



INVENTUM ENGINEERING, PC

Satellite Source Area Solidification Remedial Action Work Plan

Riverview Innovation & Technology Campus
Brownfield Cleanup Program Site No. C915353

3875 River Road
Tonawanda, New York 14150

February 19, 2025

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List of Acronyms and Abbreviations

ACM	Asbestos Containing Material
AOI	Area of Investigation
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
BCP	Brownfield Cleanup Program
bgs	Below Ground Surface
CAMP	Community Air Monitoring Plan
cf	cubic feet
CPP	Community Participation Plan
cy	cubic yards
DER	Division of Environmental Remediation
FER	Final Engineering Report
ft-amsl	Feet above mean sea level
HASP	Health and Safety Plan
IRM	Interim Remedial Measure
LKD	Lime Kiln Dust
NAPL	non-aqueous phase liquid
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OU	Operable Unit
PE	Professional Engineer
PDIWP	Pre-design Investigation Work Plan
PID	Photoionization detector
PM	Project Manager
QAPP	Quality Assurance Project Plan
RAWP	Remedial Action Work Plan
RI	Remedial Investigation
RIR	Remedial Investigation Report
RITC	Riverview Innovation & Technology Campus, Inc.
RIWP	Remedial Investigation Work Plan
SCO	Soil Cleanup Objective
ST	Storage Tank
SVOC	Semi-volatile organic compound
SWPPP	Stormwater Pollution Prevention Plan
TCC	Tonawanda Coke Corporation
TCLP	Toxicity Characteristic Leaching Procedure
TOC	Total Organic Carbon
TP	Test Pit
USEPA	U.S. Environmental Protection Agency
VOC	Volatile Organic Compound



Executive Summary

On behalf of Riverview Innovation & Technology Campus, Inc (RITC), Inventum Engineering, P.C. (Inventum) has prepared this Remedial Action Work Plan (RAWP) for the RITC Brownfield Cleanup Program Site (BCP Site). The RAWP has been prepared to provide the approach for implementation of a portion of the remedy selected and approved by the New York State Department of Environmental Conservation (NYSDEC). The scope includes activities that are appropriate for the satellite areas as well as the range of anticipated conditions to be addressed by the remedial action.

RITC is a volunteer under the BCP as it had no ownership or operational history at the operating facility. The BCP Site is listed as Site Number C915353. The approximate 86.5-acre BCP Site represents a portion of the former Tonawanda Coke Corporation (TCC) facility, which was an operating coke making and by-products facility for more than 100-years.

Site Description

The BCP property is located at 3875 River Road in the Town of Tonawanda and represents former operating areas of the TCC. The TCC had a long history of environmental and safety violations and closed in October 2018.

The BCP Site occupies an area of approximately 86.5 acres of the approximately 120-acre RITC properties and consisted broadly of the former production area (ex. battery, powerhouse, oil recovery, and by-products area) and coke and coal yards (described in the Draft Remedial Investigation Report (RIR), Inventum 2022a). The property is in a heavily industrial area approximately 0.5 mile east of the Niagara River. The wastewater treatment area is in the southwest corner of the BCP Site bounded to the south by the 3821 River Road BCP Site (NYSDEC #C915003), to the west by Site 109 (NYSDEC #915055, Operable Unit (OU) 2), and to the north and east by the remaining areas of the BCP Site (NYSDEC #C915353).

Site Background

Prior to its closure in 2018, the BCP Site was an operating coke making and by-products facility for more than 100 years. The facility was owned and operated from circa 1917 through 1947 by Semet Solvay Company, a subsidiary of Allied Chemical and Dye Corporation. In 1947, Semet Solvay Company was merged into Allied Chemical Corporation¹, which owned and operated the facility until 1978, when it sold the facility to TCC. TCC owned and operated the facility continuously from 1978 through October 2018. TCC filed for bankruptcy protection in 2018 and all manufacturing on the property was permanently discontinued. Between October 2018 and March 2020, the U.S. Environmental Protection Agency (USEPA) conducted emergency response activities to remove gases from pipes and tanks and treat wastewater. The USEPA continued to manage stormwater through May 2020. On September 23, 2019, the sale of the property to RITC was approved by the U.S. Bankruptcy Court. The purchase of the property was completed October 10, 2019. Management of the property was transitioned from the USEPA to RITC between September 2019 and June² 2020.

¹ Note: Honeywell acquired Allied-Signal in 1999. The combined/merged entity retained the Honeywell name.

² The USEPA managed surface water on the property until the NYSDEC approved RITC's current Storm Water Pollution Prevention Plan (SWPPP) in May 2020.



RITC is a volunteer under the terms of the BCP Agreement signed on February 14, 2020 (NYSDEC, 2020a) as RITC had never conducted coking or by-product production operations on the property, had never operated any of the equipment or placed materials in the tanks at the water treatment area.

The liquids and tars produced on the property were conveyed through pipes to onsite by-products facilities where they were processed for sale as raw materials or feedstocks. The management of these materials was the source of the majority of releases to the ground surface. The wastewater treatment tanks seemed largely intact, the majority of the impacts could have been from piping and valve leaks.

Geology

The geology beneath the Site is relatively straight forward and consistent with regional studies. Fill material overlies the native clay and till deposits. This RAWP addresses conditions in and above the fill unit.

