30
Carbazole	1400	J	ug/kg	5400	520	30
Atrazine	ND		ug/kg	4300	1900	30
Benzaldehyde	ND		ug/kg	7100	1400	30

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-04 D

Date Collected: 04/27/23 15:00

Client ID: 23-B-33 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	5400	1600	30
2,3,4,6-Tetrachlorophenol	ND		ug/kg	5400	1100	30

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	0	Q	25-120
Phenol-d6	0	Q	10-120
Nitrobenzene-d5	0	Q	23-120
2-Fluorobiphenyl	0	Q	30-120
2,4,6-Tribromophenol	0	Q	10-136
4-Terphenyl-d14	0	Q	18-120

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-05
 Client ID: 23-B-34 (0-2")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:00
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 144,1633
 Analytical Date: 05/25/23 17:42
 Analyst: RS
 Percent Solids: 70%

Extraction Method: EPA 1633
 Extraction Date: 05/24/23 16:27
 Cleanup Method: EPA 1633
 Cleanup Date: 05/25/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/g	0.796	0.050	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	0.398	0.056	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.199	0.043	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	0.796	0.080	1
Perfluorohexanoic Acid (PFHxA)	0.064	J	ng/g	0.199	0.046	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	0.199	0.023	1
Perfluoroheptanoic Acid (PFHpA)	0.048	J	ng/g	0.199	0.023	1
Perfluorohexanesulfonic Acid (PFHxS)	0.072	J	ng/g	0.199	0.059	1
Perfluorooctanoic Acid (PFOA)	0.191	J	ng/g	0.199	0.052	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.796	0.278	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.199	0.037	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.199	0.078	1
Perfluorooctanesulfonic Acid (PFOS)	1.59		ng/g	0.199	0.079	1
Perfluorodecanoic Acid (PFDA)	0.103	J	ng/g	0.199	0.075	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.796	0.385	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	0.199	0.042	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.199	0.100	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	0.199	0.051	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.199	0.032	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/g	0.199	0.043	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	0.119	JF	ng/g	0.199	0.082	1
Perfluorododecanoic Acid (PFDoA)	0.080	J	ng/g	0.199	0.041	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/g	0.199	0.053	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/g	0.199	0.106	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/g	0.796	0.098	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	0.796	0.146	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/g	0.199	0.038	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-05
 Client ID: 23-B-34 (0-2")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:00
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	0.796	0.195	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	0.796	0.166	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/g	0.199	0.100	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/g	0.199	0.111	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/g	1.99	0.249	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/g	1.99	0.508	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/g	0.398	0.041	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/g	0.398	0.031	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND		ng/g	0.398	0.083	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/g	0.398	0.095	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/g	0.995	0.143	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/g	4.97	0.502	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/g	4.97	1.75	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-05**Date Collected:** 04/27/23 14:00**Client ID:** 23-B-34 (0-2")**Date Received:** 04/27/23**Sample Location:** SYRACUSE, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	71		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	70		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	74		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	78		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	69		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	71		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	73		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	73		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	99		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	76		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	81		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	75		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	147		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	100		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	74		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	67		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	89		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	75		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	96		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	72		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	44		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	59		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	100		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	73		20-150

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-05 RE\D
Client ID: 23-B-34 (0-2")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:00
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 05/13/23 18:02
Analyst: IM
Percent Solids: 70%

Extraction Method: EPA 3546
Extraction Date: 05/12/23 14:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	270	J	ug/kg	940	120	5
Hexachlorobenzene	ND		ug/kg	700	130	5
Bis(2-chloroethyl)ether	ND		ug/kg	1000	160	5
2-Chloronaphthalene	ND		ug/kg	1200	120	5
3,3'-Dichlorobenzidine	ND		ug/kg	1200	310	5
2,4-Dinitrotoluene	ND		ug/kg	1200	240	5
2,6-Dinitrotoluene	ND		ug/kg	1200	200	5
Fluoranthene	5500		ug/kg	700	140	5
4-Chlorophenyl phenyl ether	ND		ug/kg	1200	120	5
4-Bromophenyl phenyl ether	ND		ug/kg	1200	180	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	1400	200	5
Bis(2-chloroethoxy)methane	ND		ug/kg	1300	120	5
Hexachlorobutadiene	ND		ug/kg	1200	170	5
Hexachlorocyclopentadiene	ND		ug/kg	3400	1100	5
Hexachloroethane	ND		ug/kg	940	190	5
Isophorone	ND		ug/kg	1000	150	5
Naphthalene	140	J	ug/kg	1200	140	5
Nitrobenzene	ND		ug/kg	1000	170	5
NDPA/DPA	ND		ug/kg	940	130	5
n-Nitrosodi-n-propylamine	ND		ug/kg	1200	180	5
Bis(2-ethylhexyl)phthalate	480	J	ug/kg	1200	410	5
Butyl benzyl phthalate	ND		ug/kg	1200	300	5
Di-n-butylphthalate	ND		ug/kg	1200	220	5
Di-n-octylphthalate	ND		ug/kg	1200	400	5
Diethyl phthalate	ND		ug/kg	1200	110	5
Dimethyl phthalate	ND		ug/kg	1200	250	5
Benzo(a)anthracene	2600		ug/kg	700	130	5
Benzo(a)pyrene	2600		ug/kg	940	290	5

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-05 RE\D

Date Collected: 04/27/23 14:00

Client ID: 23-B-34 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	3600		ug/kg	700	200	5
Benzo(k)fluoranthene	1000		ug/kg	700	190	5
Chrysene	2700		ug/kg	700	120	5
Acenaphthylene	930	J	ug/kg	940	180	5
Anthracene	1000		ug/kg	700	230	5
Benzo(ghi)perylene	1500		ug/kg	940	140	5
Fluorene	310	J	ug/kg	1200	110	5
Phenanthrene	2700		ug/kg	700	140	5
Dibenzo(a,h)anthracene	370	J	ug/kg	700	140	5
Indeno(1,2,3-cd)pyrene	1900		ug/kg	940	160	5
Pyrene	4400		ug/kg	700	120	5
Biphenyl	ND		ug/kg	2700	150	5
4-Chloroaniline	ND		ug/kg	1200	210	5
2-Nitroaniline	ND		ug/kg	1200	230	5
3-Nitroaniline	ND		ug/kg	1200	220	5
4-Nitroaniline	ND		ug/kg	1200	490	5
Dibenzofuran	150	J	ug/kg	1200	110	5
2-Methylnaphthalene	ND		ug/kg	1400	140	5
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	1200	120	5
Acetophenone	ND		ug/kg	1200	140	5
2,4,6-Trichlorophenol	ND		ug/kg	700	220	5
p-Chloro-m-cresol	ND		ug/kg	1200	180	5
2-Chlorophenol	ND		ug/kg	1200	140	5
2,4-Dichlorophenol	ND		ug/kg	1000	190	5
2,4-Dimethylphenol	ND		ug/kg	1200	390	5
2-Nitrophenol	ND		ug/kg	2500	440	5
4-Nitrophenol	ND		ug/kg	1600	480	5
2,4-Dinitrophenol	ND		ug/kg	5600	550	5
4,6-Dinitro-o-cresol	ND		ug/kg	3000	560	5
Pentachlorophenol	ND		ug/kg	940	260	5
Phenol	ND		ug/kg	1200	180	5
2-Methylphenol	ND		ug/kg	1200	180	5
3-Methylphenol/4-Methylphenol	ND		ug/kg	1700	180	5
2,4,5-Trichlorophenol	ND		ug/kg	1200	220	5
Carbazole	400	J	ug/kg	1200	110	5
Atrazine	ND		ug/kg	940	410	5
Benzaldehyde	ND		ug/kg	1600	320	5

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-05 RE\D

Date Collected: 04/27/23 14:00

Client ID: 23-B-34 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	1200	360	5
2,3,4,6-Tetrachlorophenol	ND		ug/kg	1200	240	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		25-120
Phenol-d6	47		10-120
Nitrobenzene-d5	35		23-120
2-Fluorobiphenyl	57		30-120
2,4,6-Tribromophenol	54		10-136
4-Terphenyl-d14	48		18-120

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-05 D
Client ID: 23-B-34 (0-2")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:00
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 05/12/23 08:59
Analyst: JG
Percent Solids: 70%

Extraction Method: EPA 3546
Extraction Date: 05/08/23 19:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	1900	240	10
Hexachlorobenzene	ND		ug/kg	1400	260	10
Bis(2-chloroethyl)ether	ND		ug/kg	2100	320	10
2-Chloronaphthalene	ND		ug/kg	2400	230	10
3,3'-Dichlorobenzidine	ND		ug/kg	2400	630	10
2,4-Dinitrotoluene	ND		ug/kg	2400	470	10
2,6-Dinitrotoluene	ND		ug/kg	2400	400	10
Fluoranthene	5200		ug/kg	1400	270	10
4-Chlorophenyl phenyl ether	ND		ug/kg	2400	250	10
4-Bromophenyl phenyl ether	ND		ug/kg	2400	360	10
Bis(2-chloroisopropyl)ether	ND		ug/kg	2800	400	10
Bis(2-chloroethoxy)methane	ND		ug/kg	2500	240	10
Hexachlorobutadiene	ND		ug/kg	2400	340	10
Hexachlorocyclopentadiene	ND		ug/kg	6700	2100	10
Hexachloroethane	ND		ug/kg	1900	380	10
Isophorone	ND		ug/kg	2100	300	10
Naphthalene	ND		ug/kg	2400	290	10
Nitrobenzene	ND		ug/kg	2100	350	10
NDPA/DPA	ND		ug/kg	1900	270	10
n-Nitrosodi-n-propylamine	ND		ug/kg	2400	360	10
Bis(2-ethylhexyl)phthalate	28000		ug/kg	2400	810	10
Butyl benzyl phthalate	ND		ug/kg	2400	590	10
Di-n-butylphthalate	ND		ug/kg	2400	450	10
Di-n-octylphthalate	ND		ug/kg	2400	800	10
Diethyl phthalate	ND		ug/kg	2400	220	10
Dimethyl phthalate	ND		ug/kg	2400	490	10
Benzo(a)anthracene	2400		ug/kg	1400	260	10
Benzo(a)pyrene	2200		ug/kg	1900	570	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-05 D

Date Collected: 04/27/23 14:00

Client ID: 23-B-34 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	2900		ug/kg	1400	400	10
Benzo(k)fluoranthene	1000	J	ug/kg	1400	380	10
Chrysene	2700		ug/kg	1400	240	10
Acenaphthylene	400	J	ug/kg	1900	360	10
Anthracene	970	J	ug/kg	1400	460	10
Benzo(ghi)perylene	1400	J	ug/kg	1900	280	10
Fluorene	280	J	ug/kg	2400	230	10
Phenanthrene	3500		ug/kg	1400	290	10
Dibenzo(a,h)anthracene	340	J	ug/kg	1400	270	10
Indeno(1,2,3-cd)pyrene	1500	J	ug/kg	1900	330	10
Pyrene	4300		ug/kg	1400	230	10
Biphenyl	ND		ug/kg	5400	310	10
4-Chloroaniline	ND		ug/kg	2400	430	10
2-Nitroaniline	ND		ug/kg	2400	450	10
3-Nitroaniline	ND		ug/kg	2400	440	10
4-Nitroaniline	ND		ug/kg	2400	970	10
Dibenzofuran	ND		ug/kg	2400	220	10
2-Methylnaphthalene	ND		ug/kg	2800	280	10
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	2400	240	10
Acetophenone	330	J	ug/kg	2400	290	10
2,4,6-Trichlorophenol	ND		ug/kg	1400	450	10
p-Chloro-m-cresol	ND		ug/kg	2400	350	10
2-Chlorophenol	ND		ug/kg	2400	280	10
2,4-Dichlorophenol	ND		ug/kg	2100	380	10
2,4-Dimethylphenol	ND		ug/kg	2400	780	10
2-Nitrophenol	ND		ug/kg	5100	880	10
4-Nitrophenol	ND		ug/kg	3300	960	10
2,4-Dinitrophenol	ND		ug/kg	11000	1100	10
4,6-Dinitro-o-cresol	ND		ug/kg	6100	1100	10
Pentachlorophenol	ND		ug/kg	1900	520	10
Phenol	ND		ug/kg	2400	360	10
2-Methylphenol	ND		ug/kg	2400	360	10
3-Methylphenol/4-Methylphenol	ND		ug/kg	3400	370	10
2,4,5-Trichlorophenol	ND		ug/kg	2400	450	10
Carbazole	480	J	ug/kg	2400	230	10
Atrazine	ND		ug/kg	1900	820	10
Benzaldehyde	ND		ug/kg	3100	640	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-05 D

Date Collected: 04/27/23 14:00

Client ID: 23-B-34 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	2400	720	10
2,3,4,6-Tetrachlorophenol	ND		ug/kg	2400	480	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		25-120
Phenol-d6	53		10-120
Nitrobenzene-d5	37		23-120
2-Fluorobiphenyl	43		30-120
2,4,6-Tribromophenol	46		10-136
4-Terphenyl-d14	41		18-120

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-06
 Client ID: 23-B-34 (2-12")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:10
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 144,1633
 Analytical Date: 05/25/23 17:55
 Analyst: RS
 Percent Solids: 93%

Extraction Method: EPA 1633
 Extraction Date: 05/24/23 16:27
 Cleanup Method: EPA 1633
 Cleanup Date: 05/25/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/g	0.784	0.049	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	0.392	0.055	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.196	0.042	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	0.784	0.079	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.196	0.046	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	0.196	0.023	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	0.196	0.023	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.196	0.058	1
Perfluorooctanoic Acid (PFOA)	0.055	J	ng/g	0.196	0.051	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.784	0.274	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.196	0.036	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.196	0.077	1
Perfluorooctanesulfonic Acid (PFOS)	1.09		ng/g	0.196	0.078	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	0.196	0.074	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.784	0.379	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	0.196	0.042	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.196	0.098	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	0.196	0.050	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.196	0.031	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/g	0.196	0.042	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.196	0.081	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.196	0.040	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.196	0.052	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/g	0.196	0.104	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/g	0.784	0.096	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	0.784	0.143	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/g	0.196	0.038	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-06
 Client ID: 23-B-34 (2-12")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:10
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	0.784	0.192	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	0.784	0.164	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/g	0.196	0.098	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/g	0.196	0.110	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/g	1.96	0.245	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/g	1.96	0.500	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/g	0.392	0.040	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/g	0.392	0.031	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND		ng/g	0.392	0.082	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/g	0.392	0.093	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/g	0.980	0.141	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/g	4.90	0.495	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/g	4.90	1.72	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-06**Date Collected:** 04/27/23 14:10**Client ID:** 23-B-34 (2-12")**Date Received:** 04/27/23**Sample Location:** SYRACUSE, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Surrogate	% Recovery			Qualifier	Acceptance Criteria	
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	80				20-150	
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	85				20-150	
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	85				20-150	
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	78				20-150	
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	83				20-150	
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	79				20-150	
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	78				20-150	
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	78				20-150	
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	85				20-150	
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	78				20-150	
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	75				20-150	
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	78				20-150	
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	138				20-150	
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	109				20-150	
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	70				20-150	
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	71				20-150	
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	86				20-150	
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	75				20-150	
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	93				20-150	
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	86				20-150	
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	47				20-150	
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	59				20-150	
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	98				20-150	
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	75				20-150	

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-06 RE\D

Date Collected: 04/27/23 14:10

Client ID: 23-B-34 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: EPA 3546

Analytical Method: 1,8270E

Extraction Date: 05/12/23 14:15

Analytical Date: 05/13/23 18:26

Analyst: IM

Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	120	J	ug/kg	700	91.	5
Hexachlorobenzene	ND		ug/kg	530	98.	5
Bis(2-chloroethyl)ether	ND		ug/kg	790	120	5
2-Chloronaphthalene	ND		ug/kg	880	87.	5
3,3'-Dichlorobenzidine	ND		ug/kg	880	230	5
2,4-Dinitrotoluene	ND		ug/kg	880	180	5
2,6-Dinitrotoluene	ND		ug/kg	880	150	5
Fluoranthene	2000		ug/kg	530	100	5
4-Chlorophenyl phenyl ether	ND		ug/kg	880	94.	5
4-Bromophenyl phenyl ether	ND		ug/kg	880	130	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	1000	150	5
Bis(2-chloroethoxy)methane	ND		ug/kg	950	88.	5
Hexachlorobutadiene	ND		ug/kg	880	130	5
Hexachlorocyclopentadiene	ND		ug/kg	2500	790	5
Hexachloroethane	ND		ug/kg	700	140	5
Isophorone	ND		ug/kg	790	110	5
Naphthalene	150	J	ug/kg	880	110	5
Nitrobenzene	ND		ug/kg	790	130	5
NDPA/DPA	ND		ug/kg	700	100	5
n-Nitrosodi-n-propylamine	ND		ug/kg	880	140	5
Bis(2-ethylhexyl)phthalate	300	J	ug/kg	880	300	5
Butyl benzyl phthalate	ND		ug/kg	880	220	5
Di-n-butylphthalate	ND		ug/kg	880	170	5
Di-n-octylphthalate	ND		ug/kg	880	300	5
Diethyl phthalate	ND		ug/kg	880	81.	5
Dimethyl phthalate	ND		ug/kg	880	180	5
Benzo(a)anthracene	980		ug/kg	530	99.	5
Benzo(a)pyrene	940		ug/kg	700	210	5

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-06 RE\D

Date Collected: 04/27/23 14:10

Client ID: 23-B-34 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	1300		ug/kg	530	150	5
Benzo(k)fluoranthene	430	J	ug/kg	530	140	5
Chrysene	970		ug/kg	530	91.	5
Acenaphthylene	610	J	ug/kg	700	140	5
Anthracene	600		ug/kg	530	170	5
Benzo(ghi)perylene	740		ug/kg	700	100	5
Fluorene	160	J	ug/kg	880	85.	5
Phenanthrene	1100		ug/kg	530	110	5
Dibenzo(a,h)anthracene	150	J	ug/kg	530	100	5
Indeno(1,2,3-cd)pyrene	800		ug/kg	700	120	5
Pyrene	1700		ug/kg	530	87.	5
Biphenyl	ND		ug/kg	2000	110	5
4-Chloroaniline	ND		ug/kg	880	160	5
2-Nitroaniline	ND		ug/kg	880	170	5
3-Nitroaniline	ND		ug/kg	880	160	5
4-Nitroaniline	ND		ug/kg	880	360	5
Dibenzofuran	ND		ug/kg	880	83.	5
2-Methylnaphthalene	100	J	ug/kg	1000	100	5
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	880	92.	5
Acetophenone	ND		ug/kg	880	110	5
2,4,6-Trichlorophenol	ND		ug/kg	530	170	5
p-Chloro-m-cresol	ND		ug/kg	880	130	5
2-Chlorophenol	ND		ug/kg	880	100	5
2,4-Dichlorophenol	ND		ug/kg	790	140	5
2,4-Dimethylphenol	ND		ug/kg	880	290	5
2-Nitrophenol	ND		ug/kg	1900	330	5
4-Nitrophenol	ND		ug/kg	1200	360	5
2,4-Dinitrophenol	ND		ug/kg	4200	410	5
4,6-Dinitro-o-cresol	ND		ug/kg	2300	420	5
Pentachlorophenol	ND		ug/kg	700	190	5
Phenol	ND		ug/kg	880	130	5
2-Methylphenol	ND		ug/kg	880	140	5
3-Methylphenol/4-Methylphenol	ND		ug/kg	1300	140	5
2,4,5-Trichlorophenol	ND		ug/kg	880	170	5
Carbazole	180	J	ug/kg	880	85.	5
Atrazine	ND		ug/kg	700	310	5
Benzaldehyde	ND		ug/kg	1200	240	5

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-06 RE\D

Date Collected: 04/27/23 14:10

Client ID: 23-B-34 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	880	270	5
2,3,4,6-Tetrachlorophenol	ND		ug/kg	880	180	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		25-120
Phenol-d6	48		10-120
Nitrobenzene-d5	33		23-120
2-Fluorobiphenyl	60		30-120
2,4,6-Tribromophenol	59		10-136
4-Terphenyl-d14	57		18-120

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-06 D
Client ID: 23-B-34 (2-12")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:10
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 05/12/23 21:39
Analyst: IM
Percent Solids: 93%

Extraction Method: EPA 3546
Extraction Date: 05/08/23 19:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	700	91.	5
Hexachlorobenzene	ND		ug/kg	530	98.	5
Bis(2-chloroethyl)ether	ND		ug/kg	790	120	5
2-Chloronaphthalene	ND		ug/kg	880	87.	5
3,3'-Dichlorobenzidine	ND		ug/kg	880	230	5
2,4-Dinitrotoluene	ND		ug/kg	880	180	5
2,6-Dinitrotoluene	ND		ug/kg	880	150	5
Fluoranthene	1800		ug/kg	530	100	5
4-Chlorophenyl phenyl ether	ND		ug/kg	880	94.	5
4-Bromophenyl phenyl ether	ND		ug/kg	880	130	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	1000	150	5
Bis(2-chloroethoxy)methane	ND		ug/kg	950	88.	5
Hexachlorobutadiene	ND		ug/kg	880	130	5
Hexachlorocyclopentadiene	ND		ug/kg	2500	800	5
Hexachloroethane	ND		ug/kg	700	140	5
Isophorone	ND		ug/kg	790	110	5
Naphthalene	ND		ug/kg	880	110	5
Nitrobenzene	ND		ug/kg	790	130	5
NDPA/DPA	ND		ug/kg	700	100	5
n-Nitrosodi-n-propylamine	ND		ug/kg	880	140	5
Bis(2-ethylhexyl)phthalate	450	J	ug/kg	880	300	5
Butyl benzyl phthalate	1100		ug/kg	880	220	5
Di-n-butylphthalate	ND		ug/kg	880	170	5
Di-n-octylphthalate	ND		ug/kg	880	300	5
Diethyl phthalate	ND		ug/kg	880	81.	5
Dimethyl phthalate	ND		ug/kg	880	180	5
Benzo(a)anthracene	920		ug/kg	530	99.	5
Benzo(a)pyrene	940		ug/kg	700	210	5

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-06 D

Date Collected: 04/27/23 14:10

Client ID: 23-B-34 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	1200		ug/kg	530	150	5
Benzo(k)fluoranthene	450	J	ug/kg	530	140	5
Chrysene	1000		ug/kg	530	91.	5
Acenaphthylene	390	J	ug/kg	700	140	5
Anthracene	500	J	ug/kg	530	170	5
Benzo(ghi)perylene	810		ug/kg	700	100	5
Fluorene	110	J	ug/kg	880	86.	5
Phenanthrene	1200		ug/kg	530	110	5
Dibenzo(a,h)anthracene	170	J	ug/kg	530	100	5
Indeno(1,2,3-cd)pyrene	820		ug/kg	700	120	5
Pyrene	1500		ug/kg	530	87.	5
Biphenyl	ND		ug/kg	2000	110	5
4-Chloroaniline	ND		ug/kg	880	160	5
2-Nitroaniline	ND		ug/kg	880	170	5
3-Nitroaniline	ND		ug/kg	880	160	5
4-Nitroaniline	ND		ug/kg	880	360	5
Dibenzofuran	ND		ug/kg	880	83.	5
2-Methylnaphthalene	ND		ug/kg	1000	110	5
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	880	92.	5
Acetophenone	ND		ug/kg	880	110	5
2,4,6-Trichlorophenol	ND		ug/kg	530	170	5
p-Chloro-m-cresol	ND		ug/kg	880	130	5
2-Chlorophenol	ND		ug/kg	880	100	5
2,4-Dichlorophenol	ND		ug/kg	790	140	5
2,4-Dimethylphenol	ND		ug/kg	880	290	5
2-Nitrophenol	ND		ug/kg	1900	330	5
4-Nitrophenol	ND		ug/kg	1200	360	5
2,4-Dinitrophenol	ND		ug/kg	4200	410	5
4,6-Dinitro-o-cresol	ND		ug/kg	2300	420	5
Pentachlorophenol	ND		ug/kg	700	190	5
Phenol	ND		ug/kg	880	130	5
2-Methylphenol	ND		ug/kg	880	140	5
3-Methylphenol/4-Methylphenol	ND		ug/kg	1300	140	5
2,4,5-Trichlorophenol	ND		ug/kg	880	170	5
Carbazole	170	J	ug/kg	880	86.	5
Atrazine	ND		ug/kg	700	310	5
Benzaldehyde	ND		ug/kg	1200	240	5

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-06 D

Date Collected: 04/27/23 14:10

Client ID: 23-B-34 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	880	270	5
2,3,4,6-Tetrachlorophenol	ND		ug/kg	880	180	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	94		25-120
Phenol-d6	94		10-120
Nitrobenzene-d5	94		23-120
2-Fluorobiphenyl	82		30-120
2,4,6-Tribromophenol	92		10-136
4-Terphenyl-d14	75		18-120

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-07
 Client ID: 23-B-35 (0-16")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 13:10
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 144,1633
 Analytical Date: 05/25/23 18:33
 Analyst: RS
 Percent Solids: 85%

Extraction Method: EPA 1633
 Extraction Date: 05/24/23 16:27
 Cleanup Method: EPA 1633
 Cleanup Date: 05/25/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.094	J	ng/g	0.786	0.050	1
Perfluoropentanoic Acid (PFPeA)	0.204	J	ng/g	0.393	0.055	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.196	0.042	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	0.786	0.079	1
Perfluorohexanoic Acid (PFHxA)	0.134	J	ng/g	0.196	0.046	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	0.196	0.023	1
Perfluoroheptanoic Acid (PFHpA)	0.102	J	ng/g	0.196	0.023	1
Perfluorohexanesulfonic Acid (PFHxS)	0.086	J	ng/g	0.196	0.058	1
Perfluorooctanoic Acid (PFOA)	0.228		ng/g	0.196	0.051	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.786	0.275	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.039	JF	ng/g	0.196	0.036	1
Perfluorononanoic Acid (PFNA)	0.181	J	ng/g	0.196	0.077	1
Perfluorooctanesulfonic Acid (PFOS)	5.36		ng/g	0.196	0.078	1
Perfluorodecanoic Acid (PFDA)	0.471		ng/g	0.196	0.074	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.786	0.380	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	0.196	0.042	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.196	0.098	1
Perfluoroundecanoic Acid (PFUnA)	0.188	J	ng/g	0.196	0.050	1
Perfluorodecanesulfonic Acid (PFDS)	0.188	J	ng/g	0.196	0.031	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/g	0.196	0.042	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	0.086	JF	ng/g	0.196	0.081	1
Perfluorododecanoic Acid (PFDoA)	0.212		ng/g	0.196	0.040	1
Perfluorotridecanoic Acid (PFTTrDA)	0.079	J	ng/g	0.196	0.052	1
Perfluorotetradecanoic Acid (PFTeDA)	0.110	J	ng/g	0.196	0.104	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/g	0.786	0.097	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	0.786	0.144	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/g	0.196	0.038	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-07
 Client ID: 23-B-35 (0-16")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 13:10
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	0.786	0.192	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	0.786	0.164	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/g	0.196	0.098	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/g	0.196	0.110	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/g	1.96	0.246	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/g	1.96	0.501	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/g	0.393	0.040	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/g	0.393	0.031	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND		ng/g	0.393	0.082	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/g	0.393	0.094	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/g	0.982	0.141	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/g	4.91	0.496	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/g	4.91	1.73	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-07
 Client ID: 23-B-35 (0-16")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 13:10
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	76		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	76		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	77		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	89		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	76		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	76		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	77		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	74		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	77		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	74		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	78		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	82		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	167	Q	20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	105		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	83		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	82		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	111		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	99		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	110		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	76		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	48		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	57		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	115		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	78		20-150

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-08
Client ID: 23-B-36 (0-2")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 11:45
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 05/11/23 19:09
Analyst: JG
Percent Solids: 96%

Extraction Method: EPA 3546
Extraction Date: 05/08/23 19:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	18.	1
Hexachlorobenzene	ND		ug/kg	100	19.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	24.	1
2-Chloronaphthalene	ND		ug/kg	170	17.	1
3,3'-Dichlorobenzidine	ND		ug/kg	170	46.	1
2,4-Dinitrotoluene	ND		ug/kg	170	35.	1
2,6-Dinitrotoluene	ND		ug/kg	170	30.	1
Fluoranthene	130		ug/kg	100	20.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	170	18.	1
4-Bromophenyl phenyl ether	ND		ug/kg	170	26.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	30.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	17.	1
Hexachlorobutadiene	ND		ug/kg	170	25.	1
Hexachlorocyclopentadiene	ND		ug/kg	500	160	1
Hexachloroethane	ND		ug/kg	140	28.	1
Isophorone	ND		ug/kg	160	22.	1
Naphthalene	ND		ug/kg	170	21.	1
Nitrobenzene	ND		ug/kg	160	26.	1
NDPA/DPA	ND		ug/kg	140	20.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	170	27.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	170	60.	1
Butyl benzyl phthalate	ND		ug/kg	170	44.	1
Di-n-butylphthalate	ND		ug/kg	170	33.	1
Di-n-octylphthalate	ND		ug/kg	170	59.	1
Diethyl phthalate	ND		ug/kg	170	16.	1
Dimethyl phthalate	ND		ug/kg	170	36.	1
Benzo(a)anthracene	77	J	ug/kg	100	20.	1
Benzo(a)pyrene	92	J	ug/kg	140	42.	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-08
 Client ID: 23-B-36 (0-2")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 11:45
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	120		ug/kg	100	29.	1
Benzo(k)fluoranthene	34	J	ug/kg	100	28.	1
Chrysene	83	J	ug/kg	100	18.	1
Acenaphthylene	46	J	ug/kg	140	27.	1
Anthracene	ND		ug/kg	100	34.	1
Benzo(ghi)perylene	79	J	ug/kg	140	20.	1
Fluorene	ND		ug/kg	170	17.	1
Phenanthrene	56	J	ug/kg	100	21.	1
Dibenzo(a,h)anthracene	ND		ug/kg	100	20.	1
Indeno(1,2,3-cd)pyrene	79	J	ug/kg	140	24.	1
Pyrene	120		ug/kg	100	17.	1
Biphenyl	ND		ug/kg	400	22.	1
4-Chloroaniline	ND		ug/kg	170	32.	1
2-Nitroaniline	ND		ug/kg	170	33.	1
3-Nitroaniline	ND		ug/kg	170	33.	1
4-Nitroaniline	ND		ug/kg	170	72.	1
Dibenzofuran	ND		ug/kg	170	16.	1
2-Methylnaphthalene	ND		ug/kg	210	21.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	170	18.	1
Acetophenone	ND		ug/kg	170	21.	1
2,4,6-Trichlorophenol	ND		ug/kg	100	33.	1
p-Chloro-m-cresol	ND		ug/kg	170	26.	1
2-Chlorophenol	ND		ug/kg	170	20.	1
2,4-Dichlorophenol	ND		ug/kg	160	28.	1
2,4-Dimethylphenol	ND		ug/kg	170	57.	1
2-Nitrophenol	ND		ug/kg	370	65.	1
4-Nitrophenol	ND		ug/kg	240	71.	1
2,4-Dinitrophenol	ND		ug/kg	830	81.	1
4,6-Dinitro-o-cresol	ND		ug/kg	450	83.	1
Pentachlorophenol	ND		ug/kg	140	38.	1
Phenol	ND		ug/kg	170	26.	1
2-Methylphenol	ND		ug/kg	170	27.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	250	27.	1
2,4,5-Trichlorophenol	ND		ug/kg	170	33.	1
Carbazole	ND		ug/kg	170	17.	1
Atrazine	ND		ug/kg	140	61.	1
Benzaldehyde	ND		ug/kg	230	47.	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-08

Date Collected: 04/27/23 11:45

Client ID: 23-B-36 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	170	53.	1
2,3,4,6-Tetrachlorophenol	ND		ug/kg	170	35.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		25-120
Phenol-d6	62		10-120
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	64		30-120
2,4,6-Tribromophenol	77		10-136
4-Terphenyl-d14	61		18-120

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-08
 Client ID: 23-B-36 (0-2")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 11:45
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 144,1633
 Analytical Date: 05/25/23 19:12
 Analyst: RS
 Percent Solids: 96%

Extraction Method: EPA 1633
 Extraction Date: 05/24/23 16:27
 Cleanup Method: EPA 1633
 Cleanup Date: 05/25/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/g	0.794	0.050	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	0.397	0.056	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.198	0.043	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	0.794	0.080	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.198	0.046	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	0.198	0.023	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	0.198	0.023	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.198	0.059	1
Perfluorooctanoic Acid (PFOA)	ND		ng/g	0.198	0.052	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.794	0.278	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.198	0.037	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.198	0.078	1
Perfluorooctanesulfonic Acid (PFOS)	0.135	JF	ng/g	0.198	0.079	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	0.198	0.075	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.794	0.384	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	0.198	0.042	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.198	0.099	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	0.198	0.051	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.198	0.032	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/g	0.198	0.043	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.198	0.082	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.198	0.041	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/g	0.198	0.052	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/g	0.198	0.106	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/g	0.794	0.098	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	0.794	0.145	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/g	0.198	0.038	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-08
 Client ID: 23-B-36 (0-2")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 11:45
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	0.794	0.194	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	0.794	0.166	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/g	0.198	0.099	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/g	0.198	0.111	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/g	1.98	0.248	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/g	1.98	0.506	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/g	0.397	0.041	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/g	0.397	0.031	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND		ng/g	0.397	0.083	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/g	0.397	0.095	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/g	0.992	0.143	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/g	4.96	0.501	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/g	4.96	1.75	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-08**Date Collected:** 04/27/23 11:45**Client ID:** 23-B-36 (0-2")**Date Received:** 04/27/23**Sample Location:** SYRACUSE, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	80		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	83		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	84		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	78		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	81		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	79		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	83		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	78		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	75		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	76		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	74		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	76		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	83		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	115		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	72		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	64		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	67		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	67		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	75		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	82		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	47		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	62		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	100		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	78		20-150

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-08 RE
Client ID: 23-B-36 (0-2")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 11:45
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 05/13/23 10:52
Analyst: IM
Percent Solids: 96%

Extraction Method: EPA 3546
Extraction Date: 05/12/23 14:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	18.	1
Hexachlorobenzene	ND		ug/kg	100	19.	1
Bis(2-chloroethyl)ether	ND		ug/kg	150	23.	1
2-Chloronaphthalene	ND		ug/kg	170	17.	1
3,3'-Dichlorobenzidine	ND		ug/kg	170	46.	1
2,4-Dinitrotoluene	ND		ug/kg	170	34.	1
2,6-Dinitrotoluene	ND		ug/kg	170	30.	1
Fluoranthene	160		ug/kg	100	20.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	170	18.	1
4-Bromophenyl phenyl ether	ND		ug/kg	170	26.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	29.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	180	17.	1
Hexachlorobutadiene	ND		ug/kg	170	25.	1
Hexachlorocyclopentadiene	ND		ug/kg	490	160	1
Hexachloroethane	ND		ug/kg	140	28.	1
Isophorone	ND		ug/kg	150	22.	1
Naphthalene	ND		ug/kg	170	21.	1
Nitrobenzene	ND		ug/kg	150	25.	1
NDPA/DPA	ND		ug/kg	140	20.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	170	26.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	170	60.	1
Butyl benzyl phthalate	ND		ug/kg	170	43.	1
Di-n-butylphthalate	ND		ug/kg	170	33.	1
Di-n-octylphthalate	ND		ug/kg	170	58.	1
Diethyl phthalate	ND		ug/kg	170	16.	1
Dimethyl phthalate	ND		ug/kg	170	36.	1
Benzo(a)anthracene	100		ug/kg	100	19.	1
Benzo(a)pyrene	130	J	ug/kg	140	42.	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-08 RE

Date Collected: 04/27/23 11:45

Client ID: 23-B-36 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	170		ug/kg	100	29.	1
Benzo(k)fluoranthene	52	J	ug/kg	100	28.	1
Chrysene	110		ug/kg	100	18.	1
Acenaphthylene	60	J	ug/kg	140	26.	1
Anthracene	44	J	ug/kg	100	34.	1
Benzo(ghi)perylene	120	J	ug/kg	140	20.	1
Fluorene	ND		ug/kg	170	17.	1
Phenanthrene	69	J	ug/kg	100	21.	1
Dibenzo(a,h)anthracene	24	J	ug/kg	100	20.	1
Indeno(1,2,3-cd)pyrene	110	J	ug/kg	140	24.	1
Pyrene	150		ug/kg	100	17.	1
Biphenyl	ND		ug/kg	390	22.	1
4-Chloroaniline	ND		ug/kg	170	31.	1
2-Nitroaniline	ND		ug/kg	170	33.	1
3-Nitroaniline	ND		ug/kg	170	32.	1
4-Nitroaniline	ND		ug/kg	170	71.	1
Dibenzofuran	ND		ug/kg	170	16.	1
2-Methylnaphthalene	ND		ug/kg	210	21.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	170	18.	1
Acetophenone	ND		ug/kg	170	21.	1
2,4,6-Trichlorophenol	ND		ug/kg	100	33.	1
p-Chloro-m-cresol	ND		ug/kg	170	26.	1
2-Chlorophenol	ND		ug/kg	170	20.	1
2,4-Dichlorophenol	ND		ug/kg	150	28.	1
2,4-Dimethylphenol	ND		ug/kg	170	57.	1
2-Nitrophenol	ND		ug/kg	370	65.	1
4-Nitrophenol	ND		ug/kg	240	70.	1
2,4-Dinitrophenol	ND		ug/kg	820	80.	1
4,6-Dinitro-o-cresol	ND		ug/kg	450	82.	1
Pentachlorophenol	ND		ug/kg	140	38.	1
Phenol	ND		ug/kg	170	26.	1
2-Methylphenol	ND		ug/kg	170	27.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	250	27.	1
2,4,5-Trichlorophenol	ND		ug/kg	170	33.	1
Carbazole	ND		ug/kg	170	17.	1
Atrazine	ND		ug/kg	140	60.	1
Benzaldehyde	ND		ug/kg	230	46.	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-08 RE

Date Collected: 04/27/23 11:45

Client ID: 23-B-36 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	170	52.	1
2,3,4,6-Tetrachlorophenol	ND		ug/kg	170	35.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	90		25-120
Phenol-d6	87		10-120
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	91		30-120
2,4,6-Tribromophenol	107		10-136
4-Terphenyl-d14	74		18-120

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-09
 Client ID: 23-B-36 (2-12")
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 11:50
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 144,1633
 Analytical Date: 05/25/23 19:25
 Analyst: RS
 Percent Solids: 94%

Extraction Method: EPA 1633
 Extraction Date: 05/24/23 16:27
 Cleanup Method: EPA 1633
 Cleanup Date: 05/25/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/g	0.788	0.050	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	0.394	0.055	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.197	0.043	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	0.788	0.080	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.197	0.046	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	0.197	0.023	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	0.197	0.023	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.197	0.058	1
Perfluorooctanoic Acid (PFOA)	ND		ng/g	0.197	0.051	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.788	0.276	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.197	0.036	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.197	0.077	1
Perfluorooctanesulfonic Acid (PFOS)	0.276		ng/g	0.197	0.078	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	0.197	0.074	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.788	0.382	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	0.197	0.042	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.197	0.099	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	0.197	0.050	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.197	0.032	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/g	0.197	0.043	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.197	0.081	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.197	0.040	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/g	0.197	0.052	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/g	0.197	0.105	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/g	0.788	0.097	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	0.788	0.144	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/g	0.197	0.038	1

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-09
Client ID: 23-B-36 (2-12")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 11:50
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	0.788	0.193	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	0.788	0.165	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/g	0.197	0.099	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/g	0.197	0.110	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/g	1.97	0.247	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/g	1.97	0.503	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/g	0.394	0.040	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/g	0.394	0.031	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND		ng/g	0.394	0.082	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/g	0.394	0.094	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/g	0.986	0.142	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/g	4.93	0.498	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/g	4.93	1.73	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-09**Date Collected:** 04/27/23 11:50**Client ID:** 23-B-36 (2-12")**Date Received:** 04/27/23**Sample Location:** SYRACUSE, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Surrogate	% Recovery			Qualifier	Acceptance Criteria	
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	80				20-150	
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	82				20-150	
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	86				20-150	
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	81				20-150	
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	80				20-150	
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	76				20-150	
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	82				20-150	
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	81				20-150	
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	78				20-150	
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	82				20-150	
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	84				20-150	
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	80				20-150	
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	101				20-150	
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	84				20-150	
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	71				20-150	
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	72				20-150	
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	76				20-150	
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	73				20-150	
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	95				20-150	
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	83				20-150	
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	55				20-150	
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	70				20-150	
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	107				20-150	
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	87				20-150	

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-09 RE\D
Client ID: 23-B-36 (2-12")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 11:50
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 05/13/23 17:14
Analyst: IM
Percent Solids: 94%

Extraction Method: EPA 3546
Extraction Date: 05/12/23 14:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	1400	180	10
Hexachlorobenzene	ND		ug/kg	1000	190	10
Bis(2-chloroethyl)ether	ND		ug/kg	1600	240	10
2-Chloronaphthalene	ND		ug/kg	1700	170	10
3,3'-Dichlorobenzidine	ND		ug/kg	1700	460	10
2,4-Dinitrotoluene	ND		ug/kg	1700	350	10
2,6-Dinitrotoluene	ND		ug/kg	1700	300	10
Fluoranthene	ND		ug/kg	1000	200	10
4-Chlorophenyl phenyl ether	ND		ug/kg	1700	180	10
4-Bromophenyl phenyl ether	ND		ug/kg	1700	260	10
Bis(2-chloroisopropyl)ether	ND		ug/kg	2100	300	10
Bis(2-chloroethoxy)methane	ND		ug/kg	1900	170	10
Hexachlorobutadiene	ND		ug/kg	1700	250	10
Hexachlorocyclopentadiene	ND		ug/kg	5000	1600	10
Hexachloroethane	ND		ug/kg	1400	280	10
Isophorone	ND		ug/kg	1600	220	10
Naphthalene	ND		ug/kg	1700	210	10
Nitrobenzene	ND		ug/kg	1600	260	10
NDPA/DPA	ND		ug/kg	1400	200	10
n-Nitrosodi-n-propylamine	ND		ug/kg	1700	270	10
Bis(2-ethylhexyl)phthalate	ND		ug/kg	1700	600	10
Butyl benzyl phthalate	ND		ug/kg	1700	440	10
Di-n-butylphthalate	ND		ug/kg	1700	330	10
Di-n-octylphthalate	ND		ug/kg	1700	590	10
Diethyl phthalate	ND		ug/kg	1700	160	10
Dimethyl phthalate	ND		ug/kg	1700	360	10
Benzo(a)anthracene	ND		ug/kg	1000	200	10
Benzo(a)pyrene	ND		ug/kg	1400	420	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-09 RE\D

Date Collected: 04/27/23 11:50

Client ID: 23-B-36 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	ND		ug/kg	1000	290	10
Benzo(k)fluoranthene	ND		ug/kg	1000	280	10
Chrysene	ND		ug/kg	1000	180	10
Acenaphthylene	520	J	ug/kg	1400	270	10
Anthracene	ND		ug/kg	1000	340	10
Benzo(ghi)perylene	ND		ug/kg	1400	200	10
Fluorene	ND		ug/kg	1700	170	10
Phenanthrene	ND		ug/kg	1000	210	10
Dibenzo(a,h)anthracene	ND		ug/kg	1000	200	10
Indeno(1,2,3-cd)pyrene	ND		ug/kg	1400	240	10
Pyrene	ND		ug/kg	1000	170	10
Biphenyl	ND		ug/kg	4000	220	10
4-Chloroaniline	ND		ug/kg	1700	320	10
2-Nitroaniline	ND		ug/kg	1700	330	10
3-Nitroaniline	ND		ug/kg	1700	330	10
4-Nitroaniline	ND		ug/kg	1700	720	10
Dibenzofuran	ND		ug/kg	1700	160	10
2-Methylnaphthalene	ND		ug/kg	2100	210	10
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	1700	180	10
Acetophenone	ND		ug/kg	1700	220	10
2,4,6-Trichlorophenol	ND		ug/kg	1000	330	10
p-Chloro-m-cresol	ND		ug/kg	1700	260	10
2-Chlorophenol	ND		ug/kg	1700	200	10
2,4-Dichlorophenol	ND		ug/kg	1600	280	10
2,4-Dimethylphenol	ND		ug/kg	1700	570	10
2-Nitrophenol	ND		ug/kg	3800	650	10
4-Nitrophenol	ND		ug/kg	2400	710	10
2,4-Dinitrophenol	ND		ug/kg	8300	810	10
4,6-Dinitro-o-cresol	ND		ug/kg	4500	830	10
Pentachlorophenol	ND		ug/kg	1400	380	10
Phenol	ND		ug/kg	1700	260	10
2-Methylphenol	ND		ug/kg	1700	270	10
3-Methylphenol/4-Methylphenol	ND		ug/kg	2500	270	10
2,4,5-Trichlorophenol	ND		ug/kg	1700	330	10
Carbazole	ND		ug/kg	1700	170	10
Atrazine	ND		ug/kg	1400	610	10
Benzaldehyde	ND		ug/kg	2300	470	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-09 RE\D

Date Collected: 04/27/23 11:50

Client ID: 23-B-36 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	1700	530	10
2,3,4,6-Tetrachlorophenol	ND		ug/kg	1700	350	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	30		25-120
Phenol-d6	28		10-120
Nitrobenzene-d5	24		23-120
2-Fluorobiphenyl	36		30-120
2,4,6-Tribromophenol	35		10-136
4-Terphenyl-d14	34		18-120

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-09 D
Client ID: 23-B-36 (2-12")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 11:50
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 05/12/23 08:37
Analyst: LJG
Percent Solids: 94%

Extraction Method: EPA 3546
Extraction Date: 05/08/23 19:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	1400	180	10
Hexachlorobenzene	ND		ug/kg	1000	190	10
Bis(2-chloroethyl)ether	ND		ug/kg	1500	230	10
2-Chloronaphthalene	ND		ug/kg	1700	170	10
3,3'-Dichlorobenzidine	ND		ug/kg	1700	460	10
2,4-Dinitrotoluene	ND		ug/kg	1700	340	10
2,6-Dinitrotoluene	ND		ug/kg	1700	290	10
Fluoranthene	ND		ug/kg	1000	200	10
4-Chlorophenyl phenyl ether	ND		ug/kg	1700	180	10
4-Bromophenyl phenyl ether	ND		ug/kg	1700	260	10
Bis(2-chloroisopropyl)ether	ND		ug/kg	2000	290	10
Bis(2-chloroethoxy)methane	ND		ug/kg	1800	170	10
Hexachlorobutadiene	ND		ug/kg	1700	250	10
Hexachlorocyclopentadiene	ND		ug/kg	4900	1600	10
Hexachloroethane	ND		ug/kg	1400	280	10
Isophorone	ND		ug/kg	1500	220	10
Naphthalene	ND		ug/kg	1700	210	10
Nitrobenzene	ND		ug/kg	1500	250	10
NDPA/DPA	ND		ug/kg	1400	190	10
n-Nitrosodi-n-propylamine	ND		ug/kg	1700	260	10
Bis(2-ethylhexyl)phthalate	ND		ug/kg	1700	590	10
Butyl benzyl phthalate	ND		ug/kg	1700	430	10
Di-n-butylphthalate	ND		ug/kg	1700	320	10
Di-n-octylphthalate	ND		ug/kg	1700	580	10
Diethyl phthalate	ND		ug/kg	1700	160	10
Dimethyl phthalate	ND		ug/kg	1700	360	10
Benzo(a)anthracene	ND		ug/kg	1000	190	10
Benzo(a)pyrene	ND		ug/kg	1400	420	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-09 D

Date Collected: 04/27/23 11:50

Client ID: 23-B-36 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	ND		ug/kg	1000	290	10
Benzo(k)fluoranthene	ND		ug/kg	1000	270	10
Chrysene	ND		ug/kg	1000	180	10
Acenaphthylene	ND		ug/kg	1400	260	10
Anthracene	ND		ug/kg	1000	330	10
Benzo(ghi)perylene	ND		ug/kg	1400	200	10
Fluorene	ND		ug/kg	1700	170	10
Phenanthrene	ND		ug/kg	1000	210	10
Dibenzo(a,h)anthracene	ND		ug/kg	1000	200	10
Indeno(1,2,3-cd)pyrene	ND		ug/kg	1400	240	10
Pyrene	ND		ug/kg	1000	170	10
Biphenyl	ND		ug/kg	3900	220	10
4-Chloroaniline	ND		ug/kg	1700	310	10
2-Nitroaniline	ND		ug/kg	1700	330	10
3-Nitroaniline	ND		ug/kg	1700	320	10
4-Nitroaniline	ND		ug/kg	1700	710	10
Dibenzofuran	ND		ug/kg	1700	160	10
2-Methylnaphthalene	ND		ug/kg	2000	210	10
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	1700	180	10
Acetophenone	ND		ug/kg	1700	210	10
2,4,6-Trichlorophenol	ND		ug/kg	1000	320	10
p-Chloro-m-cresol	ND		ug/kg	1700	260	10
2-Chlorophenol	ND		ug/kg	1700	200	10
2,4-Dichlorophenol	ND		ug/kg	1500	280	10
2,4-Dimethylphenol	ND		ug/kg	1700	560	10
2-Nitrophenol	ND		ug/kg	3700	640	10
4-Nitrophenol	ND		ug/kg	2400	700	10
2,4-Dinitrophenol	ND		ug/kg	8200	800	10
4,6-Dinitro-o-cresol	ND		ug/kg	4400	820	10
Pentachlorophenol	ND		ug/kg	1400	380	10
Phenol	ND		ug/kg	1700	260	10
2-Methylphenol	ND		ug/kg	1700	260	10
3-Methylphenol/4-Methylphenol	ND		ug/kg	2500	270	10
2,4,5-Trichlorophenol	ND		ug/kg	1700	330	10
Carbazole	ND		ug/kg	1700	170	10
Atrazine	ND		ug/kg	1400	600	10
Benzaldehyde	ND		ug/kg	2300	460	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-09 D