Nature and Extent

With respect to this RAWP, the data included information from the Secondary Containment IRM Work Plan and selected samples from the RI. The impacts being addressed in this RAWP are limited to the fill.

Remedial Action Work Plan

The RAWP has been developed to provide the sequence of activities to be completed to initiate, monitor and complete the solidification of the fill and potentially shallow clay. This RAWP includes the means and methods included in the Source Area Solidification, Interim Remedial Measure Work Plan (Inventum, 2023)

Schedule

The schedule included with the RAWP depicts the sequence:

- Initial Bench-Scale Testing – Completed
- Solidification Mixing – 2 Months
- Confirmation Sampling – Ongoing
- Verification Sampling – Ongoing
- Progress report – 3 Months



Engineering Certification

I, John P. Black certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Satellite Source Area Solidification Remedial Action Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the NYSDEC Technical Guidance for Site Investigation and Remediation (DER-10) and Green Remediation (DER-31) and that all activities producing the data were performed in full accordance with NYSDEC-approved work plans and any NYSDEC-approved modifications.

Respectfully Submitted,

Inventum Engineering, P.C.

Date:

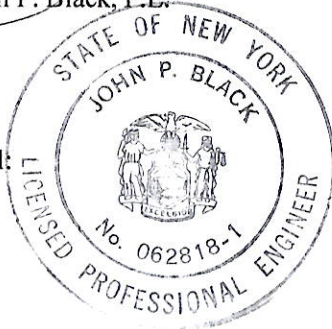
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1. Introduction

On behalf of Riverview Innovation & Technology Campus, Inc (RITC), Inventum Engineering, P.C. (Inventum) has prepared this Remedial Action Work Plan (RAWP) for the RITC Brownfield Cleanup Program Site (BCP Site) located at 3875 River Road in Tonawanda, Erie County, New York (Figure 1).

RITC is a volunteer under the BCP as it had no ownership or operational history at the facility until after it was purchased through the U.S. Bankruptcy Court. The coke making and by-products facilities were never operated by RITC. All work conducted for the BCP Site was completed on behalf of RITC, in accordance with NYSDEC approved work plans. The BCP Site is listed as Site Number C915353. The BCP Site represents a portion of the former Tonawanda Coke Corporation (TCC) facility, which was an operating coke making and by-products facility for more than 100-years. TCC filed for bankruptcy protection in 2018 and all manufacturing on the property was permanently suspended in October 2018. On September 23, 2019, the sale of the property to RITC was approved by the U.S. Bankruptcy Court and the purchase was completed October 10, 2019. On February 14, 2020, a Brownfield Cleanup Agreement (BCA) was signed by RITC and the NYSDEC.

The Source Area Solidification Interim Remedial Measure Work Plan (Inventum 2023) was designed to eliminate, or at least mitigate, sources of impact to shallow groundwater and to surface water conveyance systems on the BCP Site and to collect detailed remedial design data on the volume and stability of the residuals in target areas within the former production area (AOI2) and Tar Seep No. 2. This RAWP is intended to address additional areas, herein termed satellite areas, that may also be acting as potential sources of groundwater impact. The satellite areas (Figure 2-1) are similar in characteristics, although less centralized and smaller in volume than the areas addressed in the Source Area Solidification IRM Work Plan.

The RAWP has been prepared in accordance with the BCP Agreement, DER-10 Technical Guidance for Site Investigation and Remediation (May 2010) – Section 5.2(b), and DER-31 Green Remediation.



1.1 Remedial Action Work Plan Objectives

The target materials are exposed to the weather, and several are possibly in contact with shallow groundwater. Solidification will reduce the volume of the materials subject to treatment and improve RITC's ability to protect water quality. Criteria for the solidification of material includes the elimination of NAPL and ensuring the material remains non-hazardous. As such, the following treatment areas have been identified for inclusion in this RAWP:

1. Former Light Oil Building and Secondary Containment Area
2. Thaw Shed Residual Storage Area
3. Rail Car Area
4. ST21 - ST23 Residual Pile

1.2 Remedial Action Work Plan Organization

This RAWP Report has been organized into the following sections:

Section 1 – Introduction
Section 2 – Remedial Action Investigations
Section 3 – Remedial Action Scope
Section 4 – Permits and Other Authorizations
Section 5 – Reporting
Bibliography
Tables
Figures
Appendices



1.3 Contacts

A Citizen Participation Plan (CPP, Inventum, 2020a) has been followed throughout the management of the BCP Site. The CPP provides information on how information generated on behalf of RITC is being made available and how the owner and NYSDEC inform and involve the public during the remediation of the BCP Site.

Key contact information for NYSDEC, New York State Department of Health (NYSDOH), and Inventum is provided below for reference:

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A website has been established for the projects at the RITC properties and can be accessed through: www.RiverviewTechCampus.com. The website contains numerous documents and photographs that may help the reader envision the locations referenced throughout this work plan.

Copies of approved documents are sent in print and on flash drives to the Buffalo and Erie County Public Libraries, both the Central (Main) and Kenmore Branches:

- Buffalo and Erie County Public Library
Central Library
One Lafayette Square
Buffalo, New York 14203
- Buffalo and Erie County Public Library
Kenmore Branch
160 Delaware Road
Kenmore, New York 14217

Approved documents can also be accessed in the NYSDEC DECinfo Locator;
<https://www.dec.ny.gov/pubs/109457.html>



1.4 BCP Site Description and History

The BCP Site represents former operating areas of the TCC. The TCC had a long history of environmental and safety violations and closed in October 2018. The closure of the facility eliminated the primary source of those environmental violations. The shutdown and USEPA emergency response actions did not address residuals in buildings, containers, process equipment, or fill at the property. The conditions left on the property by TCC have been, and are currently, the subject of numerous IRMs and the conditions in the satellite areas are the subject of this RAWP.

1.4.1 BCP Site Location and Description

The BCP property is located at 3875 River Road in the Town of Tonawanda, Erie County, New York. The BCP Site occupies an area of approximately 86.5 acres of the approximately 120-acre RITC properties and consisted broadly of the former production area (ex. battery, powerhouse, oil recovery, and by-products area) and coke and coal yards (described in the Draft RI Report, Inventum 2022a).

1.4.2 Topography

Topographical surveys of the BCP Site were conducted in November 2019, March 2022, and June 2024 by Niagara Boundary and Mapping Services, a NYS licensed surveyor. Following implementation of numerous IRMs, the elevation of the BCP Site is generally flat with a slight downslope from east to west and north to south. Surface elevations range from approximately 608 feet above mean sea level (ft amsl) on the northeastern boundary to 600 ft amsl on the southwestern boundary, with some remaining piles and local areas above 608 ft amsl. The average elevation of the former production area is approximately 606 ft amsl.

The entire surface of the BCP Site has been completely altered from its natural grade. IRMs and asbestos containing materials (ACM) removal activities have continued since the 2022 survey, so the topography continues to evolve. As a result, the 2024 topographic survey has been completed for the remedial design.

1.4.3 Geology

This description of the geology beneath the BCP Site and the larger regional geology is based on the test pit and drilling programs conducted as part of the RI (Inventum, 2022a), regional studies conducted by others, boring/monitoring well log data from adjacent properties, historical knowledge, and local experience. The geology of the BCP Site is remarkably uniform, as detailed in the boring logs.

1.4.4 Surface Water Hydrology

RITC discharges storm water to the Niagara River under a Storm Water Pollution Prevention Plan (SWPPP) approved by the NYSDEC. Surface water is discharged through three outfalls³:

- Outfall #001– Discharge point for stormwater runoff from the former production area after treatment in two concrete-lined settling/skimming ponds/lagoons. Only stormwater runoff has been discharging through this outfall since the acquisition of the BCP Site by RITC.
- Outfall #002– Discharge of runoff from the coal and coke yards and the southern drainage area. During dry weather periods there is no flow from Outfall #002, there is no sustained base flow.

³ Outfall 003 was not in use at the time of the bankruptcy and there had been no flow from this outfall since 2008 (TCC 2016).



- Outfall #004 — Represents the combined flow from Outfalls #001, #002, Site 109, and a section of the offsite 3821 River Road Site (Site # C915003). Outfall #004 discharges to a drainage ditch on the east side of River Road where the flow combines with flows from the western portion of Site 109 and other industrial properties south of Site 109 including the western portion of the Tonawanda Plastics Site and the Energy Transfer Terminal, as well as portions of River Road. The combined flow is conveyed through a culvert under River Road, into a drainage ditch on Site 108, and finally to the Niagara River.

1.5 Nature and Extent of Contamination

The RI was completed on the BCP Site between October 2020 and September 2021. The RI data is supplemented and confirmed by data collected during the IRMs, site management on the BCP Site and the RIs on the adjacent Sites 109 and 110. The RI and IRM data provided the information required to complete the AA.

With respect to this RAWP, the data includes information from the Secondary Containment IRM Work Plan and selected samples from the RI. The impacts from the subject grossly contaminated material are largely within or above the fill.



2. Remedial Action Investigations

Design related investigations have been completed prior to the development of this RAWP:

1. Inventum, 2023, Preliminary Investigation ST21, ST22, and ST23 Area, Riverview Innovation & Technology Campus, Brownfield Cleanup Program Site No. C915353, 3875 River Road, Tonawanda, New York 14150, Revised October 9.
2. Inventum, 2024, Data Transmittal, Riverview Innovation & Technology Campus, Brownfield Cleanup Program Site No. C915353, 3875 River Road, Tonawanda, New York 14150, March 14.
3. Topographic Mapping – Niagara Boundary July 2024
4. Inventum, 2024, Remedial Investigation Report, Riverview Innovation & Technology Campus, Brownfield Cleanup Program Site No. C915353, 3875 River Road, Tonawanda, New York 14150, September 3.
5. Groundwater Elevation Measurements – Site-wide including adjacent sites 3821 River Road and Sites 109 and 110 if well access is available.

These activities provided data for the finalization of the remedial actions.

2.1 Former Light Oil Building and Secondary Containment Areas

Following removal of the Former Light Oil Building and secondary containment slabs, impacted fill soils were visually identified. Ten samples were collected from below the former building foundation, the former bullet tank secondary containment and the former diesel unloading secondary containment. Results are included in the attached Tables 1-1 through 1-4.