Date Collected: 04/27/23 11:50

Client ID: 23-B-36 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	1700	520	10
2,3,4,6-Tetrachlorophenol	ND		ug/kg	1700	340	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		25-120
Phenol-d6	42		10-120
Nitrobenzene-d5	44		23-120
2-Fluorobiphenyl	51		30-120
2,4,6-Tribromophenol	57		10-136
4-Terphenyl-d14	51		18-120

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-10
 Client ID: DUP 1
 Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 12:00
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 144,1633
 Analytical Date: 05/25/23 19:37
 Analyst: RS
 Percent Solids: 85%

Extraction Method: EPA 1633
 Extraction Date: 05/24/23 16:27
 Cleanup Method: EPA 1633
 Cleanup Date: 05/25/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/g	0.787	0.050	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	0.394	0.055	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.197	0.043	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	0.787	0.080	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.197	0.046	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	0.197	0.023	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	0.197	0.023	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.197	0.058	1
Perfluorooctanoic Acid (PFOA)	ND		ng/g	0.197	0.051	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.787	0.276	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.197	0.036	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.197	0.077	1
Perfluorooctanesulfonic Acid (PFOS)	1.66		ng/g	0.197	0.078	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	0.197	0.074	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.787	0.381	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	0.197	0.042	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.197	0.098	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	0.197	0.050	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.197	0.032	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/g	0.197	0.043	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.197	0.081	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.197	0.040	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.197	0.052	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/g	0.197	0.105	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/g	0.787	0.097	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	0.787	0.144	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/g	0.197	0.038	1

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-10
Client ID: DUP 1
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 12:00
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	0.787	0.193	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	0.787	0.164	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/g	0.197	0.098	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/g	0.197	0.110	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/g	1.97	0.246	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/g	1.97	0.502	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/g	0.394	0.040	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/g	0.394	0.031	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/g	0.394	0.082	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/g	0.394	0.094	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/g	0.984	0.142	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/g	4.92	0.497	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/g	4.92	1.73	1

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-10**Date Collected:** 04/27/23 12:00**Client ID:** DUP 1**Date Received:** 04/27/23**Sample Location:** SYRACUSE, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	82		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	84		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	91		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	83		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	85		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	82		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	85		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	82		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	85		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	82		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	84		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	83		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	134		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	128		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	79		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	83		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	112		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	82		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	106		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	84		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	54		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	74		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	118		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	91		20-150

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-10 **RE\ID**
Client ID: DUP 1
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 12:00
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 05/13/23 17:38
Analyst: IM
Percent Solids: 85%

Extraction Method: EPA 3546
Extraction Date: 05/12/23 14:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	340	J	ug/kg	1600	200	10
Hexachlorobenzene	ND		ug/kg	1200	220	10
Bis(2-chloroethyl)ether	ND		ug/kg	1700	260	10
2-Chloronaphthalene	ND		ug/kg	1900	190	10
3,3'-Dichlorobenzidine	ND		ug/kg	1900	520	10
2,4-Dinitrotoluene	ND		ug/kg	1900	390	10
2,6-Dinitrotoluene	ND		ug/kg	1900	330	10
Fluoranthene	5800		ug/kg	1200	220	10
4-Chlorophenyl phenyl ether	ND		ug/kg	1900	210	10
4-Bromophenyl phenyl ether	ND		ug/kg	1900	300	10
Bis(2-chloroisopropyl)ether	ND		ug/kg	2300	330	10
Bis(2-chloroethoxy)methane	ND		ug/kg	2100	190	10
Hexachlorobutadiene	ND		ug/kg	1900	280	10
Hexachlorocyclopentadiene	ND		ug/kg	5500	1800	10
Hexachloroethane	ND		ug/kg	1600	310	10
Isophorone	ND		ug/kg	1700	250	10
Naphthalene	1100	J	ug/kg	1900	240	10
Nitrobenzene	ND		ug/kg	1700	290	10
NDPA/DPA	ND		ug/kg	1600	220	10
n-Nitrosodi-n-propylamine	ND		ug/kg	1900	300	10
Bis(2-ethylhexyl)phthalate	ND		ug/kg	1900	670	10
Butyl benzyl phthalate	ND		ug/kg	1900	490	10
Di-n-butylphthalate	ND		ug/kg	1900	370	10
Di-n-octylphthalate	ND		ug/kg	1900	660	10
Diethyl phthalate	ND		ug/kg	1900	180	10
Dimethyl phthalate	720	J	ug/kg	1900	410	10
Benzo(a)anthracene	4700		ug/kg	1200	220	10
Benzo(a)pyrene	6800		ug/kg	1600	470	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-10 RE\D

Date Collected: 04/27/23 12:00

Client ID: DUP 1

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	8300		ug/kg	1200	330	10
Benzo(k)fluoranthene	2200		ug/kg	1200	310	10
Chrysene	4700		ug/kg	1200	200	10
Acenaphthylene	5000		ug/kg	1600	300	10
Anthracene	3600		ug/kg	1200	380	10
Benzo(ghi)perylene	4100		ug/kg	1600	230	10
Fluorene	650	J	ug/kg	1900	190	10
Phenanthrene	1700		ug/kg	1200	240	10
Dibenzo(a,h)anthracene	1000	J	ug/kg	1200	220	10
Indeno(1,2,3-cd)pyrene	4700		ug/kg	1600	270	10
Pyrene	7800		ug/kg	1200	190	10
Biphenyl	ND		ug/kg	4400	250	10
4-Chloroaniline	ND		ug/kg	1900	350	10
2-Nitroaniline	ND		ug/kg	1900	370	10
3-Nitroaniline	ND		ug/kg	1900	360	10
4-Nitroaniline	ND		ug/kg	1900	800	10
Dibenzofuran	310	J	ug/kg	1900	180	10
2-Methylnaphthalene	670	J	ug/kg	2300	230	10
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	1900	200	10
Acetophenone	ND		ug/kg	1900	240	10
2,4,6-Trichlorophenol	ND		ug/kg	1200	370	10
p-Chloro-m-cresol	ND		ug/kg	1900	290	10
2-Chlorophenol	ND		ug/kg	1900	230	10
2,4-Dichlorophenol	ND		ug/kg	1700	310	10
2,4-Dimethylphenol	ND		ug/kg	1900	640	10
2-Nitrophenol	ND		ug/kg	4200	730	10
4-Nitrophenol	ND		ug/kg	2700	790	10
2,4-Dinitrophenol	ND		ug/kg	9300	900	10
4,6-Dinitro-o-cresol	ND		ug/kg	5000	930	10
Pentachlorophenol	ND		ug/kg	1600	430	10
Phenol	ND		ug/kg	1900	290	10
2-Methylphenol	ND		ug/kg	1900	300	10
3-Methylphenol/4-Methylphenol	ND		ug/kg	2800	300	10
2,4,5-Trichlorophenol	ND		ug/kg	1900	370	10
Carbazole	380	J	ug/kg	1900	190	10
Atrazine	ND		ug/kg	1600	680	10
Benzaldehyde	ND		ug/kg	2600	520	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-10 RE\D

Date Collected: 04/27/23 12:00

Client ID: DUP 1

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	1900	590	10
2,3,4,6-Tetrachlorophenol	ND		ug/kg	1900	390	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		25-120
Phenol-d6	35		10-120
Nitrobenzene-d5	31		23-120
2-Fluorobiphenyl	47		30-120
2,4,6-Tribromophenol	45		10-136
4-Terphenyl-d14	44		18-120

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-10 D
Client ID: DUP 1
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 12:00
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 05/12/23 11:57
Analyst: IM
Percent Solids: 85%

Extraction Method: EPA 3546
Extraction Date: 05/08/23 19:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	340	J	ug/kg	1500	200	10
Hexachlorobenzene	ND		ug/kg	1200	220	10
Bis(2-chloroethyl)ether	ND		ug/kg	1700	260	10
2-Chloronaphthalene	ND		ug/kg	1900	190	10
3,3'-Dichlorobenzidine	ND		ug/kg	1900	510	10
2,4-Dinitrotoluene	ND		ug/kg	1900	380	10
2,6-Dinitrotoluene	ND		ug/kg	1900	330	10
Fluoranthene	9800		ug/kg	1200	220	10
4-Chlorophenyl phenyl ether	ND		ug/kg	1900	200	10
4-Bromophenyl phenyl ether	ND		ug/kg	1900	290	10
Bis(2-chloroisopropyl)ether	ND		ug/kg	2300	330	10
Bis(2-chloroethoxy)methane	ND		ug/kg	2100	190	10
Hexachlorobutadiene	ND		ug/kg	1900	280	10
Hexachlorocyclopentadiene	ND		ug/kg	5500	1700	10
Hexachloroethane	ND		ug/kg	1500	310	10
Isophorone	ND		ug/kg	1700	250	10
Naphthalene	1900		ug/kg	1900	230	10
Nitrobenzene	ND		ug/kg	1700	280	10
NDPA/DPA	ND		ug/kg	1500	220	10
n-Nitrosodi-n-propylamine	ND		ug/kg	1900	300	10
Bis(2-ethylhexyl)phthalate	ND		ug/kg	1900	660	10
Butyl benzyl phthalate	ND		ug/kg	1900	480	10
Di-n-butylphthalate	ND		ug/kg	1900	360	10
Di-n-octylphthalate	ND		ug/kg	1900	650	10
Diethyl phthalate	ND		ug/kg	1900	180	10
Dimethyl phthalate	ND		ug/kg	1900	400	10
Benzo(a)anthracene	7000		ug/kg	1200	220	10
Benzo(a)pyrene	9400		ug/kg	1500	470	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-10 D

Date Collected: 04/27/23 12:00

Client ID: DUP 1

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	11000		ug/kg	1200	320	10
Benzo(k)fluoranthene	3100		ug/kg	1200	310	10
Chrysene	7500		ug/kg	1200	200	10
Acenaphthylene	5000		ug/kg	1500	300	10
Anthracene	3600		ug/kg	1200	370	10
Benzo(ghi)perylene	5900		ug/kg	1500	220	10
Fluorene	780	J	ug/kg	1900	190	10
Phenanthrene	2700		ug/kg	1200	230	10
Dibenzo(a,h)anthracene	1500		ug/kg	1200	220	10
Indeno(1,2,3-cd)pyrene	6400		ug/kg	1500	270	10
Pyrene	13000		ug/kg	1200	190	10
Biphenyl	ND		ug/kg	4400	250	10
4-Chloroaniline	ND		ug/kg	1900	350	10
2-Nitroaniline	ND		ug/kg	1900	370	10
3-Nitroaniline	ND		ug/kg	1900	360	10
4-Nitroaniline	ND		ug/kg	1900	800	10
Dibenzofuran	460	J	ug/kg	1900	180	10
2-Methylnaphthalene	1200	J	ug/kg	2300	230	10
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	1900	200	10
Acetophenone	ND		ug/kg	1900	240	10
2,4,6-Trichlorophenol	ND		ug/kg	1200	360	10
p-Chloro-m-cresol	ND		ug/kg	1900	290	10
2-Chlorophenol	ND		ug/kg	1900	230	10
2,4-Dichlorophenol	ND		ug/kg	1700	310	10
2,4-Dimethylphenol	ND		ug/kg	1900	630	10
2-Nitrophenol	ND		ug/kg	4100	720	10
4-Nitrophenol	ND		ug/kg	2700	780	10
2,4-Dinitrophenol	ND		ug/kg	9200	900	10
4,6-Dinitro-o-cresol	ND		ug/kg	5000	920	10
Pentachlorophenol	ND		ug/kg	1500	420	10
Phenol	ND		ug/kg	1900	290	10
2-Methylphenol	ND		ug/kg	1900	300	10
3-Methylphenol/4-Methylphenol	ND		ug/kg	2800	300	10
2,4,5-Trichlorophenol	ND		ug/kg	1900	370	10
Carbazole	540	J	ug/kg	1900	190	10
Atrazine	ND		ug/kg	1500	670	10
Benzaldehyde	ND		ug/kg	2500	520	10

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-10 D

Date Collected: 04/27/23 12:00

Client ID: DUP 1

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	1900	580	10
2,3,4,6-Tetrachlorophenol	ND		ug/kg	1900	390	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		25-120
Phenol-d6	49		10-120
Nitrobenzene-d5	56		23-120
2-Fluorobiphenyl	53		30-120
2,4,6-Tribromophenol	49		10-136
4-Terphenyl-d14	56		18-120

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 05/11/23 20:46
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 05/08/23 19:01

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03-06,08-10 Batch: WG1776405-1					
Acenaphthene	ND		ug/kg	130	17.
Hexachlorobenzene	ND		ug/kg	99	18.
Bis(2-chloroethyl)ether	ND		ug/kg	150	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
3,3'-Dichlorobenzidine	ND		ug/kg	160	44.
2,4-Dinitrotoluene	ND		ug/kg	160	33.
2,6-Dinitrotoluene	ND		ug/kg	160	28.
Fluoranthene	ND		ug/kg	99	19.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	18.
4-Bromophenyl phenyl ether	ND		ug/kg	160	25.
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	28.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	17.
Hexachlorobutadiene	ND		ug/kg	160	24.
Hexachlorocyclopentadiene	ND		ug/kg	470	150
Hexachloroethane	ND		ug/kg	130	27.
Isophorone	ND		ug/kg	150	22.
Naphthalene	ND		ug/kg	160	20.
Nitrobenzene	ND		ug/kg	150	24.
NDPA/DPA	ND		ug/kg	130	19.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	26.
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	57.
Butyl benzyl phthalate	ND		ug/kg	160	42.
Di-n-butylphthalate	ND		ug/kg	160	31.
Di-n-octylphthalate	ND		ug/kg	160	56.
Diethyl phthalate	ND		ug/kg	160	15.
Dimethyl phthalate	ND		ug/kg	160	35.
Benzo(a)anthracene	ND		ug/kg	99	19.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	99	28.

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 05/11/23 20:46
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 05/08/23 19:01

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03-06,08-10 Batch: WG1776405-1					
Benzo(k)fluoranthene	ND		ug/kg	99	26.
Chrysene	ND		ug/kg	99	17.
Acenaphthylene	ND		ug/kg	130	26.
Anthracene	ND		ug/kg	99	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	99	20.
Dibenzo(a,h)anthracene	ND		ug/kg	99	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	99	16.
Biphenyl	ND		ug/kg	380	22.
4-Chloroaniline	ND		ug/kg	160	30.
2-Nitroaniline	ND		ug/kg	160	32.
3-Nitroaniline	ND		ug/kg	160	31.
4-Nitroaniline	ND		ug/kg	160	68.
Dibenzofuran	ND		ug/kg	160	16.
2-Methylnaphthalene	ND		ug/kg	200	20.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	17.
Acetophenone	ND		ug/kg	160	20.
2,4,6-Trichlorophenol	ND		ug/kg	99	31.
p-Chloro-m-cresol	ND		ug/kg	160	25.
2-Chlorophenol	ND		ug/kg	160	20.
2,4-Dichlorophenol	ND		ug/kg	150	27.
2,4-Dimethylphenol	ND		ug/kg	160	55.
2-Nitrophenol	ND		ug/kg	360	62.
4-Nitrophenol	ND		ug/kg	230	68.
2,4-Dinitrophenol	ND		ug/kg	800	77.
4,6-Dinitro-o-cresol	ND		ug/kg	430	80.
Pentachlorophenol	ND		ug/kg	130	36.

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 05/11/23 20:46
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 05/08/23 19:01

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03-06,08-10 Batch: WG1776405-1					
Phenol	ND		ug/kg	160	25.
2-Methylphenol	ND		ug/kg	160	26.
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	26.
2,4,5-Trichlorophenol	ND		ug/kg	160	32.
Carbazole	ND		ug/kg	160	16.
Atrazine	ND		ug/kg	130	58.
Benzaldehyde	ND		ug/kg	220	45.
Caprolactam	ND		ug/kg	160	50.
2,3,4,6-Tetrachlorophenol	ND		ug/kg	160	33.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	80		25-120
Phenol-d6	79		10-120
Nitrobenzene-d5	85		23-120
2-Fluorobiphenyl	70		30-120
2,4,6-Tribromophenol	52		10-136
4-Terphenyl-d14	73		18-120

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 05/13/23 08:27
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 05/12/23 14:15

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03-06,08-10 Batch: WG1778352-1					
Acenaphthene	ND		ug/kg	130	17.
Hexachlorobenzene	ND		ug/kg	98	18.
Bis(2-chloroethyl)ether	ND		ug/kg	150	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
3,3'-Dichlorobenzidine	ND		ug/kg	160	43.
2,4-Dinitrotoluene	ND		ug/kg	160	32.
2,6-Dinitrotoluene	ND		ug/kg	160	28.
Fluoranthene	ND		ug/kg	98	19.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	17.
4-Bromophenyl phenyl ether	ND		ug/kg	160	25.
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	28.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	16.
Hexachlorobutadiene	ND		ug/kg	160	24.
Hexachlorocyclopentadiene	ND		ug/kg	460	150
Hexachloroethane	ND		ug/kg	130	26.
Isophorone	ND		ug/kg	150	21.
Naphthalene	ND		ug/kg	160	20.
Nitrobenzene	ND		ug/kg	150	24.
NDPA/DPA	ND		ug/kg	130	18.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	25.
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	56.
Butyl benzyl phthalate	ND		ug/kg	160	41.
Di-n-butylphthalate	ND		ug/kg	160	31.
Di-n-octylphthalate	ND		ug/kg	160	55.
Diethyl phthalate	ND		ug/kg	160	15.
Dimethyl phthalate	ND		ug/kg	160	34.
Benzo(a)anthracene	ND		ug/kg	98	18.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	98	27.

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 05/13/23 08:27
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 05/12/23 14:15

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03-06,08-10 Batch: WG1778352-1					
Benzo(k)fluoranthene	ND		ug/kg	98	26.
Chrysene	ND		ug/kg	98	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	98	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	98	20.
Dibenzo(a,h)anthracene	ND		ug/kg	98	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	98	16.
Biphenyl	ND		ug/kg	370	21.
4-Chloroaniline	ND		ug/kg	160	30.
2-Nitroaniline	ND		ug/kg	160	31.
3-Nitroaniline	ND		ug/kg	160	31.
4-Nitroaniline	ND		ug/kg	160	67.
Dibenzofuran	ND		ug/kg	160	15.
2-Methylnaphthalene	ND		ug/kg	200	20.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	17.
Acetophenone	ND		ug/kg	160	20.
2,4,6-Trichlorophenol	ND		ug/kg	98	31.
p-Chloro-m-cresol	ND		ug/kg	160	24.
2-Chlorophenol	ND		ug/kg	160	19.
2,4-Dichlorophenol	ND		ug/kg	150	26.
2,4-Dimethylphenol	ND		ug/kg	160	54.
2-Nitrophenol	ND		ug/kg	350	61.
4-Nitrophenol	ND		ug/kg	230	66.
2,4-Dinitrophenol	ND		ug/kg	780	76.
4,6-Dinitro-o-cresol	ND		ug/kg	420	78.
Pentachlorophenol	ND		ug/kg	130	36.

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 05/13/23 08:27
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 05/12/23 14:15

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03-06,08-10 Batch: WG1778352-1					
Phenol	ND		ug/kg	160	25.
2-Methylphenol	ND		ug/kg	160	25.
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	26.
2,4,5-Trichlorophenol	ND		ug/kg	160	31.
Carbazole	ND		ug/kg	160	16.
Atrazine	ND		ug/kg	130	57.
Benzaldehyde	ND		ug/kg	220	44.
Caprolactam	ND		ug/kg	160	50.
2,3,4,6-Tetrachlorophenol	ND		ug/kg	160	33.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	75		25-120
Phenol-d6	73		10-120
Nitrobenzene-d5	65		23-120
2-Fluorobiphenyl	79		30-120
2,4,6-Tribromophenol	100		10-136
4-Terphenyl-d14	90		18-120

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 05/25/23 15:33
Analyst: RS

Extraction Method: EPA 1633
Extraction Date: 05/24/23 16:27
Cleanup Method: EPA 1633
Cleanup Date: 05/25/23

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-10 Batch: WG1782785-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/g	0.800	0.050
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	0.400	0.056
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.200	0.043
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	0.800	0.081
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.200	0.046
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	0.200	0.023
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	0.200	0.023
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.200	0.059
Perfluorooctanoic Acid (PFOA)	ND		ng/g	0.200	0.052
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.800	0.280
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.200	0.037
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.200	0.078
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/g	0.200	0.079
Perfluorodecanoic Acid (PFDA)	ND		ng/g	0.200	0.075
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.800	0.387
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	0.200	0.042
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.200	0.100
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	0.200	0.051
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.200	0.032
Perfluorooctanesulfonamide (PFOSA)	ND		ng/g	0.200	0.043
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.200	0.082
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.200	0.041
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.200	0.053
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/g	0.200	0.106
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/g	0.800	0.098
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/g	0.800	0.146
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/g	0.200	0.038

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 05/25/23 15:33
Analyst: RS

Extraction Method: EPA 1633
Extraction Date: 05/24/23 16:27
Cleanup Method: EPA 1633
Cleanup Date: 05/25/23

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-10 Batch: WG1782785-1					
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/g	0.800	0.196
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/g	0.800	0.167
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/g	0.200	0.100
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/g	0.200	0.112
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/g	2.00	0.250
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/g	2.00	0.510
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/g	0.400	0.041
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/g	0.400	0.031
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/g	0.400	0.083
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/g	0.400	0.095
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/g	1.00	0.144
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/g	5.00	0.505
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/g	5.00	1.76

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 144,1633
Analytical Date: 05/25/23 15:33
Analyst: RS

Extraction Method: EPA 1633
Extraction Date: 05/24/23 16:27
Cleanup Method: EPA 1633
Cleanup Date: 05/25/23

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-10 Batch: WG1782785-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	78		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	85		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	91		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	80		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	80		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	79		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	82		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	80		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	76		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	81		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	77		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	74		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	61		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	118		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	68		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	60		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	62		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	74		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	70		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	80		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	42		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	44		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	64		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	70		20-150

Lab Control Sample Analysis **Batch Quality Control**

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 Batch: WG1776405-2 WG1776405-3								
Acenaphthene	84		28	Q	31-137	100	Q	50
Hexachlorobenzene	64		22	Q	40-140	98	Q	50
Bis(2-chloroethyl)ether	90		30	Q	40-140	100	Q	50
2-Chloronaphthalene	79		18	Q	40-140	126	Q	50
3,3'-Dichlorobenzidine	58		20	Q	40-140	97	Q	50
2,4-Dinitrotoluene	90		30	Q	40-132	100	Q	50
2,6-Dinitrotoluene	78		18	Q	40-140	125	Q	50
Fluoranthene	86		29	Q	40-140	99	Q	50
4-Chlorophenyl phenyl ether	77		28	Q	40-140	93	Q	50
4-Bromophenyl phenyl ether	76		26	Q	40-140	98	Q	50
Bis(2-chloroisopropyl)ether	87		30	Q	40-140	97	Q	50
Bis(2-chloroethoxy)methane	58		30	Q	40-117	64	Q	50
Hexachlorobutadiene	70		24	Q	40-140	98	Q	50
Hexachlorocyclopentadiene	55		14	Q	40-140	119	Q	50
Hexachloroethane	84		30	Q	40-140	95	Q	50
Isophorone	55		31	Q	40-140	56	Q	50
Naphthalene	81		26	Q	40-140	103	Q	50
Nitrobenzene	57		35	Q	40-140	48		50
NDPA/DPA	84		28	Q	36-157	100	Q	50
n-Nitrosodi-n-propylamine	94		32		32-121	98	Q	50
Bis(2-ethylhexyl)phthalate	106		37	Q	40-140	97	Q	50
Butyl benzyl phthalate	95		32	Q	40-140	99	Q	50
Di-n-butylphthalate	95		32	Q	40-140	99	Q	50

Lab Control Sample Analysis **Batch Quality Control**

Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052

Project Number: 16-S0140N

Report Date: 05/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 Batch: WG1776405-2 WG1776405-3								
Di-n-octylphthalate	108		36	Q	40-140	100	Q	50
Diethyl phthalate	84		30	Q	40-140	95	Q	50
Dimethyl phthalate	78		18	Q	40-140	125	Q	50
Benzo(a)anthracene	85		30	Q	40-140	96	Q	50
Benzo(a)pyrene	99		34	Q	40-140	98	Q	50
Benzo(b)fluoranthene	90		33	Q	40-140	93	Q	50
Benzo(k)fluoranthene	93		30	Q	40-140	102	Q	50
Chrysene	87		30	Q	40-140	97	Q	50
Acenaphthylene	84		19	Q	40-140	126	Q	50
Anthracene	90		31	Q	40-140	98	Q	50
Benzo(ghi)perylene	83		30	Q	40-140	94	Q	50
Fluorene	84		29	Q	40-140	97	Q	50
Phenanthrene	84		29	Q	40-140	97	Q	50
Dibenzo(a,h)anthracene	85		29	Q	40-140	98	Q	50
Indeno(1,2,3-cd)pyrene	87		29	Q	40-140	100	Q	50
Pyrene	86		30	Q	35-142	97	Q	50
Biphenyl	77		17	Q	37-127	128	Q	50
4-Chloroaniline	60		28	Q	40-140	73	Q	50
2-Nitroaniline	81		18	Q	47-134	127	Q	50
3-Nitroaniline	61		23	Q	26-129	90	Q	50
4-Nitroaniline	88		30	Q	41-125	98	Q	50
Dibenzofuran	86		29	Q	40-140	99	Q	50
2-Methylnaphthalene	83		18	Q	40-140	129	Q	50

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 Batch: WG1776405-2 WG1776405-3								
1,2,4,5-Tetrachlorobenzene	70		15	Q	40-117	129	Q	50
Acetophenone	80		30		14-144	91	Q	50
2,4,6-Trichlorophenol	78		18	Q	30-130	125	Q	50
p-Chloro-m-cresol	88		20	Q	26-103	126	Q	50
2-Chlorophenol	86		27		25-102	104	Q	50
2,4-Dichlorophenol	60		32		30-130	61	Q	50
2,4-Dimethylphenol	59		33		30-130	57	Q	50
2-Nitrophenol	59		29	Q	30-130	68	Q	50
4-Nitrophenol	97		30		11-114	106	Q	50
2,4-Dinitrophenol	83		22		4-130	116	Q	50
4,6-Dinitro-o-cresol	88		31		10-130	96	Q	50
Pentachlorophenol	66		24		17-109	93	Q	50
Phenol	95	Q	32		26-90	99	Q	50
2-Methylphenol	81		28	Q	30-130	97	Q	50
3-Methylphenol/4-Methylphenol	87		31		30-130	95	Q	50
2,4,5-Trichlorophenol	79		18	Q	30-130	126	Q	50
Carbazole	92		32	Q	54-128	97	Q	50
Atrazine	77		26	Q	40-140	99	Q	50
Benzaldehyde	90		35	Q	40-140	88	Q	50
Caprolactam	79		31		15-130	87	Q	50
2,3,4,6-Tetrachlorophenol	78		27	Q	40-140	97	Q	50

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052

Project Number: 16-S0140N

Report Date: 05/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 Batch: WG1776405-2 WG1776405-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	88		30		25-120
Phenol-d6	97		32		10-120
Nitrobenzene-d5	60		32		23-120
2-Fluorobiphenyl	79		18	Q	30-120
2,4,6-Tribromophenol	60		22		10-136
4-Terphenyl-d14	77		27		18-120

Lab Control Sample Analysis **Batch Quality Control**

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 Batch: WG1778352-2 WG1778352-3								
Acenaphthene	72		80		31-137	11		50
Hexachlorobenzene	86		98		40-140	13		50
Bis(2-chloroethyl)ether	58		63		40-140	8		50
2-Chloronaphthalene	74		83		40-140	11		50
3,3'-Dichlorobenzidine	59		71		40-140	18		50
2,4-Dinitrotoluene	78		89		40-132	13		50
2,6-Dinitrotoluene	77		90		40-140	16		50
Fluoranthene	77		88		40-140	13		50
4-Chlorophenyl phenyl ether	77		86		40-140	11		50
4-Bromophenyl phenyl ether	80		92		40-140	14		50
Bis(2-chloroisopropyl)ether	48		52		40-140	8		50
Bis(2-chloroethoxy)methane	62		69		40-117	11		50
Hexachlorobutadiene	74		80		40-140	8		50
Hexachlorocyclopentadiene	97		105		40-140	8		50
Hexachloroethane	63		67		40-140	6		50
Isophorone	59		66		40-140	11		50
Naphthalene	69		76		40-140	10		50
Nitrobenzene	58		65		40-140	11		50
NDPA/DPA	78		90		36-157	14		50
n-Nitrosodi-n-propylamine	57		63		32-121	10		50
Bis(2-ethylhexyl)phthalate	76		86		40-140	12		50
Butyl benzyl phthalate	78		91		40-140	15		50
Di-n-butylphthalate	77		88		40-140	13		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 Batch: WG1778352-2 WG1778352-3								
Di-n-octylphthalate	78		88		40-140	12		50
Diethyl phthalate	75		86		40-140	14		50
Dimethyl phthalate	76		86		40-140	12		50
Benzo(a)anthracene	78		86		40-140	10		50
Benzo(a)pyrene	88		98		40-140	11		50
Benzo(b)fluoranthene	81		89		40-140	9		50
Benzo(k)fluoranthene	80		92		40-140	14		50
Chrysene	77		86		40-140	11		50
Acenaphthylene	81		92		40-140	13		50
Anthracene	78		87		40-140	11		50
Benzo(ghi)perylene	76		85		40-140	11		50
Fluorene	77		85		40-140	10		50
Phenanthrene	75		84		40-140	11		50
Dibenzo(a,h)anthracene	77		86		40-140	11		50
Indeno(1,2,3-cd)pyrene	79		92		40-140	15		50
Pyrene	78		89		35-142	13		50
Biphenyl	76		84		37-127	10		50
4-Chloroaniline	58		62		40-140	7		50
2-Nitroaniline	75		89		47-134	17		50
3-Nitroaniline	66		77		26-129	15		50
4-Nitroaniline	75		89		41-125	17		50
Dibenzofuran	76		84		40-140	10		50
2-Methylnaphthalene	75		83		40-140	10		50

Lab Control Sample Analysis **Batch Quality Control**

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 Batch: WG1778352-2 WG1778352-3								
1,2,4,5-Tetrachlorobenzene	76		84		40-117	10		50
Acetophenone	66		72		14-144	9		50
2,4,6-Trichlorophenol	82		92		30-130	11		50
p-Chloro-m-cresol	77		85		26-103	10		50
2-Chlorophenol	68		76		25-102	11		50
2,4-Dichlorophenol	73		81		30-130	10		50
2,4-Dimethylphenol	72		81		30-130	12		50
2-Nitrophenol	69		76		30-130	10		50
4-Nitrophenol	69		79		11-114	14		50
2,4-Dinitrophenol	54		62		4-130	14		50
4,6-Dinitro-o-cresol	82		102		10-130	22		50
Pentachlorophenol	90		106		17-109	16		50
Phenol	69		73		26-90	6		50
2-Methylphenol	68		76		30-130.	11		50
3-Methylphenol/4-Methylphenol	67		75		30-130	11		50
2,4,5-Trichlorophenol	82		96		30-130	16		50
Carbazole	77		87		54-128	12		50
Atrazine	87		100		40-140	14		50
Benzaldehyde	60		68		40-140	13		50
Caprolactam	63		74		15-130	16		50
2,3,4,6-Tetrachlorophenol	82		96		40-140	16		50

Lab Control Sample Analysis **Batch Quality Control**

Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052

Project Number: 16-S0140N

Report Date: 05/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 Batch: WG1778352-2 WG1778352-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	70		78		25-120
Phenol-d6	67		75		10-120
Nitrobenzene-d5	60		67		23-120
2-Fluorobiphenyl	74		84		30-120
2,4,6-Tribromophenol	93		110		10-136
4-Terphenyl-d14	78		91		18-120

Lab Control Sample Analysis **Batch Quality Control**

Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052

Project Number: 16-S0140N

Report Date: 05/26/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-10 Batch: WG1782785-2 LOW LEVEL								
Perfluorobutanoic Acid (PFBA)	94		-		40-150	-		30
Perfluoropentanoic Acid (PFPeA)	94		-		40-150	-		30
Perfluorobutanesulfonic Acid (PFBS)	90		-		40-150	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	101		-		40-150	-		30
Perfluorohexanoic Acid (PFHxA)	100		-		40-150	-		30
Perfluoropentanesulfonic Acid (PFPeS)	98		-		40-150	-		30
Perfluoroheptanoic Acid (PFHpA)	105		-		40-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	96		-		40-150	-		30
Perfluorooctanoic Acid (PFOA)	95		-		40-150	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	98		-		40-150	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	105		-		40-150	-		30
Perfluorononanoic Acid (PFNA)	88		-		40-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	118		-		40-150	-		30
Perfluorodecanoic Acid (PFDA)	88		-		40-150	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	99		-		40-150	-		30
Perfluorononanesulfonic Acid (PFNS)	94		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	75		-		40-150	-		30
Perfluoroundecanoic Acid (PFUnA)	105		-		40-150	-		30
Perfluorodecanesulfonic Acid (PFDS)	85		-		40-150	-		30
Perfluorooctanesulfonamide (PFOSA)	102		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	92		-		40-150	-		30
Perfluorododecanoic Acid (PFDoA)	120		-		40-150	-		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052

Project Number: 16-S0140N

Report Date: 05/26/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-10 Batch: WG1782785-2 LOW LEVEL								
Perfluorotridecanoic Acid (PFTrDA)	110		-		40-150	-		30
Perfluorotetradecanoic Acid (PFTeDA)	105		-		40-150	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	96		-		40-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	85		-		40-150	-		30
Perfluorododecanesulfonic Acid (PFDoS)	82		-		40-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	64		-		40-150	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	60		-		40-150	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	110		-		40-150	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	82		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	90		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	98		-		40-150	-		30
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	92		-		40-150	-		30
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	91		-		40-150	-		30
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	91		-		40-150	-		30
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	121		-		40-150	-		30
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	95		-		40-150	-		30
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	82		-		40-150	-		30
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	129		-		40-150	-		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052

Project Number: 16-S0140N

Report Date: 05/26/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-10 Batch: WG1782785-2 LOW LEVEL								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	86				20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	87				20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	101				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	86				20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	84				20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	77				20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	88				20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	87				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	81				20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	86				20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	84				20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	84				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	66				20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	152	Q			20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	75				20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	68				20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	72				20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	74				20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	78				20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	84				20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	48				20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	53				20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	70				20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	74				20-150

Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-10 Batch: WG1782785-3								
Perfluorobutanoic Acid (PFBA)	106		-		40-150	-		30
Perfluoropentanoic Acid (PFPeA)	99		-		40-150	-		30
Perfluorobutanesulfonic Acid (PFBS)	89		-		40-150	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	105		-		40-150	-		30
Perfluorohexanoic Acid (PFHxA)	97		-		40-150	-		30
Perfluoropentanesulfonic Acid (PFPeS)	105		-		40-150	-		30
Perfluoroheptanoic Acid (PFHpA)	103		-		40-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	98		-		40-150	-		30
Perfluorooctanoic Acid (PFOA)	99		-		40-150	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	106		-		40-150	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	118		-		40-150	-		30
Perfluorononanoic Acid (PFNA)	85		-		40-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	111		-		40-150	-		30
Perfluorodecanoic Acid (PFDA)	97		-		40-150	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	120		-		40-150	-		30
Perfluorononanesulfonic Acid (PFNS)	98		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	100		-		40-150	-		30
Perfluoroundecanoic Acid (PFUnA)	99		-		40-150	-		30
Perfluorodecanesulfonic Acid (PFDS)	95		-		40-150	-		30
Perfluorooctanesulfonamide (PFOSA)	100		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	117		-		40-150	-		30
Perfluorododecanoic Acid (PFDoA)	106		-		40-150	-		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-10 Batch: WG1782785-3								
Perfluorotridecanoic Acid (PFTrDA)	105		-		40-150	-		30
Perfluorotetradecanoic Acid (PFTeDA)	99		-		40-150	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	103		-		40-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	92		-		40-150	-		30
Perfluorododecanesulfonic Acid (PFDoS)	88		-		40-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	75		-		40-150	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	68		-		40-150	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	94		-		40-150	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	99		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	104		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	94		-		40-150	-		30
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	99		-		40-150	-		30
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	100		-		40-150	-		30
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	94		-		40-150	-		30
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	127		-		40-150	-		30
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	101		-		40-150	-		30
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	86		-		40-150	-		30
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	133		-		40-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052

Project Number: 16-S0140N

Report Date: 05/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-10 Batch: WG1782785-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	83				20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	84				20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	93				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	81				20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	84				20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	78				20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	81				20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	84				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	73				20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	80				20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	81				20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	86				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	54				20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	160	Q			20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	84				20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	66				20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	65				20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	74				20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	78				20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	85				20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	46				20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	46				20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	67				20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	74				20-150

Matrix Spike Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 QC Batch ID: WG1776405-4 WG1776405-5 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")												
Acenaphthene	ND	1430	1100	77		1200	85		31-137	9		50
Hexachlorobenzene	ND	1430	1000	70		1000	71		40-140	0		50
Bis(2-chloroethyl)ether	ND	1430	1300	91		1300	93		40-140	0		50
2-Chloronaphthalene	ND	1430	1100	77		1100	78		40-140	0		50
3,3'-Dichlorobenzidine	ND	1430	490J	34	Q	510J	36	Q	40-140	4		50
2,4-Dinitrotoluene	ND	1430	430J	30	Q	480J	34	Q	40-132	11		50
2,6-Dinitrotoluene	ND	1430	560J	39	Q	560J	40		40-140	0		50
Fluoranthene	1800	1430	2900	77		2700	64		40-140	7		50
4-Chlorophenyl phenyl ether	ND	1430	1000	70		1000	71		40-140	0		50
4-Bromophenyl phenyl ether	ND	1430	1000	70		1000	71		40-140	0		50
Bis(2-chloroisopropyl)ether	ND	1430	1300	91		1400	100		40-140	7		50
Bis(2-chloroethoxy)methane	ND	1430	1200	84		1200	85		40-117	0		50
Hexachlorobutadiene	ND	1430	880J	61		870J	62		40-140	1		50
Hexachlorocyclopentadiene	ND	1430	ND	0	Q	ND	0	Q	40-140	NC		50
Hexachloroethane	ND	1430	500J	35	Q	480J	34	Q	40-140	4		50
Isophorone	ND	1430	1200	84		1200	85		40-140	0		50
Naphthalene	ND	1430	1100	77		1200	85		40-140	9		50
Nitrobenzene	ND	1430	1000	70		1100	78		40-140	10		50
NDPA/DPA	ND	1430	1100	77		1200	85		36-157	9		50
n-Nitrosodi-n-propylamine	ND	1430	1200	84		1300	93		32-121	8		50
Bis(2-ethylhexyl)phthalate	450J	1430	1600	110		1700	120		40-140	6		50
Butyl benzyl phthalate	1100	1430	1400	21	Q	1300	14	Q	40-140	7		50
Di-n-butylphthalate	ND	1430	1200	84		1200	85		40-140	0		50

Matrix Spike Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 QC Batch ID: WG1776405-4 WG1776405-5 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")												
Di-n-octylphthalate	ND	1430	1200	84		1300	93		40-140	8		50
Diethyl phthalate	ND	1430	1000	70		1100	78		40-140	10		50
Dimethyl phthalate	ND	1430	1100	77		1100	78		40-140	0		50
Benzo(a)anthracene	920	1430	1900	68		2000	77		40-140	5		50
Benzo(a)pyrene	940	1430	1800	60		1900	68		40-140	5		50
Benzo(b)fluoranthene	1200	1430	2100	63		2000	57		40-140	5		50
Benzo(k)fluoranthene	450J	1430	1300	91		1500	110		40-140	14		50
Chrysene	1000	1430	1900	63		2000	71		40-140	5		50
Acenaphthylene	390J	1430	1600	110		1700	120		40-140	6		50
Anthracene	500J	1430	1500	100		1500	110		40-140	0		50
Benzo(ghi)perylene	810	1430	1600	55		1700	63		40-140	6		50
Fluorene	110J	1430	1200	84		1200	85		40-140	0		50
Phenanthrene	1200	1430	2000	56		1900	50		40-140	5		50
Dibenzo(a,h)anthracene	170J	1430	1100	77		1200	85		40-140	9		50
Indeno(1,2,3-cd)pyrene	820	1430	1600	54		1800	70		40-140	12		50
Pyrene	1500	1430	2600	77		2500	71		35-142	4		50
Biphenyl	ND	1430	1000J	70		1100J	78		37-127	10		50
4-Chloroaniline	ND	1430	770J	54		760J	54		40-140	1		50
2-Nitroaniline	ND	1430	930	65		1000	71		47-134	7		50
3-Nitroaniline	ND	1430	1000	70		1100	78		26-129	10		50
4-Nitroaniline	ND	1430	1100	77		1200	85		41-125	9		50
Dibenzofuran	ND	1430	1100	77		1100	78		40-140	0		50
2-Methylnaphthalene	ND	1430	1100	77		1200	85		40-140	9		50

Matrix Spike Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 QC Batch ID: WG1776405-4 WG1776405-5 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")												
1,2,4,5-Tetrachlorobenzene	ND	1430	990	69		1000	71		40-117	1		50
Acetophenone	ND	1430	1300	91		1200	85		14-144	8		50
2,4,6-Trichlorophenol	ND	1430	1100	77		1100	78		30-130	0		50
p-Chloro-m-cresol	ND	1430	1100	77		1300	93		26-103	17		50
2-Chlorophenol	ND	1430	1100	77		1100	78		25-102	0		50
2,4-Dichlorophenol	ND	1430	1100	77		1100	78		30-130	0		50
2,4-Dimethylphenol	ND	1430	980	68		1100	78		30-130	12		50
2-Nitrophenol	ND	1430	350J	24	Q	370J	26	Q	30-130	6		50
4-Nitrophenol	ND	1430	860J	60		900J	64		11-114	5		50
2,4-Dinitrophenol	ND	1430	ND	0	Q	ND	0	Q	4-130	NC		50
4,6-Dinitro-o-cresol	ND	1430	ND	0	Q	ND	0	Q	10-130	NC		50
Pentachlorophenol	ND	1430	690J	48		690J	49		17-109	0		50
Phenol	ND	1430	1200	84		1200	85		26-90	0		50
2-Methylphenol	ND	1430	1100	77		1200	85		30-130.	9		50
3-Methylphenol/4-Methylphenol	ND	1430	1200J	84		1300	93		30-130	8		50
2,4,5-Trichlorophenol	ND	1430	1100	77		1100	78		30-130	0		50
Carbazole	170J	1430	1300	91		1300	93		54-128	0		50
Atrazine	ND	1430	1000	70		1000	71		40-140	0		50
Benzaldehyde	ND	1430	1200	84		1200	85		40-140	0		50
Caprolactam	ND	1430	1100	77		1300	93		15-130	17		50
2,3,4,6-Tetrachlorophenol	ND	1430	1000	70		1000	71		40-140	0		50

Matrix Spike Analysis**Batch Quality Control****Project Name:** FORMER ROTH STEEL SITE**Project Number:** 16-S0140N**Lab Number:** L2323052**Report Date:** 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 QC Batch ID: WG1776405-4 WG1776405-5 QC Sample: L2323052-06
 Client ID: 23-B-34 (2-12")

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
2,4,6-Tribromophenol	72		76		10-136
2-Fluorobiphenyl	69		74		30-120
2-Fluorophenol	77		81		25-120
4-Terphenyl-d14	70		70		18-120
Nitrobenzene-d5	67		71		23-120
Phenol-d6	79		83		10-120

Matrix Spike Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 QC Batch ID: WG1778352-4 WG1778352-5 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")												
Acenaphthene	120J	1400	920	66		810	58		31-137	13		50
Hexachlorobenzene	ND	1400	970	69		810	58		40-140	18		50
Bis(2-chloroethyl)ether	ND	1400	720J	51		670J	48		40-140	7		50
2-Chloronaphthalene	ND	1400	970	69		820J	58		40-140	17		50
3,3'-Dichlorobenzidine	ND	1400	ND	0	Q	240J	17	Q	40-140	NC		50
2,4-Dinitrotoluene	ND	1400	740J	53		520J	37	Q	40-132	35		50
2,6-Dinitrotoluene	ND	1400	960	68		620J	44		40-140	43		50
Fluoranthene	2000	1400	2900	64		2300	21	Q	40-140	23		50
4-Chlorophenyl phenyl ether	ND	1400	920	66		790J	56		40-140	15		50
4-Bromophenyl phenyl ether	ND	1400	1000	71		800J	57		40-140	22		50
Bis(2-chloroisopropyl)ether	ND	1400	620J	44		540J	38	Q	40-140	14		50
Bis(2-chloroethoxy)methane	ND	1400	770J	55		690J	49		40-117	11		50
Hexachlorobutadiene	ND	1400	890	63		760J	54		40-140	16		50
Hexachlorocyclopentadiene	ND	1400	ND	0	Q	ND	0	Q	40-140	NC		50
Hexachloroethane	ND	1400	690J	49		530J	38	Q	40-140	26		50
Isophorone	ND	1400	790	56		700J	50		40-140	12		50
Naphthalene	150J	1400	1000	71		870J	62		40-140	14		50
Nitrobenzene	ND	1400	760J	54		670J	48		40-140	13		50
NDPA/DPA	ND	1400	900	64		770	55		36-157	16		50
n-Nitrosodi-n-propylamine	ND	1400	720J	51		660J	47		32-121	9		50
Bis(2-ethylhexyl)phthalate	300J	1400	1200	85		1000	71		40-140	18		50
Butyl benzyl phthalate	ND	1400	960	68		840J	60		40-140	13		50
Di-n-butylphthalate	ND	1400	920	66		800J	57		40-140	14		50

Matrix Spike Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 QC Batch ID: WG1778352-4 WG1778352-5 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")												
Di-n-octylphthalate	ND	1400	980	70		820J	58		40-140	18		50
Diethyl phthalate	ND	1400	820J	58		730J	52		40-140	12		50
Dimethyl phthalate	ND	1400	880	63		850J	60		40-140	3		50
Benzo(a)anthracene	980	1400	1800	58		1500	37	Q	40-140	18		50
Benzo(a)pyrene	940	1400	1800	61		1500	40		40-140	18		50
Benzo(b)fluoranthene	1300	1400	2100	57		1800	36	Q	40-140	15		50
Benzo(k)fluoranthene	430J	1400	1400	100		1100	78		40-140	24		50
Chrysene	970	1400	1800	59		1500	38	Q	40-140	18		50
Acenaphthylene	610J	1400	1500	110		1300	92		40-140	14		50
Anthracene	600	1400	1400	57		1200	43		40-140	15		50
Benzo(ghi)perylene	740	1400	1600	61		1300	40		40-140	21		50
Fluorene	160J	1400	1100	78		910	65		40-140	19		50
Phenanthrene	1100	1400	1900	57		1500	28	Q	40-140	24		50
Dibenzo(a,h)anthracene	150J	1400	920	66		830	59		40-140	10		50
Indeno(1,2,3-cd)pyrene	800	1400	1700	64		1400	43		40-140	19		50
Pyrene	1700	1400	2500	57		2100	28	Q	35-142	17		50
Biphenyl	ND	1400	1000J	71		850J	60		37-127	16		50
4-Chloroaniline	ND	1400	580J	41		450J	32	Q	40-140	25		50
2-Nitroaniline	ND	1400	900	64		770J	55		47-134	16		50
3-Nitroaniline	ND	1400	680J	48		600J	43		26-129	13		50
4-Nitroaniline	ND	1400	590J	42		580J	41		41-125	2		50
Dibenzofuran	ND	1400	950	68		840J	60		40-140	12		50
2-Methylnaphthalene	100J	1400	1000	71		890J	63		40-140	12		50

Matrix Spike Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 QC Batch ID: WG1778352-4 WG1778352-5 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")												
1,2,4,5-Tetrachlorobenzene	ND	1400	980	70		830J	59		40-117	17		50
Acetophenone	ND	1400	880	63		800J	57		14-144	10		50
2,4,6-Trichlorophenol	ND	1400	1000	71		870	62		30-130	14		50
p-Chloro-m-cresol	ND	1400	920	66		800J	57		26-103	14		50
2-Chlorophenol	ND	1400	870J	62		780J	55		25-102	11		50
2,4-Dichlorophenol	ND	1400	960	68		830	59		30-130	15		50
2,4-Dimethylphenol	ND	1400	910	65		760J	54		30-130	18		50
2-Nitrophenol	ND	1400	630J	45		460J	33		30-130	31		50
4-Nitrophenol	ND	1400	ND	0	Q	ND	0	Q	11-114	NC		50
2,4-Dinitrophenol	ND	1400	ND	0	Q	ND	0	Q	4-130	NC		50
4,6-Dinitro-o-cresol	ND	1400	ND	0	Q	ND	0	Q	10-130	NC		50
Pentachlorophenol	ND	1400	880	63		740	53		17-109	17		50
Phenol	ND	1400	890	63		760J	54		26-90	16		50
2-Methylphenol	ND	1400	850J	61		760J	54		30-130.	11		50
3-Methylphenol/4-Methylphenol	ND	1400	860J	61		750J	53		30-130	14		50
2,4,5-Trichlorophenol	ND	1400	950	68		850J	60		30-130	11		50
Carbazole	180J	1400	990	71		840J	60		54-128	16		50
Atrazine	ND	1400	950	68		840	60		40-140	12		50
Benzaldehyde	ND	1400	870J	62		780J	55		40-140	11		50
Caprolactam	ND	1400	820J	58		700J	50		15-130	16		50
2,3,4,6-Tetrachlorophenol	ND	1400	940	67		770J	55		40-140	20		50

Matrix Spike Analysis**Batch Quality Control****Project Name:** FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-06,08-10 QC Batch ID: WG1778352-4 WG1778352-5 QC Sample: L2323052-06
 Client ID: 23-B-34 (2-12")

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	74		61		10-136
2-Fluorobiphenyl	68		59		30-120
2-Fluorophenol	59		54		25-120
4-Terphenyl-d14	63		54		18-120
Nitrobenzene-d5	58		51		23-120
Phenol-d6	60		53		10-120

Matrix Spike Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1782785-4 WG1782785-5 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")												
Perfluorobutanoic Acid (PFBA)	ND	7.96	7.80	98		7.56	97		40-150	3		30
Perfluoropentanoic Acid (PFPeA)	ND	3.98	3.68	93		3.54	91		40-150	4		30
Perfluorobutanesulfonic Acid (PFBS)	ND	1.76	1.58	90		1.46	84		40-150	8		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	7.46	7.34	98		6.58	90		40-150	11		30
Perfluorohexanoic Acid (PFHxA)	ND	1.99	1.92	97		1.87	96		40-150	3		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	1.87	1.73	92		1.62	88		40-150	7		30
Perfluoroheptanoic Acid (PFHpA)	ND	1.99	1.82	92		1.96	101		40-150	7		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	1.82	1.69	93		1.60	90		40-150	5		30
Perfluorooctanoic Acid (PFOA)	0.055J	1.99	1.88	92		1.86	93		40-150	1		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	7.56	6.99	93		6.88	93		40-150	2		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	1.9	1.88	99		1.98	107		40-150	5		30
Perfluorononanoic Acid (PFNA)	ND	1.99	1.73	87		1.78	91		40-150	3		30
Perfluorooctanesulfonic Acid (PFOS)	1.09	1.84	2.95	101		2.69	88		40-150	9		30
Perfluorodecanoic Acid (PFDA)	ND	1.99	2.03	102		1.95	100		40-150	4		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	7.64	8.42	110		7.62	102		40-150	10		30
Perfluorononanesulfonic Acid (PFNS)	ND	1.91	1.61	84		1.50	80		40-150	7		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	1.99	2.30	116		2.00	103		40-150	14		30
Perfluoroundecanoic Acid (PFUnA)	ND	1.99	2.00	101		1.86	95		40-150	7		30
Perfluorodecanesulfonic Acid (PFDS)	ND	1.92	1.65	86		1.40	74		40-150	16		30
Perfluorooctanesulfonamide (PFOSA)	ND	1.99	1.98	100		1.83	94		40-150	8		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.99	2.16	109		1.58	81		40-150	31	Q	30
Perfluorododecanoic Acid (PFDoA)	ND	1.99	1.88	95		1.92	99		40-150	2		30

Matrix Spike Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1782785-4 WG1782785-5 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")												
Perfluorotridecanoic Acid (PFTrDA)	ND	1.99	2.14	108		2.02	104		40-150	6		30
Perfluorotetradecanoic Acid (PFTeDA)	ND	1.99	1.62	82		1.71	88		40-150	5		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	7.96	7.24	91		7.53	97		40-150	4		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	7.52	6.19	82		7.34	100		40-150	17		30
Perfluorododecanesulfonic Acid (PFDoS)	ND	1.93	1.68	87		1.68	89		40-150	0		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	7.44	6.00	81		5.86	80		40-150	2		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	7.52	5.76	77		5.16	70		40-150	11		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.99	2.06	104		1.83	94		40-150	12		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.99	2.04	103		1.78	91		40-150	14		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	19.9	19.3	97		18.3	94		40-150	5		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	19.9	19.3	97		17.5	90		40-150	10		30
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	3.98	3.60	91		3.52	90		40-150	2		30
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	3.98	3.69	93		3.52	90		40-150	5		30
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	3.54	3.15	89		3.13	90		40-150	1		30
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	3.98	4.42	111		4.68	120		40-150	6		30
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND	9.94	8.70	88		8.32	85		40-150	4		30
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND	49.7	36.9	74		35.3	72		40-150	4		30
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND	49.7	54.7	110		52.1	107		40-150	5		30

Matrix Spike Analysis**Batch Quality Control****Project Name:** FORMER ROTH STEEL SITE**Project Number:** 16-S0140N**Lab Number:** L2323052**Report Date:** 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1782785-4 WG1782785-5 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	114		109		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	71		83		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	76		85		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	59		68		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	73		91		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	72		82		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	48		51		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	98		109		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	96		107		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	73		82		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	66		73		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	77		81		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	78		86		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	73		72		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	74		76		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	72		78		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	73		73		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	66		73		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	84		92		20-150
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	73		78		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	73		79		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	73		74		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	71		77		20-150

Matrix Spike Analysis**Batch Quality Control****Project Name:** FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1782785-4 WG1782785-5 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")												

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	76		78		20-150

PCBS

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-03
Client ID: 23-B-33 (0-2")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:50
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 05/09/23 16:26
Analyst: JM
Percent Solids: 85%

Extraction Method: EPA 3546
Extraction Date: 05/06/23 15:28
Cleanup Method: EPA 3665A
Cleanup Date: 05/07/23
Cleanup Method: EPA 3660B
Cleanup Date: 05/07/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	54.0	4.80	1	A
Aroclor 1221	ND		ug/kg	54.0	5.41	1	A
Aroclor 1232	ND		ug/kg	54.0	11.4	1	A
Aroclor 1242	108		ug/kg	54.0	7.28	1	B
Aroclor 1248	ND		ug/kg	54.0	8.10	1	A
Aroclor 1254	260		ug/kg	54.0	5.91	1	B
Aroclor 1260	108		ug/kg	54.0	9.98	1	A
Aroclor 1262	ND		ug/kg	54.0	6.86	1	A
Aroclor 1268	ND		ug/kg	54.0	5.59	1	A
PCBs, Total	476		ug/kg	54.0	4.80	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	51		30-150	A
Decachlorobiphenyl	51		30-150	A
2,4,5,6-Tetrachloro-m-xylene	50		30-150	B
Decachlorobiphenyl	66		30-150	B

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-04
Client ID: 23-B-33 (2-12")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 15:00
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 05/07/23 17:47
Analyst: MEO
Percent Solids: 92%

Extraction Method: EPA 3546
Extraction Date: 05/06/23 15:28
Cleanup Method: EPA 3665A
Cleanup Date: 05/06/23
Cleanup Method: EPA 3660B
Cleanup Date: 05/07/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	50.2	4.45	1	A
Aroclor 1221	ND		ug/kg	50.2	5.03	1	A
Aroclor 1232	ND		ug/kg	50.2	10.6	1	A
Aroclor 1242	107		ug/kg	50.2	6.76	1	B
Aroclor 1248	ND		ug/kg	50.2	7.52	1	A
Aroclor 1254	215		ug/kg	50.2	5.49	1	B
Aroclor 1260	85.8		ug/kg	50.2	9.27	1	B
Aroclor 1262	ND		ug/kg	50.2	6.37	1	A
Aroclor 1268	ND		ug/kg	50.2	5.20	1	A
PCBs, Total	408		ug/kg	50.2	4.45	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	50		30-150	A
Decachlorobiphenyl	41		30-150	A
2,4,5,6-Tetrachloro-m-xylene	50		30-150	B
Decachlorobiphenyl	55		30-150	B

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-05
Client ID: 23-B-34 (0-2")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:00
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 05/07/23 18:00
Analyst: MEO
Percent Solids: 70%

Extraction Method: EPA 3546
Extraction Date: 05/06/23 15:28
Cleanup Method: EPA 3665A
Cleanup Date: 05/06/23
Cleanup Method: EPA 3660B
Cleanup Date: 05/07/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	68.4	6.07	1	A
Aroclor 1221	ND		ug/kg	68.4	6.85	1	A
Aroclor 1232	ND		ug/kg	68.4	14.5	1	A
Aroclor 1242	113		ug/kg	68.4	9.22	1	A
Aroclor 1248	ND		ug/kg	68.4	10.2	1	A
Aroclor 1254	332		ug/kg	68.4	7.48	1	B
Aroclor 1260	221		ug/kg	68.4	12.6	1	B
Aroclor 1262	ND		ug/kg	68.4	8.68	1	A
Aroclor 1268	ND		ug/kg	68.4	7.08	1	A
PCBs, Total	666		ug/kg	68.4	6.07	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	55		30-150	A
Decachlorobiphenyl	47		30-150	A
2,4,5,6-Tetrachloro-m-xylene	56		30-150	B
Decachlorobiphenyl	62		30-150	B

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-06
Client ID: 23-B-34 (2-12")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 14:10
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 05/07/23 16:17
Analyst: MEO
Percent Solids: 93%

Extraction Method: EPA 3546
Extraction Date: 05/06/23 15:28
Cleanup Method: EPA 3665A
Cleanup Date: 05/06/23
Cleanup Method: EPA 3660B
Cleanup Date: 05/07/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	52.3	4.65	1	A
Aroclor 1221	ND		ug/kg	52.3	5.24	1	A
Aroclor 1232	ND		ug/kg	52.3	11.1	1	A
Aroclor 1242	58.4		ug/kg	52.3	7.05	1	B
Aroclor 1248	ND		ug/kg	52.3	7.85	1	A
Aroclor 1254	188		ug/kg	52.3	5.72	1	B
Aroclor 1260	170		ug/kg	52.3	9.67	1	B
Aroclor 1262	ND		ug/kg	52.3	6.64	1	A
Aroclor 1268	ND		ug/kg	52.3	5.42	1	A
PCBs, Total	416		ug/kg	52.3	4.65	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	51		30-150	A
2,4,5,6-Tetrachloro-m-xylene	64		30-150	B
Decachlorobiphenyl	66		30-150	B

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-08
Client ID: 23-B-36 (0-2")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 11:45
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 05/08/23 15:14
Analyst: JM
Percent Solids: 96%

Extraction Method: EPA 3546
Extraction Date: 05/06/23 15:28
Cleanup Method: EPA 3665A
Cleanup Date: 05/07/23
Cleanup Method: EPA 3660B
Cleanup Date: 05/07/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	48.3	4.29	1	A
Aroclor 1221	ND		ug/kg	48.3	4.84	1	A
Aroclor 1232	ND		ug/kg	48.3	10.2	1	A
Aroclor 1242	25.3	J	ug/kg	48.3	6.51	1	A
Aroclor 1248	ND		ug/kg	48.3	7.25	1	A
Aroclor 1254	19.9	J	ug/kg	48.3	5.29	1	A
Aroclor 1260	11.3	J	ug/kg	48.3	8.93	1	B
Aroclor 1262	ND		ug/kg	48.3	6.14	1	A
Aroclor 1268	ND		ug/kg	48.3	5.01	1	A
PCBs, Total	56.5	J	ug/kg	48.3	4.29	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	53		30-150	B
Decachlorobiphenyl	62		30-150	B

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-09
Client ID: 23-B-36 (2-12")
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 11:50
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 05/08/23 15:24
Analyst: JM
Percent Solids: 94%

Extraction Method: EPA 3546
Extraction Date: 05/06/23 15:28
Cleanup Method: EPA 3665A
Cleanup Date: 05/07/23
Cleanup Method: EPA 3660B
Cleanup Date: 05/07/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	50.5	4.48	1	A
Aroclor 1221	ND		ug/kg	50.5	5.06	1	A
Aroclor 1232	ND		ug/kg	50.5	10.7	1	A
Aroclor 1242	7.66	J	ug/kg	50.5	6.81	1	A
Aroclor 1248	ND		ug/kg	50.5	7.57	1	A
Aroclor 1254	10.6	J	ug/kg	50.5	5.52	1	A
Aroclor 1260	ND		ug/kg	50.5	9.33	1	A
Aroclor 1262	ND		ug/kg	50.5	6.41	1	A
Aroclor 1268	ND		ug/kg	50.5	5.23	1	A
PCBs, Total	18.3	J	ug/kg	50.5	4.48	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	51		30-150	A
Decachlorobiphenyl	49		30-150	A
2,4,5,6-Tetrachloro-m-xylene	48		30-150	B
Decachlorobiphenyl	46		30-150	B

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

SAMPLE RESULTS

Lab ID: L2323052-10
Client ID: DUP 1
Sample Location: SYRACUSE, NY

Date Collected: 04/27/23 12:00
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 05/07/23 18:13
Analyst: MEO
Percent Solids: 85%

Extraction Method: EPA 3546
Extraction Date: 05/06/23 15:33
Cleanup Method: EPA 3665A
Cleanup Date: 05/06/23
Cleanup Method: EPA 3660B
Cleanup Date: 05/07/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	55.1	4.89	1	A
Aroclor 1221	ND		ug/kg	55.1	5.52	1	A
Aroclor 1232	ND		ug/kg	55.1	11.7	1	A
Aroclor 1242	165		ug/kg	55.1	7.42	1	B
Aroclor 1248	ND		ug/kg	55.1	8.26	1	A
Aroclor 1254	513		ug/kg	55.1	6.02	1	B
Aroclor 1260	209		ug/kg	55.1	10.2	1	B
Aroclor 1262	ND		ug/kg	55.1	6.99	1	A
Aroclor 1268	ND		ug/kg	55.1	5.70	1	A
PCBs, Total	887		ug/kg	55.1	4.89	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	49		30-150	A
2,4,5,6-Tetrachloro-m-xylene	62		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 05/07/23 15:38
Analyst: MEO

Extraction Method: EPA 3546
Extraction Date: 05/06/23 15:28
Cleanup Method: EPA 3665A
Cleanup Date: 05/06/23
Cleanup Method: EPA 3660B
Cleanup Date: 05/07/23

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 03-06,08-10 Batch: WG1775716-1						
Aroclor 1016	ND		ug/kg	46.0	4.08	A
Aroclor 1221	ND		ug/kg	46.0	4.61	A
Aroclor 1232	ND		ug/kg	46.0	9.75	A
Aroclor 1242	ND		ug/kg	46.0	6.20	A
Aroclor 1248	ND		ug/kg	46.0	6.90	A
Aroclor 1254	ND		ug/kg	46.0	5.03	A
Aroclor 1260	ND		ug/kg	46.0	8.50	A
Aroclor 1262	ND		ug/kg	46.0	5.84	A
Aroclor 1268	ND		ug/kg	46.0	4.76	A
PCBs, Total	ND		ug/kg	46.0	4.08	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	74		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	82		30-150	B

Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052

Project Number: 16-S0140N

Report Date: 05/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 03-06,08-10 Batch: WG1775716-2 WG1775716-3									
Aroclor 1016	69		79		40-140	14		50	A
Aroclor 1260	70		79		40-140	12		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		88		30-150	A
Decachlorobiphenyl	77		88		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		81		30-150	B
Decachlorobiphenyl	85		92		30-150	B

Matrix Spike Analysis**Batch Quality Control****Project Name:** FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 03-06,08-10 QC Batch ID: WG1775716-4 WG1775716-5 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")													
Aroclor 1016	ND	325	228	70		227	72		40-140	0		50	A
Aroclor 1260	170	325	367	61		347	56		40-140	6		50	B

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		62		30-150	A
Decachlorobiphenyl	50		50		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		63		30-150	B
Decachlorobiphenyl	70		70		30-150	B

METALS

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-03

Date Collected: 04/27/23 14:50

Client ID: 23-B-33 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	2310		mg/kg	9.32	2.52	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Antimony, Total	1.10	J	mg/kg	4.66	0.354	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Arsenic, Total	7.45		mg/kg	0.932	0.194	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Barium, Total	85.4		mg/kg	0.932	0.162	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Beryllium, Total	0.195	J	mg/kg	0.466	0.031	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Cadmium, Total	2.21		mg/kg	0.932	0.091	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Calcium, Total	261000		mg/kg	93.2	32.6	20	05/05/23 23:35	05/11/23 15:15	EPA 3050B	1,6010D	NTB
Chromium, Total	27.0		mg/kg	0.932	0.089	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Cobalt, Total	4.81		mg/kg	1.86	0.155	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Copper, Total	136		mg/kg	0.932	0.240	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Iron, Total	20800		mg/kg	46.6	8.41	20	05/05/23 23:35	05/11/23 15:15	EPA 3050B	1,6010D	NTB
Lead, Total	125		mg/kg	4.66	0.250	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Magnesium, Total	49500		mg/kg	93.2	14.4	20	05/05/23 23:35	05/11/23 15:15	EPA 3050B	1,6010D	NTB
Manganese, Total	346		mg/kg	0.932	0.148	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Mercury, Total	0.458		mg/kg	0.076	0.050	1	05/06/23 00:30	05/10/23 16:27	EPA 7471B	1,7471B	DMB
Nickel, Total	29.0		mg/kg	2.33	0.226	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Potassium, Total	323		mg/kg	233	13.4	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Selenium, Total	0.730	J	mg/kg	1.86	0.240	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Silver, Total	ND		mg/kg	0.466	0.264	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Sodium, Total	226		mg/kg	186	2.94	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Thallium, Total	0.346	J	mg/kg	1.86	0.294	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Vanadium, Total	21.7		mg/kg	0.932	0.189	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA
Zinc, Total	450		mg/kg	4.66	0.273	2	05/05/23 23:35	05/09/23 00:32	EPA 3050B	1,6010D	TAA



Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-04

Date Collected: 04/27/23 15:00

Client ID: 23-B-33 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 92%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	2770		mg/kg	8.63	2.33	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Antimony, Total	0.499	J	mg/kg	4.31	0.328	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Arsenic, Total	5.25		mg/kg	0.863	0.179	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Barium, Total	71.4		mg/kg	0.863	0.150	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Beryllium, Total	0.195	J	mg/kg	0.431	0.029	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Cadmium, Total	2.51		mg/kg	0.863	0.085	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Calcium, Total	253000		mg/kg	86.3	30.2	20	05/05/23 23:35	05/11/23 15:18	EPA 3050B	1,6010D	NTB
Chromium, Total	39.9		mg/kg	0.863	0.083	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Cobalt, Total	5.10		mg/kg	1.72	0.143	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Copper, Total	168		mg/kg	0.863	0.223	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Iron, Total	22800		mg/kg	43.1	7.79	20	05/05/23 23:35	05/11/23 15:18	EPA 3050B	1,6010D	NTB
Lead, Total	135		mg/kg	4.31	0.231	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Magnesium, Total	40000		mg/kg	86.3	13.3	20	05/05/23 23:35	05/11/23 15:18	EPA 3050B	1,6010D	NTB
Manganese, Total	298		mg/kg	0.863	0.137	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Mercury, Total	0.684		mg/kg	0.076	0.050	1	05/06/23 00:30	05/10/23 16:31	EPA 7471B	1,7471B	DMB
Nickel, Total	34.6		mg/kg	2.16	0.209	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Potassium, Total	292		mg/kg	216	12.4	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Selenium, Total	0.762	J	mg/kg	1.72	0.223	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Silver, Total	ND		mg/kg	0.431	0.244	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Sodium, Total	173		mg/kg	172	2.72	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Thallium, Total	0.492	J	mg/kg	1.72	0.272	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Vanadium, Total	43.2		mg/kg	0.863	0.175	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA
Zinc, Total	514		mg/kg	4.31	0.253	2	05/05/23 23:35	05/09/23 00:37	EPA 3050B	1,6010D	TAA



Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-05

Date Collected: 04/27/23 14:00

Client ID: 23-B-34 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 70%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	2640		mg/kg	11.1	3.00	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Antimony, Total	0.897	J	mg/kg	5.56	0.422	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Arsenic, Total	5.42		mg/kg	1.11	0.231	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Barium, Total	113		mg/kg	1.11	0.193	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Beryllium, Total	0.198	J	mg/kg	0.556	0.037	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Cadmium, Total	2.78		mg/kg	1.11	0.109	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Calcium, Total	304000		mg/kg	111	38.9	20	05/05/23 23:35	05/11/23 15:21	EPA 3050B	1,6010D	NTB
Chromium, Total	33.6		mg/kg	1.11	0.107	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Cobalt, Total	5.33		mg/kg	2.22	0.184	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Copper, Total	147		mg/kg	1.11	0.287	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Iron, Total	22700		mg/kg	55.6	10.0	20	05/05/23 23:35	05/11/23 15:21	EPA 3050B	1,6010D	NTB
Lead, Total	152		mg/kg	5.56	0.298	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Magnesium, Total	46800		mg/kg	111	17.1	20	05/05/23 23:35	05/11/23 15:21	EPA 3050B	1,6010D	NTB
Manganese, Total	334		mg/kg	1.11	0.177	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Mercury, Total	0.303		mg/kg	0.104	0.068	1	05/06/23 00:30	05/10/23 16:34	EPA 7471B	1,7471B	DMB
Nickel, Total	34.2		mg/kg	2.78	0.269	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Potassium, Total	383		mg/kg	278	16.0	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Selenium, Total	0.641	J	mg/kg	2.22	0.287	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Silver, Total	0.407	J	mg/kg	0.556	0.314	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Sodium, Total	233		mg/kg	222	3.50	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Thallium, Total	0.521	J	mg/kg	2.22	0.350	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Vanadium, Total	18.0		mg/kg	1.11	0.226	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA
Zinc, Total	660		mg/kg	5.56	0.326	2	05/05/23 23:35	05/09/23 00:42	EPA 3050B	1,6010D	TAA



Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-06

Date Collected: 04/27/23 14:10

Client ID: 23-B-34 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	1990		mg/kg	8.50	2.29	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Antimony, Total	0.718	J	mg/kg	4.25	0.323	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Arsenic, Total	5.98		mg/kg	0.850	0.177	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Barium, Total	68.6		mg/kg	0.850	0.148	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Beryllium, Total	0.216	J	mg/kg	0.425	0.028	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Cadmium, Total	1.35		mg/kg	0.850	0.083	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Calcium, Total	285000		mg/kg	85.0	29.7	20	05/05/23 23:35	05/11/23 15:23	EPA 3050B	1,6010D	NTB
Chromium, Total	16.9		mg/kg	0.850	0.082	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Cobalt, Total	5.41		mg/kg	1.70	0.141	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Copper, Total	84.4		mg/kg	0.850	0.219	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Iron, Total	15200		mg/kg	42.5	7.67	20	05/05/23 23:35	05/11/23 15:23	EPA 3050B	1,6010D	NTB
Lead, Total	90.2		mg/kg	4.25	0.228	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Magnesium, Total	47000		mg/kg	85.0	13.1	20	05/05/23 23:35	05/11/23 15:23	EPA 3050B	1,6010D	NTB
Manganese, Total	341		mg/kg	0.850	0.135	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Mercury, Total	0.158		mg/kg	0.076	0.049	1	05/06/23 00:30	05/07/23 21:39	EPA 7471B	1,7471B	TAA
Nickel, Total	19.9		mg/kg	2.12	0.206	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Potassium, Total	454		mg/kg	212	12.2	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Selenium, Total	0.464	J	mg/kg	1.70	0.219	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Silver, Total	ND		mg/kg	0.425	0.240	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Sodium, Total	215		mg/kg	170	2.68	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Thallium, Total	0.274	J	mg/kg	1.70	0.268	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Vanadium, Total	15.4		mg/kg	0.850	0.172	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA
Zinc, Total	263		mg/kg	4.25	0.249	2	05/05/23 23:35	05/08/23 23:24	EPA 3050B	1,6010D	TAA



Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-08

Date Collected: 04/27/23 11:45

Client ID: 23-B-36 (0-2")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 96%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	1770		mg/kg	8.14	2.20	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Antimony, Total	ND		mg/kg	4.07	0.309	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Arsenic, Total	5.86		mg/kg	0.814	0.169	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Barium, Total	35.5		mg/kg	0.814	0.142	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Beryllium, Total	0.280	J	mg/kg	0.407	0.027	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Cadmium, Total	0.377	J	mg/kg	0.814	0.080	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Calcium, Total	284000		mg/kg	81.4	28.5	20	05/05/23 23:35	05/11/23 16:30	EPA 3050B	1,6010D	NTB
Chromium, Total	9.04		mg/kg	0.814	0.078	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Cobalt, Total	5.10		mg/kg	1.63	0.135	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Copper, Total	37.0		mg/kg	0.814	0.210	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Iron, Total	7430		mg/kg	40.7	7.35	20	05/05/23 23:35	05/11/23 16:30	EPA 3050B	1,6010D	NTB
Lead, Total	24.7		mg/kg	4.07	0.218	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Magnesium, Total	26100		mg/kg	81.4	12.5	20	05/05/23 23:35	05/11/23 16:30	EPA 3050B	1,6010D	NTB
Manganese, Total	265		mg/kg	0.814	0.129	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Mercury, Total	ND		mg/kg	0.073	0.048	1	05/06/23 00:30	05/10/23 16:37	EPA 7471B	1,7471B	DMB
Nickel, Total	14.9		mg/kg	2.04	0.197	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Potassium, Total	682		mg/kg	204	11.7	2	05/05/23 23:35	05/11/23 16:39	EPA 3050B	1,6010D	NTB
Selenium, Total	0.298	J	mg/kg	1.63	0.210	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Silver, Total	ND		mg/kg	0.407	0.230	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Sodium, Total	196		mg/kg	163	2.56	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Thallium, Total	ND		mg/kg	1.63	0.256	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Vanadium, Total	9.83		mg/kg	0.814	0.165	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA
Zinc, Total	91.7		mg/kg	4.07	0.238	2	05/05/23 23:35	05/09/23 00:56	EPA 3050B	1,6010D	TAA



Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-09

Date Collected: 04/27/23 11:50

Client ID: 23-B-36 (2-12")

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 94%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	1170		mg/kg	8.13	2.19	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Antimony, Total	ND		mg/kg	4.06	0.309	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Arsenic, Total	3.56		mg/kg	0.813	0.169	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Barium, Total	51.3		mg/kg	0.813	0.141	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Beryllium, Total	0.168	J	mg/kg	0.406	0.027	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Cadmium, Total	0.140	J	mg/kg	0.813	0.080	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Calcium, Total	282000		mg/kg	81.3	28.4	20	05/05/23 23:35	05/11/23 16:33	EPA 3050B	1,6010D	NTB
Chromium, Total	7.66		mg/kg	0.813	0.078	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Cobalt, Total	2.15		mg/kg	1.62	0.135	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Copper, Total	15.0		mg/kg	0.813	0.210	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Iron, Total	4980		mg/kg	40.6	7.34	20	05/05/23 23:35	05/11/23 16:33	EPA 3050B	1,6010D	NTB
Lead, Total	12.1		mg/kg	4.06	0.218	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Magnesium, Total	33400		mg/kg	81.3	12.5	20	05/05/23 23:35	05/11/23 16:33	EPA 3050B	1,6010D	NTB
Manganese, Total	149		mg/kg	0.813	0.129	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Mercury, Total	ND		mg/kg	0.078	0.051	1	05/06/23 00:30	05/10/23 16:41	EPA 7471B	1,7471B	DMB
Nickel, Total	7.54		mg/kg	2.03	0.197	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Potassium, Total	351		mg/kg	203	11.7	2	05/05/23 23:35	05/11/23 16:41	EPA 3050B	1,6010D	NTB
Selenium, Total	0.303	J	mg/kg	1.62	0.210	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Silver, Total	ND		mg/kg	0.406	0.230	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Sodium, Total	175		mg/kg	162	2.56	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Thallium, Total	ND		mg/kg	1.62	0.256	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Vanadium, Total	19.6		mg/kg	0.813	0.165	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA
Zinc, Total	32.4		mg/kg	4.06	0.238	2	05/05/23 23:35	05/09/23 01:01	EPA 3050B	1,6010D	TAA



Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS**

Lab ID: L2323052-10

Date Collected: 04/27/23 12:00

Client ID: DUP 1

Date Received: 04/27/23

Sample Location: SYRACUSE, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	2440		mg/kg	9.28	2.51	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Antimony, Total	0.525	J	mg/kg	4.64	0.353	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Arsenic, Total	5.66		mg/kg	0.928	0.193	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Barium, Total	81.0		mg/kg	0.928	0.162	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Beryllium, Total	0.191	J	mg/kg	0.464	0.031	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Cadmium, Total	3.00		mg/kg	0.928	0.091	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Calcium, Total	294000		mg/kg	92.8	32.5	20	05/05/23 23:35	05/11/23 16:36	EPA 3050B	1,6010D	NTB
Chromium, Total	31.0		mg/kg	0.928	0.089	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Cobalt, Total	4.66		mg/kg	1.86	0.154	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Copper, Total	182		mg/kg	0.928	0.239	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Iron, Total	19500		mg/kg	46.4	8.38	20	05/05/23 23:35	05/11/23 16:36	EPA 3050B	1,6010D	NTB
Lead, Total	150		mg/kg	4.64	0.249	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Magnesium, Total	34700		mg/kg	92.8	14.3	20	05/05/23 23:35	05/11/23 16:36	EPA 3050B	1,6010D	NTB
Manganese, Total	269		mg/kg	0.928	0.148	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Mercury, Total	0.545		mg/kg	0.077	0.050	1	05/06/23 00:30	05/10/23 16:44	EPA 7471B	1,7471B	DMB
Nickel, Total	34.9		mg/kg	2.32	0.225	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Potassium, Total	326		mg/kg	232	13.4	2	05/05/23 23:35	05/11/23 16:44	EPA 3050B	1,6010D	NTB
Selenium, Total	0.872	J	mg/kg	1.86	0.239	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Silver, Total	0.835		mg/kg	0.464	0.263	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Sodium, Total	205		mg/kg	186	2.92	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Thallium, Total	0.382	J	mg/kg	1.86	0.292	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Vanadium, Total	15.8		mg/kg	0.928	0.188	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA
Zinc, Total	502		mg/kg	4.64	0.272	2	05/05/23 23:35	05/09/23 01:05	EPA 3050B	1,6010D	TAA



Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052

Project Number: 16-S0140N

Report Date: 05/26/23

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 03-06,08-10 Batch: WG1775240-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Antimony, Total	ND		mg/kg	2.00	0.152	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Arsenic, Total	ND		mg/kg	0.400	0.083	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Barium, Total	ND		mg/kg	0.400	0.070	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Beryllium, Total	ND		mg/kg	0.200	0.013	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Cadmium, Total	ND		mg/kg	0.400	0.039	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Calcium, Total	ND		mg/kg	4.00	1.40	1	05/05/23 23:35	05/11/23 15:09	1,6010D	NTB
Chromium, Total	0.061	J	mg/kg	0.400	0.038	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Cobalt, Total	ND		mg/kg	0.800	0.066	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Copper, Total	ND		mg/kg	0.400	0.103	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Iron, Total	3.37		mg/kg	2.00	0.361	1	05/05/23 23:35	05/11/23 15:09	1,6010D	NTB
Lead, Total	ND		mg/kg	2.00	0.107	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Magnesium, Total	ND		mg/kg	4.00	0.616	1	05/05/23 23:35	05/11/23 15:09	1,6010D	NTB
Manganese, Total	ND		mg/kg	0.400	0.064	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Nickel, Total	ND		mg/kg	1.00	0.097	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Potassium, Total	ND		mg/kg	100	5.76	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Selenium, Total	ND		mg/kg	0.800	0.103	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Silver, Total	ND		mg/kg	0.200	0.113	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Sodium, Total	2.00	J	mg/kg	80.0	1.26	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Thallium, Total	0.136	J	mg/kg	0.800	0.126	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Vanadium, Total	ND		mg/kg	0.400	0.081	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA
Zinc, Total	ND		mg/kg	2.00	0.117	1	05/05/23 23:35	05/08/23 22:09	1,6010D	TAA

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 03-06,08-10 Batch: WG1775241-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	05/06/23 00:30	05/07/23 21:32	1,7471B	TAA



Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052

Project Number: 16-S0140N

Report Date: 05/26/23

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 03-06,08-10 Batch: WG1775240-2 SRM Lot Number: D119-540								
Aluminum, Total	72		-		48-152	-		
Antimony, Total	106		-		10-190	-		
Arsenic, Total	100		-		83-117	-		
Barium, Total	94		-		82-118	-		
Beryllium, Total	99		-		83-117	-		
Cadmium, Total	101		-		82-117	-		
Calcium, Total	94		-		81-118	-		
Chromium, Total	100		-		82-119	-		
Cobalt, Total	102		-		83-117	-		
Copper, Total	101		-		84-116	-		
Iron, Total	91		-		60-140	-		
Lead, Total	100		-		82-118	-		
Magnesium, Total	89		-		76-124	-		
Manganese, Total	98		-		82-118	-		
Nickel, Total	101		-		82-117	-		
Potassium, Total	85		-		70-130	-		
Selenium, Total	101		-		79-121	-		
Silver, Total	100		-		80-120	-		
Sodium, Total	99		-		74-126	-		
Thallium, Total	102		-		81-119	-		
Vanadium, Total	98		-		79-121	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 03-06,08-10 Batch: WG1775240-2 SRM Lot Number: D119-540					
Zinc, Total	100	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 03-06,08-10 Batch: WG1775241-2 SRM Lot Number: D119-540					
Mercury, Total	93	-	73-127	-	

Matrix Spike Analysis

Batch Quality Control

Project Name: FORMER ROTH STEEL SITE

Project Number: 16-S0140N

Lab Number: L2323052

Report Date: 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 03-06,08-10 QC Batch ID: WG1775240-3 WG1775240-4 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")												
Aluminum, Total	1990	169	1850	0	Q	2320	192	Q	75-125	23	Q	20
Antimony, Total	0.718J	42.2	42.7	101		46.0	107		75-125	7		20
Arsenic, Total	5.98	10.1	19.2	130	Q	20.5	141	Q	75-125	7		20
Barium, Total	68.6	169	236	99		247	104		75-125	5		20
Beryllium, Total	0.216J	4.22	4.36	103		4.64	108		75-125	6		20
Cadmium, Total	1.35	4.47	6.06	105		6.02	102		75-125	1		20
Calcium, Total	285000	844	354000	8180	Q	349000	7450	Q	75-125	1		20
Chromium, Total	16.9	16.9	73.4	335	Q	36.5	114		75-125	67	Q	20
Cobalt, Total	5.41	42.2	48.3	102		51.5	107		75-125	6		20
Copper, Total	84.4	21.1	93.5	43	Q	108	110		75-125	14		20
Iron, Total	15200	84.4	15400	237	Q	19600	5120	Q	75-125	24	Q	20
Lead, Total	90.2	44.7	138	107		144	118		75-125	4		20
Magnesium, Total	47000	844	35100	0	Q	35600	0	Q	75-125	1		20
Manganese, Total	341	42.2	326	0	Q	408	156	Q	75-125	22	Q	20
Nickel, Total	19.9	42.2	110	214	Q	64.6	104		75-125	52	Q	20
Potassium, Total	454	844	1340	105		1500	122		75-125	11		20
Selenium, Total	0.464J	10.1	12.3	121		13.0	126	Q	75-125	6		20
Silver, Total	ND	4.22	4.92	117		5.66	132	Q	75-125	14		20
Sodium, Total	215	844	1180	114		1200	115		75-125	2		20
Thallium, Total	0.274J	10.1	8.24	81		8.87	86		75-125	7		20
Vanadium, Total	15.4	42.2	54.1	92		59.9	104		75-125	10		20

Matrix Spike Analysis Batch Quality Control

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 03-06,08-10 QC Batch ID: WG1775240-3 WG1775240-4 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")									
Zinc, Total	263	42.2	283	47	Q	293	70	Q	75-125 3 20
Total Metals - Mansfield Lab Associated sample(s): 03-06,08-10 QC Batch ID: WG1775241-3 WG1775241-4 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")									
Mercury, Total	0.158	1.41	1.54	98		1.75	104		80-120 13 20

INORGANICS & MISCELLANEOUS

Project Name: FORMER ROTH STEEL SITE**Project Number:** 16-S0140N**Lab Number:** L2323052**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-01**Client ID:** 23-B-32 (0-2")**Sample Location:** SYRACUSE, NY**Date Collected:** 04/27/23 15:30**Date Received:** 04/27/23**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.7		%	0.100	NA	1	-	04/28/23 12:14	121,2540G	ROI



Project Name: FORMER ROTH STEEL SITE**Project Number:** 16-S0140N**Lab Number:** L2323052**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-02**Client ID:** 23-B-32 (2-12")**Sample Location:** SYRACUSE, NY**Date Collected:** 04/27/23 15:35**Date Received:** 04/27/23**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.0		%	0.100	NA	1	-	04/28/23 12:14	121,2540G	ROI



Project Name: FORMER ROTH STEEL SITE**Project Number:** 16-S0140N**Lab Number:** L2323052**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-03**Client ID:** 23-B-33 (0-2")**Sample Location:** SYRACUSE, NY**Date Collected:** 04/27/23 14:50**Date Received:** 04/27/23**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.1		%	0.100	NA	1	-	04/28/23 12:14	121,2540G	ROI



Project Name: FORMER ROTH STEEL SITE**Project Number:** 16-S0140N**Lab Number:** L2323052**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-04**Client ID:** 23-B-33 (2-12")**Sample Location:** SYRACUSE, NY**Date Collected:** 04/27/23 15:00**Date Received:** 04/27/23**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	92.2		%	0.100	NA	1	-	04/28/23 12:14	121,2540G	ROI



Project Name: FORMER ROTH STEEL SITE**Project Number:** 16-S0140N**Lab Number:** L2323052**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-05**Client ID:** 23-B-34 (0-2")**Sample Location:** SYRACUSE, NY**Date Collected:** 04/27/23 14:00**Date Received:** 04/27/23**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	70.3		%	0.100	NA	1	-	04/28/23 12:14	121,2540G	ROI



Project Name: FORMER ROTH STEEL SITE**Project Number:** 16-S0140N**Lab Number:** L2323052**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-06**Client ID:** 23-B-34 (2-12")**Sample Location:** SYRACUSE, NY**Date Collected:** 04/27/23 14:10**Date Received:** 04/27/23**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	92.6		%	0.100	NA	1	-	04/28/23 12:14	121,2540G	ROI



Project Name: FORMER ROTH STEEL SITE**Project Number:** 16-S0140N**Lab Number:** L2323052**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-07**Client ID:** 23-B-35 (0-16")**Sample Location:** SYRACUSE, NY**Date Collected:** 04/27/23 13:10**Date Received:** 04/27/23**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.0		%	0.100	NA	1	-	04/28/23 12:14	121,2540G	ROI



Project Name: FORMER ROTH STEEL SITE**Project Number:** 16-S0140N**Lab Number:** L2323052**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-08**Client ID:** 23-B-36 (0-2")**Sample Location:** SYRACUSE, NY**Date Collected:** 04/27/23 11:45**Date Received:** 04/27/23**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	95.8		%	0.100	NA	1	-	04/28/23 12:14	121,2540G	ROI



Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-09**Date Collected:** 04/27/23 11:50**Client ID:** 23-B-36 (2-12")**Date Received:** 04/27/23**Sample Location:** SYRACUSE, NY**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.3		%	0.100	NA	1	-	04/28/23 12:14	121,2540G	ROI



Project Name: FORMER ROTH STEEL SITE**Project Number:** 16-S0140N**Lab Number:** L2323052**Report Date:** 05/26/23**SAMPLE RESULTS****Lab ID:** L2323052-10**Client ID:** DUP 1**Sample Location:** SYRACUSE, NY**Date Collected:** 04/27/23 12:00**Date Received:** 04/27/23**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.1		%	0.100	NA	1	-	04/28/23 12:14	121,2540G	ROI



Lab Duplicate Analysis
*Batch Quality Control***Project Name:** FORMER ROTH STEEL SITE**Project Number:** 16-S0140N**Lab Number:** L2323052**Report Date:** 05/26/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1772468-1 QC Sample: L2323052-06 Client ID: 23-B-34 (2-12")						
Solids, Total	92.6	94.2	%	2		20

Project Name: FORMER ROTH STEEL SITE**Lab Number:** L2323052**Project Number:** 16-S0140N**Report Date:** 05/26/23**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2323052-01A	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		TS(7)
L2323052-01B	Plastic 8oz unpreserved	A	NA		3.4	Y	Absent		A2-1633-DRAFT(90)
L2323052-02A	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		TS(7)
L2323052-02B	Plastic 8oz unpreserved	A	NA		3.4	Y	Absent		A2-1633-DRAFT(90)
L2323052-03A	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		TS(7)
L2323052-03B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		BE-Ti(180),BA-Ti(180),AS-Ti(180),AG-Ti(180),AL-Ti(180),TL-Ti(180),CR-Ti(180),NI-Ti(180),CU-Ti(180),SE-Ti(180),SB-Ti(180),PB-Ti(180),ZN-Ti(180),CO-Ti(180),V-Ti(180),FE-Ti(180),HG-T(28),MG-Ti(180),MN-Ti(180),NA-Ti(180),CD-Ti(180),K-Ti(180),CA-Ti(180)
L2323052-03C	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-8270(14),NYTCL-8082(365)
L2323052-03D	Plastic 8oz unpreserved	A	NA		3.4	Y	Absent		A2-1633-DRAFT(90)
L2323052-04A	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		TS(7)
L2323052-04B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		BE-Ti(180),AS-Ti(180),BA-Ti(180),AG-Ti(180),NI-Ti(180),AL-Ti(180),CR-Ti(180),TL-Ti(180),SB-Ti(180),ZN-Ti(180),CU-Ti(180),PB-Ti(180),SE-Ti(180),CO-Ti(180),V-Ti(180),FE-Ti(180),MG-Ti(180),MN-Ti(180),HG-T(28),K-Ti(180),NA-Ti(180),CA-Ti(180),CD-Ti(180)
L2323052-04C	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-8270(14),NYTCL-8082(365)
L2323052-04D	Plastic 8oz unpreserved	A	NA		3.4	Y	Absent		A2-1633-DRAFT(90)
L2323052-05A	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		TS(7)
L2323052-05B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		BE-Ti(180),BA-Ti(180),AS-Ti(180),AG-Ti(180),AL-Ti(180),NI-Ti(180),TL-Ti(180),CR-Ti(180),PB-Ti(180),ZN-Ti(180),CU-Ti(180),SE-Ti(180),SB-Ti(180),V-Ti(180),CO-Ti(180),MG-Ti(180),FE-Ti(180),HG-T(28),MN-Ti(180),K-Ti(180),NA-Ti(180),CA-Ti(180),CD-Ti(180)
L2323052-05C	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-8270(14),NYTCL-8082(365)

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Serial_No: 05262316:13
Lab Number: L2323052
Report Date: 05/26/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2323052-05D	Plastic 8oz unpreserved	A	NA		3.4	Y	Absent		A2-1633-DRAFT(90)
L2323052-06A	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		TS(7)
L2323052-06A1	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		TS(7)
L2323052-06A2	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		TS(7)
L2323052-06B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		BE-Ti(180),AS-Ti(180),BA-Ti(180),AG-Ti(180),AL-Ti(180),NI-Ti(180),CR-Ti(180),TL-Ti(180),PB-Ti(180),CU-Ti(180),ZN-Ti(180),SB-Ti(180),SE-Ti(180),V-Ti(180),CO-Ti(180),MN-Ti(180),MG-Ti(180),FE-Ti(180),HG-T(28),K-Ti(180),CD-Ti(180),NA-Ti(180),CA-Ti(180)
L2323052-06B1	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		BE-Ti(180),BA-Ti(180),NI-Ti(180),CR-Ti(180),TL-Ti(180),PB-Ti(180),CU-Ti(180),ZN-Ti(180),SB-Ti(180),SE-Ti(180),V-Ti(180),CO-Ti(180),MN-Ti(180),MG-Ti(180),FE-Ti(180),HG-T(28),K-Ti(180),CD-Ti(180),NA-Ti(180),CA-Ti(180)
L2323052-06B2	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		BE-Ti(180),BA-Ti(180),NI-Ti(180),CR-Ti(180),TL-Ti(180),PB-Ti(180),CU-Ti(180),ZN-Ti(180),SB-Ti(180),SE-Ti(180),V-Ti(180),CO-Ti(180),MN-Ti(180),MG-Ti(180),FE-Ti(180),HG-T(28),K-Ti(180),CD-Ti(180),NA-Ti(180),CA-Ti(180)
L2323052-06C	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-8270(14),NYTCL-8082(365)
L2323052-06C1	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-8270(14),NYTCL-8082(365)
L2323052-06C2	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-8270(14),NYTCL-8082(365)
L2323052-06D	Plastic 8oz unpreserved	A	NA		3.4	Y	Absent		A2-1633-DRAFT(90)
L2323052-06D1	Plastic 8oz unpreserved	A	NA		3.4	Y	Absent		A2-1633-DRAFT(90)
L2323052-06D2	Plastic 8oz unpreserved	A	NA		3.4	Y	Absent		A2-1633-DRAFT(90)
L2323052-07A	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		TS(7)
L2323052-07B	Plastic 8oz unpreserved	A	NA		3.4	Y	Absent		A2-1633-DRAFT(90)
L2323052-08A	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		TS(7)
L2323052-08B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		BE-Ti(180),BA-Ti(180),AS-Ti(180),AG-Ti(180),NI-Ti(180),AL-Ti(180),CR-Ti(180),TL-Ti(180),CU-Ti(180),PB-Ti(180),SE-Ti(180),ZN-Ti(180),SB-Ti(180),V-Ti(180),CO-Ti(180),MG-Ti(180),HG-T(28),MN-Ti(180),FE-Ti(180),CD-Ti(180),K-Ti(180),NA-Ti(180),CA-Ti(180)
L2323052-08C	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-8270(14),NYTCL-8082(365)
L2323052-08D	Plastic 8oz unpreserved	A	NA		3.4	Y	Absent		A2-1633-DRAFT(90)

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Serial_No: 05262316:13
Lab Number: L2323052
Report Date: 05/26/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2323052-09A	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		TS(7)
L2323052-09B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),AL-TI(180),NI-TI(180),TL-TI(180),CR-TI(180),SB-TI(180),ZN-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),V-TI(180),CO-TI(180),FE-TI(180),MG-TI(180),HG-T(28),MN-TI(180),CD-TI(180),NA-TI(180),CA-TI(180),K-TI(180)
L2323052-09C	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-8270(14),NYTCL-8082(365)
L2323052-09D	Plastic 8oz unpreserved	A	NA		3.4	Y	Absent		A2-1633-DRAFT(90)
L2323052-10A	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		TS(7)
L2323052-10B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),NI-TI(180),AL-TI(180),CR-TI(180),TL-TI(180),ZN-TI(180),PB-TI(180),SE-TI(180),SB-TI(180),CU-TI(180),V-TI(180),CO-TI(180),HG-T(28),MG-TI(180),FE-TI(180),MN-TI(180),CA-TI(180),K-TI(180),NA-TI(180),CD-TI(180)
L2323052-10C	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-8270(14),NYTCL-8082(365)
L2323052-10D	Plastic 8oz unpreserved	A	NA		3.4	Y	Absent		A2-1633-DRAFT(90)

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Serial_No:05262316:13
Lab Number: L2323052
Report Date: 05/26/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA/PFTeDA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS/PFDoS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
Perfluoropropanesulfonic Acid	PFPrS	423-41-6
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA/PFOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Serial_No:05262316:13
Lab Number: L2323052
Report Date: 05/26/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
FLUOROTELOMER CARBOXYLIC ACIDS (FTCAs)		
3-Perfluoroheptyl Propanoic Acid	7:3FTCA	812-70-4
2H,2H,3H,3H-Perfluorooctanoic Acid	5:3FTCA	914637-49-3
3-Perfluoropropyl Propanoic Acid	3:3FTCA	356-02-5

Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

Data Qualifiers

Identified Compounds (TICs).