The sample results indicated:

- Below Tank Secondary Containment – One sample (F-LOA-03) exhibited the characteristic of toxicity for benzene. One sample (F-LOA-04) contained perched or shallow groundwater with sheen at the fill-clay interface. Water was abundant within the excavation and had observable dull sheen throughout.
- Below Former Light Oil Building Slab – One sample (FLOA-SUBSLAB) had a total concentration of benzene reported at 17 mg/kg. The sample contained small amounts of non-aqueous phase liquid (NAPL) as shown in photographs No. 1 and No. 2.





Photograph No. 1: Based on site observations, the black veins appear to be coal and coke breeze saturated with water, typical of site fill. An observable green to yellow NAPL is also present. Viscous tar was not observed in this area.





Photograph No. 2: The sample of fill from below the Former Light Oil Building slab had observable black NAPL blebs.

- Below the Diesel Truck Loading/Unloading Pad – field observations and the two samples collected below the pad do not indicate that the fill is grossly contaminated (in effect, no separate phase). During slab removal and sample collection sheen was not observed in the groundwater. The fill did not have staining and had no detectable odor.
- The sample UNLOAD-01 had no exceedance of Commercial SCOs for VOCs and had one exceedance of the Industrial SCO for Benzo(a)pyrene at a concentration of 1.1 mg/kg (J). The total SVOCs were 15.98 mg/kg. The mercury concentration did not exceed Commercial SCOs at 0.54 mg/kg, but ammonia was detected at 8.3 mg/kg. The sample was not characteristically hazardous.
- The sample UNLOAD-02 did not contain VOC or SVOC concentrations that exceeded Commercial SCOs. The total SVOCs reported for the sample were 9.82 mg/kg. The mercury concentration of 2.9 mg/kg exceeded Commercial SCO of 2.8 mg/kg. Ammonia was detected at 31.7 mg/kg. The sample was not characteristically hazardous.

Based on these results, only the fill that was below the Former Light Oil Building slab and secondary containment areas require solidification. The estimated volume of material requiring solidification in the former light oil area is 1,600, cubic yards. The bulk sample SS-BCP-29 was collected for characterization and bench scale testing in June 2024.



2.2 Former Thaw Shed Residual Storage

There are approximately 1,200 cubic yards of residuals within the Former Thaw Shed storage area. The materials were encountered during test pit excavation and IRM excavations and based on visual and olfactory evidence were considered potentially grossly contaminated. Based on the visual and olfactory evidence, RITC did not place these materials as backfill in the source test pits or excavations.

The Thaw Shed started to fail (trusses, siding, and roofing were collapsing) and was demolished without disturbing the stockpiled materials. The demolition was planned to be completed after solidification, but safety dictated that the structure be removed sooner than desired. The stockpiles have been covered since removal of the structure.

The bulk sample SS-BCP-30 was collected for characterization and bench scale testing in June 2024.



2.2.1 Rail Car Area

The Rail Car area is in the southwest corner of the BCP Site and AOI7 South Drainage. The area was investigated during the RI and a thin continuous seam of viscous tar was identified near three abandoned rail cars that were subsequently removed. The seam did not extend a significant distance to the north, and the east and west boundary was investigated and defined after the rail cars were removed. See Tables 1-6 through 1-9 for the results of the of sample analyses from TP-BCP-31 and TP-BCP-52.



Analytes	Part 375 SCOs		Units	TP-BCP-31	Analytes	Part 375 SCOs		Units	TP-BCP-52-28	
	Commercial	Industrial				Commercial	Industrial			
	Sample Date:					Sample Date:				
	Sample Interval:					Sample Interval:				
	Formation:					Formation:				
TCL SVOCs (SW8270D)					TCL SVOCs (SW8270D)					
Benzo(A)Anthracene	5,600	11,000	ug/kg	9200	D	Benzo(A)Anthracene	5,600	11,000	ug/kg	200000
Benzo(A)Pyrene	1,000	1,100	ug/kg	17000	D	Benzo(A)Pyrene	1,000	1,100	ug/kg	240000
Benzo(B)Fluoranthene	5,600	11,000	ug/kg	16000	D	Benzo(B)Fluoranthene	5,600	11,000	ug/kg	240000
Benzo(K)Fluoranthene	56,000	110,000	ug/kg	6200		Benzo(K)Fluoranthene	56,000	110,000	ug/kg	99000
Chrysene	56,000	110,000	ug/kg	11000	D	Chrysene	56,000	110,000	ug/kg	200000
Dibenz(A,H)Anthracene	560	1,100	ug/kg	2500	D	Dibenz(A,H)Anthracene	560	1,100	ug/kg	30000
Indeno(1,2,3-C,D)Pyrene	5,600	11,000	ug/kg	11000	D	Fluoranthene	500,000	1,000,000	ug/kg	510000
Pyrene	500,000	1,000,000	ug/kg	13000	D	Indeno(1,2,3-C,D)Pyrene	5,600	11,000	ug/kg	130000
						Pyrene	500,000	1,000,000	ug/kg	380000
TAL Metals (SW6010)						TAL Metals (SW6010)				
Arsenic	16	16	mg/kg	11.7	J	Arsenic	16	16	mg/kg	18
Barium	400	10,000	mg/kg	96.4		Barium	400	10,000	mg/kg	85
Cadmium	9.3	60	mg/kg	0.301	J	Cadmium	9.3	60	mg/kg	0.548
Copper	270	10,000	mg/kg	42.1	J	Copper	270	10,000	mg/kg	18.8
Mercury (SW7471)						Mercury (SW7471)				
Mercury	2.8	5.7	mg/kg	0.04		Mercury	2.8	5.7	mg/kg	0.054
Total Cyanide (SW9012B)						Total Cyanide (SW9012B)				
Cyanide	27	10,000	mg/kg	0.3	J	Cyanide	27	10,000	mg/kg	0.67