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report with 'J' Qualifiers



Project Name: FORMER ROTH STEEL SITE
Project Number: 16-S0140N

Lab Number: L2323052
Report Date: 05/26/23

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 144 Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS. Draft EPA Method 1633, EPA Document 821-D-22-001, June 2022.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 19

Published Date: 4/2/2021 1:14:23 PM

Page 1 of 1

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Page 163 of 164

Page 164 of 164



APPENDIX E

2023 DUSR



Geology

Hydrology

Remediation

Water Supply

June 22, 2023

Mr. Matthew Gaffuri
Environmental Scientist
Natural & Cultural Resources
JMT of New York, Inc.
19 British American Blvd.
Latham, New York 12110

Re: Data Validation Report
Project-16-S0140N-001, Roth Steel
April 2023 Soil Samples

Dear Mr. Gaffuri:

The data usability summary report (DUSR) and data validation summaries are attached to this letter for Project-16-S0140N-001, Roth Steel. The data for Alpha Analytical Labs SDG number L2323052 have issues that are identified and discussed in the DUSR validation summaries. There are data that are qualified as rejected, unusable (R) in the data pack. The data is rejected based solely on the validation guidance criteria. The rejected data may be determined to be acceptable to the user based on additional information that is not contained in the data validation criteria.

A list of common data validation acronyms is attached to this letter to assist you in interpreting the validation summaries. If you have any questions concerning the work performed, please contact me at (518) 348-6995. Thank you for the opportunity to assist JMT of New York, Inc.

Sincerely,
Alpha Geoscience

Donald Anné
Senior Chemist

L2323052



Geology

Hydrology

Remediation

Water Supply

**Data Usability Summary Report
for Alpha Analytical Labs
SDG Number: L2323052**

**9 Soil Samples and 1 Field Duplicate
Collected April 27, 2023**

Prepared by: Donald Anné
June 22, 2023

The data package contained the documentation as required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contained the results of semi-volatile, PCBs, and TAL metals analyses for 6 soil samples and 1 field duplicate, and the results of PFAS analyses for 9 soil samples and 1 field duplicate.

The overall performances of the analyses are acceptable. Alpha Analytical Labs did fulfill the requirements of the analytical methods except for the 8270D semi-volatile analyses.

The data are mostly acceptable with some issues that are identified in the accompanying data validation reviews. The following data were qualified:

- The initial analyses samples for semi-volatile were rejected because the LCS/LCSD associated with the initial analyses was non-compliant.
- The positive and “not detected” semi-volatile results for target compounds were qualified as estimated (J or UJ respectively unless otherwise qualified) for all samples because the samples were re-extracted beyond USEPA SW-846 holding times.
- The positive semi-volatile results for fluoranthene, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, phenanthrene, and pyrene were qualified as estimated, biased low (J-) for re-extracted sample 23-B-34 (2-12”) because 1 of 2 percent recoveries for fluoranthene, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, phenanthrene, and pyrene were below QC limits, but not below 10% in the soil MS/MSD.
- The “not detected” semi-volatile results for 3,3'-dichlorobenzidine, hexachlorocyclopentadiene, 4-nitrophenol, 2,4-dinitrophenol, and 4,6-dinitro-2-methylphenol were qualified as rejected, unusable (R) for sample 23-B-34 (2-12”) because 2 of 2 percent recoveries for 3,3'-dichlorobenzidine, hexachlorocyclopentadiene, 4-nitrophenol, 2,4-dinitrophenol, and 4,6-dinitro-2-methylphenol were below QC limits and 1 or 2 below 10% in the soil MS/MSD.

- The positive PCB result for aroclor-1260 was qualified as “estimated, biased high” (J+) for sample 23-B-34 (0-2”) because the %RPD for dual column quantitation of aroclor-1260 was above the allowable maximum, but not above 70% and the higher result was reported.
- The positive PCB result for aroclor-1242 was qualified as “estimated, biased high” (J+) for sample 23-B-36 (2-12”) because the %RPD for dual column quantitation of aroclor-1242 was above the allowable maximum, but not above 70% and the higher result was reported.
- The positive PCB results for aroclor-1242, aroclor-1254, aroclor-1260, and total PCBs were qualified as estimated (J) for samples 23-B-33 (2-12”) and DUP 1 because the relative percent differences for aroclor-1242, aroclor-1254, aroclor-1260, and total PCBs were above the allowable maximum in the soil field duplicate pair 23-B-33 (2-12”)/DUP 1.
- The “not detected” PFAS results for 11CL-PF3OUdS were qualified as “estimated” (UJ) in samples 23-B-32 (0-2”), 23-B-32 (2-12”), 23-B-33 (0-2”), 23-B-33 (2-12”), 23-B-34 (0-2”), 23-B-34 (2-12”), and 23-B-35 (0-16”) because the %D for 11CI-PF3OUdS was below the QC limits, but not below 10% the associated continuing calibration.
- The positive metal results for arsenic were qualified as “estimated, biased high” (J+) for all 6 soil samples and the field duplicate because 2 of 2 percent recoveries for arsenic were above control limits in the associated soil MS/MSD sample.
- The positive metal results for chromium, nickel, and selenium were qualified as “estimated, biased high” (J+) for all 6 soil samples and the field duplicate because 1 of 2 percent recoveries for calcium, nickel, and selenium were above control limits in the associated soil MS/MSD sample.
- The positive metal results for silver were qualified as “estimated, biased high” (J+) for samples 23-B-34 (0-2”) and DUP 1 because 1 of 2 percent recoveries for silver was above control limits in the associated soil MS/MSD sample.
- The positive metal results for zinc were qualified as “estimated, biased low” (J-) for all 6 soil samples and the field duplicate because 2 of 2 percent recoveries for zinc were below control limits, but not below 10% in the associated soil MS/MSD sample.
- The positive metal results for copper were qualified as “estimated, biased low” (J-) for all 6 soil samples and the field duplicate because 1 of 2 percent recoveries for copper was below control limits, but not below 10% in the associated soil MS/MSD sample.

- The positive metal results for vanadium were qualified as estimated (J) in samples 23-B-33 (2-12) and DUP 1 because the relative percent difference for vanadium was above the allowable maximum in the soil field duplicate pair 23-B-33 (2-12)/DUP 1.

All data that are not qualified rejected (R) are considered usable with estimated (J+, J, J-, or UJ) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

Qualified Data Section

Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-03D
 Client ID : 23-B-33 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-03D1
 Sample Amount : 30.72 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:50
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 08:35
 Date Extracted : 05/08/23
 Dilution Factor : 10
 Analyst : JG
 Instrument ID : JULIET
 GC Column : RTX5-MS
 %Solids : 85
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	460	1500	200	J
118-74-1	Hexachlorobenzene	ND	1100	210	U
111-44-4	Bis(2-chloroethyl)ether	ND	1700	260	U
91-58-7	2-Chloronaphthalene	ND	1900	190	U
91-94-1	3,3'-Dichlorobenzidine	ND	1900	510	U
121-14-2	2,4-Dinitrotoluene	ND	1900	380	U
606-20-2	2,6-Dinitrotoluene	ND	1900	330	U
206-44-0	Fluoranthene	12000	1100	220	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1900	200	U
101-55-3	4-Bromophenyl phenyl ether	ND	1900	290	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2300	330	U
111-91-1	Bis(2-chloroethoxy)methane	ND	2100	190	U
87-68-3	Hexachlorobutadiene	ND	1900	280	U
77-47-4	Hexachlorocyclopentadiene	ND	5500	1700	U
67-72-1	Hexachloroethane	ND	1500	310	U
78-59-1	Isophorone	ND	1700	250	U
91-20-3	Naphthalene	4100	1900	230	
98-95-3	Nitrobenzene	ND	1700	280	U
86-30-6	NDPA/DPA	ND	1500	220	U
621-64-7	n-Nitrosodi-n-propylamine	ND	1900	300	U
117-81-7	Bis(2-ethylhexyl)phthalate	4000	1900	660	
85-68-7	Butyl benzyl phthalate	ND	1900	480	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-03D
 Client ID : 23-B-33 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-03D1
 Sample Amount : 30.72 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:50
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 08:35
 Date Extracted : 05/08/23
 Dilution Factor : 10
 Analyst : JG
 Instrument ID : JULIET
 GC Column : RTX5-MS
 %Solids : 85
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	1900	360	U
117-84-0	Di-n-octylphthalate	ND	1900	650	U
84-66-2	Diethyl phthalate	ND	1900	180	U
131-11-3	Dimethyl phthalate	ND	1900	400	U
56-55-3	Benzo(a)anthracene	8700	1100	220	
50-32-8	Benzo(a)pyrene	12000	1500	470	
205-99-2	Benzo(b)fluoranthene	14000	1100	320	
207-08-9	Benzo(k)fluoranthene	4800	1100	310	
218-01-9	Chrysene	10000	1100	200	
208-96-8	Acenaphthylene	5500	1500	300	
120-12-7	Anthracene	5300	1100	370	
191-24-2	Benzo(ghi)perylene	7800	1500	220	
86-73-7	Fluorene	960	1900	180	J
85-01-8	Phenanthrene	4700	1100	230	
53-70-3	Dibenzo(a,h)anthracene	1900	1100	220	
193-39-5	Indeno(1,2,3-cd)pyrene	8400	1500	270	
129-00-0	Pyrene	14000	1100	190	
92-52-4	Biphenyl	390	4400	250	J
106-47-8	4-Chloroaniline	ND	1900	350	U
88-74-4	2-Nitroaniline	ND	1900	370	U
99-09-2	3-Nitroaniline	ND	1900	360	U
100-01-6	4-Nitroaniline	ND	1900	790	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-03D
 Client ID : 23-B-33 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-03D1
 Sample Amount : 30.72 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:50
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 08:35
 Date Extracted : 05/08/23
 Dilution Factor : 10
 Analyst : JG
 Instrument ID : JULIET
 GC Column : RTX5-MS
 %Solids : 85
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	820	1900	180	J
91-57-6	2-Methylnaphthalene	1700	2300	230	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	1900	200	U
98-86-2	Acetophenone	ND	1900	240	U
88-06-2	2,4,6-Trichlorophenol	ND	1100	360	U
59-50-7	p-Chloro-m-cresol	ND	1900	280	U
95-57-8	2-Chlorophenol	ND	1900	230	U
120-83-2	2,4-Dichlorophenol	ND	1700	310	U
105-67-9	2,4-Dimethylphenol	ND	1900	630	U
88-75-5	2-Nitrophenol	ND	4100	720	U
100-02-7	4-Nitrophenol	ND	2700	780	U
51-28-5	2,4-Dinitrophenol	ND	9200	890	U
534-52-1	4,6-Dinitro-o-cresol	ND	5000	920	U
87-86-5	Pentachlorophenol	ND	1500	420	U
108-95-2	Phenol	320	1900	290	J
95-48-7	2-Methylphenol	ND	1900	300	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	340	2800	300	J
95-95-4	2,4,5-Trichlorophenol	ND	1900	370	U
86-74-8	Carbazole	660	1900	180	J
1912-24-9	Atrazine	ND	1500	670	U
100-52-7	Benzaldehyde	ND	2500	520	U
105-60-2	Caprolactam	ND	1900	580	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-03D
 Client ID : 23-B-33 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-03D1
 Sample Amount : 30.72 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:50
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 08:35
 Date Extracted : 05/08/23
 Dilution Factor : 10
 Analyst : JG
 Instrument ID : JULIET
 GC Column : RTX5-MS
 %Solids : 85
 Injection Volume : 1 uL

Rejected Data
 Do Not Use

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	1900	390	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-03RE\D	Date Collected : 04/27/23 14:50
Client ID : 23-B-33 (0-2")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 16:26
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 10
Lab File ID : 052-03D1	Analyst : IM
Sample Amount : 30.38 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 85
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	360	1500	200	J
118-74-1	Hexachlorobenzene	ND	1200	220	U
111-44-4	Bis(2-chloroethyl)ether	ND	1700	260	U
91-58-7	2-Chloronaphthalene	ND	1900	190	U
91-94-1	3,3'-Dichlorobenzidine	ND	1900	510	U
121-14-2	2,4-Dinitrotoluene	ND	1900	390	U
606-20-2	2,6-Dinitrotoluene	ND	1900	330	U
206-44-0	Fluoranthene	7900	1200	220	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1900	210	U
101-55-3	4-Bromophenyl phenyl ether	ND	1900	300	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2300	330	U
111-91-1	Bis(2-chloroethoxy)methane	ND	2100	190	U
87-68-3	Hexachlorobutadiene	ND	1900	280	U
77-47-4	Hexachlorocyclopentadiene	ND	5500	1800	U
67-72-1	Hexachloroethane	ND	1500	310	U
78-59-1	Isophorone	ND	1700	250	U
91-20-3	Naphthalene	680	1900	240	J
98-95-3	Nitrobenzene	ND	1700	290	U
86-30-6	NDPA/DPA	ND	1500	220	U
621-64-7	n-Nitrosodi-n-propylamine	ND	1900	300	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	1900	670	U
85-68-7	Butyl benzyl phthalate	ND	1900	490	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-03RE\D	Date Collected : 04/27/23 14:50
Client ID : 23-B-33 (0-2")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 16:26
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 10
Lab File ID : 052-03D1	Analyst : IM
Sample Amount : 30.38 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 85
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	1900	370	U
117-84-0	Di-n-octylphthalate	ND	1900	660	U
84-66-2	Diethyl phthalate	ND	1900	180	U
131-11-3	Dimethyl phthalate	ND	1900	410	U
56-55-3	Benzo(a)anthracene	5000	1200	220	
50-32-8	Benzo(a)pyrene	7200	1500	470	
205-99-2	Benzo(b)fluoranthene	8300	1200	320	
207-08-9	Benzo(k)fluoranthene	2900	1200	310	
218-01-9	Chrysene	5300	1200	200	
208-96-8	Acenaphthylene	3500	1500	300	
120-12-7	Anthracene	2900	1200	380	
191-24-2	Benzo(ghi)perylene	4000	1500	230	
86-73-7	Fluorene	640	1900	190	J
85-01-8	Phenanthrene	2900	1200	240	
53-70-3	Dibenzo(a,h)anthracene	1000	1200	220	J
193-39-5	Indeno(1,2,3-cd)pyrene	4800	1500	270	
129-00-0	Pyrene	8900	1200	190	
92-52-4	Biphenyl	ND	4400	250	U
106-47-8	4-Chloroaniline	ND	1900	350	U
88-74-4	2-Nitroaniline	ND	1900	370	U
99-09-2	3-Nitroaniline	ND	1900	360	U
100-01-6	4-Nitroaniline	ND	1900	800	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc. Project Name : FORMER ROTH STEEL SITE Lab ID : L2323052-03RE\D Client ID : 23-B-33 (0-2") Sample Location : SYRACUSE, NY Sample Matrix : SOIL Analytical Method : 1,8270E Lab File ID : 052-03D1 Sample Amount : 30.38 g Extraction Method : EPA 3546 Extract Volume : 1000 uL GPC Cleanup : N	Lab Number : L2323052 Project Number : 16-S0140N Date Collected : 04/27/23 14:50 Date Received : 04/27/23 Date Analyzed : 05/13/23 16:26 Date Extracted : 05/12/23 Dilution Factor : 10 Analyst : IM Instrument ID : GCMS5 GC Column : RTX5-MS %Solids : 85 Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	260	1900	180	J
91-57-6	2-Methylnaphthalene	450	2300	230	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	1900	200	U
98-86-2	Acetophenone	ND	1900	240	U
88-06-2	2,4,6-Trichlorophenol	ND	1200	370	U
59-50-7	p-Chloro-m-cresol	ND	1900	290	U
95-57-8	2-Chlorophenol	ND	1900	230	U
120-83-2	2,4-Dichlorophenol	ND	1700	310	U
105-67-9	2,4-Dimethylphenol	ND	1900	640	U
88-75-5	2-Nitrophenol	ND	4200	730	U
100-02-7	4-Nitrophenol	ND	2700	790	U
51-28-5	2,4-Dinitrophenol	ND	9300	900	U
534-52-1	4,6-Dinitro-o-cresol	ND	5000	930	U
87-86-5	Pentachlorophenol	ND	1500	420	U
108-95-2	Phenol	ND	1900	290	U
95-48-7	2-Methylphenol	ND	1900	300	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	2800	300	U
95-95-4	2,4,5-Trichlorophenol	ND	1900	370	U
86-74-8	Carbazole	370	1900	190	J
1912-24-9	Atrazine	ND	1500	680	U
100-52-7	Benzaldehyde	ND	2600	520	U
105-60-2	Caprolactam	ND	1900	590	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Lab ID	: L2323052-03RE\D	Date Collected	: 04/27/23 14:50
Client ID	: 23-B-33 (0-2")	Date Received	: 04/27/23
Sample Location	: SYRACUSE, NY	Date Analyzed	: 05/13/23 16:26
Sample Matrix	: SOIL	Date Extracted	: 05/12/23
Analytical Method	: 1,8270E	Dilution Factor	: 10
Lab File ID	: 052-03D1	Analyst	: IM
Sample Amount	: 30.38 g	Instrument ID	: GCMS5
Extraction Method	: EPA 3546	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: 85
GPC Cleanup	: N	Injection Volume	: 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	1900	390	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-04RE\D	Date Collected : 04/27/23 15:00
Client ID : 23-B-33 (2-12")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/15/23 13:15
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 20
Lab File ID : 23052-04	Analyst : JG
Sample Amount : 30.23 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 92
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	810	2900	370	J
118-74-1	Hexachlorobenzene	ND	2200	400	U
111-44-4	Bis(2-chloroethyl)ether	ND	3200	490	U
91-58-7	2-Chloronaphthalene	ND	3600	360	U
91-94-1	3,3'-Dichlorobenzidine	ND	3600	950	U
121-14-2	2,4-Dinitrotoluene	ND	3600	720	U
606-20-2	2,6-Dinitrotoluene	ND	3600	620	U
206-44-0	Fluoranthene	25000	2200	410	
7005-72-3	4-Chlorophenyl phenyl ether	ND	3600	380	U
101-55-3	4-Bromophenyl phenyl ether	ND	3600	550	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	4300	610	U
111-91-1	Bis(2-chloroethoxy)methane	ND	3900	360	U
87-68-3	Hexachlorobutadiene	ND	3600	520	U
77-47-4	Hexachlorocyclopentadiene	ND	10000	3200	U
67-72-1	Hexachloroethane	ND	2900	580	U
78-59-1	Isophorone	ND	3200	460	U
91-20-3	Naphthalene	850	3600	440	J
98-95-3	Nitrobenzene	ND	3200	530	U
86-30-6	NDPA/DPA	ND	2900	410	U
621-64-7	n-Nitrosodi-n-propylamine	ND	3600	550	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	3600	1200	U
85-68-7	Butyl benzyl phthalate	ND	3600	900	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-04RE\D	Date Collected : 04/27/23 15:00
Client ID : 23-B-33 (2-12")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/15/23 13:15
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 20
Lab File ID : 23052-04	Analyst : JG
Sample Amount : 30.23 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 92
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	3600	680	U
117-84-0	Di-n-octylphthalate	ND	3600	1200	U
84-66-2	Diethyl phthalate	ND	3600	330	U
131-11-3	Dimethyl phthalate	ND	3600	750	U
56-55-3	Benzo(a)anthracene	16000	2200	400	
50-32-8	Benzo(a)pyrene	22000	2900	880	
205-99-2	Benzo(b)fluoranthene	25000	2200	600	
207-08-9	Benzo(k)fluoranthene	8200	2200	570	
218-01-9	Chrysene	16000	2200	370	
208-96-8	Acenaphthylene	12000	2900	550	
120-12-7	Anthracene	7900	2200	700	
191-24-2	Benzo(ghi)perylene	12000	2900	420	
86-73-7	Fluorene	1600	3600	350	J
85-01-8	Phenanthrene	7200	2200	440	
53-70-3	Dibenzo(a,h)anthracene	3100	2200	410	
193-39-5	Indeno(1,2,3-cd)pyrene	14000	2900	500	
129-00-0	Pyrene	30000	2200	360	
92-52-4	Biphenyl	ND	8200	470	U
106-47-8	4-Chloroaniline	ND	3600	650	U
88-74-4	2-Nitroaniline	ND	3600	690	U
99-09-2	3-Nitroaniline	ND	3600	680	U
100-01-6	4-Nitroaniline	ND	3600	1500	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc. Project Name : FORMER ROTH STEEL SITE Lab ID : L2323052-04RE\D Client ID : 23-B-33 (2-12") Sample Location : SYRACUSE, NY Sample Matrix : SOIL Analytical Method : 1,8270E Lab File ID : 23052-04 Sample Amount : 30.23 g Extraction Method : EPA 3546 Extract Volume : 1000 uL GPC Cleanup : N	Lab Number : L2323052 Project Number : 16-S0140N Date Collected : 04/27/23 15:00 Date Received : 04/27/23 Date Analyzed : 05/15/23 13:15 Date Extracted : 05/12/23 Dilution Factor : 20 Analyst : JG Instrument ID : GCMS5 GC Column : RTX5-MS %Solids : 92 Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	540	3600	340	J
91-57-6	2-Methylnaphthalene	720	4300	430	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	3600	370	U
98-86-2	Acetophenone	ND	3600	440	U
88-06-2	2,4,6-Trichlorophenol	ND	2200	680	U
59-50-7	p-Chloro-m-cresol	ND	3600	530	U
95-57-8	2-Chlorophenol	ND	3600	420	U
120-83-2	2,4-Dichlorophenol	ND	3200	580	U
105-67-9	2,4-Dimethylphenol	ND	3600	1200	U
88-75-5	2-Nitrophenol	ND	7700	1300	U
100-02-7	4-Nitrophenol	ND	5000	1500	U
51-28-5	2,4-Dinitrophenol	ND	17000	1700	U
534-52-1	4,6-Dinitro-o-cresol	ND	9300	1700	U
87-86-5	Pentachlorophenol	ND	2900	790	U
108-95-2	Phenol	ND	3600	540	U
95-48-7	2-Methylphenol	ND	3600	560	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5200	560	U
95-95-4	2,4,5-Trichlorophenol	ND	3600	690	U
86-74-8	Carbazole	880	3600	350	J
1912-24-9	Atrazine	ND	2900	1200	U
100-52-7	Benzaldehyde	ND	4700	970	U
105-60-2	Caprolactam	ND	3600	1100	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Lab ID	: L2323052-04RE\D	Date Collected	: 04/27/23 15:00
Client ID	: 23-B-33 (2-12")	Date Received	: 04/27/23
Sample Location	: SYRACUSE, NY	Date Analyzed	: 05/15/23 13:15
Sample Matrix	: SOIL	Date Extracted	: 05/12/23
Analytical Method	: 1,8270E	Dilution Factor	: 20
Lab File ID	: 23052-04	Analyst	: JG
Sample Amount	: 30.23 g	Instrument ID	: GCMS5
Extraction Method	: EPA 3546	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: 92
GPC Cleanup	: N	Injection Volume	: 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	3600	720	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-04D
 Client ID : 23-B-33 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-04D1
 Sample Amount : 30.4 g
 Extraction Method : EPA 3546
 Extract Volume : 3000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:00
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 12:21
 Date Extracted : 05/08/23
 Dilution Factor : 30
 Analyst : IM
 Instrument ID : MORK
 GC Column : RTX5-MS
 %Solids : 92
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	1200	4300	550	J
118-74-1	Hexachlorobenzene	ND	3200	600	U
111-44-4	Bis(2-chloroethyl)ether	ND	4800	720	U
91-58-7	2-Chloronaphthalene	ND	5400	530	U
91-94-1	3,3'-Dichlorobenzidine	ND	5400	1400	U
121-14-2	2,4-Dinitrotoluene	ND	5400	1100	U
606-20-2	2,6-Dinitrotoluene	ND	5400	920	U
206-44-0	Fluoranthene	32000	3200	610	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5400	570	U
101-55-3	4-Bromophenyl phenyl ether	ND	5400	820	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	6400	910	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5800	540	U
87-68-3	Hexachlorobutadiene	ND	5400	780	U
77-47-4	Hexachlorocyclopentadiene	ND	15000	4800	U
67-72-1	Hexachloroethane	ND	4300	860	U
78-59-1	Isophorone	ND	4800	690	U
91-20-3	Naphthalene	3900	5400	650	J
98-95-3	Nitrobenzene	ND	4800	790	U
86-30-6	NDPA/DPA	ND	4300	610	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5400	830	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	5400	1800	U
85-68-7	Butyl benzyl phthalate	ND	5400	1300	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-04D
 Client ID : 23-B-33 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-04D1
 Sample Amount : 30.4 g
 Extraction Method : EPA 3546
 Extract Volume : 3000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:00
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 12:21
 Date Extracted : 05/08/23
 Dilution Factor : 30
 Analyst : IM
 Instrument ID : MORK
 GC Column : RTX5-MS
 %Solids : 92
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	5400	1000	U
117-84-0	Di-n-octylphthalate	ND	5400	1800	U
84-66-2	Diethyl phthalate	ND	5400	500	U
131-11-3	Dimethyl phthalate	ND	5400	1100	U
56-55-3	Benzo(a)anthracene	21000	3200	600	
50-32-8	Benzo(a)pyrene	26000	4300	1300	
205-99-2	Benzo(b)fluoranthene	29000	3200	900	
207-08-9	Benzo(k)fluoranthene	10000	3200	860	
218-01-9	Chrysene	21000	3200	560	
208-96-8	Acenaphthylene	12000	4300	830	
120-12-7	Anthracene	9500	3200	1000	
191-24-2	Benzo(ghi)perylene	16000	4300	630	
86-73-7	Fluorene	2400	5400	520	J
85-01-8	Phenanthrene	10000	3200	650	
53-70-3	Dibenzo(a,h)anthracene	3900	3200	620	
193-39-5	Indeno(1,2,3-cd)pyrene	18000	4300	750	
129-00-0	Pyrene	39000	3200	530	
92-52-4	Biphenyl	ND	12000	700	U
106-47-8	4-Chloroaniline	ND	5400	970	U
88-74-4	2-Nitroaniline	ND	5400	1000	U
99-09-2	3-Nitroaniline	ND	5400	1000	U
100-01-6	4-Nitroaniline	ND	5400	2200	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-04D
 Client ID : 23-B-33 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-04D1
 Sample Amount : 30.4 g
 Extraction Method : EPA 3546
 Extract Volume : 3000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:00
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 12:21
 Date Extracted : 05/08/23
 Dilution Factor : 30
 Analyst : IM
 Instrument ID : MORK
 GC Column : RTX5-MS
 %Solids : 92
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	1200	5400	510	J
91-57-6	2-Methylnaphthalene	2200	6400	650	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	5400	560	U
98-86-2	Acetophenone	ND	5400	660	U
88-06-2	2,4,6-Trichlorophenol	ND	3200	1000	U
59-50-7	p-Chloro-m-cresol	ND	5400	800	U
95-57-8	2-Chlorophenol	ND	5400	630	U
120-83-2	2,4-Dichlorophenol	ND	4800	860	U
105-67-9	2,4-Dimethylphenol	ND	5400	1800	U
88-75-5	2-Nitrophenol	ND	12000	2000	U
100-02-7	4-Nitrophenol	ND	7500	2200	U
51-28-5	2,4-Dinitrophenol	ND	26000	2500	U
534-52-1	4,6-Dinitro-o-cresol	ND	14000	2600	U
87-86-5	Pentachlorophenol	ND	4300	1200	U
108-95-2	Phenol	ND	5400	810	U
95-48-7	2-Methylphenol	ND	5400	830	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	7700	840	U
95-95-4	2,4,5-Trichlorophenol	ND	5400	1000	U
86-74-8	Carbazole	1400	5400	520	J
1912-24-9	Atrazine	ND	4300	1900	U
100-52-7	Benzaldehyde	ND	7100	1400	U
105-60-2	Caprolactam	ND	5400	1600	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-04D
 Client ID : 23-B-33 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-04D1
 Sample Amount : 30.4 g
 Extraction Method : EPA 3546
 Extract Volume : 3000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:00
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 12:21
 Date Extracted : 05/08/23
 Dilution Factor : 30
 Analyst : IM
 Instrument ID : MORK
 GC Column : RTX5-MS
 %Solids : 92
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5400	1100	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-05D
 Client ID : 23-B-34 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-05D1
 Sample Amount : 30.21 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:00
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 08:59
 Date Extracted : 05/08/23
 Dilution Factor : 10
 Analyst : JG
 Instrument ID : JULIET
 GC Column : RTX5-MS
 %Solids : 70
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	ND	1900	240	U
118-74-1	Hexachlorobenzene	ND	1400	260	U
111-44-4	Bis(2-chloroethyl)ether	ND	2100	320	U
91-58-7	2-Chloronaphthalene	ND	2400	230	U
91-94-1	3,3'-Dichlorobenzidine	ND	2400	630	U
121-14-2	2,4-Dinitrotoluene	ND	2400	470	U
606-20-2	2,6-Dinitrotoluene	ND	2400	400	U
206-44-0	Fluoranthene	5200	1400	270	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2400	250	U
101-55-3	4-Bromophenyl phenyl ether	ND	2400	360	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2800	400	U
111-91-1	Bis(2-chloroethoxy)methane	ND	2500	240	U
87-68-3	Hexachlorobutadiene	ND	2400	340	U
77-47-4	Hexachlorocyclopentadiene	ND	6700	2100	U
67-72-1	Hexachloroethane	ND	1900	380	U
78-59-1	Isophorone	ND	2100	300	U
91-20-3	Naphthalene	ND	2400	290	U
98-95-3	Nitrobenzene	ND	2100	350	U
86-30-6	NDPA/DPA	ND	1900	270	U
621-64-7	n-Nitrosodi-n-propylamine	ND	2400	360	U
117-81-7	Bis(2-ethylhexyl)phthalate	28000	2400	810	
85-68-7	Butyl benzyl phthalate	ND	2400	590	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-05D
 Client ID : 23-B-34 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-05D1
 Sample Amount : 30.21 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:00
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 08:59
 Date Extracted : 05/08/23
 Dilution Factor : 10
 Analyst : JG
 Instrument ID : JULIET
 GC Column : RTX5-MS
 %Solids : 70
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	2400	450	U
117-84-0	Di-n-octylphthalate	ND	2400	800	U
84-66-2	Diethyl phthalate	ND	2400	220	U
131-11-3	Dimethyl phthalate	ND	2400	490	U
56-55-3	Benzo(a)anthracene	2400	1400	260	
50-32-8	Benzo(a)pyrene	2200	1900	570	
205-99-2	Benzo(b)fluoranthene	2900	1400	400	
207-08-9	Benzo(k)fluoranthene	1000	1400	380	J
218-01-9	Chrysene	2700	1400	240	
208-96-8	Acenaphthylene	400	1900	360	J
120-12-7	Anthracene	970	1400	460	J
191-24-2	Benzo(ghi)perylene	1400	1900	280	J
86-73-7	Fluorene	280	2400	230	J
85-01-8	Phenanthrene	3500	1400	290	
53-70-3	Dibenzo(a,h)anthracene	340	1400	270	J
193-39-5	Indeno(1,2,3-cd)pyrene	1500	1900	330	J
129-00-0	Pyrene	4300	1400	230	
92-52-4	Biphenyl	ND	5400	310	U
106-47-8	4-Chloroaniline	ND	2400	430	U
88-74-4	2-Nitroaniline	ND	2400	450	U
99-09-2	3-Nitroaniline	ND	2400	440	U
100-01-6	4-Nitroaniline	ND	2400	970	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-05D
 Client ID : 23-B-34 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-05D1
 Sample Amount : 30.21 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:00
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 08:59
 Date Extracted : 05/08/23
 Dilution Factor : 10
 Analyst : JG
 Instrument ID : JULIET
 GC Column : RTX5-MS
 %Solids : 70
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	ND	2400	220	U
91-57-6	2-Methylnaphthalene	ND	2800	280	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2400	240	U
98-86-2	Acetophenone	330	2400	290	J
88-06-2	2,4,6-Trichlorophenol	ND	1400	450	U
59-50-7	p-Chloro-m-cresol	ND	2400	350	U
95-57-8	2-Chlorophenol	ND	2400	280	U
120-83-2	2,4-Dichlorophenol	ND	2100	380	U
105-67-9	2,4-Dimethylphenol	ND	2400	780	U
88-75-5	2-Nitrophenol	ND	5100	880	U
100-02-7	4-Nitrophenol	ND	3300	960	U
51-28-5	2,4-Dinitrophenol	ND	11000	1100	U
534-52-1	4,6-Dinitro-o-cresol	ND	6100	1100	U
87-86-5	Pentachlorophenol	ND	1900	520	U
108-95-2	Phenol	ND	2400	360	U
95-48-7	2-Methylphenol	ND	2400	360	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	3400	370	U
95-95-4	2,4,5-Trichlorophenol	ND	2400	450	U
86-74-8	Carbazole	480	2400	230	J
1912-24-9	Atrazine	ND	1900	820	U
100-52-7	Benzaldehyde	ND	3100	640	U
105-60-2	Caprolactam	ND	2400	720	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Lab ID	: L2323052-05D	Date Collected	: 04/27/23 14:00
Client ID	: 23-B-34 (0-2")	Date Received	: 04/27/23
Sample Location	: SYRACUSE, NY	Date Analyzed	: 05/12/23 08:59
Sample Matrix	: SOIL	Date Extracted	: 05/08/23
Analytical Method	: 1,8270E	Dilution Factor	: 10
Lab File ID	: 052-05D1	Analyst	: JG
Sample Amount	: 30.21 g	Instrument ID	: JULIET
Extraction Method	: EPA 3546	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: 70
GPC Cleanup	: N	Injection Volume	: 1 uL

Rejected Data
Do Not Use

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	2400	480	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc. Project Name : FORMER ROTH STEEL SITE Lab ID : L2323052-05RE\D Client ID : 23-B-34 (0-2") Sample Location : SYRACUSE, NY Sample Matrix : SOIL Analytical Method : 1,8270E Lab File ID : 052-05D1 Sample Amount : 30.23 g Extraction Method : EPA 3546 Extract Volume : 1000 uL GPC Cleanup : N	Lab Number : L2323052 Project Number : 16-S0140N Date Collected : 04/27/23 14:00 Date Received : 04/27/23 Date Analyzed : 05/13/23 18:02 Date Extracted : 05/12/23 Dilution Factor : 5 Analyst : IM Instrument ID : GCMS5 GC Column : RTX5-MS %Solids : 70 Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	270	940	120	J
118-74-1	Hexachlorobenzene	ND	700	130	U
111-44-4	Bis(2-chloroethyl)ether	ND	1000	160	U
91-58-7	2-Chloronaphthalene	ND	1200	120	U
91-94-1	3,3'-Dichlorobenzidine	ND	1200	310	U
121-14-2	2,4-Dinitrotoluene	ND	1200	240	U
606-20-2	2,6-Dinitrotoluene	ND	1200	200	U
206-44-0	Fluoranthene	5500	700	140	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1200	120	U
101-55-3	4-Bromophenyl phenyl ether	ND	1200	180	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	1400	200	U
111-91-1	Bis(2-chloroethoxy)methane	ND	1300	120	U
87-68-3	Hexachlorobutadiene	ND	1200	170	U
77-47-4	Hexachlorocyclopentadiene	ND	3400	1100	U
67-72-1	Hexachloroethane	ND	940	190	U
78-59-1	Isophorone	ND	1000	150	U
91-20-3	Naphthalene	140	1200	140	J
98-95-3	Nitrobenzene	ND	1000	170	U
86-30-6	NDPA/DPA	ND	940	130	U
621-64-7	n-Nitrosodi-n-propylamine	ND	1200	180	U
117-81-7	Bis(2-ethylhexyl)phthalate	480	1200	410	J
85-68-7	Butyl benzyl phthalate	ND	1200	300	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-05RE\D	Date Collected : 04/27/23 14:00
Client ID : 23-B-34 (0-2")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 18:02
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 5
Lab File ID : 052-05D1	Analyst : IM
Sample Amount : 30.23 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 70
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	1200	220	U
117-84-0	Di-n-octylphthalate	ND	1200	400	U
84-66-2	Diethyl phthalate	ND	1200	110	U
131-11-3	Dimethyl phthalate	ND	1200	250	U
56-55-3	Benzo(a)anthracene	2600	700	130	
50-32-8	Benzo(a)pyrene	2600	940	290	
205-99-2	Benzo(b)fluoranthene	3600	700	200	
207-08-9	Benzo(k)fluoranthene	1000	700	190	
218-01-9	Chrysene	2700	700	120	
208-96-8	Acenaphthylene	930	940	180	J
120-12-7	Anthracene	1000	700	230	
191-24-2	Benzo(ghi)perylene	1500	940	140	
86-73-7	Fluorene	310	1200	110	J
85-01-8	Phenanthrene	2700	700	140	
53-70-3	Dibenzo(a,h)anthracene	370	700	140	J
193-39-5	Indeno(1,2,3-cd)pyrene	1900	940	160	
129-00-0	Pyrene	4400	700	120	
92-52-4	Biphenyl	ND	2700	150	U
106-47-8	4-Chloroaniline	ND	1200	210	U
88-74-4	2-Nitroaniline	ND	1200	230	U
99-09-2	3-Nitroaniline	ND	1200	220	U
100-01-6	4-Nitroaniline	ND	1200	490	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-05RE\D	Date Collected : 04/27/23 14:00
Client ID : 23-B-34 (0-2")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 18:02
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 5
Lab File ID : 052-05D1	Analyst : IM
Sample Amount : 30.23 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 70
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	150	1200	110	J
91-57-6	2-Methylnaphthalene	ND	1400	140	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	1200	120	U
98-86-2	Acetophenone	ND	1200	140	U
88-06-2	2,4,6-Trichlorophenol	ND	700	220	U
59-50-7	p-Chloro-m-cresol	ND	1200	180	U
95-57-8	2-Chlorophenol	ND	1200	140	U
120-83-2	2,4-Dichlorophenol	ND	1000	190	U
105-67-9	2,4-Dimethylphenol	ND	1200	390	U
88-75-5	2-Nitrophenol	ND	2500	440	U
100-02-7	4-Nitrophenol	ND	1600	480	U
51-28-5	2,4-Dinitrophenol	ND	5600	550	U
534-52-1	4,6-Dinitro-o-cresol	ND	3000	560	U
87-86-5	Pentachlorophenol	ND	940	260	U
108-95-2	Phenol	ND	1200	180	U
95-48-7	2-Methylphenol	ND	1200	180	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	1700	180	U
95-95-4	2,4,5-Trichlorophenol	ND	1200	220	U
86-74-8	Carbazole	400	1200	110	J
1912-24-9	Atrazine	ND	940	410	U
100-52-7	Benzaldehyde	ND	1600	320	U
105-60-2	Caprolactam	ND	1200	360	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Lab ID	: L2323052-05RE\D	Date Collected	: 04/27/23 14:00
Client ID	: 23-B-34 (0-2")	Date Received	: 04/27/23
Sample Location	: SYRACUSE, NY	Date Analyzed	: 05/13/23 18:02
Sample Matrix	: SOIL	Date Extracted	: 05/12/23
Analytical Method	: 1,8270E	Dilution Factor	: 5
Lab File ID	: 052-05D1	Analyst	: IM
Sample Amount	: 30.23 g	Instrument ID	: GCMS5
Extraction Method	: EPA 3546	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: 70
GPC Cleanup	: N	Injection Volume	: 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	1200	240	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-06RE\D	Date Collected : 04/27/23 14:10
Client ID : 23-B-34 (2-12")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 18:26
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 5
Lab File ID : 052-06D1	Analyst : IM
Sample Amount : 30.77 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 93
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ
Unless otherwise qualified

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	120	700	91.	J
118-74-1	Hexachlorobenzene	ND	530	98.	U
111-44-4	Bis(2-chloroethyl)ether	ND	790	120	U
91-58-7	2-Chloronaphthalene	ND	880	87.	U
91-94-1	3,3'-Dichlorobenzidine	ND	880	230	U R
121-14-2	2,4-Dinitrotoluene	ND	880	180	U
606-20-2	2,6-Dinitrotoluene	ND	880	150	U
206-44-0	Fluoranthene	2000	530	100	J-
7005-72-3	4-Chlorophenyl phenyl ether	ND	880	94.	U
101-55-3	4-Bromophenyl phenyl ether	ND	880	130	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	1000	150	U
111-91-1	Bis(2-chloroethoxy)methane	ND	950	88.	U
87-68-3	Hexachlorobutadiene	ND	880	130	U
77-47-4	Hexachlorocyclopentadiene	ND	2500	790	U R
67-72-1	Hexachloroethane	ND	700	140	U
78-59-1	Isophorone	ND	790	110	U
91-20-3	Naphthalene	150	880	110	J
98-95-3	Nitrobenzene	ND	790	130	U
86-30-6	NDPA/DPA	ND	700	100	U
621-64-7	n-Nitrosodi-n-propylamine	ND	880	140	U
117-81-7	Bis(2-ethylhexyl)phthalate	300	880	300	J
85-68-7	Butyl benzyl phthalate	ND	880	220	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-06RE\D	Date Collected : 04/27/23 14:10
Client ID : 23-B-34 (2-12")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 18:26
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 5
Lab File ID : 052-06D1	Analyst : IM
Sample Amount : 30.77 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 93
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ
Unless otherwise qualified

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	880	170	U
117-84-0	Di-n-octylphthalate	ND	880	300	U
84-66-2	Diethyl phthalate	ND	880	81.	U
131-11-3	Dimethyl phthalate	ND	880	180	U
56-55-3	Benzo(a)anthracene	980	530	99.	J-
50-32-8	Benzo(a)pyrene	940	700	210	
205-99-2	Benzo(b)fluoranthene	1300	530	150	J-
207-08-9	Benzo(k)fluoranthene	430	530	140	J
218-01-9	Chrysene	970	530	91.	J-
208-96-8	Acenaphthylene	610	700	140	J
120-12-7	Anthracene	600	530	170	
191-24-2	Benzo(ghi)perylene	740	700	100	
86-73-7	Fluorene	160	880	85.	J
85-01-8	Phenanthrene	1100	530	110	J-
53-70-3	Dibenzo(a,h)anthracene	150	530	100	J
193-39-5	Indeno(1,2,3-cd)pyrene	800	700	120	
129-00-0	Pyrene	1700	530	87.	J-
92-52-4	Biphenyl	ND	2000	110	U
106-47-8	4-Chloroaniline	ND	880	160	U
88-74-4	2-Nitroaniline	ND	880	170	U
99-09-2	3-Nitroaniline	ND	880	160	U
100-01-6	4-Nitroaniline	ND	880	360	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-06RE\D
 Client ID : 23-B-34 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-06D1
 Sample Amount : 30.77 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

All detected results qualified J
 All "not detected results UJ
 Unless otherwise qualified

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:10
 Date Received : 04/27/23
 Date Analyzed : 05/13/23 18:26
 Date Extracted : 05/12/23
 Dilution Factor : 5
 Analyst : IM
 Instrument ID : GCMS5
 GC Column : RTX5-MS
 %Solids : 93
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	ND	880	83.	U
91-57-6	2-Methylnaphthalene	100	1000	100	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	880	92.	U
98-86-2	Acetophenone	ND	880	110	U
88-06-2	2,4,6-Trichlorophenol	ND	530	170	U
59-50-7	p-Chloro-m-cresol	ND	880	130	U
95-57-8	2-Chlorophenol	ND	880	100	U
120-83-2	2,4-Dichlorophenol	ND	790	140	U
105-67-9	2,4-Dimethylphenol	ND	880	290	U
88-75-5	2-Nitrophenol	ND	1900	330	U
100-02-7	4-Nitrophenol	ND	1200	360	U R
51-28-5	2,4-Dinitrophenol	ND	4200	410	U R
534-52-1	4,6-Dinitro-o-cresol	ND	2300	420	U R
87-86-5	Pentachlorophenol	ND	700	190	U
108-95-2	Phenol	ND	880	130	U
95-48-7	2-Methylphenol	ND	880	140	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	1300	140	U
95-95-4	2,4,5-Trichlorophenol	ND	880	170	U
86-74-8	Carbazole	180	880	85.	J
1912-24-9	Atrazine	ND	700	310	U
100-52-7	Benzaldehyde	ND	1200	240	U
105-60-2	Caprolactam	ND	880	270	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Lab ID	: L2323052-06RE\D	Date Collected	: 04/27/23 14:10
Client ID	: 23-B-34 (2-12")	Date Received	: 04/27/23
Sample Location	: SYRACUSE, NY	Date Analyzed	: 05/13/23 18:26
Sample Matrix	: SOIL	Date Extracted	: 05/12/23
Analytical Method	: 1,8270E	Dilution Factor	: 5
Lab File ID	: 052-06D1	Analyst	: IM
Sample Amount	: 30.77 g	Instrument ID	: GCMS5
Extraction Method	: EPA 3546	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: 93
GPC Cleanup	: N	Injection Volume	: 1 uL

All detected results qualified J
 All "not detected results UJ
 Unless otherwise qualified

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	880	180	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-06D
 Client ID : 23-B-34 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 23052-06
 Sample Amount : 30.69 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:10
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 21:39
 Date Extracted : 05/08/23
 Dilution Factor : 5
 Analyst : IM
 Instrument ID : JULIET
 GC Column : RTX5-MS
 %Solids : 93
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	ND	700	91.	U
118-74-1	Hexachlorobenzene	ND	530	98.	U
111-44-4	Bis(2-chloroethyl)ether	ND	790	120	U
91-58-7	2-Chloronaphthalene	ND	880	87.	U
91-94-1	3,3'-Dichlorobenzidine	ND	880	230	U
121-14-2	2,4-Dinitrotoluene	ND	880	180	U
606-20-2	2,6-Dinitrotoluene	ND	880	150	U
206-44-0	Fluoranthene	1800	530	100	
7005-72-3	4-Chlorophenyl phenyl ether	ND	880	94.	U
101-55-3	4-Bromophenyl phenyl ether	ND	880	130	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	1000	150	U
111-91-1	Bis(2-chloroethoxy)methane	ND	950	88.	U
87-68-3	Hexachlorobutadiene	ND	880	130	U
77-47-4	Hexachlorocyclopentadiene	ND	2500	800	U
67-72-1	Hexachloroethane	ND	700	140	U
78-59-1	Isophorone	ND	790	110	U
91-20-3	Naphthalene	ND	880	110	U
98-95-3	Nitrobenzene	ND	790	130	U
86-30-6	NDPA/DPA	ND	700	100	U
621-64-7	n-Nitrosodi-n-propylamine	ND	880	140	U
117-81-7	Bis(2-ethylhexyl)phthalate	450	880	300	J
85-68-7	Butyl benzyl phthalate	1100	880	220	