The limits of the viscous tar in the Rail Car Area were defined during test pitting conducted in May 2024. Test pit logs are presented in Appendix A. TP-BCP-76 was excavated near the tar lens documented during the RI. Comparatively little tar was observed for a proposed solidification area (estimated less than 30 cubic



yards). Sample SS-BCP-31 was collected for characterization. Due to the limited thickness collection of sufficient volume for a representative bulk sample to perform bench scale trials was difficult. The proposed approach for this material is excavation of the layer of viscous tar from the impacted layer in the Railcar Area and consolidate the Rail Car Area materials with the Thaw Shed Residual Pile for solidification.

2.2.2 ST21-ST23 Residuals

Approximately 500 cubic yards of grossly contaminated material is staged just north of the Water Treatment Tank Area. The material was removed from within the secondary containment area of former wastewater treatment tanks ST21, ST22, and ST23. Within the secondary containment the materials were exposed to precipitation and were potentially a source of surface and groundwater impact. The material was consolidated in the stockpile to protect the surface water quality in and around the secondary containment areas.

The bulk sample SS-BCP-33 was collected from the residual pile for characterization and bench scale testing.

The ST21-ST23 residual pile will be moved to the Thaw Shed Residual pile for more efficient solidification mixing.



2.3 Bench-Scale Testing

Bench-scale solidification testing of the samples from the satellite area materials was conducted in June 2024. The results are tabulated in Table 2-1. The bench-scale testing demonstrates that the resulting mass, using the defined mixtures of Lime Kiln Dust (LKD) or Portland, and breeze, does not pose a risk to ground or surface water, by testing the leachate and comparing to the target standards in accordance with the TCLP testing. The use of breeze is beneficial in both reducing VOCs in the leachate, and total ammonia concentrations and provides a long-term source of carbon that will reduce the mobility of these constituents to the groundwater system.

Mixtures of Portland cement and LKD with breeze were identified that effectively eliminated the characteristic of toxicity during bench scale sampling performed in accordance with the Pre-Design Investigation Work Plan (PDIWP) (Inventum, 2023a). LKD and breeze were selected as the solidification reagents during the implementation of the Source Area Solidification IRM Work Plan (Inventum, 2023b) and has been confirmed to effectively eliminate the characteristic of toxicity from grossly impacted material throughout the production area and Tar Seep No. 2. Although mix ratios of 5% LKD and 5% breeze were effective on some materials at a bench-scale, achieving a well-distributed mix at this low ratio has been difficult at full scale. Therefore, the bench-scale testing for each satellite area included:

Additive	Baseline	Mix 1	Mix 2	Mix 3
Lime Kiln Dust	0	10%	15%	0%
Portland Cement	0	0%	0%	10%
Coke Breeze	0	10%	10%	10%

Each mix sample consisted of no less than 1,000 grams (35 ounces) of untreated material. Each sample was weighted, and the appropriate ratios of additives were added and thoroughly mixed for at least 2 minutes. All sample and additive weights and observations were recorded in a field book. Each solidification mixture was allowed to hydrate for 24 hours.

After 24 hours, 50 grams (2 ounces) of the sample was placed in a paint filter for observation. The material consistency, pliability, moisture content, and hardness were observed and recorded. The mixes selected for analytical testing were the samples that had no free liquid but were of a consistency that could be managed with conventional earthmoving equipment.

All baseline samples (“raw material”) and all bench-scale samples were analyzed for Full TCLP (VOCs, SVOCs, Metals, Pesticides, and Herbicides), corrosivity, reactivity, ignitability, total ammonia, and total cyanide. The laboratory report is provided in Appendix B. All untreated and remaining treated sample materials were placed in the former Thaw Shed stockpile.

The analytical results have been tabulated in Table 2-1. The sample leachate produced from the TCLP procedure has been compared to the hazardous toxicity characteristics. Sample concentrations of ammonia and cyanide are reported in mass- per- mass and are included to observe the effects of solidification on total concentration.



2.4.1 Bench Scale Results Summary

The results from each of the satellite areas are presented below. Material resulting from the Bench Scale Testing was sent to Alpha Analytical for Full TCLP analysis. All Bench Scale generated material was used for sample analysis. No additional material remained on site after sampling was completed.

Former Light Oil Area

The baseline sample was not characteristically hazardous. Mix 1, Mix 2, and Mix 3 lowered the benzene concentration up to two orders of magnitude. The barium concentration was lowered in all three mixes. The cyanide concentration appeared unaffected by mixing with a baseline concentration of 2 mg/kg and Mix 1, 2, and 3 concentrations of 2.7 mg/kg, 1.3 mg/kg, and 2.4 mg/kg, respectively. The ammonia concentration was decreased between 93 and 97 percent. LKD Mixes 1 and 2 were characteristically hazardous for corrosivity (12.6 v 12.5 SUs), Portland Mix 3 was not characteristically hazardous for corrosivity.