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-06D
 Client ID : 23-B-34 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 23052-06
 Sample Amount : 30.69 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:10
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 21:39
 Date Extracted : 05/08/23
 Dilution Factor : 5
 Analyst : IM
 Instrument ID : JULIET
 GC Column : RTX5-MS
 %Solids : 93
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	880	170	U
117-84-0	Di-n-octylphthalate	ND	880	300	U
84-66-2	Diethyl phthalate	ND	880	81.	U
131-11-3	Dimethyl phthalate	ND	880	180	U
56-55-3	Benzo(a)anthracene	920	530	99.	
50-32-8	Benzo(a)pyrene	940	700	210	
205-99-2	Benzo(b)fluoranthene	1200	530	150	
207-08-9	Benzo(k)fluoranthene	450	530	140	J
218-01-9	Chrysene	1000	530	91.	
208-96-8	Acenaphthylene	390	700	140	J
120-12-7	Anthracene	500	530	170	J
191-24-2	Benzo(ghi)perylene	810	700	100	
86-73-7	Fluorene	110	880	86.	J
85-01-8	Phenanthrene	1200	530	110	
53-70-3	Dibenzo(a,h)anthracene	170	530	100	J
193-39-5	Indeno(1,2,3-cd)pyrene	820	700	120	
129-00-0	Pyrene	1500	530	87.	
92-52-4	Biphenyl	ND	2000	110	U
106-47-8	4-Chloroaniline	ND	880	160	U
88-74-4	2-Nitroaniline	ND	880	170	U
99-09-2	3-Nitroaniline	ND	880	160	U
100-01-6	4-Nitroaniline	ND	880	360	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-06D
 Client ID : 23-B-34 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 23052-06
 Sample Amount : 30.69 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:10
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 21:39
 Date Extracted : 05/08/23
 Dilution Factor : 5
 Analyst : IM
 Instrument ID : JULIET
 GC Column : RTX5-MS
 %Solids : 93
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	ND	880	83.	U
91-57-6	2-Methylnaphthalene	ND	1000	110	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	880	92.	U
98-86-2	Acetophenone	ND	880	110	U
88-06-2	2,4,6-Trichlorophenol	ND	530	170	U
59-50-7	p-Chloro-m-cresol	ND	880	130	U
95-57-8	2-Chlorophenol	ND	880	100	U
120-83-2	2,4-Dichlorophenol	ND	790	140	U
105-67-9	2,4-Dimethylphenol	ND	880	290	U
88-75-5	2-Nitrophenol	ND	1900	330	U
100-02-7	4-Nitrophenol	ND	1200	360	U
51-28-5	2,4-Dinitrophenol	ND	4200	410	U
534-52-1	4,6-Dinitro-o-cresol	ND	2300	420	U
87-86-5	Pentachlorophenol	ND	700	190	U
108-95-2	Phenol	ND	880	130	U
95-48-7	2-Methylphenol	ND	880	140	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	1300	140	U
95-95-4	2,4,5-Trichlorophenol	ND	880	170	U
86-74-8	Carbazole	170	880	86.	J
1912-24-9	Atrazine	ND	700	310	U
100-52-7	Benzaldehyde	ND	1200	240	U
105-60-2	Caprolactam	ND	880	270	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-06D
 Client ID : 23-B-34 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 23052-06
 Sample Amount : 30.69 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:10
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 21:39
 Date Extracted : 05/08/23
 Dilution Factor : 5
 Analyst : IM
 Instrument ID : JULIET
 GC Column : RTX5-MS
 %Solids : 93
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	880	180	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-08
 Client ID : 23-B-36 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 23052-08
 Sample Amount : 30.11 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:45
 Date Received : 04/27/23
 Date Analyzed : 05/11/23 19:09
 Date Extracted : 05/08/23
 Dilution Factor : 1
 Analyst : JG
 Instrument ID : GCMS5
 GC Column : RTX5-MS
 %Solids : 96
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	ND	140	18.	U
118-74-1	Hexachlorobenzene	ND	100	19.	U
111-44-4	Bis(2-chloroethyl)ether	ND	160	24.	U
91-58-7	2-Chloronaphthalene	ND	170	17.	U
91-94-1	3,3'-Dichlorobenzidine	ND	170	46.	U
121-14-2	2,4-Dinitrotoluene	ND	170	35.	U
606-20-2	2,6-Dinitrotoluene	ND	170	30.	U
206-44-0	Fluoranthene	130	100	20.	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	18.	U
101-55-3	4-Bromophenyl phenyl ether	ND	170	26.	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	210	30.	U
111-91-1	Bis(2-chloroethoxy)methane	ND	190	17.	U
87-68-3	Hexachlorobutadiene	ND	170	25.	U
77-47-4	Hexachlorocyclopentadiene	ND	500	160	U
67-72-1	Hexachloroethane	ND	140	28.	U
78-59-1	Isophorone	ND	160	22.	U
91-20-3	Naphthalene	ND	170	21.	U
98-95-3	Nitrobenzene	ND	160	26.	U
86-30-6	NDPA/DPA	ND	140	20.	U
621-64-7	n-Nitrosodi-n-propylamine	ND	170	27.	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	170	60.	U
85-68-7	Butyl benzyl phthalate	ND	170	44.	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-08
 Client ID : 23-B-36 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 23052-08
 Sample Amount : 30.11 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:45
 Date Received : 04/27/23
 Date Analyzed : 05/11/23 19:09
 Date Extracted : 05/08/23
 Dilution Factor : 1
 Analyst : JG
 Instrument ID : GCMS5
 GC Column : RTX5-MS
 %Solids : 96
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	170	33.	U
117-84-0	Di-n-octylphthalate	ND	170	59.	U
84-66-2	Diethyl phthalate	ND	170	16.	U
131-11-3	Dimethyl phthalate	ND	170	36.	U
56-55-3	Benzo(a)anthracene	77	100	20.	J
50-32-8	Benzo(a)pyrene	92	140	42.	J
205-99-2	Benzo(b)fluoranthene	120	100	29.	
207-08-9	Benzo(k)fluoranthene	34	100	28.	J
218-01-9	Chrysene	83	100	18.	J
208-96-8	Acenaphthylene	46	140	27.	J
120-12-7	Anthracene	ND	100	34.	U
191-24-2	Benzo(ghi)perylene	79	140	20.	J
86-73-7	Fluorene	ND	170	17.	U
85-01-8	Phenanthrene	56	100	21.	J
53-70-3	Dibenzo(a,h)anthracene	ND	100	20.	U
193-39-5	Indeno(1,2,3-cd)pyrene	79	140	24.	J
129-00-0	Pyrene	120	100	17.	
92-52-4	Biphenyl	ND	400	22.	U
106-47-8	4-Chloroaniline	ND	170	32.	U
88-74-4	2-Nitroaniline	ND	170	33.	U
99-09-2	3-Nitroaniline	ND	170	33.	U
100-01-6	4-Nitroaniline	ND	170	72.	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-08
 Client ID : 23-B-36 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 23052-08
 Sample Amount : 30.11 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:45
 Date Received : 04/27/23
 Date Analyzed : 05/11/23 19:09
 Date Extracted : 05/08/23
 Dilution Factor : 1
 Analyst : JG
 Instrument ID : GCMS5
 GC Column : RTX5-MS
 %Solids : 96
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	ND	170	16.	U
91-57-6	2-Methylnaphthalene	ND	210	21.	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	18.	U
98-86-2	Acetophenone	ND	170	21.	U
88-06-2	2,4,6-Trichlorophenol	ND	100	33.	U
59-50-7	p-Chloro-m-cresol	ND	170	26.	U
95-57-8	2-Chlorophenol	ND	170	20.	U
120-83-2	2,4-Dichlorophenol	ND	160	28.	U
105-67-9	2,4-Dimethylphenol	ND	170	57.	U
88-75-5	2-Nitrophenol	ND	370	65.	U
100-02-7	4-Nitrophenol	ND	240	71.	U
51-28-5	2,4-Dinitrophenol	ND	830	81.	U
534-52-1	4,6-Dinitro-o-cresol	ND	450	83.	U
87-86-5	Pentachlorophenol	ND	140	38.	U
108-95-2	Phenol	ND	170	26.	U
95-48-7	2-Methylphenol	ND	170	27.	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	250	27.	U
95-95-4	2,4,5-Trichlorophenol	ND	170	33.	U
86-74-8	Carbazole	ND	170	17.	U
1912-24-9	Atrazine	ND	140	61.	U
100-52-7	Benzaldehyde	ND	230	47.	U
105-60-2	Caprolactam	ND	170	53.	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-08
 Client ID : 23-B-36 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 23052-08
 Sample Amount : 30.11 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:45
 Date Received : 04/27/23
 Date Analyzed : 05/11/23 19:09
 Date Extracted : 05/08/23
 Dilution Factor : 1
 Analyst : JG
 Instrument ID : GCMS5
 GC Column : RTX5-MS
 %Solids : 96
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	35.	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-08RE	Date Collected : 04/27/23 11:45
Client ID : 23-B-36 (0-2")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 10:52
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 1
Lab File ID : 23052-08	Analyst : IM
Sample Amount : 30.33 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 96
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	ND	140	18.	U
118-74-1	Hexachlorobenzene	ND	100	19.	U
111-44-4	Bis(2-chloroethyl)ether	ND	150	23.	U
91-58-7	2-Chloronaphthalene	ND	170	17.	U
91-94-1	3,3'-Dichlorobenzidine	ND	170	46.	U
121-14-2	2,4-Dinitrotoluene	ND	170	34.	U
606-20-2	2,6-Dinitrotoluene	ND	170	30.	U
206-44-0	Fluoranthene	160	100	20.	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	18.	U
101-55-3	4-Bromophenyl phenyl ether	ND	170	26.	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	210	29.	U
111-91-1	Bis(2-chloroethoxy)methane	ND	180	17.	U
87-68-3	Hexachlorobutadiene	ND	170	25.	U
77-47-4	Hexachlorocyclopentadiene	ND	490	160	U
67-72-1	Hexachloroethane	ND	140	28.	U
78-59-1	Isophorone	ND	150	22.	U
91-20-3	Naphthalene	ND	170	21.	U
98-95-3	Nitrobenzene	ND	150	25.	U
86-30-6	NDPA/DPA	ND	140	20.	U
621-64-7	n-Nitrosodi-n-propylamine	ND	170	26.	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	170	60.	U
85-68-7	Butyl benzyl phthalate	ND	170	43.	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-08RE	Date Collected : 04/27/23 11:45
Client ID : 23-B-36 (0-2")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 10:52
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 1
Lab File ID : 23052-08	Analyst : IM
Sample Amount : 30.33 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 96
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	170	33.	U
117-84-0	Di-n-octylphthalate	ND	170	58.	U
84-66-2	Diethyl phthalate	ND	170	16.	U
131-11-3	Dimethyl phthalate	ND	170	36.	U
56-55-3	Benzo(a)anthracene	100	100	19.	
50-32-8	Benzo(a)pyrene	130	140	42.	J
205-99-2	Benzo(b)fluoranthene	170	100	29.	
207-08-9	Benzo(k)fluoranthene	52	100	28.	J
218-01-9	Chrysene	110	100	18.	
208-96-8	Acenaphthylene	60	140	26.	J
120-12-7	Anthracene	44	100	34.	J
191-24-2	Benzo(ghi)perylene	120	140	20.	J
86-73-7	Fluorene	ND	170	17.	U
85-01-8	Phenanthrene	69	100	21.	J
53-70-3	Dibenzo(a,h)anthracene	24	100	20.	J
193-39-5	Indeno(1,2,3-cd)pyrene	110	140	24.	J
129-00-0	Pyrene	150	100	17.	
92-52-4	Biphenyl	ND	390	22.	U
106-47-8	4-Chloroaniline	ND	170	31.	U
88-74-4	2-Nitroaniline	ND	170	33.	U
99-09-2	3-Nitroaniline	ND	170	32.	U
100-01-6	4-Nitroaniline	ND	170	71.	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-08RE	Date Collected : 04/27/23 11:45
Client ID : 23-B-36 (0-2")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 10:52
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 1
Lab File ID : 23052-08	Analyst : IM
Sample Amount : 30.33 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 96
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	ND	170	16.	U
91-57-6	2-Methylnaphthalene	ND	210	21.	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	18.	U
98-86-2	Acetophenone	ND	170	21.	U
88-06-2	2,4,6-Trichlorophenol	ND	100	33.	U
59-50-7	p-Chloro-m-cresol	ND	170	26.	U
95-57-8	2-Chlorophenol	ND	170	20.	U
120-83-2	2,4-Dichlorophenol	ND	150	28.	U
105-67-9	2,4-Dimethylphenol	ND	170	57.	U
88-75-5	2-Nitrophenol	ND	370	65.	U
100-02-7	4-Nitrophenol	ND	240	70.	U
51-28-5	2,4-Dinitrophenol	ND	820	80.	U
534-52-1	4,6-Dinitro-o-cresol	ND	450	82.	U
87-86-5	Pentachlorophenol	ND	140	38.	U
108-95-2	Phenol	ND	170	26.	U
95-48-7	2-Methylphenol	ND	170	27.	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	250	27.	U
95-95-4	2,4,5-Trichlorophenol	ND	170	33.	U
86-74-8	Carbazole	ND	170	17.	U
1912-24-9	Atrazine	ND	140	60.	U
100-52-7	Benzaldehyde	ND	230	46.	U
105-60-2	Caprolactam	ND	170	52.	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Lab ID	: L2323052-08RE	Date Collected	: 04/27/23 11:45
Client ID	: 23-B-36 (0-2")	Date Received	: 04/27/23
Sample Location	: SYRACUSE, NY	Date Analyzed	: 05/13/23 10:52
Sample Matrix	: SOIL	Date Extracted	: 05/12/23
Analytical Method	: 1,8270E	Dilution Factor	: 1
Lab File ID	: 23052-08	Analyst	: IM
Sample Amount	: 30.33 g	Instrument ID	: GCMS5
Extraction Method	: EPA 3546	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: 96
GPC Cleanup	: N	Injection Volume	: 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	35.	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-09D
 Client ID : 23-B-36 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-09D1
 Sample Amount : 30.96 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:50
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 08:37
 Date Extracted : 05/08/23
 Dilution Factor : 10
 Analyst : LJG
 Instrument ID : GCMS5
 GC Column : RTX5-MS
 %Solids : 94
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	ND	1400	180	U
118-74-1	Hexachlorobenzene	ND	1000	190	U
111-44-4	Bis(2-chloroethyl)ether	ND	1500	230	U
91-58-7	2-Chloronaphthalene	ND	1700	170	U
91-94-1	3,3'-Dichlorobenzidine	ND	1700	460	U
121-14-2	2,4-Dinitrotoluene	ND	1700	340	U
606-20-2	2,6-Dinitrotoluene	ND	1700	290	U
206-44-0	Fluoranthene	ND	1000	200	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	1700	180	U
101-55-3	4-Bromophenyl phenyl ether	ND	1700	260	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2000	290	U
111-91-1	Bis(2-chloroethoxy)methane	ND	1800	170	U
87-68-3	Hexachlorobutadiene	ND	1700	250	U
77-47-4	Hexachlorocyclopentadiene	ND	4900	1600	U
67-72-1	Hexachloroethane	ND	1400	280	U
78-59-1	Isophorone	ND	1500	220	U
91-20-3	Naphthalene	ND	1700	210	U
98-95-3	Nitrobenzene	ND	1500	250	U
86-30-6	NDPA/DPA	ND	1400	190	U
621-64-7	n-Nitrosodi-n-propylamine	ND	1700	260	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	1700	590	U
85-68-7	Butyl benzyl phthalate	ND	1700	430	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Lab ID	: L2323052-09D	Date Collected	: 04/27/23 11:50
Client ID	: 23-B-36 (2-12")	Date Received	: 04/27/23
Sample Location	: SYRACUSE, NY	Date Analyzed	: 05/12/23 08:37
Sample Matrix	: SOIL	Date Extracted	: 05/08/23
Analytical Method	: 1,8270E	Dilution Factor	: 10
Lab File ID	: 052-09D1	Analyst	: LJG
Sample Amount	: 30.96 g	Instrument ID	: GCMS5
Extraction Method	: EPA 3546	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: 94
GPC Cleanup	: N	Injection Volume	: 1 uL

Rejected Data
Do Not Use

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	1700	320	U
117-84-0	Di-n-octylphthalate	ND	1700	580	U
84-66-2	Diethyl phthalate	ND	1700	160	U
131-11-3	Dimethyl phthalate	ND	1700	360	U
56-55-3	Benzo(a)anthracene	ND	1000	190	U
50-32-8	Benzo(a)pyrene	ND	1400	420	U
205-99-2	Benzo(b)fluoranthene	ND	1000	290	U
207-08-9	Benzo(k)fluoranthene	ND	1000	270	U
218-01-9	Chrysene	ND	1000	180	U
208-96-8	Acenaphthylene	ND	1400	260	U
120-12-7	Anthracene	ND	1000	330	U
191-24-2	Benzo(ghi)perylene	ND	1400	200	U
86-73-7	Fluorene	ND	1700	170	U
85-01-8	Phenanthrene	ND	1000	210	U
53-70-3	Dibenzo(a,h)anthracene	ND	1000	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1400	240	U
129-00-0	Pyrene	ND	1000	170	U
92-52-4	Biphenyl	ND	3900	220	U
106-47-8	4-Chloroaniline	ND	1700	310	U
88-74-4	2-Nitroaniline	ND	1700	330	U
99-09-2	3-Nitroaniline	ND	1700	320	U
100-01-6	4-Nitroaniline	ND	1700	710	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Lab ID	: L2323052-09D	Date Collected	: 04/27/23 11:50
Client ID	: 23-B-36 (2-12")	Date Received	: 04/27/23
Sample Location	: SYRACUSE, NY	Date Analyzed	: 05/12/23 08:37
Sample Matrix	: SOIL	Date Extracted	: 05/08/23
Analytical Method	: 1,8270E	Dilution Factor	: 10
Lab File ID	: 052-09D1	Analyst	: LJG
Sample Amount	: 30.96 g	Instrument ID	: GCMS5
Extraction Method	: EPA 3546	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: 94
GPC Cleanup	: N	Injection Volume	: 1 uL

Rejected Data
Do Not Use

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	ND	1700	160	U
91-57-6	2-Methylnaphthalene	ND	2000	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	1700	180	U
98-86-2	Acetophenone	ND	1700	210	U
88-06-2	2,4,6-Trichlorophenol	ND	1000	320	U
59-50-7	p-Chloro-m-cresol	ND	1700	260	U
95-57-8	2-Chlorophenol	ND	1700	200	U
120-83-2	2,4-Dichlorophenol	ND	1500	280	U
105-67-9	2,4-Dimethylphenol	ND	1700	560	U
88-75-5	2-Nitrophenol	ND	3700	640	U
100-02-7	4-Nitrophenol	ND	2400	700	U
51-28-5	2,4-Dinitrophenol	ND	8200	800	U
534-52-1	4,6-Dinitro-o-cresol	ND	4400	820	U
87-86-5	Pentachlorophenol	ND	1400	380	U
108-95-2	Phenol	ND	1700	260	U
95-48-7	2-Methylphenol	ND	1700	260	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	2500	270	U
95-95-4	2,4,5-Trichlorophenol	ND	1700	330	U
86-74-8	Carbazole	ND	1700	170	U
1912-24-9	Atrazine	ND	1400	600	U
100-52-7	Benzaldehyde	ND	2300	460	U
105-60-2	Caprolactam	ND	1700	520	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Lab ID	: L2323052-09D	Date Collected	: 04/27/23 11:50
Client ID	: 23-B-36 (2-12")	Date Received	: 04/27/23
Sample Location	: SYRACUSE, NY	Date Analyzed	: 05/12/23 08:37
Sample Matrix	: SOIL	Date Extracted	: 05/08/23
Analytical Method	: 1,8270E	Dilution Factor	: 10
Lab File ID	: 052-09D1	Analyst	: LJG
Sample Amount	: 30.96 g	Instrument ID	: GCMS5
Extraction Method	: EPA 3546	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: 94
GPC Cleanup	: N	Injection Volume	: 1 uL

Rejected Data
Do Not Use

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	1700	340	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-09RE\D	Date Collected : 04/27/23 11:50
Client ID : 23-B-36 (2-12")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 17:14
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 10
Lab File ID : 052-09D1	Analyst : IM
Sample Amount : 30.53 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 94
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	ND	1400	180	U
118-74-1	Hexachlorobenzene	ND	1000	190	U
111-44-4	Bis(2-chloroethyl)ether	ND	1600	240	U
91-58-7	2-Chloronaphthalene	ND	1700	170	U
91-94-1	3,3'-Dichlorobenzidine	ND	1700	460	U
121-14-2	2,4-Dinitrotoluene	ND	1700	350	U
606-20-2	2,6-Dinitrotoluene	ND	1700	300	U
206-44-0	Fluoranthene	ND	1000	200	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	1700	180	U
101-55-3	4-Bromophenyl phenyl ether	ND	1700	260	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2100	300	U
111-91-1	Bis(2-chloroethoxy)methane	ND	1900	170	U
87-68-3	Hexachlorobutadiene	ND	1700	250	U
77-47-4	Hexachlorocyclopentadiene	ND	5000	1600	U
67-72-1	Hexachloroethane	ND	1400	280	U
78-59-1	Isophorone	ND	1600	220	U
91-20-3	Naphthalene	ND	1700	210	U
98-95-3	Nitrobenzene	ND	1600	260	U
86-30-6	NDPA/DPA	ND	1400	200	U
621-64-7	n-Nitrosodi-n-propylamine	ND	1700	270	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	1700	600	U
85-68-7	Butyl benzyl phthalate	ND	1700	440	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-09RE\D	Date Collected : 04/27/23 11:50
Client ID : 23-B-36 (2-12")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 17:14
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 10
Lab File ID : 052-09D1	Analyst : IM
Sample Amount : 30.53 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 94
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	1700	330	U
117-84-0	Di-n-octylphthalate	ND	1700	590	U
84-66-2	Diethyl phthalate	ND	1700	160	U
131-11-3	Dimethyl phthalate	ND	1700	360	U
56-55-3	Benzo(a)anthracene	ND	1000	200	U
50-32-8	Benzo(a)pyrene	ND	1400	420	U
205-99-2	Benzo(b)fluoranthene	ND	1000	290	U
207-08-9	Benzo(k)fluoranthene	ND	1000	280	U
218-01-9	Chrysene	ND	1000	180	U
208-96-8	Acenaphthylene	520	1400	270	J
120-12-7	Anthracene	ND	1000	340	U
191-24-2	Benzo(ghi)perylene	ND	1400	200	U
86-73-7	Fluorene	ND	1700	170	U
85-01-8	Phenanthrene	ND	1000	210	U
53-70-3	Dibenzo(a,h)anthracene	ND	1000	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1400	240	U
129-00-0	Pyrene	ND	1000	170	U
92-52-4	Biphenyl	ND	4000	220	U
106-47-8	4-Chloroaniline	ND	1700	320	U
88-74-4	2-Nitroaniline	ND	1700	330	U
99-09-2	3-Nitroaniline	ND	1700	330	U
100-01-6	4-Nitroaniline	ND	1700	720	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-09RE\D	Date Collected : 04/27/23 11:50
Client ID : 23-B-36 (2-12")	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 17:14
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 10
Lab File ID : 052-09D1	Analyst : IM
Sample Amount : 30.53 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 94
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	ND	1700	160	U
91-57-6	2-Methylnaphthalene	ND	2100	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	1700	180	U
98-86-2	Acetophenone	ND	1700	220	U
88-06-2	2,4,6-Trichlorophenol	ND	1000	330	U
59-50-7	p-Chloro-m-cresol	ND	1700	260	U
95-57-8	2-Chlorophenol	ND	1700	200	U
120-83-2	2,4-Dichlorophenol	ND	1600	280	U
105-67-9	2,4-Dimethylphenol	ND	1700	570	U
88-75-5	2-Nitrophenol	ND	3800	650	U
100-02-7	4-Nitrophenol	ND	2400	710	U
51-28-5	2,4-Dinitrophenol	ND	8300	810	U
534-52-1	4,6-Dinitro-o-cresol	ND	4500	830	U
87-86-5	Pentachlorophenol	ND	1400	380	U
108-95-2	Phenol	ND	1700	260	U
95-48-7	2-Methylphenol	ND	1700	270	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	2500	270	U
95-95-4	2,4,5-Trichlorophenol	ND	1700	330	U
86-74-8	Carbazole	ND	1700	170	U
1912-24-9	Atrazine	ND	1400	610	U
100-52-7	Benzaldehyde	ND	2300	470	U
105-60-2	Caprolactam	ND	1700	530	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Lab ID	: L2323052-09RE\D	Date Collected	: 04/27/23 11:50
Client ID	: 23-B-36 (2-12")	Date Received	: 04/27/23
Sample Location	: SYRACUSE, NY	Date Analyzed	: 05/13/23 17:14
Sample Matrix	: SOIL	Date Extracted	: 05/12/23
Analytical Method	: 1,8270E	Dilution Factor	: 10
Lab File ID	: 052-09D1	Analyst	: IM
Sample Amount	: 30.53 g	Instrument ID	: GCMS5
Extraction Method	: EPA 3546	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: 94
GPC Cleanup	: N	Injection Volume	: 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	1700	350	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-10RE\D	Date Collected : 04/27/23 12:00
Client ID : DUP 1	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 17:38
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 10
Lab File ID : 052-10D1	Analyst : IM
Sample Amount : 30.31 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 85
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	340	1600	200	J
118-74-1	Hexachlorobenzene	ND	1200	220	U
111-44-4	Bis(2-chloroethyl)ether	ND	1700	260	U
91-58-7	2-Chloronaphthalene	ND	1900	190	U
91-94-1	3,3'-Dichlorobenzidine	ND	1900	520	U
121-14-2	2,4-Dinitrotoluene	ND	1900	390	U
606-20-2	2,6-Dinitrotoluene	ND	1900	330	U
206-44-0	Fluoranthene	5800	1200	220	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1900	210	U
101-55-3	4-Bromophenyl phenyl ether	ND	1900	300	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2300	330	U
111-91-1	Bis(2-chloroethoxy)methane	ND	2100	190	U
87-68-3	Hexachlorobutadiene	ND	1900	280	U
77-47-4	Hexachlorocyclopentadiene	ND	5500	1800	U
67-72-1	Hexachloroethane	ND	1600	310	U
78-59-1	Isophorone	ND	1700	250	U
91-20-3	Naphthalene	1100	1900	240	J
98-95-3	Nitrobenzene	ND	1700	290	U
86-30-6	NDPA/DPA	ND	1600	220	U
621-64-7	n-Nitrosodi-n-propylamine	ND	1900	300	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	1900	670	U
85-68-7	Butyl benzyl phthalate	ND	1900	490	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.	Lab Number : L2323052
Project Name : FORMER ROTH STEEL SITE	Project Number : 16-S0140N
Lab ID : L2323052-10RE\D	Date Collected : 04/27/23 12:00
Client ID : DUP 1	Date Received : 04/27/23
Sample Location : SYRACUSE, NY	Date Analyzed : 05/13/23 17:38
Sample Matrix : SOIL	Date Extracted : 05/12/23
Analytical Method : 1,8270E	Dilution Factor : 10
Lab File ID : 052-10D1	Analyst : IM
Sample Amount : 30.31 g	Instrument ID : GCMS5
Extraction Method : EPA 3546	GC Column : RTX5-MS
Extract Volume : 1000 uL	%Solids : 85
GPC Cleanup : N	Injection Volume : 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	1900	370	U
117-84-0	Di-n-octylphthalate	ND	1900	660	U
84-66-2	Diethyl phthalate	ND	1900	180	U
131-11-3	Dimethyl phthalate	720	1900	410	J
56-55-3	Benzo(a)anthracene	4700	1200	220	
50-32-8	Benzo(a)pyrene	6800	1600	470	
205-99-2	Benzo(b)fluoranthene	8300	1200	330	
207-08-9	Benzo(k)fluoranthene	2200	1200	310	
218-01-9	Chrysene	4700	1200	200	
208-96-8	Acenaphthylene	5000	1600	300	
120-12-7	Anthracene	3600	1200	380	
191-24-2	Benzo(ghi)perylene	4100	1600	230	
86-73-7	Fluorene	650	1900	190	J
85-01-8	Phenanthrene	1700	1200	240	
53-70-3	Dibenzo(a,h)anthracene	1000	1200	220	J
193-39-5	Indeno(1,2,3-cd)pyrene	4700	1600	270	
129-00-0	Pyrene	7800	1200	190	
92-52-4	Biphenyl	ND	4400	250	U
106-47-8	4-Chloroaniline	ND	1900	350	U
88-74-4	2-Nitroaniline	ND	1900	370	U
99-09-2	3-Nitroaniline	ND	1900	360	U
100-01-6	4-Nitroaniline	ND	1900	800	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-10RE\D
 Client ID : DUP 1
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-10D1
 Sample Amount : 30.31 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

All detected results qualified J
 All "not detected results UJ

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 12:00
 Date Received : 04/27/23
 Date Analyzed : 05/13/23 17:38
 Date Extracted : 05/12/23
 Dilution Factor : 10
 Analyst : IM
 Instrument ID : GCMS5
 GC Column : RTX5-MS
 %Solids : 85
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	310	1900	180	J
91-57-6	2-Methylnaphthalene	670	2300	230	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	1900	200	U
98-86-2	Acetophenone	ND	1900	240	U
88-06-2	2,4,6-Trichlorophenol	ND	1200	370	U
59-50-7	p-Chloro-m-cresol	ND	1900	290	U
95-57-8	2-Chlorophenol	ND	1900	230	U
120-83-2	2,4-Dichlorophenol	ND	1700	310	U
105-67-9	2,4-Dimethylphenol	ND	1900	640	U
88-75-5	2-Nitrophenol	ND	4200	730	U
100-02-7	4-Nitrophenol	ND	2700	790	U
51-28-5	2,4-Dinitrophenol	ND	9300	900	U
534-52-1	4,6-Dinitro-o-cresol	ND	5000	930	U
87-86-5	Pentachlorophenol	ND	1600	430	U
108-95-2	Phenol	ND	1900	290	U
95-48-7	2-Methylphenol	ND	1900	300	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	2800	300	U
95-95-4	2,4,5-Trichlorophenol	ND	1900	370	U
86-74-8	Carbazole	380	1900	190	J
1912-24-9	Atrazine	ND	1600	680	U
100-52-7	Benzaldehyde	ND	2600	520	U
105-60-2	Caprolactam	ND	1900	590	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Lab ID	: L2323052-10RE\D	Date Collected	: 04/27/23 12:00
Client ID	: DUP 1	Date Received	: 04/27/23
Sample Location	: SYRACUSE, NY	Date Analyzed	: 05/13/23 17:38
Sample Matrix	: SOIL	Date Extracted	: 05/12/23
Analytical Method	: 1,8270E	Dilution Factor	: 10
Lab File ID	: 052-10D1	Analyst	: IM
Sample Amount	: 30.31 g	Instrument ID	: GCMS5
Extraction Method	: EPA 3546	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: 85
GPC Cleanup	: N	Injection Volume	: 1 uL

All detected results qualified J
All "not detected results UJ

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	1900	390	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-10D
 Client ID : DUP 1
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-10D1
 Sample Amount : 30.59 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 12:00
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 11:57
 Date Extracted : 05/08/23
 Dilution Factor : 10
 Analyst : IM
 Instrument ID : MORK
 GC Column : RTX5-MS
 %Solids : 85
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
83-32-9	Acenaphthene	340	1500	200	J
118-74-1	Hexachlorobenzene	ND	1200	220	U
111-44-4	Bis(2-chloroethyl)ether	ND	1700	260	U
91-58-7	2-Chloronaphthalene	ND	1900	190	U
91-94-1	3,3'-Dichlorobenzidine	ND	1900	510	U
121-14-2	2,4-Dinitrotoluene	ND	1900	380	U
606-20-2	2,6-Dinitrotoluene	ND	1900	330	U
206-44-0	Fluoranthene	9800	1200	220	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1900	200	U
101-55-3	4-Bromophenyl phenyl ether	ND	1900	290	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2300	330	U
111-91-1	Bis(2-chloroethoxy)methane	ND	2100	190	U
87-68-3	Hexachlorobutadiene	ND	1900	280	U
77-47-4	Hexachlorocyclopentadiene	ND	5500	1700	U
67-72-1	Hexachloroethane	ND	1500	310	U
78-59-1	Isophorone	ND	1700	250	U
91-20-3	Naphthalene	1900	1900	230	
98-95-3	Nitrobenzene	ND	1700	280	U
86-30-6	NDPA/DPA	ND	1500	220	U
621-64-7	n-Nitrosodi-n-propylamine	ND	1900	300	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	1900	660	U
85-68-7	Butyl benzyl phthalate	ND	1900	480	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-10D
 Client ID : DUP 1
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-10D1
 Sample Amount : 30.59 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 12:00
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 11:57
 Date Extracted : 05/08/23
 Dilution Factor : 10
 Analyst : IM
 Instrument ID : MORK
 GC Column : RTX5-MS
 %Solids : 85
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
84-74-2	Di-n-butylphthalate	ND	1900	360	U
117-84-0	Di-n-octylphthalate	ND	1900	650	U
84-66-2	Diethyl phthalate	ND	1900	180	U
131-11-3	Dimethyl phthalate	ND	1900	400	U
56-55-3	Benzo(a)anthracene	7000	1200	220	
50-32-8	Benzo(a)pyrene	9400	1500	470	
205-99-2	Benzo(b)fluoranthene	11000	1200	320	
207-08-9	Benzo(k)fluoranthene	3100	1200	310	
218-01-9	Chrysene	7500	1200	200	
208-96-8	Acenaphthylene	5000	1500	300	
120-12-7	Anthracene	3600	1200	370	
191-24-2	Benzo(ghi)perylene	5900	1500	220	
86-73-7	Fluorene	780	1900	190	J
85-01-8	Phenanthrene	2700	1200	230	
53-70-3	Dibenzo(a,h)anthracene	1500	1200	220	
193-39-5	Indeno(1,2,3-cd)pyrene	6400	1500	270	
129-00-0	Pyrene	13000	1200	190	
92-52-4	Biphenyl	ND	4400	250	U
106-47-8	4-Chloroaniline	ND	1900	350	U
88-74-4	2-Nitroaniline	ND	1900	370	U
99-09-2	3-Nitroaniline	ND	1900	360	U
100-01-6	4-Nitroaniline	ND	1900	800	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-10D
 Client ID : DUP 1
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8270E
 Lab File ID : 052-10D1
 Sample Amount : 30.59 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N

Rejected Data
 Do Not Use

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 12:00
 Date Received : 04/27/23
 Date Analyzed : 05/12/23 11:57
 Date Extracted : 05/08/23
 Dilution Factor : 10
 Analyst : IM
 Instrument ID : MORK
 GC Column : RTX5-MS
 %Solids : 85
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
132-64-9	Dibenzofuran	460	1900	180	J
91-57-6	2-Methylnaphthalene	1200	2300	230	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	1900	200	U
98-86-2	Acetophenone	ND	1900	240	U
88-06-2	2,4,6-Trichlorophenol	ND	1200	360	U
59-50-7	p-Chloro-m-cresol	ND	1900	290	U
95-57-8	2-Chlorophenol	ND	1900	230	U
120-83-2	2,4-Dichlorophenol	ND	1700	310	U
105-67-9	2,4-Dimethylphenol	ND	1900	630	U
88-75-5	2-Nitrophenol	ND	4100	720	U
100-02-7	4-Nitrophenol	ND	2700	780	U
51-28-5	2,4-Dinitrophenol	ND	9200	900	U
534-52-1	4,6-Dinitro-o-cresol	ND	5000	920	U
87-86-5	Pentachlorophenol	ND	1500	420	U
108-95-2	Phenol	ND	1900	290	U
95-48-7	2-Methylphenol	ND	1900	300	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	2800	300	U
95-95-4	2,4,5-Trichlorophenol	ND	1900	370	U
86-74-8	Carbazole	540	1900	190	J
1912-24-9	Atrazine	ND	1500	670	U
100-52-7	Benzaldehyde	ND	2500	520	U
105-60-2	Caprolactam	ND	1900	580	U



Results Summary

Form 1

Semivolatile Organics by GC/MS

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Lab ID	: L2323052-10D	Date Collected	: 04/27/23 12:00
Client ID	: DUP 1	Date Received	: 04/27/23
Sample Location	: SYRACUSE, NY	Date Analyzed	: 05/12/23 11:57
Sample Matrix	: SOIL	Date Extracted	: 05/08/23
Analytical Method	: 1,8270E	Dilution Factor	: 10
Lab File ID	: 052-10D1	Analyst	: IM
Sample Amount	: 30.59 g	Instrument ID	: MORK
Extraction Method	: EPA 3546	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: 85
GPC Cleanup	: N	Injection Volume	: 1 uL

Rejected Data
Do Not Use

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	1900	390	U



Results Summary

Form 1

Polychlorinated Biphenyls by GC

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-03
 Client ID : 23-B-33 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8082A
 Lab File ID : 23230509a-39
 Sample Amount : 10.88 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N
 Sulfur Cleanup : Y

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:50
 Date Received : 04/27/23
 Date Analyzed : 05/09/23 16:26
 Date Extracted : 05/06/23
 Dilution Factor : 1
 Analyst : JM
 Instrument ID : PEST23
 GC Column : CLP-Pesticide
 %Solids : 85
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
12674-11-2	Aroclor 1016	ND	54.0	4.80	U
11104-28-2	Aroclor 1221	ND	54.0	5.41	U
11141-16-5	Aroclor 1232	ND	54.0	11.4	U
12672-29-6	Aroclor 1248	ND	54.0	8.10	U
11096-82-5	Aroclor 1260	108	54.0	9.98	
37324-23-5	Aroclor 1262	ND	54.0	6.86	U
11100-14-4	Aroclor 1268	ND	54.0	5.59	U
1336-36-3	PCBs, Total	476	54.0	4.80	



Results Summary

Form 1

Polychlorinated Biphenyls by GC

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-03
 Client ID : 23-B-33 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8082A
 Lab File ID : 23230509a-39
 Sample Amount : 10.88 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N
 Sulfur Cleanup : Y

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:50
 Date Received : 04/27/23
 Date Analyzed : 05/09/23 16:26
 Date Extracted : 05/06/23
 Dilution Factor : 1
 Analyst : JM
 Instrument ID : PEST23
 GC Column : CLP-PesticideII
 %Solids : 85
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
53469-21-9	Aroclor 1242	108	54.0	7.28	
11097-69-1	Aroclor 1254	260	54.0	5.91	



Results Summary

Form 1

Polychlorinated Biphenyls by GC

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-04
 Client ID : 23-B-33 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8082A
 Lab File ID : P7230507a-13
 Sample Amount : 10.81 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N
 Sulfur Cleanup : Y

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:00
 Date Received : 04/27/23
 Date Analyzed : 05/07/23 17:47
 Date Extracted : 05/06/23
 Dilution Factor : 1
 Analyst : MEO
 Instrument ID : PEST7
 GC Column : CLP-Pesticide
 %Solids : 92
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
12674-11-2	Aroclor 1016	ND	50.2	4.45	U
11104-28-2	Aroclor 1221	ND	50.2	5.03	U
11141-16-5	Aroclor 1232	ND	50.2	10.6	U
12672-29-6	Aroclor 1248	ND	50.2	7.52	U
37324-23-5	Aroclor 1262	ND	50.2	6.37	U
11100-14-4	Aroclor 1268	ND	50.2	5.20	U

Results Summary

Form 1

Polychlorinated Biphenyls by GC

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-04
 Client ID : 23-B-33 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8082A
 Lab File ID : P7230507a-13
 Sample Amount : 10.81 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N
 Sulfur Cleanup : Y

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:00
 Date Received : 04/27/23
 Date Analyzed : 05/07/23 17:47
 Date Extracted : 05/06/23
 Dilution Factor : 1
 Analyst : MEO
 Instrument ID : PEST7
 GC Column : CLP-PesticideII
 %Solids : 92
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
53469-21-9	Aroclor 1242	107	50.2	6.76	J
11097-69-1	Aroclor 1254	215	50.2	5.49	J
11096-82-5	Aroclor 1260	85.8	50.2	9.27	J
1336-36-3	PCBs, Total	408	50.2	4.45	J



Results Summary

Form 1

Polychlorinated Biphenyls by GC

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-05
 Client ID : 23-B-34 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8082A
 Lab File ID : P7230507a-14
 Sample Amount : 10.4 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N
 Sulfur Cleanup : Y

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:00
 Date Received : 04/27/23
 Date Analyzed : 05/07/23 18:00
 Date Extracted : 05/06/23
 Dilution Factor : 1
 Analyst : MEO
 Instrument ID : PEST7
 GC Column : CLP-Pesticide
 %Solids : 70
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
12674-11-2	Aroclor 1016	ND	68.4	6.07	U
11104-28-2	Aroclor 1221	ND	68.4	6.85	U
11141-16-5	Aroclor 1232	ND	68.4	14.5	U
53469-21-9	Aroclor 1242	113	68.4	9.22	
12672-29-6	Aroclor 1248	ND	68.4	10.2	U
37324-23-5	Aroclor 1262	ND	68.4	8.68	U
11100-14-4	Aroclor 1268	ND	68.4	7.08	U

Results Summary

Form 1

Polychlorinated Biphenyls by GC

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-05
 Client ID : 23-B-34 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8082A
 Lab File ID : P7230507a-14
 Sample Amount : 10.4 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N
 Sulfur Cleanup : Y

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:00
 Date Received : 04/27/23
 Date Analyzed : 05/07/23 18:00
 Date Extracted : 05/06/23
 Dilution Factor : 1
 Analyst : MEO
 Instrument ID : PEST7
 GC Column : CLP-PesticideII
 %Solids : 70
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
11097-69-1	Aroclor 1254	332	68.4	7.48	
11096-82-5	Aroclor 1260	221	68.4	12.6	J+
1336-36-3	PCBs, Total	666	68.4	6.07	



Results Summary

Form 1

Polychlorinated Biphenyls by GC

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-06
 Client ID : 23-B-34 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8082A
 Lab File ID : P7230507a-06
 Sample Amount : 10.32 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N
 Sulfur Cleanup : Y

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:10
 Date Received : 04/27/23
 Date Analyzed : 05/07/23 16:17
 Date Extracted : 05/06/23
 Dilution Factor : 1
 Analyst : MEO
 Instrument ID : PEST7
 GC Column : CLP-Pesticide
 %Solids : 93
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
12674-11-2	Aroclor 1016	ND	52.3	4.65	U
11104-28-2	Aroclor 1221	ND	52.3	5.24	U
11141-16-5	Aroclor 1232	ND	52.3	11.1	U
12672-29-6	Aroclor 1248	ND	52.3	7.85	U
37324-23-5	Aroclor 1262	ND	52.3	6.64	U
11100-14-4	Aroclor 1268	ND	52.3	5.42	U

Results Summary

Form 1

Polychlorinated Biphenyls by GC

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-06
 Client ID : 23-B-34 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8082A
 Lab File ID : P7230507a-06
 Sample Amount : 10.32 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N
 Sulfur Cleanup : Y

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:10
 Date Received : 04/27/23
 Date Analyzed : 05/07/23 16:17
 Date Extracted : 05/06/23
 Dilution Factor : 1
 Analyst : MEO
 Instrument ID : PEST7
 GC Column : CLP-PesticideII
 %Solids : 93
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
53469-21-9	Aroclor 1242	58.4	52.3	7.05	
11097-69-1	Aroclor 1254	188	52.3	5.72	
11096-82-5	Aroclor 1260	170	52.3	9.67	
1336-36-3	PCBs, Total	416	52.3	4.65	



Results Summary

Form 1

Polychlorinated Biphenyls by GC

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-08
 Client ID : 23-B-36 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8082A
 Lab File ID : 13230508a-38
 Sample Amount : 10.8 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N
 Sulfur Cleanup : Y

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:45
 Date Received : 04/27/23
 Date Analyzed : 05/08/23 15:14
 Date Extracted : 05/06/23
 Dilution Factor : 1
 Analyst : JM
 Instrument ID : PEST13
 GC Column : CLP-Pesticide
 %Solids : 96
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
12674-11-2	Aroclor 1016	ND	48.3	4.29	U
11104-28-2	Aroclor 1221	ND	48.3	4.84	U
11141-16-5	Aroclor 1232	ND	48.3	10.2	U
53469-21-9	Aroclor 1242	25.3	48.3	6.51	J
12672-29-6	Aroclor 1248	ND	48.3	7.25	U
11097-69-1	Aroclor 1254	19.9	48.3	5.29	J
37324-23-5	Aroclor 1262	ND	48.3	6.14	U
11100-14-4	Aroclor 1268	ND	48.3	5.01	U

Results Summary

Form 1

Polychlorinated Biphenyls by GC

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-08
 Client ID : 23-B-36 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8082A
 Lab File ID : 13230508a-38
 Sample Amount : 10.8 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N
 Sulfur Cleanup : Y

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:45
 Date Received : 04/27/23
 Date Analyzed : 05/08/23 15:14
 Date Extracted : 05/06/23
 Dilution Factor : 1
 Analyst : JM
 Instrument ID : PEST13
 GC Column : CLP-PesticideII
 %Solids : 96
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
11096-82-5	Aroclor 1260	11.3	48.3	8.93	J
1336-36-3	PCBs, Total	56.5	48.3	4.29	J

Results Summary

Form 1

Polychlorinated Biphenyls by GC

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-09
 Client ID : 23-B-36 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8082A
 Lab File ID : 13230508a-39
 Sample Amount : 10.5 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N
 Sulfur Cleanup : Y

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:50
 Date Received : 04/27/23
 Date Analyzed : 05/08/23 15:24
 Date Extracted : 05/06/23
 Dilution Factor : 1
 Analyst : JM
 Instrument ID : PEST13
 GC Column : CLP-Pesticide
 %Solids : 94
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
12674-11-2	Aroclor 1016	ND	50.5	4.48	U
11104-28-2	Aroclor 1221	ND	50.5	5.06	U
11141-16-5	Aroclor 1232	ND	50.5	10.7	U
53469-21-9	Aroclor 1242	7.66	50.5	6.81	J J+
12672-29-6	Aroclor 1248	ND	50.5	7.57	U
11097-69-1	Aroclor 1254	10.6	50.5	5.52	J
11096-82-5	Aroclor 1260	ND	50.5	9.33	U
37324-23-5	Aroclor 1262	ND	50.5	6.41	U
11100-14-4	Aroclor 1268	ND	50.5	5.23	U
1336-36-3	PCBs, Total	18.3	50.5	4.48	J



Results Summary

Form 1

Polychlorinated Biphenyls by GC

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-10
 Client ID : DUP 1
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8082A
 Lab File ID : P7230507a-15
 Sample Amount : 10.67 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N
 Sulfur Cleanup : Y

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 12:00
 Date Received : 04/27/23
 Date Analyzed : 05/07/23 18:13
 Date Extracted : 05/06/23
 Dilution Factor : 1
 Analyst : MEO
 Instrument ID : PEST7
 GC Column : CLP-Pesticide
 %Solids : 85
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
12674-11-2	Aroclor 1016	ND	55.1	4.89	U
11104-28-2	Aroclor 1221	ND	55.1	5.52	U
11141-16-5	Aroclor 1232	ND	55.1	11.7	U
12672-29-6	Aroclor 1248	ND	55.1	8.26	U
37324-23-5	Aroclor 1262	ND	55.1	6.99	U
11100-14-4	Aroclor 1268	ND	55.1	5.70	U

Results Summary

Form 1

Polychlorinated Biphenyls by GC

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-10
 Client ID : DUP 1
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,8082A
 Lab File ID : P7230507a-15
 Sample Amount : 10.67 g
 Extraction Method : EPA 3546
 Extract Volume : 1000 uL
 GPC Cleanup : N
 Sulfur Cleanup : Y

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 12:00
 Date Received : 04/27/23
 Date Analyzed : 05/07/23 18:13
 Date Extracted : 05/06/23
 Dilution Factor : 1
 Analyst : MEO
 Instrument ID : PEST7
 GC Column : CLP-PesticideII
 %Solids : 85
 Injection Volume : 1 uL

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
53469-21-9	Aroclor 1242	165	55.1	7.42	J
11097-69-1	Aroclor 1254	513	55.1	6.02	J
11096-82-5	Aroclor 1260	209	55.1	10.2	J
1336-36-3	PCBs, Total	887	55.1	4.89	J



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-01
 Client ID : 23-B-32 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_18
 Sample Amount : 5.91 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:30
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 16:50
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 85
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	0.799	0.050	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	0.400	0.056	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	0.200	0.043	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	0.799	0.081	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	ND	0.200	0.046	U
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	0.200	0.023	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	0.032	0.200	0.023	J
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	ND	0.200	0.059	U
335-67-1	Perfluorooctanoic Acid (PFOA)	0.144	0.200	0.052	J
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	0.799	0.280	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	0.200	0.037	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	0.200	0.078	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	0.927	0.200	0.079	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	0.200	0.075	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	0.799	0.387	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	0.200	0.042	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	0.200	0.100	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	0.200	0.051	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-01
 Client ID : 23-B-32 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_18
 Sample Amount : 5.91 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:30
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 16:50
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 85
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	0.200	0.032	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	0.200	0.043	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	0.200	0.082	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	0.200	0.041	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	0.200	0.053	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	0.200	0.106	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	0.799	0.098	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	0.799	0.146	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	0.200	0.038	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	0.799	0.196	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	0.799	0.167	U UJ
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	0.200	0.100	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	0.200	0.112	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	2.00	0.250	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-01
 Client ID : 23-B-32 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_18
 Sample Amount : 5.91 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:30
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 16:50
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 85
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	2.00	0.510	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	0.400	0.041	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	0.400	0.031	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND	0.400	0.083	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	0.400	0.095	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	0.999	0.144	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	4.99	0.504	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	4.99	1.76	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-02
 Client ID : 23-B-32 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_19
 Sample Amount : 5.9 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:35
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:03
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 87
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
375-22-4	Perfluorobutanoic Acid (PFBA)	0.062	0.779	0.049	J
2706-90-3	Perfluoropentanoic Acid (PFPeA)	0.062	0.390	0.055	J
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	0.195	0.042	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	0.779	0.079	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	0.055	0.195	0.045	JF
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	0.195	0.023	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	0.031	0.195	0.023	J
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	ND	0.195	0.058	U
335-67-1	Perfluorooctanoic Acid (PFOA)	0.156	0.195	0.051	J
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	0.779	0.273	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	0.195	0.036	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	0.195	0.076	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	2.17	0.195	0.077	
335-76-2	Perfluorodecanoic Acid (PFDA)	0.148	0.195	0.073	J
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	0.779	0.377	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	0.195	0.041	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	0.195	0.097	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	0.062	0.195	0.050	J