Thaw Shed Residual Stockpile

The baseline sample was not characteristically hazardous. Mix 1, Mix 2, and Mix 3 lowered the benzene concentration by an order of magnitude. The cyanide concentration appeared unaffected by mixing with a baseline concentration of 7.5 mg/kg and Mix 1, 2, and 3 concentrations of 5.8 mg/kg, 4.9 mg/kg, and 10 mg/kg, respectively. The ammonia concentration was decreased between 63 and 81 percent. No characteristics of corrosivity were produced from Mix 1, Mix 2, or Mix 3.

Water Treatment Area Residual Stockpile

The baseline sample was not characteristically hazardous. Mix 1, Mix 2, and Mix 3 lowered the benzene concentration by an order of magnitude. The lead concentration was lowered by an order of magnitude. The cyanide concentration appeared unaffected by mixing with a baseline concentration of 6.8 mg/kg and Mix 1, 2, and 3 concentrations of 19 mg/kg, 20 mg/kg, and 10 mg/kg, respectively. The ammonia concentration decreased between 88 and 94 percent. LKD Mixes 1 and 2 were characteristically hazardous for corrosivity (at the standard 12.5 SUs), Portland Mix 3 was not characteristically hazardous for corrosivity.

Rail Car Area

During investigation test pitting the volume of grossly impacted material was observed to be comparatively small (estimated less than 30 cubic yards). It was challenging to collect enough representative sample volume to perform bench scale testing. A baseline sample was collected from the Rail Car Area for characterization. The sample was not characteristically hazardous.

2.4.2 Solidification Mix Selection

None of the five baseline samples were characteristically hazardous. Mixes 1 and 2, at 10% and 15% LKD respectively, produced a material that was characteristically hazardous for corrosivity in all trials except for the Thaw Shed Residuals. Based on the nature of the Thaw Shed Residuals, this pile may contain the most concentrated grossly impacted materials. It is possible that the material is consuming more of the solidification reagent when mixed.

Mix 3, 10% Portland Cement and 10% breeze has been selected for the solidification of the Satellites Areas based on the bench scale testing results.



2.5 Supporting Documents

The Quality Assurance Project Plan (QAPP) (Appendix C), Health and Safety Plan (HASP) (Appendix D) and Community Air Monitoring Plan (CAMP) (Appendix E) will be followed for all remedial actions.



3. Remedial Action Scope

The RAWP scope will include all phases of the satellite areas solidification remedial action from procurement; materials management; operation and closure; surface water management; cover placement; and interim reporting. Final reporting will be in the Final Engineering Report (FER).

The Solidification Satellite Areas RAWP activities are proposed to eliminate or mitigate the mobility of constituents in satellite source areas that exist below the ground surface and in the Former Thaw Shed Storage area while collecting data for the remedial designs. The purposes of these source control activities are to:

- Solidify the materials exposed in the satellite areas while the OSC crews have a consistent and effective procedure defined;
- Solidify conditions in close proximity to the stormwater management systems and upgradient of the south drainage ditch, and

In the event additional grossly contaminated material is encountered below grade during solidification it will be chased and quantified if practical. Using GPS, the limits of the grossly contaminated material will be recorded, approximate volume will be quantified, and boundaries will be updated. NYSDEC will be notified of any expansion to proposed solidification areas.

A summary of the areas applicable to the proposed Solidification Satellite Areas RAWP scope (Figure 2-2 through Figure 2-5) is provided below:

- AOI 2 – Production Area
 - Former Light Oil Building and Secondary Containment footprints
- AOI 4 - Coke Yard
 - The former Thaw Shed
- AOI 6 – Water Treatment – Materials removed from the secondary containment.
- AOI 7 – South Drainage
 - Former Rail Car Area – Southwest corner of AOI 7

3.1 Solidification

The areas of focus under the scope of work are distributed potential source areas around the BCP Site that pose potential exposures to the stormwater collection systems as the source material may come in contact with the shallow groundwater and the groundwater may potentially flow to the stormwater conveyance system. The RAWP scope will reduce the mobility of compounds located in widespread areas of the BCP Site and prepare materials for consolidation under the site-wide RAWP.

The solidification of these areas will include.

- In-situ solidification of materials that demonstrate visual and olfactory properties of grossly contaminated materials. Grossly contaminated materials at the BCP Site are those with “Free flowing non-aqueous liquids (oil or tar)” or other materials identified by the owner’s onsite representative or the NYSDEC;
- In-situ solidification of materials that demonstrate the characteristic of toxicity;



- Reduction of the number of areas on the BCP Site with potential source materials;
- Definition of the volume of materials that could be classified as source materials in each of the areas addressed within this Solidification RAWP;
- Definition of the volume of the resulting solidified material that will be addressed by the selected remedial action; and
- Definition of the properties of the solidified materials at full-scale, including characteristics that could affect the selection of materials for long-term management of the materials.

3.2 Sampling and Delineation

The volume of material solidified in each satellite area was estimated by advancing test pits around the subject areas' perimeter. The test pits served two purposes: initial delineation of the limits of each subject area and sample collection for bench-scale testing. Test pits were excavated at the locations shown in Figures 2-2 to 2-5.