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-02
 Client ID : 23-B-32 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_19
 Sample Amount : 5.9 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:35
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:03
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 87
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	0.031	0.195	0.031	J
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	0.195	0.042	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	0.195	0.080	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	0.195	0.040	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	0.195	0.051	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	0.195	0.104	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	0.779	0.096	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	0.779	0.143	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	0.195	0.037	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	0.779	0.191	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	0.779	0.163	U UJ
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	0.195	0.097	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	0.195	0.109	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	1.95	0.244	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-02
 Client ID : 23-B-32 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_19
 Sample Amount : 5.9 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:35
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:03
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 87
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	1.95	0.497	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	0.390	0.040	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	0.390	0.030	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND	0.390	0.081	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	0.390	0.093	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	0.974	0.140	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	4.87	0.492	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	4.87	1.71	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-03
 Client ID : 23-B-33 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_20
 Sample Amount : 5.96 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:50
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:16
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 85
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	0.789	0.050	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	0.394	0.055	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	0.197	0.043	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	0.789	0.080	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	0.055	0.197	0.046	J
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	0.197	0.023	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	ND	0.197	0.023	U
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	ND	0.197	0.058	U
335-67-1	Perfluorooctanoic Acid (PFOA)	ND	0.197	0.051	U
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	0.789	0.276	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	0.197	0.036	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	0.197	0.077	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	1.68	0.197	0.078	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	0.197	0.074	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	0.789	0.382	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	0.197	0.042	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	0.197	0.099	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	0.197	0.051	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-03
 Client ID : 23-B-33 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_20
 Sample Amount : 5.96 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:50
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:16
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 85
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	0.197	0.032	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	0.197	0.043	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	0.197	0.081	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	0.047	0.197	0.040	J
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	0.197	0.052	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	0.197	0.105	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	0.789	0.097	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	0.789	0.144	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	0.197	0.038	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	0.789	0.193	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	0.789	0.165	U UJ
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	0.197	0.099	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	0.197	0.110	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	1.97	0.247	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-03
 Client ID : 23-B-33 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_20
 Sample Amount : 5.96 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:50
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:16
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 85
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	1.97	0.503	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	0.394	0.040	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	0.394	0.031	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND	0.394	0.082	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	0.394	0.094	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	0.986	0.142	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	4.93	0.498	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	4.93	1.74	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-04
 Client ID : 23-B-33 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_21
 Sample Amount : 5.54 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:00
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:29
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 92
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	0.783	0.049	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	0.392	0.055	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	0.196	0.042	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	0.783	0.079	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	ND	0.196	0.045	U
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	0.196	0.023	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	ND	0.196	0.023	U
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	ND	0.196	0.058	U
335-67-1	Perfluorooctanoic Acid (PFOA)	0.086	0.196	0.051	J
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	0.783	0.274	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	0.196	0.036	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	0.196	0.077	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	1.66	0.196	0.078	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	0.196	0.074	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	0.783	0.379	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	0.196	0.042	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	0.196	0.098	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	0.196	0.050	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-04
 Client ID : 23-B-33 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_21
 Sample Amount : 5.54 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:00
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:29
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 92
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	0.039	0.196	0.031	J
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	0.196	0.042	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	0.196	0.081	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	0.196	0.040	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	0.196	0.052	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	0.196	0.104	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	0.783	0.096	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	0.783	0.143	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	0.196	0.038	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	0.783	0.192	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	0.783	0.164	U UJ
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	0.196	0.098	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	0.196	0.110	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	1.96	0.245	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-04
 Client ID : 23-B-33 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_21
 Sample Amount : 5.54 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:00
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:29
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 92
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	1.96	0.500	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	0.392	0.040	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	0.392	0.031	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND	0.392	0.081	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	0.392	0.093	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	0.979	0.141	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	4.89	0.494	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	4.89	1.72	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-05
 Client ID : 23-B-34 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_22
 Sample Amount : 7.15 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:00
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:42
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 70
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	0.796	0.050	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	0.398	0.056	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	0.199	0.043	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	0.796	0.080	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	0.064	0.199	0.046	J
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	0.199	0.023	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	0.048	0.199	0.023	J
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	0.072	0.199	0.059	J
335-67-1	Perfluorooctanoic Acid (PFOA)	0.191	0.199	0.052	J
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	0.796	0.278	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	0.199	0.037	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	0.199	0.078	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	1.59	0.199	0.079	
335-76-2	Perfluorodecanoic Acid (PFDA)	0.103	0.199	0.075	J
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	0.796	0.385	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	0.199	0.042	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	0.199	0.100	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	0.199	0.051	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-05
 Client ID : 23-B-34 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_22
 Sample Amount : 7.15 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:00
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:42
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 70
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	0.199	0.032	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	0.199	0.043	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	0.119	0.199	0.082	JF
307-55-1	Perfluorododecanoic Acid (PFDoA)	0.080	0.199	0.041	J
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	0.199	0.053	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	0.199	0.106	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	0.796	0.098	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	0.796	0.146	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	0.199	0.038	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	0.796	0.195	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	0.796	0.166	U UJ
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	0.199	0.100	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	0.199	0.111	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	1.99	0.249	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-05
 Client ID : 23-B-34 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_22
 Sample Amount : 7.15 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:00
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:42
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 70
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	1.99	0.508	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	0.398	0.041	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	0.398	0.031	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND	0.398	0.083	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	0.398	0.095	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	0.995	0.143	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	4.97	0.502	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	4.97	1.75	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-06
 Client ID : 23-B-34 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_23
 Sample Amount : 5.51 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:10
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:55
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 93
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	0.784	0.049	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	0.392	0.055	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	0.196	0.042	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	0.784	0.079	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	ND	0.196	0.046	U
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	0.196	0.023	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	ND	0.196	0.023	U
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	ND	0.196	0.058	U
335-67-1	Perfluorooctanoic Acid (PFOA)	0.055	0.196	0.051	J
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	0.784	0.274	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	0.196	0.036	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	0.196	0.077	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	1.09	0.196	0.078	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	0.196	0.074	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	0.784	0.379	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	0.196	0.042	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	0.196	0.098	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	0.196	0.050	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-06
 Client ID : 23-B-34 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_23
 Sample Amount : 5.51 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:10
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:55
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 93
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	0.196	0.031	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	0.196	0.042	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	0.196	0.081	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	0.196	0.040	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	0.196	0.052	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	0.196	0.104	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	0.784	0.096	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	0.784	0.143	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	0.196	0.038	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	0.784	0.192	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	0.784	0.164	U UJ
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	0.196	0.098	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	0.196	0.110	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	1.96	0.245	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-06
 Client ID : 23-B-34 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_23
 Sample Amount : 5.51 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:10
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 17:55
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 93
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	1.96	0.500	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	0.392	0.040	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	0.392	0.031	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND	0.392	0.082	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	0.392	0.093	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	0.980	0.141	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	4.90	0.495	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	4.90	1.72	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-07
 Client ID : 23-B-35 (0-16")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_26
 Sample Amount : 5.99 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 13:10
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 18:33
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 85
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
375-22-4	Perfluorobutanoic Acid (PFBA)	0.094	0.786	0.050	J
2706-90-3	Perfluoropentanoic Acid (PFPeA)	0.204	0.393	0.055	J
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	0.196	0.042	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	0.786	0.079	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	0.134	0.196	0.046	J
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	0.196	0.023	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	0.102	0.196	0.023	J
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	0.086	0.196	0.058	J
335-67-1	Perfluorooctanoic Acid (PFOA)	0.228	0.196	0.051	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	0.786	0.275	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	0.039	0.196	0.036	JF
375-95-1	Perfluorononanoic Acid (PFNA)	0.181	0.196	0.077	J
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	5.36	0.196	0.078	
335-76-2	Perfluorodecanoic Acid (PFDA)	0.471	0.196	0.074	
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	0.786	0.380	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	0.196	0.042	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	0.196	0.098	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	0.188	0.196	0.050	J



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-07
 Client ID : 23-B-35 (0-16")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_26
 Sample Amount : 5.99 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 13:10
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 18:33
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 85
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	0.188	0.196	0.031	J
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	0.196	0.042	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	0.086	0.196	0.081	JF
307-55-1	Perfluorododecanoic Acid (PFDoA)	0.212	0.196	0.040	
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	0.079	0.196	0.052	J
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	0.110	0.196	0.104	J
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	0.786	0.097	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	0.786	0.144	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	0.196	0.038	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	0.786	0.192	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	0.786	0.164	U UJ
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	0.196	0.098	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	0.196	0.110	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	1.96	0.246	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-07
 Client ID : 23-B-35 (0-16")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_26
 Sample Amount : 5.99 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 13:10
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 18:33
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 85
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	1.96	0.501	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	0.393	0.040	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	0.393	0.031	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND	0.393	0.082	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	0.393	0.094	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	0.982	0.141	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	4.91	0.496	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	4.91	1.73	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-08
 Client ID : 23-B-36 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_29
 Sample Amount : 5.26 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:45
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 19:12
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 96
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	0.794	0.050	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	0.397	0.056	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	0.198	0.043	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	0.794	0.080	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	ND	0.198	0.046	U
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	0.198	0.023	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	ND	0.198	0.023	U
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	ND	0.198	0.059	U
335-67-1	Perfluorooctanoic Acid (PFOA)	ND	0.198	0.052	U
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	0.794	0.278	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	0.198	0.037	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	0.198	0.078	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	0.135	0.198	0.079	JF
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	0.198	0.075	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	0.794	0.384	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	0.198	0.042	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	0.198	0.099	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	0.198	0.051	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-08
 Client ID : 23-B-36 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_29
 Sample Amount : 5.26 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:45
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 19:12
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 96
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	0.198	0.032	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	0.198	0.043	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	0.198	0.082	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	0.198	0.041	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	0.198	0.052	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	0.198	0.106	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	0.794	0.098	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	0.794	0.145	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	0.198	0.038	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	0.794	0.194	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	0.794	0.166	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	0.198	0.099	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	0.198	0.111	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	1.98	0.248	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-08
 Client ID : 23-B-36 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_29
 Sample Amount : 5.26 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:45
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 19:12
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 96
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	1.98	0.506	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	0.397	0.041	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	0.397	0.031	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND	0.397	0.083	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	0.397	0.095	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	0.992	0.143	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	4.96	0.501	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	4.96	1.75	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-09
 Client ID : 23-B-36 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_30
 Sample Amount : 5.38 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:50
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 19:25
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 94
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	0.788	0.050	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	0.394	0.055	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	0.197	0.043	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	0.788	0.080	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	ND	0.197	0.046	U
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	0.197	0.023	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	ND	0.197	0.023	U
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	ND	0.197	0.058	U
335-67-1	Perfluorooctanoic Acid (PFOA)	ND	0.197	0.051	U
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	0.788	0.276	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	0.197	0.036	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	0.197	0.077	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	0.276	0.197	0.078	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	0.197	0.074	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	0.788	0.382	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	0.197	0.042	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	0.197	0.099	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	0.197	0.050	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-09
 Client ID : 23-B-36 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_30
 Sample Amount : 5.38 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:50
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 19:25
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 94
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	0.197	0.032	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	0.197	0.043	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	0.197	0.081	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	0.197	0.040	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	0.197	0.052	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	0.197	0.105	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	0.788	0.097	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	0.788	0.144	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	0.197	0.038	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	0.788	0.193	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	0.788	0.165	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	0.197	0.099	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	0.197	0.110	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	1.97	0.247	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-09
 Client ID : 23-B-36 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_30
 Sample Amount : 5.38 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:50
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 19:25
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 94
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	1.97	0.503	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	0.394	0.040	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	0.394	0.031	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND	0.394	0.082	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	0.394	0.094	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	0.986	0.142	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	4.93	0.498	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	4.93	1.73	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-10
 Client ID : DUP 1
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_31
 Sample Amount : 5.97 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 12:00
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 19:37
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 85
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	0.787	0.050	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	0.394	0.055	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	0.197	0.043	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	0.787	0.080	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	ND	0.197	0.046	U
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	0.197	0.023	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	ND	0.197	0.023	U
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	ND	0.197	0.058	U
335-67-1	Perfluorooctanoic Acid (PFOA)	ND	0.197	0.051	U
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	0.787	0.276	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	0.197	0.036	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	0.197	0.077	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	1.66	0.197	0.078	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	0.197	0.074	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	0.787	0.381	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	0.197	0.042	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	0.197	0.098	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	0.197	0.050	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-10
 Client ID : DUP 1
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_31
 Sample Amount : 5.97 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 12:00
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 19:37
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 85
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	0.197	0.032	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	0.197	0.043	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	0.197	0.081	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	0.197	0.040	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	0.197	0.052	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	0.197	0.105	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	0.787	0.097	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	0.787	0.144	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	0.197	0.038	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	0.787	0.193	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	0.787	0.164	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	0.197	0.098	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	0.197	0.110	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	1.97	0.246	U



Results Summary

Form 1

Perfluorinated Alkyl Acids by EPA 1633

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-10
 Client ID : DUP 1
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 144,1633
 Lab File ID : SCI08_230525_31
 Sample Amount : 5.97 g
 Extraction Method : EPA 1633
 Extract Volume : 4000 uL
 GPC Cleanup : N

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 12:00
 Date Received : 04/27/23
 Date Analyzed : 05/25/23 19:37
 Date Extracted : 05/24/23
 Dilution Factor : 1
 Analyst : RS
 Instrument ID : LCMS08
 GC Column : Acquity UPLC BEH C18
 %Solids : 85
 Injection Volume : 3 uL

CAS NO.	Parameter	ng/g			Qualifier
		Results	RL	MDL	
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	1.97	0.502	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	0.394	0.040	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	0.394	0.031	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA)	ND	0.394	0.082	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	0.394	0.094	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	0.984	0.142	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	4.92	0.497	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	4.92	1.73	U



Form 1 METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-03
 Client ID : 23-B-33 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,6010D
 Lab File ID : WG1775974.pdf
 Sample Amount : 1.261g
 Digestion Method : EPA 3050B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:50
 Date Received : 04/27/23
 Date Analyzed : 05/09/23 00:32
 Dilution Factor : 2
 Analyst : TAA
 Instrument ID : TRACE7
 %Solids : 85
 Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7429-90-5	Aluminum, Total	2310	9.32	2.52	
7440-36-0	Antimony, Total	1.10	4.66	0.354	J
7440-38-2	Arsenic, Total	7.45	0.932	0.194	J+
7440-39-3	Barium, Total	85.4	0.932	0.162	
7440-41-7	Beryllium, Total	0.195	0.466	0.031	J
7440-43-9	Cadmium, Total	2.21	0.932	0.091	
7440-47-3	Chromium, Total	27.0	0.932	0.089	J+
7440-48-4	Cobalt, Total	4.81	1.86	0.155	
7440-50-8	Copper, Total	136	0.932	0.240	J-
7439-92-1	Lead, Total	125	4.66	0.250	
7439-96-5	Manganese, Total	346	0.932	0.148	
7440-02-0	Nickel, Total	29.0	2.33	0.226	J+
7440-09-7	Potassium, Total	323	233	13.4	
7782-49-2	Selenium, Total	0.730	1.86	0.240	J J+
7440-22-4	Silver, Total	ND	0.466	0.264	U
7440-23-5	Sodium, Total	226	186	2.94	
7440-28-0	Thallium, Total	0.346	1.86	0.294	J
7440-62-2	Vanadium, Total	21.7	0.932	0.189	
7440-66-6	Zinc, Total	450	4.66	0.273	J-



Form 1 METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-04
 Client ID : 23-B-33 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,6010D
 Lab File ID : WG1775974.pdf
 Sample Amount : 1.257g
 Digestion Method : EPA 3050B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:00
 Date Received : 04/27/23
 Date Analyzed : 05/09/23 00:37
 Dilution Factor : 2
 Analyst : TAA
 Instrument ID : TRACE7
 %Solids : 92
 Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7429-90-5	Aluminum, Total	2770	8.63	2.33	
7440-36-0	Antimony, Total	0.499	4.31	0.328	J
7440-38-2	Arsenic, Total	5.25	0.863	0.179	J+
7440-39-3	Barium, Total	71.4	0.863	0.150	
7440-41-7	Beryllium, Total	0.195	0.431	0.029	J
7440-43-9	Cadmium, Total	2.51	0.863	0.085	
7440-47-3	Chromium, Total	39.9	0.863	0.083	J+
7440-48-4	Cobalt, Total	5.10	1.72	0.143	
7440-50-8	Copper, Total	168	0.863	0.223	J-
7439-92-1	Lead, Total	135	4.31	0.231	
7439-96-5	Manganese, Total	298	0.863	0.137	
7440-02-0	Nickel, Total	34.6	2.16	0.209	J+
7440-09-7	Potassium, Total	292	216	12.4	
7782-49-2	Selenium, Total	0.762	1.72	0.223	J J+
7440-22-4	Silver, Total	ND	0.431	0.244	U
7440-23-5	Sodium, Total	173	172	2.72	
7440-28-0	Thallium, Total	0.492	1.72	0.272	J
7440-62-2	Vanadium, Total	43.2	0.863	0.175	J
7440-66-6	Zinc, Total	514	4.31	0.253	J-



Form 1 METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-05
 Client ID : 23-B-34 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,6010D
 Lab File ID : WG1775974.pdf
 Sample Amount : 1.28g
 Digestion Method : EPA 3050B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:00
 Date Received : 04/27/23
 Date Analyzed : 05/09/23 00:42
 Dilution Factor : 2
 Analyst : TAA
 Instrument ID : TRACE7
 %Solids : 70
 Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7429-90-5	Aluminum, Total	2640	11.1	3.00	
7440-36-0	Antimony, Total	0.897	5.56	0.422	J
7440-38-2	Arsenic, Total	5.42	1.11	0.231	J+
7440-39-3	Barium, Total	113	1.11	0.193	
7440-41-7	Beryllium, Total	0.198	0.556	0.037	J
7440-43-9	Cadmium, Total	2.78	1.11	0.109	
7440-47-3	Chromium, Total	33.6	1.11	0.107	J+
7440-48-4	Cobalt, Total	5.33	2.22	0.184	
7440-50-8	Copper, Total	147	1.11	0.287	J-
7439-92-1	Lead, Total	152	5.56	0.298	
7439-96-5	Manganese, Total	334	1.11	0.177	
7440-02-0	Nickel, Total	34.2	2.78	0.269	J+
7440-09-7	Potassium, Total	383	278	16.0	
7782-49-2	Selenium, Total	0.641	2.22	0.287	J J+
7440-22-4	Silver, Total	0.407	0.556	0.314	J J+
7440-23-5	Sodium, Total	233	222	3.50	
7440-28-0	Thallium, Total	0.521	2.22	0.350	J
7440-62-2	Vanadium, Total	18.0	1.11	0.226	
7440-66-6	Zinc, Total	660	5.56	0.326	J-

Form 1 METALS

Client : JMT, Inc.
Project Name : FORMER ROTH STEEL SITE
Lab ID : L2323052-06
Client ID : 23-B-34 (2-12")
Sample Location : SYRACUSE, NY
Sample Matrix : SOIL
Analytical Method : 1,6010D
Lab File ID : WG1775974.pdf
Sample Amount : 1.271g
Digestion Method : EPA 3050B

Lab Number : L2323052
Project Number : 16-S0140N
Date Collected : 04/27/23 14:10
Date Received : 04/27/23
Date Analyzed : 05/08/23 23:24
Dilution Factor : 2
Analyst : TAA
Instrument ID : TRACE7
%Solids : 93
Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7429-90-5	Aluminum, Total	1990	8.50	2.29	
7440-36-0	Antimony, Total	0.718	4.25	0.323	J
7440-38-2	Arsenic, Total	5.98	0.850	0.177	J+
7440-39-3	Barium, Total	68.6	0.850	0.148	
7440-41-7	Beryllium, Total	0.216	0.425	0.028	J
7440-43-9	Cadmium, Total	1.35	0.850	0.083	
7440-47-3	Chromium, Total	16.9	0.850	0.082	J+
7440-48-4	Cobalt, Total	5.41	1.70	0.141	
7440-50-8	Copper, Total	84.4	0.850	0.219	J-
7439-92-1	Lead, Total	90.2	4.25	0.228	
7439-96-5	Manganese, Total	341	0.850	0.135	
7440-02-0	Nickel, Total	19.9	2.12	0.206	J+
7440-09-7	Potassium, Total	454	212	12.2	
7782-49-2	Selenium, Total	0.464	1.70	0.219	J J+
7440-22-4	Silver, Total	ND	0.425	0.240	U
7440-23-5	Sodium, Total	215	170	2.68	
7440-28-0	Thallium, Total	0.274	1.70	0.268	J
7440-62-2	Vanadium, Total	15.4	0.850	0.172	
7440-66-6	Zinc, Total	263	4.25	0.249	J-

Form 1 METALS

Client : JMT, Inc.
Project Name : FORMER ROTH STEEL SITE
Lab ID : L2323052-08
Client ID : 23-B-36 (0-2")
Sample Location : SYRACUSE, NY
Sample Matrix : SOIL
Analytical Method : 1,6010D
Lab File ID : WG1775974.pdf
Sample Amount : 1.282g
Digestion Method : EPA 3050B

Lab Number : L2323052
Project Number : 16-S0140N
Date Collected : 04/27/23 11:45
Date Received : 04/27/23
Date Analyzed : 05/09/23 00:56
Dilution Factor : 2
Analyst : TAA
Instrument ID : TRACE7
%Solids : 96
Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7429-90-5	Aluminum, Total	1770	8.14	2.20	
7440-36-0	Antimony, Total	ND	4.07	0.309	U
7440-38-2	Arsenic, Total	5.86	0.814	0.169	J+
7440-39-3	Barium, Total	35.5	0.814	0.142	
7440-41-7	Beryllium, Total	0.280	0.407	0.027	J
7440-43-9	Cadmium, Total	0.377	0.814	0.080	J
7440-47-3	Chromium, Total	9.04	0.814	0.078	J+
7440-48-4	Cobalt, Total	5.10	1.63	0.135	
7440-50-8	Copper, Total	37.0	0.814	0.210	J-
7439-92-1	Lead, Total	24.7	4.07	0.218	
7439-96-5	Manganese, Total	265	0.814	0.129	
7440-02-0	Nickel, Total	14.9	2.04	0.197	J+
7782-49-2	Selenium, Total	0.298	1.63	0.210	J J+
7440-22-4	Silver, Total	ND	0.407	0.230	U
7440-23-5	Sodium, Total	196	163	2.56	
7440-28-0	Thallium, Total	ND	1.63	0.256	U
7440-62-2	Vanadium, Total	9.83	0.814	0.165	
7440-66-6	Zinc, Total	91.7	4.07	0.238	J-



Form 1 METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-09
 Client ID : 23-B-36 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,6010D
 Lab File ID : WG1775974.pdf
 Sample Amount : 1.305g
 Digestion Method : EPA 3050B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:50
 Date Received : 04/27/23
 Date Analyzed : 05/09/23 01:01
 Dilution Factor : 2
 Analyst : TAA
 Instrument ID : TRACE7
 %Solids : 94
 Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7429-90-5	Aluminum, Total	1170	8.13	2.19	
7440-36-0	Antimony, Total	ND	4.06	0.309	U
7440-38-2	Arsenic, Total	3.56	0.813	0.169	J+
7440-39-3	Barium, Total	51.3	0.813	0.141	
7440-41-7	Beryllium, Total	0.168	0.406	0.027	J
7440-43-9	Cadmium, Total	0.140	0.813	0.080	J
7440-47-3	Chromium, Total	7.66	0.813	0.078	J+
7440-48-4	Cobalt, Total	2.15	1.62	0.135	
7440-50-8	Copper, Total	15.0	0.813	0.210	J-
7439-92-1	Lead, Total	12.1	4.06	0.218	
7439-96-5	Manganese, Total	149	0.813	0.129	
7440-02-0	Nickel, Total	7.54	2.03	0.197	J+
7782-49-2	Selenium, Total	0.303	1.62	0.210	J J+
7440-22-4	Silver, Total	ND	0.406	0.230	U
7440-23-5	Sodium, Total	175	162	2.56	
7440-28-0	Thallium, Total	ND	1.62	0.256	U
7440-62-2	Vanadium, Total	19.6	0.813	0.165	
7440-66-6	Zinc, Total	32.4	4.06	0.238	J-



Form 1

METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-10
 Client ID : DUP 1
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,6010D
 Lab File ID : WG1775974.pdf
 Sample Amount : 1.266g
 Digestion Method : EPA 3050B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 12:00
 Date Received : 04/27/23
 Date Analyzed : 05/09/23 01:05
 Dilution Factor : 2
 Analyst : TAA
 Instrument ID : TRACE7
 %Solids : 85
 Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7429-90-5	Aluminum, Total	2440	9.28	2.51	
7440-36-0	Antimony, Total	0.525	4.64	0.353	J
7440-38-2	Arsenic, Total	5.66	0.928	0.193	J+
7440-39-3	Barium, Total	81.0	0.928	0.162	
7440-41-7	Beryllium, Total	0.191	0.464	0.031	J
7440-43-9	Cadmium, Total	3.00	0.928	0.091	
7440-47-3	Chromium, Total	31.0	0.928	0.089	J+
7440-48-4	Cobalt, Total	4.66	1.86	0.154	
7440-50-8	Copper, Total	182	0.928	0.239	J-
7439-92-1	Lead, Total	150	4.64	0.249	
7439-96-5	Manganese, Total	269	0.928	0.148	
7440-02-0	Nickel, Total	34.9	2.32	0.225	J+
7782-49-2	Selenium, Total	0.872	1.86	0.239	J J+
7440-22-4	Silver, Total	0.835	0.464	0.263	J+
7440-23-5	Sodium, Total	205	186	2.92	
7440-28-0	Thallium, Total	0.382	1.86	0.292	J
7440-62-2	Vanadium, Total	15.8	0.928	0.188	J
7440-66-6	Zinc, Total	502	4.64	0.272	J-

Form 1

METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-03
 Client ID : 23-B-33 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,6010D
 Lab File ID : WG1777484.csv
 Sample Amount : 1.261g
 Digestion Method : EPA 3050B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:50
 Date Received : 04/27/23
 Date Analyzed : 05/11/23 15:15
 Dilution Factor : 20
 Analyst : NTB
 Instrument ID : TRACE9
 %Solids : 85
 Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7440-70-2	Calcium, Total	261000	93.2	32.6	
7439-89-6	Iron, Total	20800	46.6	8.41	
7439-95-4	Magnesium, Total	49500	93.2	14.4	



Form 1 METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-04
 Client ID : 23-B-33 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,6010D
 Lab File ID : WG1777484.csv
 Sample Amount : 1.257g
 Digestion Method : EPA 3050B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:00
 Date Received : 04/27/23
 Date Analyzed : 05/11/23 15:18
 Dilution Factor : 20
 Analyst : NTB
 Instrument ID : TRACE9
 %Solids : 92
 Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7440-70-2	Calcium, Total	253000	86.3	30.2	
7439-89-6	Iron, Total	22800	43.1	7.79	
7439-95-4	Magnesium, Total	40000	86.3	13.3	



Form 1

METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-05
 Client ID : 23-B-34 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,6010D
 Lab File ID : WG1777484.csv
 Sample Amount : 1.28g
 Digestion Method : EPA 3050B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:00
 Date Received : 04/27/23
 Date Analyzed : 05/11/23 15:21
 Dilution Factor : 20
 Analyst : NTB
 Instrument ID : TRACE9
 %Solids : 70
 Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7440-70-2	Calcium, Total	304000	111	38.9	
7439-89-6	Iron, Total	22700	55.6	10.0	
7439-95-4	Magnesium, Total	46800	111	17.1	



Form 1

METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-06
 Client ID : 23-B-34 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,6010D
 Lab File ID : WG1777484.csv
 Sample Amount : 1.271g
 Digestion Method : EPA 3050B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 14:10
 Date Received : 04/27/23
 Date Analyzed : 05/11/23 15:23
 Dilution Factor : 20
 Analyst : NTB
 Instrument ID : TRACE9
 %Solids : 93
 Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7440-70-2	Calcium, Total	285000	85.0	29.7	
7439-89-6	Iron, Total	15200	42.5	7.67	
7439-95-4	Magnesium, Total	47000	85.0	13.1	



Form 1

METALS

Client : JMT, Inc.
Project Name : FORMER ROTH STEEL SITE
Lab ID : L2323052-08
Client ID : 23-B-36 (0-2")
Sample Location : SYRACUSE, NY
Sample Matrix : SOIL
Analytical Method : 1,6010D
Lab File ID : WG1777484.csv
Sample Amount : 1.282g
Digestion Method : EPA 3050B

Lab Number : L2323052
Project Number : 16-S0140N
Date Collected : 04/27/23 11:45
Date Received : 04/27/23
Date Analyzed : 05/11/23 16:39
Dilution Factor : 2
Analyst : NTB
Instrument ID : TRACE9
%Solids : 96
Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7440-09-7	Potassium, Total	682	204	11.7	



Form 1

METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-08
 Client ID : 23-B-36 (0-2")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,6010D
 Lab File ID : WG1777484.csv
 Sample Amount : 1.282g
 Digestion Method : EPA 3050B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:45
 Date Received : 04/27/23
 Date Analyzed : 05/11/23 16:30
 Dilution Factor : 20
 Analyst : NTB
 Instrument ID : TRACE9
 %Solids : 96
 Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7440-70-2	Calcium, Total	284000	81.4	28.5	
7439-89-6	Iron, Total	7430	40.7	7.35	
7439-95-4	Magnesium, Total	26100	81.4	12.5	



Form 1

METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-09
 Client ID : 23-B-36 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,6010D
 Lab File ID : WG1777484.csv
 Sample Amount : 1.305g
 Digestion Method : EPA 3050B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:50
 Date Received : 04/27/23
 Date Analyzed : 05/11/23 16:33
 Dilution Factor : 20
 Analyst : NTB
 Instrument ID : TRACE9
 %Solids : 94
 Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7440-70-2	Calcium, Total	282000	81.3	28.4	
7439-89-6	Iron, Total	4980	40.6	7.34	
7439-95-4	Magnesium, Total	33400	81.3	12.5	



Form 1

METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-09
 Client ID : 23-B-36 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,6010D
 Lab File ID : WG1777484.csv
 Sample Amount : 1.305g
 Digestion Method : EPA 3050B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 11:50
 Date Received : 04/27/23
 Date Analyzed : 05/11/23 16:41
 Dilution Factor : 2
 Analyst : NTB
 Instrument ID : TRACE9
 %Solids : 94
 Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7440-09-7	Potassium, Total	351	203	11.7	



Form 1

METALS

Client : JMT, Inc.
Project Name : FORMER ROTH STEEL SITE
Lab ID : L2323052-10
Client ID : DUP 1
Sample Location : SYRACUSE, NY
Sample Matrix : SOIL
Analytical Method : 1,6010D
Lab File ID : WG1777484.csv
Sample Amount : 1.266g
Digestion Method : EPA 3050B

Lab Number : L2323052
Project Number : 16-S0140N
Date Collected : 04/27/23 12:00
Date Received : 04/27/23
Date Analyzed : 05/11/23 16:44
Dilution Factor : 2
Analyst : NTB
Instrument ID : TRACE9
%Solids : 85
Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7440-09-7	Potassium, Total	326	232	13.4	



Form 1

METALS

Client : JMT, Inc.
Project Name : FORMER ROTH STEEL SITE
Lab ID : L2323052-10
Client ID : DUP 1
Sample Location : SYRACUSE, NY
Sample Matrix : SOIL
Analytical Method : 1,6010D
Lab File ID : WG1777484.csv
Sample Amount : 1.266g
Digestion Method : EPA 3050B

Lab Number : L2323052
Project Number : 16-S0140N
Date Collected : 04/27/23 12:00
Date Received : 04/27/23
Date Analyzed : 05/11/23 16:36
Dilution Factor : 20
Analyst : NTB
Instrument ID : TRACE9
%Solids : 85
Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7440-70-2	Calcium, Total	294000	92.8	32.5	
7439-89-6	Iron, Total	19500	46.4	8.38	
7439-95-4	Magnesium, Total	34700	92.8	14.3	



Form 1

METALS

Client : JMT, Inc.
Project Name : FORMER ROTH STEEL SITE
Lab ID : L2323052-06
Client ID : 23-B-34 (2-12")
Sample Location : SYRACUSE, NY
Sample Matrix : SOIL
Analytical Method : 1,7471B
Lab File ID : WG1775869.pdf
Sample Amount : 0.357g
Digestion Method : EPA 7471B

Lab Number : L2323052
Project Number : 16-S0140N
Date Collected : 04/27/23 14:10
Date Received : 04/27/23
Date Analyzed : 05/07/23 21:39
Dilution Factor : 1
Analyst : TAA
Instrument ID : NIC4
%Solids : 93
Date Digested : 05/06/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7439-97-6	Mercury, Total	0.158	0.076	0.049	



Form 1

METALS

Client : JMT, Inc.
Project Name : FORMER ROTH STEEL SITE
Lab ID : L2323052-03
Client ID : 23-B-33 (0-2")
Sample Location : SYRACUSE, NY
Sample Matrix : SOIL
Analytical Method : 1,7471B
Lab File ID : WG1777061.pdf
Sample Amount : 0.387g
Digestion Method : EPA 7471B

Lab Number : L2323052
Project Number : 16-S0140N
Date Collected : 04/27/23 14:50
Date Received : 04/27/23
Date Analyzed : 05/10/23 16:27
Dilution Factor : 1
Analyst : DMB
Instrument ID : NIC3
%Solids : 85
Date Digested : 05/06/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7439-97-6	Mercury, Total	0.458	0.076	0.050	



Form 1 METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : L2323052-04
 Client ID : 23-B-33 (2-12")
 Sample Location : SYRACUSE, NY
 Sample Matrix : SOIL
 Analytical Method : 1,7471B
 Lab File ID : WG1777061.pdf
 Sample Amount : 0.356g
 Digestion Method : EPA 7471B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : 04/27/23 15:00
 Date Received : 04/27/23
 Date Analyzed : 05/10/23 16:31
 Dilution Factor : 1
 Analyst : DMB
 Instrument ID : NIC3
 %Solids : 92
 Date Digested : 05/06/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7439-97-6	Mercury, Total	0.684	0.076	0.050	



Form 1

METALS

Client : JMT, Inc.
Project Name : FORMER ROTH STEEL SITE
Lab ID : L2323052-05
Client ID : 23-B-34 (0-2")
Sample Location : SYRACUSE, NY
Sample Matrix : SOIL
Analytical Method : 1,7471B
Lab File ID : WG1777061.pdf
Sample Amount : 0.34g
Digestion Method : EPA 7471B

Lab Number : L2323052
Project Number : 16-S0140N
Date Collected : 04/27/23 14:00
Date Received : 04/27/23
Date Analyzed : 05/10/23 16:34
Dilution Factor : 1
Analyst : DMB
Instrument ID : NIC3
%Solids : 70
Date Digested : 05/06/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7439-97-6	Mercury, Total	0.303	0.104	0.068	



Form 1

METALS

Client : JMT, Inc.
Project Name : FORMER ROTH STEEL SITE
Lab ID : L2323052-08
Client ID : 23-B-36 (0-2")
Sample Location : SYRACUSE, NY
Sample Matrix : SOIL
Analytical Method : 1,7471B
Lab File ID : WG1777061.pdf
Sample Amount : 0.358g
Digestion Method : EPA 7471B

Lab Number : L2323052
Project Number : 16-S0140N
Date Collected : 04/27/23 11:45
Date Received : 04/27/23
Date Analyzed : 05/10/23 16:37
Dilution Factor : 1
Analyst : DMB
Instrument ID : NIC3
%Solids : 96
Date Digested : 05/06/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7439-97-6	Mercury, Total	ND	0.073	0.048	U



Form 1

METALS

Client : JMT, Inc.
Project Name : FORMER ROTH STEEL SITE
Lab ID : L2323052-09
Client ID : 23-B-36 (2-12")
Sample Location : SYRACUSE, NY
Sample Matrix : SOIL
Analytical Method : 1,7471B
Lab File ID : WG1777061.pdf
Sample Amount : 0.341g
Digestion Method : EPA 7471B

Lab Number : L2323052
Project Number : 16-S0140N
Date Collected : 04/27/23 11:50
Date Received : 04/27/23
Date Analyzed : 05/10/23 16:41
Dilution Factor : 1
Analyst : DMB
Instrument ID : NIC3
%Solids : 94
Date Digested : 05/06/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7439-97-6	Mercury, Total	ND	0.078	0.051	U



Form 1

METALS

Client : JMT, Inc.
Project Name : FORMER ROTH STEEL SITE
Lab ID : L2323052-10
Client ID : DUP 1
Sample Location : SYRACUSE, NY
Sample Matrix : SOIL
Analytical Method : 1,7471B
Lab File ID : WG1777061.pdf
Sample Amount : 0.383g
Digestion Method : EPA 7471B

Lab Number : L2323052
Project Number : 16-S0140N
Date Collected : 04/27/23 12:00
Date Received : 04/27/23
Date Analyzed : 05/10/23 16:44
Dilution Factor : 1
Analyst : DMB
Instrument ID : NIC3
%Solids : 85
Date Digested : 05/06/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7439-97-6	Mercury, Total	0.545	0.077	0.050	



SVOC Data Section



Geology

Hydrology

Remediation

Water Supply

**QA/QC Review of Method 8270D Semi-Volatiles
Data for Alpha Analytical, SDG Number: L2323052**

**6 Soil Samples and 1 Field Duplicate
Collected April 27, 2023**

Prepared by: Donald Anné
June 22, 2023

Holding Times: All samples were re-extracted beyond USEPA SW-846 holding times. Positive and “not detected” results for all compounds should be considered estimated (J, UJ respectively unless otherwise noted.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The average RRFs for 2-chloronaphthalene and 2,6-dinitrotoluene were below the method minimums, but not below 0.010 for GCMS5 on 04-05-23. No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no average RRF is less than 0.010.

The average RRFs for target compounds were above the allowable minimum (0.010) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRFs for 2-chloronaphthalene and 2,6-dinitrotoluene were below the method minimums, but not below 0.010 on 05-13-23 (WG1778541-3). The RRFs for 2-chloronaphthalene and 2,6-dinitrotoluene were below the method minimums, but not below 0.010 on 05-15-23 (WG1778940-3). The %Ds for 3 compounds (highlighted yellow on attached Form 7) were above the method maximum on 05-13-23 (WG1778541-3). The %Ds for 3 compounds (highlighted yellow on attached Form 7) were above the method maximum on 05-15-23 (WG1778940-3). No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no RRF is less than 0.010.

The RRFs for target compounds were above the allowable minimum (0.010), as required.

The %Ds for 3 compounds (highlighted yellow on attached Form 7) were above the allowable maximum (20%) on 05-13-23 (WG1778541-3). The %D for benzaldehyde was above the allowable maximum (20%) on 05-13-23 (WG1778541-4). The %Ds for 3 compounds (highlighted yellow on attached Form 7) were above the allowable maximum

(20%) on 05-15-23 (WG1778940-3). The %D for benzaldehyde was above the allowable maximum (20%) on 05-15-23 (WG1778940-4). Positive results for these compounds should be considered estimated (J) in associated samples.

Blanks: The analyses of the method blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogates for sample 23-B-33 (2-12”) were diluted beyond detection limits. No action is taken on surrogates diluted beyond detection limits.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences for target compounds were below the allowable maximum; 1 of 2 percent recoveries (%Rs) for 10 compounds (highlighted yellow on attached Form 3) were below QC limits, but not below 10%; and 2 of 2 %Rs for 5 compounds (red X on attached Form 3) were below QC limits and 1 or 2 below 10% for soil MS/MSD sample 23-B-34 (2-12”). Positive results for fluoranthene, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, phenanthrene, and pyrene should be considered estimated, biased low (J-); “not detected” results for 2,4-dinitrotoluene, bis(2-chloroisopropyl)ether, hexachloroethane, and 4-chloroaniline estimated (UJ); and “not detected” results for 3,3'-dichlorobenzidine, hexachlorocyclopentadiene, 4-nitrophenol, 2,4-dinitrophenol, and 4,6-dinitro-2-methylphenol rejected, unusable (R) in sample 23-B-34 (2-12”).

Laboratory Control Sample: The relative percent differences for target compounds were below the allowable maximum and the percent recoveries were within QC limits for soil samples WG1778352-2/3. (associated with the re-analyzed samples)

The analyses of LCS/LCSD soil sample WG1776405-2/3 were not acceptable and all samples for the initial analyses associated with this LCS/LCSD are rejected, unusable (R) the re-analyses of the samples should be used.

Field Duplicates: The relative percent differences for 14 compounds were above the allowable maximum (35%) for soil field duplicate pair 23-B-33 (2-12)/DUP 1 (attached table). Positive results for these 14 compounds should be considered estimated (J) in samples 23-B-33 (2-12) and DUP 1.

Compound ID: Checked compound and surrogate results were within quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

Laboratory Control Sample Summary

Form 3

Semivolatiles

REJECTED

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Matrix (Level)	: SOIL (LOW)		
LCS Sample ID	: WG1776405-2	Analysis Date	: 05/11/23 21:10
LCSD Sample ID	: WG1776405-3	Analysis Date	: 05/11/23 21:33
		File ID	: 776405-2
		File ID	: 776405-3

Parameter	Laboratory Control Sample			Laboratory Control Duplicate			RPD	Recovery Limits	RPD Limit
	True (ug/kg)	Found (ug/kg)	%R	True (ug/kg)	Found (ug/kg)	%R			
Acenaphthene	1300	1100	84	1300	370	28	Q	100	Q
Hexachlorobenzene	1300	840	64	1300	300	22	Q	98	Q
Bis(2-chloroethyl)ether	1300	1200	90	1300	390	30	Q	100	Q
2-Chloronaphthalene	1300	1000	79	1300	240	18	Q	126	Q
3,3'-Dichlorobenzidine	1300	760	58	1300	260	20	Q	97	Q
2,4-Dinitrotoluene	1300	1200	90	1300	400	30	Q	100	Q
2,6-Dinitrotoluene	1300	1000	78	1300	230	18	Q	125	Q
Fluoranthene	1300	1100	86	1300	390	29	Q	99	Q
4-Chlorophenyl phenyl ether	1300	1000	77	1300	360	28	Q	93	Q
4-Bromophenyl phenyl ether	1300	1000	76	1300	340	26	Q	98	Q
Bis(2-chloroisopropyl)ether	1300	1100	87	1300	400	30	Q	97	Q
Bis(2-chloroethoxy)methane	1300	760	58	1300	390	30	Q	64	Q
Hexachlorobutadiene	1300	920	70	1300	320	24	Q	98	Q
Hexachlorocyclopentadiene	1300	720	55	1300	180	14	Q	119	Q
Hexachloroethane	1300	1100	84	1300	400	30	Q	95	Q
Isophorone	1300	720	55	1300	410	31	Q	56	Q
Naphthalene	1300	1100	81	1300	350	26	Q	103	Q
Nitrobenzene	1300	750	57	1300	460	35	Q	48	
NDPA/DPA	1300	1100	84	1300	370	28	Q	100	Q
n-Nitrosodi-n-propylamine	1300	1200	94	1300	420	32		98	Q
Bis(2-ethylhexyl)phthalate	1300	1400	106	1300	490	37	Q	97	Q
Butyl benzyl phthalate	1300	1200	95	1300	420	32	Q	99	Q
Di-n-butylphthalate	1300	1200	95	1300	420	32	Q	99	Q
Di-n-octylphthalate	1300	1400	108	1300	480	36	Q	100	Q
Diethyl phthalate	1300	1100	84	1300	390	30	Q	95	Q
Dimethyl phthalate	1300	1000	78	1300	230	18	Q	125	Q



Laboratory Control Sample Summary

Form 3

Semivolatiles

REJECTED

Client : JMT, Inc. Lab Number : L2323052
 Project Name : FORMER ROTH STEEL SITE Project Number : 16-S0140N
 Matrix (Level) : SOIL (LOW)
 LCS Sample ID : WG1776405-2 Analysis Date : 05/11/23 21:10 File ID : 776405-2
 LCSD Sample ID : WG1776405-3 Analysis Date : 05/11/23 21:33 File ID : 776405-3

Parameter	Laboratory Control Sample			Laboratory Control Duplicate			RPD	Recovery Limits	RPD Limit
	True (ug/kg)	Found (ug/kg)	%R	True (ug/kg)	Found (ug/kg)	%R			
Benzo(a)anthracene	1300	1100	85	1300	390	30 Q	96 Q	40-140	50
Benzo(a)pyrene	1300	1300	99	1300	450	34 Q	98 Q	40-140	50
Benzo(b)fluoranthene	1300	1200	90	1300	440	33 Q	93 Q	40-140	50
Benzo(k)fluoranthene	1300	1200	93	1300	400	30 Q	102 Q	40-140	50
Chrysene	1300	1100	87	1300	400	30 Q	97 Q	40-140	50
Acenaphthylene	1300	1100	84	1300	250	19 Q	126 Q	40-140	50
Anthracene	1300	1200	90	1300	410	31 Q	98 Q	40-140	50
Benzo(ghi)perylene	1300	1100	83	1300	390	30 Q	94 Q	40-140	50
Fluorene	1300	1100	84	1300	380	29 Q	97 Q	40-140	50
Phenanthrene	1300	1100	84	1300	380	29 Q	97 Q	40-140	50
Dibenzo(a,h)anthracene	1300	1100	85	1300	380	29 Q	98 Q	40-140	50
Indeno(1,2,3-cd)pyrene	1300	1100	87	1300	390	29 Q	100 Q	40-140	50
Pyrene	1300	1100	86	1300	390	30 Q	97 Q	35-142	50
Biphenyl	1300	1000	77	1300	230	17 Q	128 Q	37-127	50
4-Chloroaniline	1300	790	60	1300	370	28 Q	73 Q	40-140	50
2-Nitroaniline	1300	1100	81	1300	240	18 Q	127 Q	47-134	50
3-Nitroaniline	1300	800	61	1300	300	23 Q	90 Q	26-129	50
4-Nitroaniline	1300	1100	88	1300	390	30 Q	98 Q	41-125	50
Dibenzofuran	1300	1100	86	1300	390	29 Q	99 Q	40-140	50
2-Methylnaphthalene	1300	1100	83	1300	240	18 Q	129 Q	40-140	50
1,2,4,5-Tetrachlorobenzene	1300	920	70	1300	200	15 Q	129 Q	40-117	50
Acetophenone	1300	1000	80	1300	390	30	91 Q	14-144	50
2,4,6-Trichlorophenol	1300	1000	78	1300	240	18 Q	125 Q	30-130	50
p-Chloro-m-cresol	1300	1200	88	1300	260	20 Q	126 Q	26-103	50
2-Chlorophenol	1300	1100	86	1300	360	27	104 Q	25-102	50
2,4-Dichlorophenol	1300	780	60	1300	420	32	61 Q	30-130	50



Laboratory Control Sample Summary

Form 3

Semivolatiles

REJECTED

Client : JMT, Inc. Lab Number : L2323052
 Project Name : FORMER ROTH STEEL SITE Project Number : 16-S0140N
 Matrix (Level) : SOIL (LOW)
 LCS Sample ID : WG1776405-2 Analysis Date : 05/11/23 21:10 File ID : 776405-2
 LCSD Sample ID : WG1776405-3 Analysis Date : 05/11/23 21:33 File ID : 776405-3

Parameter	Laboratory Control Sample			Laboratory Control Duplicate			RPD	Recovery Limits	RPD Limit
	True (ug/kg)	Found (ug/kg)	%R	True (ug/kg)	Found (ug/kg)	%R			
2,4-Dimethylphenol	1300	780	59	1300	440	33	57 Q	30-130	50
2-Nitrophenol	1300	780	59	1300	380	29	Q 68 Q	30-130	50
4-Nitrophenol	1300	1300	97	1300	400	30	106 Q	11-114	50
2,4-Dinitrophenol	1300	1100	83	1300	300	22	116 Q	4-130	50
4,6-Dinitro-o-cresol	1300	1200	88	1300	400	31	96 Q	10-130	50
Pentachlorophenol	1300	870	66	1300	320	24	93 Q	17-109	50
Phenol	1300	1200	95 Q	1300	420	32	99 Q	26-90	50
2-Methylphenol	1300	1000	81	1300	370	28	Q 97 Q	30-130.	50
3-Methylphenol/4-Methylphenol	1300	1100	87	1300	410	31	95 Q	30-130	50
2,4,5-Trichlorophenol	1300	1000	79	1300	240	18	Q 126 Q	30-130	50
Carbazole	1300	1200	92	1300	420	32	Q 97 Q	54-128	50
Atrazine	1300	1000	77	1300	350	26	Q 99 Q	40-140	50
Benzaldehyde	1300	1200	90	1300	460	35	Q 88 Q	40-140	50
Caprolactam	1300	1000	79	1300	410	31	87 Q	15-130	50
2,3,4,6-Tetrachlorophenol	1300	1000	78	1300	350	27	Q 97 Q	40-140	50



Matrix Spike Sample Summary

Form 3

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Client Sample ID : 23-B-34 (2-12")
 Lab Sample ID : L2323052-06
 Matrix Spike : WG1778352-4
 Matrix Spike Dup : WG1778352-5

Lab Number : L2323052
 Project Number : 16-S0140N
 Matrix (Level) : SOIL (LOW)
 Analysis Date : 05/13/23 18:26
 MS Analysis Date : 05/15/23 15:21
 MSD Analysis Date : 05/15/23 15:44