One sample was collected from each satellite area. Samples SS-BCP-29 through SS-BCP-33 (Figures 2-2 through 2-5) were biased to the most grossly impacted fill, determined by visual and olfactory observations, and PID readings.

3.3 Implementation

The materials will be blended in a manner that exposes the proposed limits of solidification by carefully following the sequence below. An estimated volume of 750 tons of breeze will be used for the solidification.

All solidification progress will be added to the weekly solidification tracker. Following receipt of passing verification results the solidified materials shall be managed as follows:

- Former Light Oil Area – In-situ, remain in place until consolidation under the site-wide RAWP;
- Former Thaw Shed Residual Materials – Solidify in place, cover for action during the remedial action;
 - Rail Car Area – Move to the former Thaw Shed and solidify, cover for action during the remedial action.
 - ST-21 to ST-23 residuals – Move to the former Thaw Shed and solidify, cover for action during the remedial action;

The breeze will be sourced from the existing stockpile or coke yard at the BCP Site. The breeze materials to be used for solidification will be free of other non-coke materials such as rail, spikes, tie plates, ties, or other industrial debris and visual evidence of tar or NAPL. A satellite area pre-solidification sample of breeze shall be collected for:

- Total Organic Carbon (TOC), VOCs, SVOCs, Metals, cyanide, and ammonia.

To confirm the quality of the breeze being utilized:

- TOC and VOC samples (1/~200 tons) and



- SVOC and metals samples (1/~700 tons) will be collected and analyzed during the implementation of this work plan addendum.

The materials to be used will be inspected at the beginning of each working shift morning by the onsite staff. Any breeze materials containing industrial debris will be rejected. Any breeze that contains tar or NAPL will be moved to the former Thaw Shed area and will be solidified. The inspected and approved materials to be used shall be stockpiled for the day's use. Should the stockpile be exhausted, additional materials will be inspected and approved.

3.3.1 Subgrade Solidification

The limits of the Former Light Oil Area will be confirmed by pulling the material away from the anticipated boundary as in a test pit but without moving the material from the within the limits of the designated areas. This will allow inspection of the outer boundary, measurement of the depth of fill, inspection of the underlying silty clay, and sampling. If grossly contaminated material is encountered beyond the anticipated boundary of the Former Light Oil Area, the size of the treatment area will be increase. After the visually identifiable limit of the treatment zone is defined, confirmation samples will be collected around the perimeter of the treatment zone. Confirmation samples will be analyzed for Full TCLP. If treatment areas share a boundary, as with the previously solidified MW-BCP-05 area and the proposed Former Light Oil Area, confirmation sample collection will be omitted from the shared boundary and collected progressively along the outer boundaries (Figure 2-2). Overlying fill that is free of viscous tar will be carefully excavated and stockpiled near the solidification area. The materials will be placed in an area that will not interfere with the solidification, but that is accessible for use as fill after the solidification is completed. If groundwater is encountered during excavation, it will be pumped consistent with the IWD Permit 331, through granular activated carbon and ultimately to the sanitary sewer.

The mixing will be done with hydraulic excavators at shallow depths, as blending and verification sampling at depths of 5 to 12 feet can be effectively completed using onsite equipment. When there is sufficient or excess moisture present, no additional moisture will be introduced. In areas with dryer target materials, or areas where the Portland has not solidified, moisture will be added to allow reaction of the binding reagent. The volume of moisture added will be based on visual observations of the hydration of the Portland cement. The solidification will be conducted in-situ within each of the designated areas. Reagents will be measured by the bucket load (for breeze) and by hopper for the Portland cement. Additional treatment will be conducted on any materials that continue to exhibit the characteristics of hazardous waste after initial solidification. Verification samples will be analyzed for Full TCLP, Total Ammonia, Total Cyanide, and Total Mercury. Once all verification and confirmation samples have been received and do not exhibit the characteristic of toxicity, the solidified mass will be graded to meet the surrounding ground surface.

3.3.2 Surface Solidification

The stockpiles at the ST21 to ST23 residuals will be moved to the Former Thaw Shed Residual Materials area and managed separately. Material from the Rail Car Area will be excavated from the ground and moved to the Thaw Shed Area for solidification. The mixing of stockpiled materials will be done with hydraulic excavators, as blending and verification sampling of stockpiles can be effectively completed using onsite equipment. When there is sufficient or excess moisture present, no additional moisture will be introduced. In areas with dryer target materials, or areas where the Portland has not solidified, moisture will be added



to allow reaction of the binding reagent. The volume of moisture added will be based on visual observations of the hydration of the Portland cement. The solidification will be conducted individually on each stockpile that has been relocated to the Former Thaw Shed Area. Reagents will be measured by the bucket load (for breeze) and by hopper for the Portland cement. Additional treatment will be conducted on any materials that continue to exhibit the characteristics of hazardous waste after initial solidification. Verification samples will be analyzed for Full TCLP, Total Ammonia, Total Cyanide, and Total Mercury. Once all verification and confirmation samples have been received and do not exhibit the characteristic of toxicity, the solidified stockpiles will remain at the Former Thaw Shed Area and will not be spread out after treatment.