Parameter	Sample Conc. (ug/kg)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (ug/kg)	Spike Conc. (ug/kg)	%R	Spike Added (ug/kg)	Spike Conc. (ug/kg)	%R			
Acenaphthene	120J	1400	920	66	1410	810	58	13	31-137	50
Hexachlorobenzene	ND	1400	970	69	1410	810	58	18	40-140	50
Bis(2-chloroethyl)ether	ND	1400	720J	51	1410	670J	48	7	40-140	50
2-Chloronaphthalene	ND	1400	970	69	1410	820J	58	17	40-140	50
3,3'-Dichlorobenzidine	ND	1400	ND	0 Q	1410	240J	17 Q	NC	40-140	50
2,4-Dinitrotoluene	ND	1400	740J	53	1410	520J	37 Q	35	40-132	50
2,6-Dinitrotoluene	ND	1400	960	68	1410	620J	44	43	40-140	50
Fluoranthene	2000	1400	2900	64	1410	2300	21 Q	23	40-140	50
4-Chlorophenyl phenyl ether	ND	1400	920	66	1410	790J	56	15	40-140	50
4-Bromophenyl phenyl ether	ND	1400	1000	71	1410	800J	57	22	40-140	50
Bis(2-chloroisopropyl)ether	ND	1400	620J	44	1410	540J	38 Q	14	40-140	50
Bis(2-chloroethoxy)methane	ND	1400	770J	55	1410	690J	49	11	40-117	50
Hexachlorobutadiene	ND	1400	890	63	1410	760J	54	16	40-140	50
Hexachlorocyclopentadiene	ND	1400	ND	0 Q	1410	ND	0 Q	NC	40-140	50
Hexachloroethane	ND	1400	690J	49	1410	530J	38 Q	26	40-140	50
Isophorone	ND	1400	790	56	1410	700J	50	12	40-140	50
Naphthalene	150J	1400	1000	71	1410	870J	62	14	40-140	50
Nitrobenzene	ND	1400	760J	54	1410	670J	48	13	40-140	50
NDPA/DPA	ND	1400	900	64	1410	770	55	16	36-157	50
n-Nitrosodi-n-propylamine	ND	1400	720J	51	1410	660J	47	9	32-121	50
Bis(2-ethylhexyl)phthalate	300J	1400	1200	85	1410	1000	71	18	40-140	50
Butyl benzyl phthalate	ND	1400	960	68	1410	840J	60	13	40-140	50



Matrix Spike Sample Summary

Form 3

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Client Sample ID : 23-B-34 (2-12")
 Lab Sample ID : L2323052-06
 Matrix Spike : WG1778352-4
 Matrix Spike Dup : WG1778352-5

Lab Number : L2323052
 Project Number : 16-S0140N
 Matrix (Level) : SOIL (LOW)
 Analysis Date : 05/13/23 18:26
 MS Analysis Date : 05/15/23 15:21
 MSD Analysis Date : 05/15/23 15:44

Parameter	Sample Conc. (ug/kg)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (ug/kg)	Spike Conc. (ug/kg)	%R	Spike Added (ug/kg)	Spike Conc. (ug/kg)	%R			
Di-n-butylphthalate	ND	1400	920	66	1410	800J	57	14	40-140	50
Di-n-octylphthalate	ND	1400	980	70	1410	820J	58	18	40-140	50
Diethyl phthalate	ND	1400	820J	58	1410	730J	52	12	40-140	50
Dimethyl phthalate	ND	1400	880	63	1410	850J	60	3	40-140	50
Benzo(a)anthracene	980	1400	1800	58	1410	1500	37	Q 18	40-140	50
Benzo(a)pyrene	940	1400	1800	61	1410	1500	40	18	40-140	50
Benzo(b)fluoranthene	1300	1400	2100	57	1410	1800	36	Q 15	40-140	50
Benzo(k)fluoranthene	430J	1400	1400	100	1410	1100	78	24	40-140	50
Chrysene	970	1400	1800	59	1410	1500	38	Q 18	40-140	50
Acenaphthylene	610J	1400	1500	110	1410	1300	92	14	40-140	50
Anthracene	600	1400	1400	57	1410	1200	43	15	40-140	50
Benzo(ghi)perylene	740	1400	1600	61	1410	1300	40	21	40-140	50
Fluorene	160J	1400	1100	78	1410	910	65	19	40-140	50
Phenanthrene	1100	1400	1900	57	1410	1500	28	Q 24	40-140	50
Dibenzo(a,h)anthracene	150J	1400	920	66	1410	830	59	10	40-140	50
Indeno(1,2,3-cd)pyrene	800	1400	1700	64	1410	1400	43	19	40-140	50
Pyrene	1700	1400	2500	57	1410	2100	28	Q 17	35-142	50
Biphenyl	ND	1400	1000J	71	1410	850J	60	16	37-127	50
4-Chloroaniline	ND	1400	580J	41	1410	450J	32	Q 25	40-140	50
2-Nitroaniline	ND	1400	900	64	1410	770J	55	16	47-134	50
3-Nitroaniline	ND	1400	680J	48	1410	600J	43	13	26-129	50
4-Nitroaniline	ND	1400	590J	42	1410	580J	41	2	41-125	50



Matrix Spike Sample Summary

Form 3

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Client Sample ID : 23-B-34 (2-12")
 Lab Sample ID : L2323052-06
 Matrix Spike : WG1778352-4
 Matrix Spike Dup : WG1778352-5

Lab Number : L2323052
 Project Number : 16-S0140N
 Matrix (Level) : SOIL (LOW)
 Analysis Date : 05/13/23 18:26
 MS Analysis Date : 05/15/23 15:21
 MSD Analysis Date : 05/15/23 15:44

		Sample Conc. (ug/kg)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit		
			Spike Added (ug/kg)	Spike Conc. (ug/kg)	%R	Spike Added (ug/kg)	Spike Conc. (ug/kg)	%R					
Parameter													
Dibenzofuran		ND	1400	950	68		1410	840J	60	12	40-140	50	
2-Methylnaphthalene		100J	1400	1000	71		1410	890J	63	12	40-140	50	
1,2,4,5-Tetrachlorobenzene		ND	1400	980	70		1410	830J	59	17	40-117	50	
Acetophenone		ND	1400	880	63		1410	800J	57	10	14-144	50	
2,4,6-Trichlorophenol		ND	1400	1000	71		1410	870	62	14	30-130	50	
p-Chloro-m-cresol		ND	1400	920	66		1410	800J	57	14	26-103	50	
2-Chlorophenol		ND	1400	870J	62		1410	780J	55	11	25-102	50	
2,4-Dichlorophenol		ND	1400	960	68		1410	830	59	15	30-130	50	
2,4-Dimethylphenol		ND	1400	910	65		1410	760J	54	18	30-130	50	
2-Nitrophenol		ND	1400	630J	45		1410	460J	33	31	30-130	50	
4-Nitrophenol	X	ND	1400	ND	0	Q	1410	ND	0	Q	NC	11-114	50
2,4-Dinitrophenol	X	ND	1400	ND	0	Q	1410	ND	0	Q	NC	4-130	50
4,6-Dinitro-o-cresol	X	ND	1400	ND	0	Q	1410	ND	0	Q	NC	10-130	50
Pentachlorophenol		ND	1400	880	63		1410	740	53	17	17-109	50	
Phenol		ND	1400	890	63		1410	760J	54	16	26-90	50	
2-Methylphenol		ND	1400	850J	61		1410	760J	54	11	30-130.	50	
3-Methylphenol/4-Methylphenol		ND	1400	860J	61		1410	750J	53	14	30-130	50	
2,4,5-Trichlorophenol		ND	1400	950	68		1410	850J	60	11	30-130	50	
Carbazole		180J	1400	990	71		1410	840J	60	16	54-128	50	
Atrazine		ND	1400	950	68		1410	840	60	12	40-140	50	
Benzaldehyde		ND	1400	870J	62		1410	780J	55	11	40-140	50	
Caprolactam		ND	1400	820J	58		1410	700J	50	16	15-130	50	



Matrix Spike Sample Summary **Form 3** **Semivolatiles**

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Client Sample ID	: 23-B-34 (2-12")	Matrix (Level)	: SOIL (LOW)
Lab Sample ID	: L2323052-06	Analysis Date	: 05/13/23 18:26
Matrix Spike	: WG1778352-4	MS Analysis Date	: 05/15/23 15:21
Matrix Spike Dup	: WG1778352-5	MSD Analysis Date	: 05/15/23 15:44

Parameter	Sample Conc. (ug/kg)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (ug/kg)	Spike Conc. (ug/kg)	%R	Spike Added (ug/kg)	Spike Conc. (ug/kg)	%R			
2,3,4,6-Tetrachlorophenol	ND	1400	940	67	1410	770J	55	20	40-140	50

Surrogate Recovery Summary

Form 2

Semivolatiles

Client: JMT, Inc.
Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052
Project Number: 16-S0140N
Matrix: Soil

CLIENT ID (LAB SAMPLE NO.)	S1 (2FP)	S2 (PHL)	S3 (NBZ)	S4 (FBP)	S5 (TBP)	S6 (TPH)	TOT OUT
23-B-33 (0-2") (L2323052-03RE\D)	26	24	24	32	28	28	0
23-B-33 (0-2") (L2323052-03D) R	47	41	34	42	44	46	0
23-B-33 (2-12") (L2323052-04D) R	0 *	0*	0*	0*	0*	0*	6
23-B-33 (2-12") (L2323052-04RE\D)	DL	DL	DL	DL	DL	DL	6
23-B-34 (0-2") (L2323052-05D) R	52	53	37	43	46	41	0
23-B-34 (0-2") (L2323052-05RE\D)	47	47	35	57	54	48	0
23-B-34 (2-12") (L2323052-06RE\D)	50	48	33	60	59	57	0
23-B-34 (2-12") (L2323052-06D) R	94	94	94	82	92	75	0
23-B-36 (0-2") (L2323052-08) R	60	62	54	64	77	61	0
23-B-36 (0-2") (L2323052-08RE)	90	87	83	91	107	74	0
23-B-36 (2-12") (L2323052-09RE\D)	30	28	24	36	35	34	0
23-B-36 (2-12") (L2323052-09D) R	47	42	44	51	57	51	0
DUP 1 (L2323052-10D) R	52	49	56	53	49	56	0
DUP 1 (L2323052-10RE\D)	39	35	31	47	45	44	0
WG1776405-1BLANK	80	79	85	70	52	73	0
WG1776405-2LCS	88	97	60	79	60	77	0
WG1776405-3LCSD	30	32	32	18*	22	27	1
23-B-34 (2-12")MS	77	79	67	69	72	70	0
23-B-34 (2-12")MSD	81	83	71	74	76	70	0
WG1778352-1BLANK	75	73	65	79	100	90	0
WG1778352-2LCS	70	67	60	74	93	78	0
WG1778352-3LCSD	78	75	67	84	110	91	0
23-B-34 (2-12")MS	59	60	58	68	74	63	0
23-B-34 (2-12")MSD	54	53	51	59	61	54	0

DL - Surrogate diluted beyond detection limit.
R - Rejected data.

QC LIMITS

(25-120) 2FP = 2-FLUOROPHENOL
(10-120) PHL = PHENOL-D6
(23-120) NBZ = NITROBENZENE-D5
(30-120) FBP = 2-FLUOROBIPHENYL
(10-136) TBP = 2,4,6-TRIBROMOPHENOL
(18-120) TPH = 4-TERPHENYL-D14

* Values outside of QC limits

FORM II NYTCL-8270



Initial Calibration Summary

Form 6

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : GCMS5
 Calibration dates : 04/05/23 13:00 04/06/23 02:14

Lab Number : L2323052
 Project Number : 16-S0140N
 Ical Ref : ICAL19893

Calibration Files

1.0 =AP9L1.D 2.0 =AP9L2.D 3.0 =AP9L3.D 5.0 =AP9L4.D 10 =AP9L5.D 20 =AP9L6.D 50 =AP9L8.D
 100 =AP9L8.D 150 =AP9L9.D 200 =AP9L10.D

Compound	1.0	2.0	3.0	5.0	10	20	50	100	150	200	Avg	%RSD
1) I IS1_1,4-Dichlorobenzene-d4	-----ISTD-----											
2) t N-Nitrosodimethylamine	0.648	0.623	0.713	0.700	0.680	0.649	0.676	0.681	0.652	0.704	0.673	4.31
3) t Pyridine	0.991	1.068	1.038	1.034	1.070	1.065	1.156	1.084	1.078	1.145	1.073	4.57
4) S 2-Fluorophenol	0.983	1.051	1.052	1.054	1.039	1.044	1.099	1.095	1.074	1.147	1.064	4.12
5) T Aniline	1.682	1.670	1.687	1.682	1.724	1.706	1.765	1.682	1.681	1.721	1.700	1.72
6) t 2-Chlorophenol	1.216	1.246	1.251	1.309	1.295	1.307	1.334	1.290	1.290	1.357	1.289	3.27
7) S Phenol-d6	1.239	1.293	1.273	1.339	1.358	1.366	1.420	1.356	1.369	1.397	1.341	4.21
8) T Phenol	1.344	1.348	1.395	1.411	1.432	1.423	1.484	1.417	1.425	1.440	1.412	2.95
9) T bis(2-Chloroethyl)ether	1.044	1.100	1.092	1.115	1.085	1.076	1.106	1.058	1.039	1.086	1.080	2.37
10) T 1,3-Dichlorobenzene	1.400	1.427	1.461	1.461	1.434	1.403	1.435	1.382	1.354	1.429	1.419	2.40
11) T 1,4-Dichlorobenzene	1.482	1.511	1.465	1.493	1.461	1.426	1.472	1.417	1.397	1.480	1.460	2.45
12) T 1,2-Dichlorobenzene	1.426	1.408	1.415	1.411	1.418	1.398	1.430	1.374	1.361	1.415	1.406	1.59
13) t Benzyl alcohol	0.823	0.906	0.881	0.902	0.932	0.961	1.014	0.969	0.975	1.016	0.938	6.52
14) T bis(2-chloroisopropyl)ether	1.111	1.161	1.142	1.190	1.159	1.135	1.177	1.141	1.131	1.208	1.155	2.56
15) T 2-Methylphenol	0.997	1.041	1.060	1.097	1.107	1.115	1.166	1.099	1.113	1.145	1.094	4.55
16) T Hexachloroethane	0.524	0.526	0.519	0.548	0.539	0.529	0.549	0.536	0.536	0.579	0.538	3.23
17) T n-Nitrosodi-n-propylamine	0.768	0.787	0.785	0.814	0.824	0.837	0.876	0.833	0.832	0.852	0.821	4.02
18) T 3-Methylphenol/4-Methylphenol	1.052	1.108	1.106	1.156	1.183	1.214	1.261	1.174	1.202	1.249	1.170	5.67
19) S Nitrobenzene-d5	1.057	1.151	1.122	1.187	1.251	1.252	1.303	1.223	1.236	1.300	1.208	6.53
20) T Nitrobenzene	1.159	1.124	1.137	1.147	1.219	1.216	1.271	1.192	1.206	1.260	1.193	4.26
21) T Isophorone	2.054	2.059	2.073	2.188	2.234	2.266	2.364	2.165	2.201	2.263	2.187	4.66
22) T 2-Nitrophenol	0.639	0.651	0.641	0.689	0.722	0.726	0.778	0.728	0.749	0.776	0.710	7.42
23) T 2,4-Dimethylphenol	0.998	1.012	1.048	1.067	1.161	1.193	1.248	1.172	1.216	1.272	1.139	8.75
24) T bis(2-Chloroethoxy)methane	1.296	1.397	1.411	1.437	1.431	1.463	1.508	1.386	1.405	1.468	1.420	4.04
25) T 2,4-Dichlorophenol	1.029	1.134	1.072	1.108	1.140	1.200	1.253	1.143	1.185	1.227	1.149	6.02
26) T 1,2,4-Trichlorobenzene	1.243	1.264	1.273	1.303	1.265	1.303	1.345	1.241	1.270	1.340	1.285	2.87
27) I IS2_1,4-Dichlorobenzene-d4	-----ISTD-----											
28) T Benzaldehyde	0.980	1.019	0.965	0.965	1.000	0.954	0.915	0.950	0.958	0.959	0.967	2.95
29) T Acetophenone	1.791	1.768	1.651	1.709	1.749	1.664	1.611	1.656	1.657	1.656	1.691	3.53
30) T m-Toluidine	1.425	1.546	1.512	1.624	1.720	1.628	1.606	1.665	1.687	1.685	1.610	5.67
31) T 2-Chloroaniline	1.651	1.710	1.589	1.675	1.748	1.668	1.586	1.633	1.650	1.644	1.655	2.99
32) I IS3_1,4-Dichlorobenzene-d4	-----ISTD-----											
33) T 1,4-Dioxane	0.473	0.444	0.426	0.416	0.393	0.389	0.410	0.396	0.396	0.393	0.414	6.60
34) T n-Decane	0.983	0.904	0.894	0.883	0.857	0.872	0.861	0.853	0.852	0.853	0.881	4.57
35) I IS1_Naphthalene-d8	-----ISTD-----											
36) T Naphthalene	1.005	0.993	0.988	0.985	0.994	0.963	0.968	0.931	0.912	0.925	0.966	3.39



Initial Calibration Summary

Form 6

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : GCMS5
 Calibration dates : 04/05/23 13:00 04/06/23 02:14

Lab Number : L2323052
 Project Number : 16-S0140N
 Ical Ref : ICAL19893

Calibration Files

1.0 =AP9L1.D 2.0 =AP9L2.D 3.0 =AP9L3.D 5.0 =AP9L4.D 10 =AP9L5.D 20 =AP9L6.D 50 =AP9L8.D
 100 =AP9L8.D 150 =AP9L9.D 200 =AP9L10.D

Compound	1.0	2.0	3.0	5.0	10	20	50	100	150	200	Avg	%RSD
37) T Benzoic Acid				0.170	0.209	0.224	0.255	0.255	0.261	0.269	0.235	15.31
38) T 4-Chloroaniline	0.091	0.093	0.093	0.098	0.099	0.096	0.101	0.099	0.098	0.101	0.097	3.44
39) T Hexachlorobutadiene	0.191	0.190	0.193	0.200	0.187	0.181	0.186	0.185	0.180	0.191	0.188	3.08
40) T p-Chloro-m-cresol	0.225	0.248	0.240	0.256	0.265	0.268	0.274	0.262	0.266	0.274	0.258	6.12
41) T 2-Methylnaphthalene	0.628	0.624	0.621	0.628	0.637	0.626	0.646	0.619	0.614	0.622	0.627	1.48
42) T 1-Methylnaphthalene	0.191	0.190	0.189	0.192	0.195	0.194	0.196	0.190	0.190	0.197	0.193	1.57
43) T Hexachlorocyclopentadiene	0.157	0.158	0.175	0.178	0.197	0.197	0.216	0.217	0.223	0.240	0.196	14.51
44) T 2,4,6-Trichlorophenol	0.198	0.205	0.205	0.217	0.225	0.225	0.234	0.227	0.229	0.235	0.220	5.99
45) T 2,4,5-Trichlorophenol	0.222	0.235	0.224	0.234	0.247	0.250	0.262	0.241	0.246	0.257	0.242	5.41
46) S 2-Fluorobiphenyl	0.749	0.757	0.759	0.785	0.774	0.755	0.770	0.720	0.715	0.725	0.751	3.17
47) T 2-Chloronaphthalene	0.661	0.673	0.656	0.674	0.672	0.657	0.678	0.635	0.639	0.647	0.659	2.31
48) T 2-Nitroaniline	0.203	0.203	0.195	0.208	0.224	0.228	0.236	0.225	0.228	0.235	0.218	6.74
49) T 1,4-Dinitrobenzene	0.082	0.081	0.078	0.087	0.098	0.103	0.107	0.104	0.106	0.109	0.095	12.66
50) T 1,3-Dinitrobenzene	0.097	0.104	0.097	0.107	0.114	0.114	0.121	0.114	0.117	0.120	0.110	7.97
51) T Dimethyl phthalate	0.757	0.802	0.762	0.809	0.812	0.794	0.812	0.752	0.751	0.759	0.781	3.43
52) T Acenaphthylene	0.987	1.022	1.021	1.036	1.054	1.040	1.059	0.983	0.979	0.983	1.016	3.07
53) T 2,6-Dinitrotoluene	0.151	0.160	0.152	0.170	0.173	0.172	0.183	0.171	0.173	0.179	0.168	6.42
54) T 1,2-Dinitrobenzene	0.061	0.069	0.060	0.061	0.071	0.071	0.073	0.070	0.072	0.074	0.068	7.67
55) I IS2_Naphthalene-d8	-----ISTD-----											
56) T a-Terpineol	0.197	0.189	0.187	0.188	0.197	0.192	0.183	0.187	0.186	0.194	0.190	2.56
57) T 3-Chloroaniline	0.103	0.112	0.113	0.106	0.109	0.110	0.102	0.104	0.105	0.107	0.107	3.55
58) T 2,6-Dichlorophenol	0.280	0.286	0.279	0.285	0.290	0.285	0.273	0.277	0.277	0.284	0.282	1.89
59) T 1-chloro-2-nitrobenzene	0.130	0.133	0.118	0.125	0.127	0.128	0.123	0.125	0.125	0.130	0.126	3.28
60) T Caprolactam	0.100	0.102	0.104	0.099	0.108	0.107	0.103	0.105	0.107	0.109	0.105	3.22
61) T 1,2,4,5-Tetrachlorobenzene	0.389	0.366	0.370	0.354	0.355	0.342	0.324	0.325	0.321	0.327	0.347	6.71
62) T Biphenyl	0.893	0.871	0.821	0.834	0.838	0.814	0.762	0.761	0.745	0.738	0.808	6.67
63) I IS1_Acenaphthene-d10	-----ISTD-----											
64) T 3-Nitroaniline	0.303	0.310	0.323	0.338	0.342	0.340	0.345	0.340	0.345	0.361	0.335	5.29
65) T Acenaphthene	1.044	1.047	1.056	1.071	1.068	1.045	1.035	1.024	1.026	1.049	1.047	1.50
66) T 2,4-Dinitrophenol			0.115	0.138	0.171	0.189	0.207	0.214	0.223	0.231	*L	0.9986
67) T Dibenzofuran	1.690	1.708	1.682	1.728	1.693	1.655	1.646	1.599	1.575	1.589	1.657	3.21
68) T 2,4-Dinitrotoluene	0.344	0.382	0.378	0.400	0.413	0.408	0.422	0.419	0.419	0.439	0.403	6.82
69) T 4-Nitrophenol	0.179	0.200	0.197	0.201	0.213	0.217	0.221	0.220	0.225	0.235	0.211	7.82
70) T 2,3,5,6-Tetrachlorophenol	0.309	0.330	0.349	0.356	0.370	0.368	0.374	0.373	0.377	0.392	0.360	6.87
71) T 2,3,4,6-Tetrachlorophenol	0.316	0.343	0.356	0.360	0.366	0.373	0.371	0.366	0.369	0.385	0.361	5.30
72) T Diethyl phthalate	1.337	1.355	1.358	1.394	1.389	1.371	1.385	1.338	1.343	1.373	1.364	1.56



Initial Calibration Summary

Form 6

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : GCMS5
 Calibration dates : 04/05/23 13:00 04/06/23 02:14

Lab Number : L2323052
 Project Number : 16-S0140N
 Ical Ref : ICAL19893

Calibration Files

1.0 =AP9L1.D 2.0 =AP9L2.D 3.0 =AP9L3.D 5.0 =AP9L4.D 10 =AP9L5.D 20 =AP9L6.D 50 =AP9L8.D
 100 =AP9L8.D 150 =AP9L9.D 200 =AP9L10.D

Compound	1.0	2.0	3.0	5.0	10	20	50	100	150	200	Avg	%RSD
73) T Fluorene	1.294	1.335	1.331	1.351	1.334	1.320	1.328	1.300	1.306	1.335	1.323	1.36
74) T 4-Chlorophenyl-phenylether	0.648	0.655	0.669	0.675	0.658	0.643	0.647	0.630	0.628	0.647	0.650	2.30
75) T 4-Nitroaniline	0.286	0.330	0.332	0.344	0.370	0.360	0.363	0.341	0.347	0.360	0.343	7.03
76) T 4,6-Dinitro-o-cresol	0.181	0.190	0.218	0.237	0.249	0.257	0.257	0.264	0.277	0.237	14.12	
77) T NDPA/DPA	1.092	1.126	1.123	1.160	1.154	1.132	1.126	1.112	1.107	1.141	1.127	1.83
78) T Azobenzene	1.071	1.079	1.091	1.116	1.120	1.102	1.116	1.087	1.086	1.114	1.098	1.62
79) S 2,4,6-Tribromophenol	0.210	0.209	0.209	0.225	0.228	0.223	0.219	0.210	0.212	0.227	0.217	3.63
80) T 4-Bromophenyl-phenylether	0.419	0.406	0.426	0.427	0.424	0.408	0.410	0.392	0.400	0.418	0.413	2.83
81) T Hexachlorobenzene	0.507	0.502	0.517	0.522	0.513	0.484	0.476	0.454	0.460	0.487	0.492	4.84
82) T Pentachlorophenol	0.231	0.246	0.267	0.302	0.306	0.316	0.310	0.317	0.339	0.293	12.30	
83) I IS2_Acenaphthene-d10	-----ISTD-----											
84) T Dichloran	0.154	0.163	0.148	0.168	0.179	0.184	0.186	0.191	0.204	0.202	0.178	10.80
85) T Pentachloronitrobenzene	0.153	0.167	0.140	0.170	0.181	0.178	0.168	0.167	0.173	0.174	0.167	7.15
86) I IS3_Acenaphthene-d10	-----ISTD-----											
87) T Atrazine	0.329	0.322	0.349	0.352	0.365	0.370	0.370	0.370	0.367	0.370	0.355	5.20
88) I IS1_Phenanthrene-d10	-----ISTD-----											
89) T Phenanthrene	1.041	1.034	1.012	1.007	0.995	0.964	0.974	0.939	0.929	0.946	0.984	4.03
90) T Anthracene	0.975	0.992	0.980	0.987	0.979	0.965	0.987	0.972	0.949	0.970	0.976	1.31
91) T Carbazole	0.896	0.954	0.934	0.959	0.958	0.930	0.941	0.912	0.909	0.930	0.932	2.32
92) T Di-n-butylphthalate	1.038	1.075	1.044	1.111	1.144	1.113	1.178	1.124	1.105	1.107	1.104	3.87
93) T Fluoranthene	1.113	1.151	1.127	1.177	1.156	1.137	1.152	1.136	1.132	1.150	1.143	1.57
94) T Benzidine	0.579	0.646	0.701	0.734	0.750	0.716	0.746	0.762	0.780	0.842	0.726	9.99
95) T Pyrene	1.178	1.233	1.216	1.260	1.252	1.187	1.219	1.196	1.180	1.214	1.213	2.36
96) S 4-Terphenyl-d14	0.903	0.967	0.944	0.976	0.976	0.925	0.948	0.932	0.931	0.958	0.946	2.51
97) T Butyl benzyl phthalate	0.429	0.468	0.462	0.505	0.530	0.522	0.557	0.567	0.572	0.605	0.522	10.69
98) I IS2_Phenanthrene-d10	-----ISTD-----											
99) T Diphenamid	0.431	0.444	0.422	0.450	0.464	0.459	0.437	0.440	0.444	0.445	0.444	2.78
100) I IS3_Phenanthrene-d10	-----ISTD-----											
101) T n-Octadecane	0.252	0.252	0.269	0.274	0.282	0.281	0.279	0.278	0.284	0.272	4.59	
102) T Parathion	0.076	0.078	0.095	0.105	0.115	0.119	0.124	0.127	0.105	19.01		
103) T 3,3'-Dimethylbenzidine	0.465	0.520	0.591	0.669	0.740	0.775	0.764	0.781	0.767	0.675	17.90	
104) I IS1_Chrysene-d12	-----ISTD-----											
105) T Benzo[a]anthracene	1.282	1.237	1.227	1.224	1.212	1.184	1.217	1.197	1.199	1.219	1.220	2.20
106) T 3,3'-Dichlorobenzidine	0.426	0.453	0.479	0.485	0.497	0.500	0.513	0.508	0.511	0.536	0.491	6.51
107) T Chrysene	1.246	1.214	1.206	1.209	1.202	1.158	1.155	1.118	1.094	1.143	1.174	4.10
108) T bis(2-Ethylhexyl)phthalate	0.661	0.691	0.709	0.744	0.787	0.794	0.833	0.806	0.792	0.810	0.762	7.60



Initial Calibration Summary

Form 6

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : GCMS5
 Calibration dates : 04/05/23 13:00 04/06/23 02:14

Lab Number : L2323052
 Project Number : 16-S0140N
 Ical Ref : ICAL19893

Calibration Files

1.0 =AP9L1.D 2.0 =AP9L2.D 3.0 =AP9L3.D 5.0 =AP9L4.D 10 =AP9L5.D 20 =AP9L6.D 50 =AP9L8.D
 100 =AP9L8.D 150 =AP9L9.D 200 =AP9L10.D

Compound	1.0	2.0	3.0	5.0	10	20	50	100	150	200	Avg	%RSD
109) T Di-n-octylphthalate	1.065	1.129	1.152	1.262	1.345	1.347	1.447	1.437	1.401	1.413	1.300	10.74
110) T Benzo(b)fluoranthene	1.215	1.233	1.289	1.268	1.343	1.228	1.280	1.316	1.308	1.487	1.297	6.04
111) T Benzo(k)fluoranthene	1.290	1.335	1.383	1.397	1.289	1.302	1.271	1.197	1.208	1.128	1.280	6.56
112) T Benzo(a)pyrene	1.075	1.098	1.170	1.180	1.160	1.130	1.169	1.136	1.143	1.194	1.146	3.25
113) I IS1_Perylene-d12	-----ISTD-----											
114) T Indeno(1,2,3-cd)pyrene	0.870	0.878	0.915	0.917	0.897	0.914	0.991	1.014	1.031	1.174	0.960	9.78
115) T Dibenzo[a,h]anthracene	1.048	1.047	1.112	1.102	1.090	1.073	1.129	1.121	1.096	1.133	1.095	2.82
116) T Benzo(g,h,i)perylene	1.085	1.081	1.128	1.122	1.101	1.071	1.115	1.085	1.061	1.096	1.094	2.01

Calibration Verification Summary

Form 7

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : GCMS5
 Lab File ID : ABN0513
 Sample No : WG1778541-3
 Channel :

Lab Number : L2323052
 Project Number : 16-S0140N
 Calibration Date : 05/13/23 07:15
 Init. Calib. Date(s) : 04/05/23 04/06/23
 Init. Calib. Times : 13:00 02:14

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
IS1_1,4-Dichlorobenzene-d4	1	1	-	0	20	94	0
n-Nitrosodimethylamine	0.673	0.546	-	18.9	20	76	0
Pyridine	1.073	0.996	-	7.2	20	81	0
2-Fluorophenol	1.064	1.01	-	5.1	20	87	0
Aniline	1.7	1.498	-	11.9	20	80	0
2-Chlorophenol	1.289	1.206	-	6.4	20	85	0
Phenol-d6	1.341	1.21	-	9.8	20	80	0
Phenol	1.412	1.252	-	11.3	20	79	0
Bis(2-chloroethyl)ether	1.08	0.895	-	17.1	20	76	0
1,3-Dichlorobenzene	1.419	1.351	-	4.8	20	89	0
1,4-Dichlorobenzene	1.46	1.376	-	5.8	20	88	0
1,2-Dichlorobenzene	1.406	1.313	-	6.6	20	86	0
Benzyl alcohol	0.938	0.829	-	11.6	20	77	0
Bis(2-chloroisopropyl)ethe	1.155	0.792	-	31.4*	20	63	0
2-Methylphenol	1.094	1.009	-	7.8	20	82	0
Hexachloroethane	0.538	0.491	-	8.7	20	84	0
n-Nitrosodi-n-propylamine	0.821	0.683	-	16.8	20	74	0
3-Methylphenol/4-Methylphe	1.17	1.083	-	7.4	20	81	0
Nitrobenzene-d5	1.208	1.056	-	12.6	20	76	0
Nitrobenzene	1.193	1.01	-	15.3	20	75	0
Isophorone	2.187	1.87	-	14.5	20	75	0
2-Nitrophenol	0.71	0.708	-	0.3	20	86	0
2,4-Dimethylphenol	1.139	1.141	-	-0.2	20	86	0
Bis(2-chloroethoxy)methane	1.42	1.217	-	14.3	20	76	0
2,4-Dichlorophenol	1.149	1.14	-	0.8	20	86	0
1,2,4-Trichlorobenzene	1.285	1.253	-	2.5	20	88	0
IS1_Naphthalene-d8	1	1	-	0	20	87	0
Naphthalene	0.966	0.925	-	4.2	20	83	0
Benzoic Acid	0.235	0.235	-	0	20	81	0
4-Chloroaniline	0.097	0.086	-	11.3	20	74	0
Hexachlorobutadiene	0.188	0.196	-	-4.3	20	92	0
p-Chloro-m-cresol	0.258	0.259	-	-0.4	20	82	0
2-Methylnaphthalene	0.627	0.626	-	0.2	20	85	0
1-Methylnaphthalene	0.193	0.188	-	2.6	20	84	0
Hexachlorocyclopentadiene	0.196	0.259	-	-32.1*	20	104	0
2,4,6-Trichlorophenol	0.22	0.245	-	-11.4	20	91	0
2,4,5-Trichlorophenol	0.242	0.264	-	-9.1	20	88	0
2-Fluorobiphenyl	0.751	0.772	-	-2.8	20	87	0
2-Chloronaphthalene	0.659	0.68	-	-3.2	20	87	0
2-Nitroaniline	0.218	0.232	-	-6.4	20	86	0
1,4-Dinitrobenzene	0.095	0.109	-	-14.7	20	89	0
1,3-Dinitrobenzene	0.11	0.121	-	-10	20	87	0
Dimethyl phthalate	0.781	0.814	-	-4.2	20	87	0

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : GCMS5
 Lab File ID : ABN0513
 Sample No : WG1778541-3
 Channel :

Lab Number : L2323052
 Project Number : 16-S0140N
 Calibration Date : 05/13/23 07:15
 Init. Calib. Date(s) : 04/05/23 04/06/23
 Init. Calib. Times : 13:00 02:14

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Acenaphthylene	1.016	1.059	-	-4.2	20	87	0
2,6-Dinitrotoluene	0.168	0.185	-	-10.1	20	88	0
1,2-Dinitrobenzene	0.068	0.075	-	-10.3	20	90	0
IS1_Acenaphthene-d10	1	1	-	0	20	88	0
3-Nitroaniline	0.335	0.338	-	-0.9	20	86	0
Acenaphthene	1.047	1.031	-	1.5	20	88	0
2,4-Dinitrophenol	50	50.583	-	-1.2	20	93	0
Dibenzofuran	1.657	1.638	-	1.1	20	88	0
2,4-Dinitrotoluene	0.403	0.415	-	-3	20	87	0
4-Nitrophenol	0.211	0.189	-	10.4	20	75	0
2,3,5,6-Tetrachlorophenol	0.36	0.409	-	-13.6	20	96	0
2,3,4,6-Tetrachlorophenol	0.361	0.399	-	-10.5	20	95	0
Diethyl phthalate	1.364	1.353	-	0.8	20	86	0
Fluorene	1.323	1.328	-	-0.4	20	88	0
4-Chlorophenyl phenyl ethe	0.65	0.675	-	-3.8	20	92	0
4-Nitroaniline	0.343	0.362	-	-5.5	20	88	0
4,6-Dinitro-o-cresol	0.237	0.276	-	-16.5	20	95	0
NDPA/DPA	1.127	1.163	-	-3.2	20	91	0
Azobenzene	1.098	0.971	-	11.6	20	77	0
2,4,6-Tribromophenol	0.217	0.276	-	-27.2*	20	111	0
4-Bromophenyl phenyl ether	0.413	0.45	-	-9	20	97	0
Hexachlorobenzene	0.492	0.567	-	-15.2	20	105	0
Pentachlorophenol	0.293	0.371	-	-26.6*	20	103	0
IS1_Phenanthrene-d10	1	1	-	0	20	93	0
Phenanthrene	0.984	0.949	-	3.6	20	91	0
Anthracene	0.976	0.993	-	-1.7	20	94	0
Carbazole	0.932	0.914	-	1.9	20	91	0
Di-n-butylphthalate	1.104	1.1	-	0.4	20	87	0
Fluoranthene	1.143	1.141	-	0.2	20	92	0
Benzidine	0.726	0.835	-	-15	20	104	0
Pyrene	1.213	1.205	-	0.7	20	92	0
4-Terphenyl-d14	0.946	1.004	-	-6.1	20	99	0
Butyl benzyl phthalate	0.522	0.529	-	-1.3	20	88	0
IS1_Chrysene-d12	1	1	-	0	20	98	0
Benzo(a)anthracene	1.22	1.182	-	3.1	20	96	0
3,3'-Dichlorobenzidine	0.491	0.522	-	-6.3	20	100	0
Chrysene	1.174	1.151	-	2	20	98	0
Bis(2-ethylhexyl)phthalate	0.762	0.752	-	1.3	20	89	0
Di-n-octylphthalate	1.3	1.323	-	-1.8	20	90	0
Benzo(b)fluoranthene	1.297	1.347	-	-3.9	20	104	0
Benzo(k)fluoranthene	1.28	1.299	-	-1.5	20	101	0
Benzo(a)pyrene	1.146	1.201	-	-4.8	20	101	0
IS1_Perylene-d12	1	1	-	0	20	112	0

* Value outside of QC limits.



Calibration Verification Summary
Form 7
Semivolatiles

Client : JMT, Inc.
Project Name : FORMER ROTH STEEL SITE
Instrument ID : GCMS5
Lab File ID : ABN0513
Sample No : WG1778541-3
Channel :

Lab Number : L2323052
Project Number : 16-S0140N
Calibration Date : 05/13/23 07:15
Init. Calib. Date(s) : 04/05/23 04/06/23
Init. Calib. Times : 13:00 02:14

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Indeno(1,2,3-cd)pyrene	0.96	0.974	-	-1.5	20	110	0
Dibenzo(a,h)anthracene	1.095	1.084	-	1	20	108	0
Benzo(ghi)perylene	1.094	1.09	-	0.4	20	110	0

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : GCMS5
 Lab File ID : AP90513
 Sample No : WG1778541-4
 Channel :

Lab Number : L2323052
 Project Number : 16-S0140N
 Calibration Date : 05/13/23 07:39
 Init. Calib. Date(s) : 04/05/23 04/06/23
 Init. Calib. Times : 13:00 02:14

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
IS2_1,4-Dichlorobenzene-d4	1	1	-	0	20	85	0
Benzaldehyde	0.967	0.748	-	22.6*	20	69	0
Acetophenone	1.691	1.528	-	9.6	20	80	0
m-Toluidine	1.61	1.352	-	16	20	71	0
2-Chloroaniline	1.655	1.556	-	6	20	83	0
IS2_Naphthalene-d8	1	1	-	0	20	80	0
a-Terpineol	0.19	0.164	-	13.7	20	72	0
3-Chloroaniline	0.107	0.089	-	16.8	20	70	0
2,6-Dichlorophenol	0.282	0.287	-	-1.8	20	85	0
1-chloro-2-nitrobenzene	0.126	0.122	-	3.2	20	80	0
Caprolactam	0.105	0.087	-	17.1	20	68	0
1,2,4,5-Tetrachlorobenzene	0.347	0.352	-	-1.4	20	87	0
Biphenyl	0.808	0.803	-	0.6	20	85	0
IS2_Acenaphthene-d10	1	1	-	0	20	80	0
Dichloran	0.178	0.205	-	-15.2	20	89	0
Pentachloronitrobenzene	0.167	0.189	-	-13.2	20	90	0
IS2_Phenanthrene-d10	1	1	-	0	20	81	0
Diphenamid	0.444	0.459	-	-3.4	20	85	0

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : GCMS5
 Lab File ID : ABN0515
 Sample No : WG1778940-3
 Channel :

Lab Number : L2323052
 Project Number : 16-S0140N
 Calibration Date : 05/15/23 08:04
 Init. Calib. Date(s) : 04/05/23 04/06/23
 Init. Calib. Times : 13:00 02:14

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
IS1_1,4-Dichlorobenzene-d4	1	1	-	0	20	86	0
n-Nitrosodimethylamine	0.673	0.532	-	21*	20	68	0
Pyridine	1.073	0.962	-	10.3	20	72	0
2-Fluorophenol	1.064	1.016	-	4.5	20	80	0
Aniline	1.7	1.54	-	9.4	20	75	0
2-Chlorophenol	1.289	1.237	-	4	20	80	0
Phenol-d6	1.341	1.255	-	6.4	20	76	0
Phenol	1.412	1.26	-	10.8	20	73	0
Bis(2-chloroethyl)ether	1.08	0.928	-	14.1	20	72	0
1,3-Dichlorobenzene	1.419	1.336	-	5.8	20	80	0
1,4-Dichlorobenzene	1.46	1.392	-	4.7	20	81	0
1,2-Dichlorobenzene	1.406	1.343	-	4.5	20	81	0
Benzyl alcohol	0.938	0.82	-	12.6	20	70	0
Bis(2-chloroisopropyl)ethe	1.155	0.774	-	33*	20	57	0
2-Methylphenol	1.094	1.028	-	6	20	76	0
Hexachloroethane	0.538	0.494	-	8.2	20	77	0
n-Nitrosodi-n-propylamine	0.821	0.687	-	16.3	20	67	0
3-Methylphenol/4-Methylphe	1.17	1.111	-	5	20	76	0
Nitrobenzene-d5	1.208	1.068	-	11.6	20	71	0
Nitrobenzene	1.193	1.032	-	13.5	20	70	0
Isophorone	2.187	1.957	-	10.5	20	71	0
2-Nitrophenol	0.71	0.729	-	-2.7	20	81	0
2,4-Dimethylphenol	1.139	1.144	-	-0.4	20	79	0
Bis(2-chloroethoxy)methane	1.42	1.262	-	11.1	20	72	0
2,4-Dichlorophenol	1.149	1.162	-	-1.1	20	80	0
1,2,4-Trichlorobenzene	1.285	1.271	-	1.1	20	81	0
IS1_Naphthalene-d8	1	1	-	0	20	81	0
Naphthalene	0.966	0.925	-	4.2	20	77	0
Benzoic Acid	0.235	0.225	-	4.3	20	71	0
4-Chloroaniline	0.097	0.087	-	10.3	20	69	0
Hexachlorobutadiene	0.188	0.191	-	-1.6	20	83	0
p-Chloro-m-cresol	0.258	0.264	-	-2.3	20	78	0
2-Methylnaphthalene	0.627	0.633	-	-1	20	79	0
1-Methylnaphthalene	0.193	0.186	-	3.6	20	77	0
Hexachlorocyclopentadiene	0.196	0.247	-	-26*	20	93	0
2,4,6-Trichlorophenol	0.22	0.246	-	-11.8	20	85	0
2,4,5-Trichlorophenol	0.242	0.266	-	-9.9	20	82	0
2-Fluorobiphenyl	0.751	0.771	-	-2.7	20	81	0
2-Chloronaphthalene	0.659	0.68	-	-3.2	20	81	0
2-Nitroaniline	0.218	0.242	-	-11	20	83	0
1,4-Dinitrobenzene	0.095	0.111	-	-16.8	20	84	0
1,3-Dinitrobenzene	0.11	0.125	-	-13.6	20	83	0
Dimethyl phthalate	0.781	0.827	-	-5.9	20	82	0

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : GCMS5
 Lab File ID : ABN0515
 Sample No : WG1778940-3
 Channel :

Lab Number : L2323052
 Project Number : 16-S0140N
 Calibration Date : 05/15/23 08:04
 Init. Calib. Date(s) : 04/05/23 04/06/23
 Init. Calib. Times : 13:00 02:14

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Acenaphthylene	1.016	1.073	-	-5.6	20	82	0
2,6-Dinitrotoluene	0.168	0.188	-	-11.9	20	83	0
1,2-Dinitrobenzene	0.068	0.078	-	-14.7	20	88	0
IS1_Acenaphthene-d10	1	1	-	0	20	82	0
3-Nitroaniline	0.335	0.342	-	-2.1	20	82	0
Acenaphthene	1.047	1.037	-	1	20	82	0
2,4-Dinitrophenol	50	51.072	-	-2.1	20	88	0
Dibenzofuran	1.657	1.643	-	0.8	20	82	0
2,4-Dinitrotoluene	0.403	0.433	-	-7.4	20	84	0
4-Nitrophenol	0.211	0.187	-	11.4	20	69	0
2,3,5,6-Tetrachlorophenol	0.36	0.404	-	-12.2	20	89	0
2,3,4,6-Tetrachlorophenol	0.361	0.398	-	-10.2	20	88	0
Diethyl phthalate	1.364	1.379	-	-1.1	20	82	0
Fluorene	1.323	1.352	-	-2.2	20	84	0
4-Chlorophenyl phenyl ethe	0.65	0.673	-	-3.5	20	86	0
4-Nitroaniline	0.343	0.353	-	-2.9	20	80	0
4,6-Dinitro-o-cresol	0.237	0.275	-	-16	20	88	0
NDPA/DPA	1.127	1.171	-	-3.9	20	86	0
Azobenzene	1.098	0.975	-	11.2	20	72	0
2,4,6-Tribromophenol	0.217	0.269	-	-24*	20	101	0
4-Bromophenyl phenyl ether	0.413	0.457	-	-10.7	20	92	0
Hexachlorobenzene	0.492	0.558	-	-13.4	20	96	0
Pentachlorophenol	0.293	0.355	-	-21.2*	20	92	0
IS1_Phenanthrene-d10	1	1	-	0	20	88	0
Phenanthrene	0.984	0.955	-	2.9	20	86	0
Anthracene	0.976	0.98	-	-0.4	20	87	0
Carbazole	0.932	0.922	-	1.1	20	86	0
Di-n-butylphthalate	1.104	1.123	-	-1.7	20	84	0
Fluoranthene	1.143	1.162	-	-1.7	20	89	0
Benzidine	0.726	0.832	-	-14.6	20	98	0
Pyrene	1.213	1.213	-	0	20	87	0
4-Terphenyl-d14	0.946	0.999	-	-5.6	20	93	0
Butyl benzyl phthalate	0.522	0.536	-	-2.7	20	85	0
IS1_Chrysene-d12	1	1	-	0	20	91	0
Benzo(a)anthracene	1.22	1.207	-	1.1	20	91	0
3,3'-Dichlorobenzidine	0.491	0.529	-	-7.7	20	94	0
Chrysene	1.174	1.127	-	4	20	89	0
Bis(2-ethylhexyl)phthalate	0.762	0.761	-	0.1	20	83	0
Di-n-octylphthalate	1.3	1.34	-	-3.1	20	84	0
Benzo(b)fluoranthene	1.297	1.328	-	-2.4	20	95	0
Benzo(k)fluoranthene	1.28	1.264	-	1.3	20	91	0
Benzo(a)pyrene	1.146	1.196	-	-4.4	20	93	0
IS1_Perylene-d12	1	1	-	0	20	100	0

* Value outside of QC limits.



Calibration Verification Summary
Form 7
Semivolatiles

Client : JMT, Inc.
Project Name : FORMER ROTH STEEL SITE
Instrument ID : GCMS5
Lab File ID : ABN0515
Sample No : WG1778940-3
Channel :

Lab Number : L2323052
Project Number : 16-S0140N
Calibration Date : 05/15/23 08:04
Init. Calib. Date(s) : 04/05/23 04/06/23
Init. Calib. Times : 13:00 02:14

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Indeno(1,2,3-cd)pyrene	0.96	0.992	-	-3.3	20	100	0
Dibenzo(a,h)anthracene	1.095	1.058	-	3.4	20	94	0
Benzo(ghi)perylene	1.094	1.034	-	5.5	20	93	0

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : GCMS5
 Lab File ID : AP90515
 Sample No : WG1778940-4
 Channel :

Lab Number : L2323052
 Project Number : 16-S0140N
 Calibration Date : 05/15/23 08:28
 Init. Calib. Date(s) : 04/05/23 04/06/23
 Init. Calib. Times : 13:00 02:14

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
IS2_1,4-Dichlorobenzene-d4	1	1	-	0	20	96	0
Benzaldehyde	0.967	0.738	-	23.7*	20	77	0
Acetophenone	1.691	1.537	-	9.1	20	92	0
m-Toluidine	1.61	1.343	-	16.6	20	80	0
2-Chloroaniline	1.655	1.563	-	5.6	20	95	0
IS2_Naphthalene-d8	1	1	-	0	20	91	0
a-Terpineol	0.19	0.163	-	14.2	20	81	0
3-Chloroaniline	0.107	0.088	-	17.8	20	79	0
2,6-Dichlorophenol	0.282	0.291	-	-3.2	20	97	0
1-chloro-2-nitrobenzene	0.126	0.124	-	1.6	20	92	0
Caprolactam	0.105	0.088	-	16.2	20	78	0
1,2,4,5-Tetrachlorobenzene	0.347	0.356	-	-2.6	20	100	0
Biphenyl	0.808	0.809	-	-0.1	20	97	0
IS2_Acenaphthene-d10	1	1	-	0	20	93	0
Dichloran	0.178	0.216	-	-21.3*	20	108	0
Pentachloronitrobenzene	0.167	0.186	-	-11.4	20	103	0
IS2_Phenanthrene-d10	1	1	-	0	20	94	0
Diphenamid	0.444	0.474	-	-6.8	20	102	0

* Value outside of QC limits.



PCB Data Section



Geology

Hydrology

Remediation

Water Supply

**QA/QC Review of 8082A PCB Data
for Alpha Analytical Labs
SDG Number: L2323052**

**6 Soil Samples and 1 Field Duplicate
Collected April 27, 2023**

Prepared by: Donald Anné
June 22, 2023

Holding Times: The samples were extracted and analyzed within USEPA SW-846 holding times.

Blanks: The analyses of the method blanks reported target aroclors as not detected.

Surrogate Recovery: The surrogate recoveries were within QC limits for the soil samples.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences for aroclor 1016 and aroclor 1260 were below the allowable maximum and percent recoveries were within QC limits for soil MS/MSD sample 23-B-34 (2-12”).

Laboratory Control Sample: The relative percent differences for aroclor 1016 and aroclor 1260 were below the allowable maximums and the percent recoveries were within QC limits for soil samples WG1775716-2/3.

Field Duplicates: The relative percent differences for aroclor 1242, aroclor 1254, aroclor 1260 and total PCBs were above the allowable maximum (35%) for soil field duplicate pair 23-B-33 (2-12)/DUP 1 (attached table). Positive results for these aroclors should be considered estimated (J) in samples 23-B-33 (2-12) and DUP 1.

Initial Calibration: The average %RSDs for target aroclors were below the allowable maximum (20%) on both columns, as required.

Continuing Calibration: The average %Ds for aroclor 1016 and aroclor-1260 were below the allowable maximum (20%) for both columns, as required.

PCB Identification Summary: Checked surrogate and aroclor results were within quantitation limits. The %RPD for dual column quantitation of aroclor 1260 in sample 23-B-34 (0-2”) was above the allowable maximum (25%), but not above 70% and the higher result was reported. Positive results for aroclor 1260 should be considered estimated, biased high (J+) in the samples.

The %RPD for dual column quantitation of aroclor 1242 in sample 23-B-36 (2-12") was above the allowable maximum (25%), but not above 70% and the higher result was reported. Positive results for aroclor 1242 should be considered estimated, biased high (J+) in the sample.

Identification Summary

Form 10

PCBs

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab Sample ID : L2323052-05
 Client ID : 23-B-34 (0-2")
 Date Analyzed (1) : 05/07/23 18:00
 Instrument ID (1) : PEST7
 GC Column (1) : CLP-Pesticide

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Analyzed (2) : 05/07/23 18:00
 Instrument ID (2) : PEST7
 GC Column (2) : CLP-PesticideII

Analyte	Peak	RT	RT Window		Concentration	Mean Concentration	%RPD
			From	To			
AROCOR 1254	1	4.10	-0.05	0.05	231.		
	2	0.00	-0.05	0.05	0.		
	3	4.64	-0.05	0.05	312.		
	4	4.87	-0.05	0.05	263.		
	5	0.00	-0.05	0.05	0.	268.	
COLUMN 1	1	0.00	-0.05	0.05	0.		
	2	4.83	-0.05	0.05	270		
	3	5.21	-0.05	0.05	371.		
	4	5.38	-0.05	0.05	356.		
	5	0.00	-0.05	0.05	0.	332.	21
AROCOR 1260	1	0.00	4.73	4.83	0.		
	2	0.00	4.96	5.06	0.		
	3	5.52	5.46	5.56	185.		
	4	5.76	5.70	5.80	165.		
	5	5.97	5.91	6.01	154.	168.	
COLUMN 1	1	0.00	5.30	5.40	0.		
	2	5.52	5.46	5.56	293.		
	3	6.09	6.03	6.13	171.		
	4	6.27	6.21	6.31	197.		
	5	6.54	6.48	6.58	223.	221.	27
AROCOR 1242	1	2.74	-0.05	0.05	49.7		
	2	2.99	-0.05	0.05	145.		
	3	3.35	-0.05	0.05	155.		
	4	3.45	-0.05	0.05	101.		
	5	0.00	-0.05	0.05	0.	113.	
COLUMN 1	1	3.06	-0.05	0.05	69.8		
	2	3.39	-0.05	0.05	86.1		
	3	3.79	-0.05	0.05	180		
	4	3.91	-0.05	0.05	114.		
	5	0.00	-0.05	0.05	0.	112.	1
COLUMN 2	1	3.06	-0.05	0.05	69.8		
	2	3.39	-0.05	0.05	86.1		
	3	3.79	-0.05	0.05	180		
	4	3.91	-0.05	0.05	114.		
	5	0.00	-0.05	0.05	0.	112.	1

Identification Summary

Form 10

PCBs

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab Sample ID : L2323052-09
 Client ID : 23-B-36 (2-12")
 Date Analyzed (1) : 05/08/23 15:24
 Instrument ID (1) : PEST13
 GC Column (1) : CLP-Pesticide

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Analyzed (2) : 05/08/23 15:24
 Instrument ID (2) : PEST13
 GC Column (2) : CLP-PesticideII

Analyte	Peak	RT	RT Window		Concentration	Mean Concentration	%RPD
			From	To			
AROCOR 1254	1	2.36	-0.05	0.05	9.28		
	2	0.00	-0.05	0.05	0.		
	3	2.65	-0.05	0.05	11.2		
	4	2.78	-0.05	0.05	8.12		
	5	3.00	-0.05	0.05	13.7	10.6J	
COLUMN 1	1	0.00	-0.05	0.05	0.		
	2	2.79	-0.05	0.05	9.47		
	3	3.02	-0.05	0.05	12.5		
	4	3.13	-0.05	0.05	6.87		
	5	3.41	-0.05	0.05	13.1	10.5J	1.0
AROCOR 1242	1	1.64	-0.05	0.05	1.66		
	2	1.78	-0.05	0.05	8.83		
	3	1.97	-0.05	0.05	6.48		
	4	2.03	-0.05	0.05	13.7		
	5	0.00	-0.05	0.05	0.	7.66J	
COLUMN 1	1	1.87	-0.05	0.05	7.48		
	2	2.03	-0.05	0.05	4.6		
	3	2.23	-0.05	0.05	6.32		
	4	2.29	-0.05	0.05	5.05		
	5	0.00	-0.05	0.05	0.	5.86J	26.3
COLUMN 2	1	1.87	-0.05	0.05	7.48		
	2	2.03	-0.05	0.05	4.6		
	3	2.23	-0.05	0.05	6.32		
	4	2.29	-0.05	0.05	5.05		
	5	0.00	-0.05	0.05	0.	5.86J	26.3

PFAS

Data Section



**QA/QC Review of Method 537 (Modified) PFAS Data
for Alpha Analytical Labs SDG Number: L2323052**

**9 Soil Samples, and 1 Field Duplicate
Collected April 27, 2023**

Prepared by: Donald Anné
June 22, 2023

Geology

Hydrology

Remediation

Water Supply

Holding Times: The samples were analyzed within USEPA holding times.

Initial Calibration: The %RSDs for applicable PFASs were below the method maximum (20%) or the R or R squared were above the method minimums, as required.

Continuing Calibration: The percent recoveries for NEtFOSAA and NFDHA were above QC limits (70-130%) on 05-25-23 (SC108_230525_06). Positive results for NEtFOSAA and NFDHA should be considered estimated (J) in associated samples.

The percent recovery for 11CI-PF3OUdS was below QC limits (70-130%), but not below 10% on 05-25-23 (SC108_230525_27). Positive and “not detected” results for 11CI-PF3OUdS should be considered estimated (J or UJ respectively) in associated samples.

Blanks: The analysis of the method blank reported target PFAS as not detected.

Surrogate Recovery: One of twenty-four surrogate recoveries for samples 23-B-33 (2-12”) and 23-B-35 (0-16”) was above QC limits. Positive results associated with the surrogates above QC limits should be considered estimated (J) in the samples.

Matrix Spike Sample: The percent recoveries for target PFAS were within QC limits, but the relative percent difference for NEtFOSAA was above the allowable maximum for soil MS/MSD sample 23-B-34 (2-12”). Sample 23-B-34 (2-12”) reported NEtFOSAA as “not detected”; therefore, no action is taken.

Laboratory Control Sample: The percent recoveries for target PFAS were within QC limits for soil samples WG1782785-2 and WG1782785-3.

Field Duplicates: The relative percent difference for PFOS was below the allowable maximum (35%) for soil field duplicate pair 23-B-33 (2-12)/DUP 1 (attached table), as required.

Compound ID: Checked PFAS results were within LC quantitation limits.

z:\projects\2019\19600-19620\19607-roth steel (project# 16s140n)\temp review\l2323052.pfs.docx

Matrix Spike Sample Summary

Form 3

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Client Sample ID : 23-B-34 (2-12")
 Lab Sample ID : L2323052-06
 Matrix Spike : WG1782785-4
 Matrix Spike Dup : WG1782785-5

Lab Number : L2323052
 Project Number : 16-S0140N
 Matrix (Level) : SOIL ()
 Analysis Date : 05/25/23 17:55
 MS Analysis Date : 05/25/23 18:07
 MSD Analysis Date : 05/25/23 18:20

Parameter	Sample Conc. (ng/g)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (ng/g)	Spike Conc. (ng/g)	%R	Spike Added (ng/g)	Spike Conc. (ng/g)	%R			
Perfluorobutanoic Acid (PFBA)	ND	7.96	7.80	98	7.8	7.56	97	3	40-150	30
Perfluoropentanoic Acid (PFPeA)	ND	3.98	3.68	93	3.9	3.54	91	4	40-150	30
Perfluorobutanesulfonic Acid (PFBS)	ND	1.76	1.58	90	1.73	1.46	84	8	40-150	30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	7.46	7.34	98	7.31	6.58	90	11	40-150	30
Perfluorohexanoic Acid (PFHxA)	ND	1.99	1.92	97	1.95	1.87	96	3	40-150	30
Perfluoropentanesulfonic Acid (PFPeS)	ND	1.87	1.73	92	1.83	1.62	88	7	40-150	30
Perfluoroheptanoic Acid (PFHpA)	ND	1.99	1.82	92	1.95	1.96	101	7	40-150	30
Perfluorohexanesulfonic Acid (PFHxS)	ND	1.82	1.69	93	1.78	1.60	90	5	40-150	30
Perfluorooctanoic Acid (PFOA)	0.055J	1.99	1.88	92	1.95	1.86	93	1	40-150	30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	7.56	6.99	93	7.41	6.88	93	2	40-150	30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	1.9	1.88	99	1.86	1.98	107	5	40-150	30
Perfluorononanoic Acid (PFNA)	ND	1.99	1.73	87	1.95	1.78	91	3	40-150	30
Perfluorooctanesulfonic Acid (PFOS)	1.09	1.84	2.95	101	1.81	2.69	88	9	40-150	30
Perfluorodecanoic Acid (PFDA)	ND	1.99	2.03	102	1.95	1.95	100	4	40-150	30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	ND	7.64	8.42	110	7.48	7.62	102	10	40-150	30



Matrix Spike Sample Summary

Form 3

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Client Sample ID : 23-B-34 (2-12")
 Lab Sample ID : L2323052-06
 Matrix Spike : WG1782785-4
 Matrix Spike Dup : WG1782785-5

Lab Number : L2323052
 Project Number : 16-S0140N
 Matrix (Level) : SOIL ()
 Analysis Date : 05/25/23 17:55
 MS Analysis Date : 05/25/23 18:07
 MSD Analysis Date : 05/25/23 18:20

Parameter	Sample Conc. (ng/g)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (ng/g)	Spike Conc. (ng/g)	%R	Spike Added (ng/g)	Spike Conc. (ng/g)	%R			
ic Acid (8:2FTS)										
Perfluorononanesulfonic Acid (PFNS)	ND	1.91	1.61	84	1.88	1.50	80	7	40-150	30
N-Methyl Perfluorooctanesulfonamide doacetic Acid (NMeFOSAA)	ND	1.99	2.30	116	1.95	2.00	103	14	40-150	30
Perfluoroundecanoic Acid (PFUnA)	ND	1.99	2.00	101	1.95	1.86	95	7	40-150	30
Perfluorodecanesulfonic Acid (PFDS)	ND	1.92	1.65	86	1.88	1.40	74	16	40-150	30
Perfluorooctanesulfonamide (PFOSA)	ND	1.99	1.98	100	1.95	1.83	94	8	40-150	30
N-Ethyl Perfluorooctanesulfonamide doacetic Acid (NEtFOSAA)	ND	1.99	2.16	109	1.95	1.58	81	31	Q 40-150	30
Perfluorododecanoic Acid (PFDoA)	ND	1.99	1.88	95	1.95	1.92	99	2	40-150	30
Perfluorotridecanoic Acid (PFTTrDA)	ND	1.99	2.14	108	1.95	2.02	104	6	40-150	30
Perfluorotetradecanoic Acid (PFTeDA)	ND	1.99	1.62	82	1.95	1.71	88	5	40-150	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	7.96	7.24	91	7.8	7.53	97	4	40-150	30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	7.52	6.19	82	7.37	7.34	100	17	40-150	30
Perfluorodecanesulfonic Acid	ND	1.93	1.68	87	1.89	1.68	89	0	40-150	30



Matrix Spike Sample Summary

Form 3

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Client Sample ID : 23-B-34 (2-12")
 Lab Sample ID : L2323052-06
 Matrix Spike : WG1782785-4
 Matrix Spike Dup : WG1782785-5

Lab Number : L2323052
 Project Number : 16-S0140N
 Matrix (Level) : SOIL ()
 Analysis Date : 05/25/23 17:55
 MS Analysis Date : 05/25/23 18:07
 MSD Analysis Date : 05/25/23 18:20

Parameter	Sample Conc. (ng/g)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (ng/g)	Spike Conc. (ng/g)	%R	Spike Added (ng/g)	Spike Conc. (ng/g)	%R			
(PFDoS)										
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	7.44	6.00	81	7.29	5.86	80	2	40-150	30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	7.52	5.76	77	7.37	5.16	70	11	40-150	30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.99	2.06	104	1.95	1.83	94	12	40-150	30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.99	2.04	103	1.95	1.78	91	14	40-150	30
N-Methyl Perfluorooctanesulfonamide Ethanol (NMeFOSE)	ND	19.9	19.3	97	19.5	18.3	94	5	40-150	30
N-Ethyl Perfluorooctanesulfonamide Ethanol (NEtFOSE)	ND	19.9	19.3	97	19.5	17.5	90	10	40-150	30
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	3.98	3.60	91	3.9	3.52	90	2	40-150	30
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	3.98	3.69	93	3.9	3.52	90	5	40-150	30
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	3.54	3.15	89	3.47	3.13	90	1	40-150	30
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	3.98	4.42	111	3.9	4.68	120	6	40-150	30
3-Perfluoropropyl Propanoic Acid	ND	9.94	8.70	88	9.75	8.32	85	4	40-150	30



Matrix Spike Sample Summary

Form 3

Semivolatiles

Client	: JMT, Inc.	Lab Number	: L2323052
Project Name	: FORMER ROTH STEEL SITE	Project Number	: 16-S0140N
Client Sample ID	: 23-B-34 (2-12")	Matrix (Level)	: SOIL ()
Lab Sample ID	: L2323052-06	Analysis Date	: 05/25/23 17:55
Matrix Spike	: WG1782785-4	MS Analysis Date	: 05/25/23 18:07
Matrix Spike Dup	: WG1782785-5	MSD Analysis Date	: 05/25/23 18:20

Parameter	Sample Conc. (ng/g)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (ng/g)	Spike Conc. (ng/g)	%R	Spike Added (ng/g)	Spike Conc. (ng/g)	%R			
(3:3FTCA)										
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND	49.7	36.9	74	48.7	35.3	72	4	40-150	30
(7:3FTCA)										
3-Perfluoroheptyl Propanoic Acid	ND	49.7	54.7	110	48.7	52.1	107	5	40-150	30

Surrogate Recovery Summary

Form 2

Semivolatiles

Client: JMT, Inc.
Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052
Project Number: 16-S0140N
Matrix: Soil

CLIENT ID (LAB SAMPLE NO.)	S1 ()	S2 ()	S3 ()	S4 ()	S5 ()	S6 ()	S7 ()
23-B-32 (0-2") (L2323052-01)	70	74	80	75	76	70	72
23-B-32 (2-12") (L2323052-02)	64	67	71	65	65	65	67
23-B-33 (0-2") (L2323052-03)	77	82	77	69	78	78	74
23-B-33 (2-12") (L2323052-04)	70	70	76	77	70	70	73
23-B-34 (0-2") (L2323052-05)	71	70	74	78	69	71	73
23-B-34 (2-12") (L2323052-06)	80	85	85	78	83	79	78
23-B-35 (0-16") (L2323052-07)	76	76	77	89	76	76	77
23-B-36 (0-2") (L2323052-08)	80	83	84	78	81	79	83
23-B-36 (2-12") (L2323052-09)	80	82	86	81	80	76	82
DUP 1 (L2323052-10)	82	84	91	83	85	82	85
WG1782785-1BLANK	78	85	91	80	80	79	82
WG1782785-2LCS	86	87	101	86	84	77	88
WG1782785-3LCS	83	84	93	81	84	78	81
23-B-34 (2-12")MS	73	73	78	71	72	73	73
23-B-34 (2-12")MSD	78	79	86	83	78	73	82

QC LIMITS

(20-150) S1 = PERFLUORO[13C4]BUTANOIC ACID (MPFBA)
 (20-150) S2 = PERFLUORO[13C5]PENTANOIC ACID (M5PFPEA)
 (20-150) S3 = PERFLUORO[2,3,4-13C3]BUTANESULFONIC ACID (M3PFBS)
 (20-150) S4 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]HEXANESULFONIC ACID (M2-4:2FTS)
 (20-150) S5 = PERFLUORO[1,2,3,4,6-13C5]HEXANOIC ACID (M5PFHXA)
 (20-150) S6 = PERFLUORO[1,2,3,4-13C4]HEPTANOIC ACID (M4PFHPA)
 (20-150) S7 = PERFLUORO[1,2,3-13C3]HEXANESULFONIC ACID (M3PFHXS)

* Values outside of QC limits

FORM II A2-1633-DRAFT



Surrogate Recovery Summary

Form 2

Semivolatiles

Client: JMT, Inc.
Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052
Project Number: 16-S0140N
Matrix: Soil

CLIENT ID (LAB SAMPLE NO.)	S8 ()	S9 ()	S10 ()	S11 ()	S12 ()	S13 ()	S14 ()
23-B-32 (0-2") (L2323052-01)	74	68	74	69	79	77	134
23-B-32 (2-12") (L2323052-02)	65	59	66	64	62	51	88
23-B-33 (0-2") (L2323052-03)	77	67	72	77	76	121	78
23-B-33 (2-12") (L2323052-04)	72	71	72	72	74	158*	86
23-B-34 (0-2") (L2323052-05)	73	99	76	81	75	147	100
23-B-34 (2-12") (L2323052-06)	78	85	78	75	78	138	109
23-B-35 (0-16") (L2323052-07)	74	77	74	78	82	167*	105
23-B-36 (0-2") (L2323052-08)	78	75	76	74	76	83	115
23-B-36 (2-12") (L2323052-09)	81	78	82	84	80	101	84
DUP 1 (L2323052-10)	82	85	82	84	83	134	128
WG1782785-1BLANK	80	76	81	77	74	61	118
WG1782785-2LCS	87	81	86	84	84	66	152*
WG1782785-3LCS	84	73	80	81	86	54	160*
23-B-34 (2-12")MS	73	76	71	77	74	114	98
23-B-34 (2-12")MSD	74	85	77	81	76	109	109

QC LIMITS

- (20-150) S8 = PERFLUORO[13C8]OCTANOIC ACID (M8PFOA)
 (20-150) S9 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]OCTANESULFONIC ACID (M2-6:2FTS)
 (20-150) S10 = PERFLUORO[13C9]NONANOIC ACID (M9PFNA)
 (20-150) S11 = PERFLUORO[13C8]OCTANESULFONIC ACID (M8PFOS)
 (20-150) S12 = PERFLUORO[1,2,3,4,5,6-13C6]DECANOIC ACID (M6PFDA)
 (20-150) S13 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]DECANESULFONIC ACID (M2-8:2FTS)
 (20-150) S14 = N-DEUTERIOMETHYLPERFLUORO-1-OCTANESULFONAMIDOACETIC ACID (D3-NMEFOSAA)

* Values outside of QC limits

FORM II A2-1633-DRAFT (Continued)



Surrogate Recovery Summary

Form 2

Semivolatiles

Client: JMT, Inc.
Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052
Project Number: 16-S0140N
Matrix: Soil

CLIENT ID (LAB SAMPLE NO.)	S15 ()	S16 ()	S17 ()	S18 ()	S19 ()	S20 ()	S21 ()
23-B-32 (0-2") (L2323052-01)	79	59	59	82	83	73	46
23-B-32 (2-12") (L2323052-02)	54	50	53	56	59	69	42
23-B-33 (0-2") (L2323052-03)	75	64	82	70	90	82	44
23-B-33 (2-12") (L2323052-04)	70	60	85	71	94	73	36
23-B-34 (0-2") (L2323052-05)	74	67	89	75	96	72	44
23-B-34 (2-12") (L2323052-06)	70	71	86	75	93	86	47
23-B-35 (0-16") (L2323052-07)	83	82	111	99	110	76	48
23-B-36 (0-2") (L2323052-08)	72	64	67	67	75	82	47
23-B-36 (2-12") (L2323052-09)	71	72	76	73	95	83	55
DUP 1 (L2323052-10)	79	83	112	82	106	84	54
WG1782785-1BLANK	68	60	62	74	70	80	42
WG1782785-2LCS	75	68	72	74	78	84	48
WG1782785-3LCS	84	66	65	74	78	85	46
23-B-34 (2-12")MS	73	66	73	66	84	76	48
23-B-34 (2-12")MSD	72	73	91	73	92	78	51

QC LIMITS

- (20-150) S15 = PERFLUORO[1,2,3,4,5,6,7-13C7]UNDECANOIC ACID (M7-PFUDA)
 (20-150) S16 = PERFLUORO[13C8]OCTANESULFONAMIDE (M8FOSA)
 (20-150) S17 = N-DEUTERIOETHYLPERFLUORO-1-OCTANESULFONAMIDOACETIC ACID (D5-NETFOSAA)
 (20-150) S18 = PERFLUORO[1,2-13C2]DODECANOIC ACID (MPFDOA)
 (20-150) S19 = PERFLUORO[1,2-13C2]TETRADECANOIC ACID (M2PFTEDA)
 (20-150) S20 = 2,3,3,3-TETRAFLUORO-2-[1,1,2,2,3,3,3-HEPTAFLUOROPROPOXY]-13C3-PROPANOIC ACID (M3HFPO-DA)
 (20-150) S21 = N-METHYL-D3-PERFLUORO-1-OCTANESULFONAMIDE (D3-NMEFOSA)

* Values outside of QC limits

FORM II A2-1633-DRAFT (Continued)



Surrogate Recovery Summary

Form 2

Semivolatiles

Client: JMT, Inc.
Project Name: FORMER ROTH STEEL SITE

Lab Number: L2323052
Project Number: 16-S0140N
Matrix: Soil

CLIENT ID (LAB SAMPLE NO.)	S22 ()	S23 ()	S24 ()	S25 ()	S26 ()	S27 ()	S28 ()	TOT OUT
23-B-32 (0-2") (L2323052-01)	53	75	68	--	--	--	--	0
23-B-32 (2-12") (L2323052-02)	47	64	62	--	--	--	--	0
23-B-33 (0-2") (L2323052-03)	60	92	74	--	--	--	--	0
23-B-33 (2-12") (L2323052-04)	46	76	58	--	--	--	--	1
23-B-34 (0-2") (L2323052-05)	59	100	73	--	--	--	--	0
23-B-34 (2-12") (L2323052-06)	59	98	75	--	--	--	--	0
23-B-35 (0-16") (L2323052-07)	57	115	78	--	--	--	--	1
23-B-36 (0-2") (L2323052-08)	62	100	78	--	--	--	--	0
23-B-36 (2-12") (L2323052-09)	70	107	87	--	--	--	--	0
DUP 1 (L2323052-10)	74	118	91	--	--	--	--	0
WG1782785-1BLANK	44	64	70	--	--	--	--	0
WG1782785-2LCS	53	70	74	--	--	--	--	1
WG1782785-3LCS	46	67	74	--	--	--	--	1
23-B-34 (2-12")MS	59	96	72	--	--	--	--	0
23-B-34 (2-12")MSD	68	107	82	--	--	--	--	0

QC LIMITS

(20-150) S22 = N-ETHYL-D5-PERFLUORO-1-OCTANESULFONAMIDE (D5-NETFOSA)
 (20-150) S23 = 2-(N-METHYL-D3-PERFLUORO-1-OCTANESULFONAMIDO)ETHAN-D4-OL (D7-NMEFOSE)
 (20-150) S24 = 2-(N-ETHYL-D5-PERFLUORO-1-OCTANESULFONAMIDO)ETHAN-D4-OL (D9-NETFOSE)

* Values outside of QC limits

FORM II A2-1633-DRAFT (Continued)



Calibration Verification Summary

Form 7

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : LCMS08
 Lab File ID : SCIO8_230525_06
 Sample No : WG1783308-2
 Channel :

Lab Number : L2323052
 Project Number : 16-S0140N
 Calibration Date : 05/25/23 13:21
 Init. Calib. Date(s) : 05/23/23 05/23/23
 Init. Calib. Times : 22:00 23:42

Compound	Concentration (ng/ml)	True Value (ng/ml)	% Recovery	QC Limits
Perfluorobutanoic Acid (PFBA)	0.720	0.800	90.3	70-130
Perfluoropentanoic Acid (PFPeA)	0.420	0.400	104.3	70-130
Perfluorobutanesulfonic Acid (PFBS)	0.200	0.177	113	70-130
Perfluorohexanoic Acid (PFHxA)	0.210	0.200	105.6	70-130
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	0.720	0.750	96.4	70-130
Perfluoropentanesulfonic Acid (PFPeS)	0.170	0.188	88.1	70-130
Perfluoroheptanoic Acid (PFHpA)	0.220	0.200	107.7	70-130
Perfluorohexanesulfonic Acid (PFHxS)	0.190	0.183	106.1	70-130
Perfluorooctanoic Acid (PFOA)	0.210	0.200	105.8	70-130
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	0.750	0.760	98	70-130
Perfluoroheptanesulfonic Acid (PFHpS)	0.170	0.191	91.5	70-130
Perfluorononanoic Acid (PFNA)	0.170	0.200	86.3	70-130
Perfluorooctanesulfonic Acid (PFOS)	0.200	0.186	105.1	70-130
Perfluorodecanoic Acid (PFDA)	0.210	0.200	105.7	70-130
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	0.740	0.768	96.3	70-130
Perfluorononanesulfonic Acid (PFNS)	0.200	0.192	102.3	70-130
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	0.180	0.200	90.6	70-130
Perfluoroundecanoic Acid (PFUnA)	0.200	0.200	100.1	70-130
Perfluorodecanesulfonic Acid (PFDS)	0.200	0.193	104.3	70-130
Perfluorooctanesulfonamide (PFOSA)	0.200	0.200	100.5	70-130
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	0.320	0.200	159.4*	70-130
Perfluorododecanoic Acid (PFDoA)	0.230	0.200	116.9	70-130
Perfluorotridecanoic Acid (PFTTrDA)	0.210	0.200	102.5	70-130
Perfluorotetradecanoic Acid (PFTeDA)	0.220	0.200	110.6	70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	0.840	0.800	104.5	70-130
4,8-Dioxo-3h-Perfluorononanoic Acid (ADONA)	0.650	0.756	85.4	70-130
Perfluorododecanesulfonic Acid (PFDoS)	0.200	0.194	100.3	70-130
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	0.620	0.748	82.5	70-130
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	0.700	0.756	92.8	70-130
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	0.190	0.200	96.5	70-130
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	0.230	0.200	116	70-130
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	1.780	2.000	89	70-130
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	1.950	2.000	97.6	70-130
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	0.390	0.400	97.4	70-130
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	0.390	0.400	98.2	70-130
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEA)	0.330	0.356	92.8	70-130
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	0.590	0.400	147.4*	70-130
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	1.040	1.000	103.7	70-130
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	4.590	5.000	91.8	70-130
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	4.300	5.000	86.1	70-130
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	9.830	10.000	98.3	70-130
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	5.150	5.000	102.9	70-130
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	2.050	2.330	88	70-130

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : LCMS08
 Lab File ID : SCI08_230525_06
 Sample No : WG1783308-2
 Channel :

Lab Number : L2323052
 Project Number : 16-S0140N
 Calibration Date : 05/25/23 13:21
 Init. Calib. Date(s) : 05/23/23 05/23/23
 Init. Calib. Times : 22:00 23:42

Compound	Concentration (ng/ml)	True Value (ng/ml)	% Recovery	QC Limits
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	4.270	4.690	91.1	70-130
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	2.580	2.500	103.3	70-130
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	2.430	2.500	97.2	70-130
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	2.310	2.370	97.6	70-130
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	2.460	2.500	98.3	70-130
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	4.480	4.755	94.3	70-130
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	1.140	1.250	91.3	70-130
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	2.320	2.395	96.8	70-130
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	1.200	1.250	95.7	70-130
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	4.260	4.800	88.8	70-130
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	4.670	5.000	93.3	70-130
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	1.260	1.250	100.9	70-130
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	2.340	2.500	93.7	70-130
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	4.390	5.000	87.8	70-130
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	1.260	1.250	100.7	70-130
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	1.240	1.250	99.2	70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	10.260	10.000	102.6	70-130
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	2.310	2.500	92.4	70-130
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	2.200	2.500	88.2	70-130
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	28.010	25.000	112.1	70-130
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	27.550	25.000	110.2	70-130
Perfluoro-n-[1,2-13C2]Hexanoic Acid (13C2-PFHxA)	2.630	2.500	105.3	70-130
Perfluoro-n-[1,2,3,4-13C4]Octanoic Acid (13C4-PFOA)	2.690	2.500	107.6	70-130
Perfluoro-n-[1,2,3,4-13C4]Octanesulfonic Acid (13C4-PFOS)	2.480	2.395	103.7	70-130
Perfluoro-n-[1,2-13C2]Decanoic Acid (13C2-PFDA)	1.470	1.250	117.3	70-130
Perfluoro-n-[2,3,4-13C3]Butanoic Acid (13C3-PFBA)	5.220	5.000	104.4	70-130
Perfluoro-n-[1,2,3,4,5-13C5]Nonanoic Acid (13C5-PFNA)	1.430	1.250	114.5	70-130
Perfluoro-1-hexane[18O2]Sulfonic Acid (18O2-PFHxS)	2.360	2.370	99.5	70-130

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : LCMS08
 Lab File ID : SCIO8_230525_27
 Sample No : WG1783308-8
 Channel :

Lab Number : L2323052
 Project Number : 16-S0140N
 Calibration Date : 05/25/23 18:46
 Init. Calib. Date(s) : 05/23/23 05/23/23
 Init. Calib. Times : 22:00 23:42

Compound	Concentration (ng/ml)	True Value (ng/ml)	% Recovery	QC Limits
Perfluorobutanoic Acid (PFBA)	10.310	10.000	103.1	70-130
Perfluoropentanoic Acid (PFPeA)	4.910	5.000	98.1	70-130
Perfluorobutanesulfonic Acid (PFBS)	2.060	2.217	92.9	70-130
Perfluorohexanoic Acid (PFHxA)	2.480	2.500	99.2	70-130
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	9.040	9.375	96.3	70-130
Perfluoropentanesulfonic Acid (PFPeS)	2.390	2.353	101.8	70-130
Perfluoroheptanoic Acid (PFHpA)	2.520	2.500	100.7	70-130
Perfluorohexanesulfonic Acid (PFHxS)	2.240	2.285	97.6	70-130
Perfluorooctanoic Acid (PFOA)	2.540	2.500	101.7	70-130
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	9.910	9.500	104.3	70-130
Perfluoroheptanesulfonic Acid (PFHpS)	2.540	2.382	106.8	70-130
Perfluorononanoic Acid (PFNA)	2.290	2.500	91.6	70-130
Perfluorooctanesulfonic Acid (PFOS)	2.180	2.320	93.8	70-130
Perfluorodecanoic Acid (PFDA)	2.600	2.500	104.2	70-130
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	11.480	9.600	119.6	70-130
Perfluorononanesulfonic Acid (PFNS)	2.020	2.405	83.7	70-130
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2.740	2.500	109.5	70-130
Perfluoroundecanoic Acid (PFUnA)	2.390	2.500	95.4	70-130
Perfluorodecanesulfonic Acid (PFDS)	1.940	2.413	80.4	70-130
Perfluorooctanesulfonamide (PFOSA)	2.520	2.500	100.9	70-130
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2.530	2.500	101.2	70-130
Perfluorododecanoic Acid (PFDoA)	2.550	2.500	101.9	70-130
Perfluorotridecanoic Acid (PFTTrDA)	2.780	2.500	111.3	70-130
Perfluorotetradecanoic Acid (PFTeDA)	2.520	2.500	100.9	70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	10.360	10.000	103.6	70-130
4,8-Dioxo-3h-Perfluorononanoic Acid (ADONA)	9.100	9.450	96.3	70-130
Perfluorododecanesulfonic Acid (PFDoS)	2.260	2.425	92.8	70-130
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	6.920	9.350	74	70-130
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	6.550	9.450	69.3*	70-130
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	2.380	2.500	95.3	70-130
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	2.500	2.500	100	70-130
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	24.870	25.000	99.5	70-130
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	26.190	25.000	104.8	70-130
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	4.810	5.000	96.1	70-130
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	4.940	5.000	98.8	70-130
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEA)	4.160	4.450	93.4	70-130
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	6.150	5.000	122.9	70-130
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	12.770	12.500	102.2	70-130
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	58.560	62.500	93.7	70-130
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	66.800	62.500	106.9	70-130
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	9.920	10.000	99.2	70-130
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	5.210	5.000	104.3	70-130
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	2.470	2.330	105.8	70-130

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Semivolatiles

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Instrument ID : LCMS08
 Lab File ID : SCI08_230525_27
 Sample No : WG1783308-8
 Channel :

Lab Number : L2323052
 Project Number : 16-S0140N
 Calibration Date : 05/25/23 18:46
 Init. Calib. Date(s) : 05/23/23 05/23/23
 Init. Calib. Times : 22:00 23:42

Compound	Concentration (ng/ml)	True Value (ng/ml)	% Recovery	QC Limits
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	5.160	4.690	110.1	70-130
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	2.540	2.500	101.5	70-130
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	2.490	2.500	99.6	70-130
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	2.440	2.370	102.9	70-130
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	2.490	2.500	99.5	70-130
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	4.540	4.755	95.3	70-130
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	1.270	1.250	101.4	70-130
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	2.410	2.395	100.3	70-130
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	1.360	1.250	108.5	70-130
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	4.730	4.800	98.5	70-130
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	5.210	5.000	104.2	70-130
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	1.230	1.250	98.5	70-130
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	3.050	2.500	122.1	70-130
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	5.050	5.000	101	70-130
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	1.300	1.250	104	70-130
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	1.470	1.250	117.9	70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	10.380	10.000	103.8	70-130
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	1.990	2.500	79.7	70-130
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	2.160	2.500	86.5	70-130
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	38.970	25.000	155.9*	70-130
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	27.940	25.000	111.8	70-130
Perfluoro-n-[1,2-13C2]Hexanoic Acid (13C2-PFHxA)	3.130	2.500	125.2	70-130
Perfluoro-n-[1,2,3,4-13C4]Octanoic Acid (13C4-PFOA)	3.030	2.500	121.2	70-130
Perfluoro-n-[1,2,3,4-13C4]Octanesulfonic Acid (13C4-PFOS)	2.530	2.395	105.3	70-130
Perfluoro-n-[1,2-13C2]Decanoic Acid (13C2-PFDA)	1.530	1.250	122.5	70-130
Perfluoro-n-[2,3,4-13C3]Butanoic Acid (13C3-PFBA)	6.380	5.000	127.6	70-130
Perfluoro-n-[1,2,3,4,5-13C5]Nonanoic Acid (13C5-PFNA)	1.570	1.250	125.8	70-130
Perfluoro-1-hexane[18O2]Sulfonic Acid (18O2-PFHxS)	2.700	2.370	113.7	70-130

* Value outside of QC limits.



Metals Data Section



Geology

Hydrology

Remediation

Water Supply

**QA/QC Review of Metals Data for
Alpha Analytical Labs, SDG Number: L2323052**

**6 Soil Samples and 1 Field Duplicate
Collected April 27, 2023**

Prepared by: Donald Anné
June 22, 2023

Holding Times: The samples were analyzed within USEPA SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for target metals were within control limits (90-110% for all metals except Hg, 80-120% for Hg).

Blanks: The analyses of initial and continuing calibration blanks reported target metals as either not detected or below the reporting limits, as required.

Method blank WG1775240-1BLANK contained iron (3.37 mg/kg) above the reporting limit. Positive results for iron that are below 5 times the method blank level should be reported as not detected (U) in associated samples.

Spike Sample Recovery: Two of two percent recoveries (%Rs) for arsenic and 1 of 2 %Rs for chromium, nickel, selenium, and silver were above control limits (75-125%) for soil MS/MSD sample 23-B34 (2-12"). Positive results for these metals should be considered estimated, biased high (J+) in associated samples.

Two of two %Rs for zinc and 1 of 2 %Rs for copper were below control limits (75-125%), but not below 10% for soil MS/MSD sample 23-B34 (2-12"). Positive results for zinc and copper should be considered estimated, biased low (J-) and "not detected" results estimated (UJ) in associated samples.

Laboratory Duplicates: The relative percent differences for chromium and nickel were above the allowable maximum (35%) for soil MS/MSD sample 23-B34 (2-12"). Positive results for chromium and nickel should be considered estimated (J) in associated samples.

Field Duplicates: The relative percent difference for vanadium was above the allowable maximum (35%) for soil field duplicate pair 23-B-33 (2-12)/DUP 1 (attached table). Positive results for vanadium should be considered estimated (J) in samples 23-B-33 (2-12) and DUP 1.

Laboratory Control Sample: The percent recoveries for target metals were within control limits for soil samples WG1775240-2 and WG1775241-2.

Percent Solids: The percent solids for soil samples were greater than 50%.

z:\projects\2019\19600-19620\19607-roth steel (project# 16s140n)\temp review\l2323052.met.docx

Form 1 METALS

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Lab ID : WG1775240-1
 Client ID : WG1775240-1BLANK
 Sample Location :
 Sample Matrix : SOIL
 Analytical Method : 1,6010D
 Lab File ID : WG1777484.csv
 Sample Amount : 1.25g
 Digestion Method : EPA 3050B

Lab Number : L2323052
 Project Number : 16-S0140N
 Date Collected : NA
 Date Received : NA
 Date Analyzed : 05/11/23 15:09
 Dilution Factor : 1
 Analyst : NTB
 Instrument ID : TRACE9
 %Solids : NA
 Date Digested : 05/05/23

CAS NO.	Parameter	mg/kg			Qualifier
		Results	RL	MDL	
7440-70-2	Calcium, Total	ND	4.00	1.40	U
7439-89-6	Iron, Total	3.37	2.00	0.361	
7439-95-4	Magnesium, Total	ND	4.00	0.616	U



Form 5a Matrix Spike

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Client Sample ID : 23-B-34 (2-12")
 Lab Sample ID : L2323052-06
 Matrix Spike : WG1775240-3
 Matrix Spike Dup : WG1775240-4

Lab Number : L2323052
 Project Number : 16-S0140N
 Matrix : SOIL
 MS Analysis Date : 05/08/23 23:29
 MSD Analysis Date : 05/08/23 23:34

Parameter	Sample Conc. (mg/kg)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (mg/kg)	Spike Conc. (mg/kg)	%R	Spike Added (mg/kg)	Spike Conc. (mg/kg)	%R			
Aluminum, Total	1990	169	1850	NA	172	2320	NA	23	75-125	35
Antimony, Total	0.718J	42.2	42.7	101	43	46.0	107	7	75-125	20
Arsenic, Total	5.98	10.1	19.2	130 Q	10.3	20.5	141 Q	7	75-125	20
Barium, Total	68.6	169	236	99	172	247	104	5	75-125	20
Beryllium, Total	0.216J	4.22	4.36	103	4.3	4.64	108	6	75-125	20
Cadmium, Total	1.35	4.47	6.06	105	4.55	6.02	102	1	75-125	20
Chromium, Total	16.9	16.9	73.4	335 Q	17.2	36.5	114	67 Q	75-125	20
Cobalt, Total	5.41	42.2	48.3	102	43	51.5	107	6	75-125	20
Copper, Total	84.4	21.1	93.5	43 Q	21.5	108	110	14	75-125	20
Lead, Total	90.2	44.7	138	107	45.5	144	118	4	75-125	20
Manganese, Total	341	42.2	326	NA	43	408	NA	22	75-125	35
Nickel, Total	19.9	42.2	110	214 Q	43	64.6	104	52 Q	75-125	20
Potassium, Total	454	844	1340	105	859	1500	122	11	75-125	20
Selenium, Total	0.464J	10.1	12.3	121	10.3	13.0	126 Q	6	75-125	20
Silver, Total	ND	4.22	4.92	117	4.3	5.66	132 Q	14	75-125	20
Sodium, Total	215	844	1180	114	859	1200	115	2	75-125	20
Thallium, Total	0.274J	10.1	8.24	81	10.3	8.87	86	7	75-125	20
Vanadium, Total	15.4	42.2	54.1	92	43	59.9	104	10	75-125	20
Zinc, Total	263	42.2	283	47 Q	43	293	70 Q	3	75-125	20

NA - Sample concentration is greater than 4 X the spiking level; therefore, the %R is not applicable.



Form 5a Matrix Spike

Client : JMT, Inc.
 Project Name : FORMER ROTH STEEL SITE
 Client Sample ID : 23-B-34 (2-12")
 Lab Sample ID : L2323052-06
 Matrix Spike : WG1775240-3
 Matrix Spike Dup : WG1775240-4

Lab Number : L2323052
 Project Number : 16-S0140N
 Matrix : SOIL
 MS Analysis Date : 05/11/23 15:26
 MSD Analysis Date : 05/11/23 15:29

Parameter	Sample Conc. (mg/kg)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (mg/kg)	Spike Conc. (mg/kg)	%R	Spike Added (mg/kg)	Spike Conc. (mg/kg)	%R			
Calcium, Total	285000	844	354000	NA	859	349000	NA	1	75-125	20
Iron, Total	15200	84.4	15400	NA	85.9	19600	NA	24	75-125	35
Magnesium, Total	47000	844	35100	NA	859	35600	NA	1	75-125	20

NA - Sample concentration is greater than 4 X the spiking level; therefore, the %R is not applicable.



Field Duplicate Calculation Section

Semi-Volatiles

Calculations for Field Duplicate Relative Percent Difference (RPD)

SDG No. L2323052

S1= 23-B-33 (2-12)

S2= DUP 1

<u>Analyte</u>	<u>S1</u>	<u>S2</u>	<u>RPD (%)</u>	
Acenaphthene	810	340	NC	
Fluoranthene	25000	5800	125%	*
Naphthalene	850	1100	NC	*
Dimethyl phthalate	ND	720	NC	
Benzo(a)anthracene	16000	4700	109%	*
Benzo(a)pyrene	22000	6800	106%	*
Benzo(b)fluoranthene	25000	8300	100%	*
Benzo(k)fluoranthene	8200	2200	115%	*
Chrysene	16000	4700	109%	*
Acenaphthylene	12000	5000	82%	*
Anthracene	7900	3600	75%	*
Benzo(ghi)perylene	12000	4100	98%	*
Fluorene	1600	650	NC	
Phenanthrene	7200	1700	124%	*
Dibenzo(a,h)anthracene	3100	1000	102%	*
Indeno(1,2,3-cd)pyrene	14000	4700	99%	*
Pyrene	30000	7800	117%	*
Dibenzofuran	540	310	NC	
2-Methylnaphthalene	720	670	NC	
Carbazole	880	380	NC	

* RPD is above the allowable maximum 35%.

Results are in units of ug/kg.

Bold numbers were values that are below the CRQL.

ND - Not detected.

NC - Not calculated, both results must be above the CRDL for valid RPDs to be calculated.

PCBs

Calculations for Field Duplicate Relative Percent Difference (RPD)
SDG No. L2323052

S1= 23-B-33 (2-12)

S2= DUP 1

<u>Analyte</u>	<u>S1</u>	<u>S2</u>	<u>RPD (%)</u>	
Aroclor 1242	107	165	43%	*
Aroclor 1254	215	513	82%	*
Aroclor 1260	85.8	209	84%	*
PCBs, Total	408	887	74%	*

* RPD is above the allowable maximum 35%.

Results are in units of ug/kg.

Bold numbers were values that are below the CRQL.

ND - Not detected.

NC - Not calculated, both results must be above the CRDL for valid RPDs to be calculated.

EPA Method 1633 PFC

Calculations for Field Duplicate Relative Percent Difference (RPD)

SDG No. L2323052

S1= 23-B-33 (2-12)

S2= DUP 1

<u>Analyte</u>	<u>S1</u>	<u>S2</u>	<u>RPD (%)</u>
Perfluorooctanoic Acid (PFOA)	0.086	ND	NC
Perfluorooctanesulfonic Acid (PFOS)	1.66	1.66	0%
Perfluorodecanesulfonic Acid (PFDS)	0.039	ND	NC

* RPD is above the allowable maximum (35%).

All results are in units of ng/g.

Bold numbers were values that are below the CRQL or above the high standard.

ND - Not detected.

NC - Not calculated, both results must be within the linear range for valid RPDs to be calculated.

TAL Metals

Calculations for Field Duplicate Relative Percent Difference (RPD)

SDG No. L2323052

S1= 23-B-33 (2-12)

S2= DUP 1

<u>Analyte</u>	<u>S1</u>	<u>S2</u>	<u>RPD (%)</u>	
aluminum	2770	2440	13%	
antimony	0.499	0.520	NC	
arsenic	5.25	5.66	8%	
barium	71.4	81	13%	
beryllium	0.195	0.191	NC	
cadmium	2.51	3.00	18%	
calcium	253000	294000	15%	
chromium	39.9	31.0	25%	
cobalt	5.10	4.66	9%	
copper	168	182	8%	
iron	22800	19500	16%	
lead	135	150	11%	
magnesium	40000	34700	14%	
manganese	298	269	10%	
mercury	0.684	0.545	23%	
nickel	34.6	34.9	1%	
potassium	292	326	11%	
selenium	0.762	0.872	NC	
silver	ND	0.835	NC	
sodium	173	205	17%	
thallium	0.492	0.382	NC	
vanadium	43.2	15.8	93%	*
zinc	514	502	2%	

* RPD is above the allowable maximum 35%.

Results are in units of mg/Kg.

Bold numbers were values that are below the CRDL.

ND - Not detected.

NC - Not calculated, both results must be above the CRDL for valid RPDs to be calculated.

Alpha Geoscience: Acronyms and Definitions

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlorophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

Polyfluorinated Alkyl Substances (PFAS) Acronyms

PFBA	Perfluorobutanoic acid
PFPeA	Perfluoropentanoic acid
PFHxA	Perfluorohexanoic acid
PFHpA	Perfluoroheptanoic acid
PFOA	Perfluorooctanoic acid
PFNA	Perfluorononanoic acid
PFDA	Perfluorodecanoic acid
PFUnA	Perfluoroundecanoic acid
PFDoA	Perfluorododecanoic acid
PFTriA or PFTrDA	Perfluorotridecanoic acid
PFTeA or PFTA	Perfluorotetradecanoic acid
PFBS	Perfluorobutanesulfonic acid
PFPeS	Perfluoropentanesulfonic acid
PFHxS	Perfluorohexanesulfonic acid
PFHpS	Perfluoroheptanesulfonic acid
PFOS	Perfluorooctanesulfonic acid
PFNS	Perfluorononanesulfonic acid
PFDS	Perfluorodecanesulfonic acid
FOSA	Perfluorooctane Sulfonamide
NMeFOSAA	N-methyl perfluorooctane sulfonamidoacetic acid
NEtFOSAA	N-ethyl perfluorooctane sulfonamidoacetic acid
4:2 FTS or 4:2	1H, 1H, 2H, 2H-perfluorohexanesulfonic acid
6:2 FTS or 6:2	1H, 1H, 2H, 2H-perfluorooctanesulfonic acid or 6:2 Fluorotelomersulfonate
8:2 FTS or 8:2	1H, 1H, 2H, 2H-perfluorodecanesulfonic acid or 8:2 Fluorotelomersulfonate