3.4 Quantification

The focus areas under the RAWP are those localized but distributed across the BCP Site and pose potential stormwater collection system exposures. The actions in this Solidification RAWP are applicable under the onsite consolidation alternative. While the solidification and quantification are only a minor component of the recommended alternative, the RAWP scope will reduce the mobility of compounds in the target materials and allow Inventum to quantify the volume of material associated with the primary exposure pathways on the BCP Site to storm/surface water.

The quantification program will include a combination of observations, confirmation, and verification samples. The observations are to be recorded in each solidification area. The observations will be around the perimeter of each treatment area and of the solidified mass. Access to the perimeter to allow observations shall be made by pulling the fill back along the perimeter. Observations will include:

- If a continuous layer or seam of NAPL is noted within the exterior wall(s) of the treatment area, or
- NAPL coating is visible on the bucket of the excavator.

Confirmation samples will be collected at locations specified below and analyzed for VOCs, SVOCs, and Ammonia. Confirmation samples will be collected around the perimeter of the Former Light Oil Area, to confirm the treatment limit observations. Confirmation samples will not be collected around the Rail Car Area as the small volume will be relocated to the Thaw Shed residuals staging area. After relocation, one sample will be collected to confirm there were no impacts to underlying fill. The sample will be analyzed for VOCs, SVOCs, and Ammonia. Confirmation samples will not be collected around the ST21 – ST23 residual stockpile as it is above grade and will be relocated to the Thaw Shed residuals staging area. After relocation, one sample will be collected below the pile to confirm there were no impacts to underlying fill. The sample will be analyzed for VOCs, SVOCs, and Ammonia. The confirmation samples will include one sample per 60 lineal feet of the perimeter of the area stabilized, but no less than 4 samples in each area stabilized. The samples will be collected at the approximate depth of the observed pre-solidification viscous tar or non-aqueous phase liquid (NAPL). The observations listed above will be recorded, if present. Should any confirmation sample indicate the treatment area must be expanded, additional expansion of the treatment area by moving materials within the treatment area will be conducted until the perimeter materials are shown to be non-hazardous.

Note: the solidification may begin while the confirmation testing is ongoing. The final solidification cannot be completed until the confirmation data shows the perimeter is non-hazardous.



Confirmation Testing	Anticipated Perimeter Length (ft)	Confirmation Samples	TCLP Method 1311
Former Light Oil Area	400	6	6
Former Thaw Shed Area	N.A.	0	0
Rail Car Area	N.A.	0	0
ST21 – ST23 Residual Pile	N.A.	0	0

During the solidification, verification samples will be collected to verify the blending of the reagents throughout the mass. The samples will be collected from the excavator bucket in each solidified area in accordance with the following table.

Verification Testing	Area (ft ²)	Estimated Depth (ft)	Volume (tons)	Verification Samples	TCLP Method 1311	Ammonia	Cyanide	Mercury	Field Unconfined Compressive Strength
Former Light Oil Area	9,600	4.5	2,700	6	6	6	6	6	30
Former Thaw Shed Area	N.A.	0	2,100	4	4	4	4	4	0
Rail Car Area	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ST21-ST23 Residuals	3,300	0	950	2	2	2	2	2	0

Verification samples will be collected for each 500-tons (~each 280 cubic yards [cy]) of stabilized material, but no less than 2 samples per area stabilized⁴. The verification samples will be collected by opening a pit to the full depth of vertically solidified materials, or from the surface of lift based-stabilized materials to ensure the constituents in the stabilized materials are no longer mobile nor represent a potential source. Should any verification sample exhibit the characteristics of grossly contaminated material or hazardous

⁴ While verification samples are typically collected from the first 25% of stabilized materials, the areas being treated are so small, all verification samples will be collected within 10 days of completion of the initial mixing of an area and while all Solidification equipment is available onsite to remix if required.



waste, the 500-ton mass represented by the sample will be stabilized with additional reagents at a ratio of 50 percent of the original addition rate and the mass shall be resampled.

In addition to the sampling, during the blending the following observations will be made:

- Visible NAPL is noted in the blended materials after mixing,
- Visible NAPL is noted on the equipment or in the equipment decontamination water,
- Unconfined compressive strength of any solidified materials below 50 psi, and
- Large sections (> 1 cubic foot [cf]) of unmixed material.

If any are observed, the NYSDEC will be notified and modifications to the mixing protocols will be mutually agreed to.

The solidification is intended to eliminate potential source materials which are to be defined by visual evidence (e.g. mobile tar NAPL) and analytical testing to demonstrate the materials do not exhibit the characteristics of toxicity.

The geotechnical data will be used to understand the volume and initial strength of materials to be placed in consolidation cells. The pocket penetrometer testing will be conducted in accordance with ASTM Method ASTM WK27337, “New Test Method for Pocket Penetrometer Test”. This test is applicable for materials that have been completely bonded. Materials that are still granular in nature will not be tested using the pocket penetrometer. The pocket penetrometer testing will be conducted in situ after the materials have been blended and compacted with the bucket of the excavator. For each analytical test location, five pocket penetrometer tests will be conducted around the analytical sample location. Permeability is not an immediate concern as the materials are thin and convey little water.

3.5 Survey

The limits of the stabilized materials and all sample locations will be documented using the onsite GPS equipment. The following measurements (location and elevation) will be documented for each of the areas stabilized:

- Top of clay will be determined, prior to solidification, at all perimeter sample locations and at no less than one per 400 square feet (SF) of base area to allow determination of addition rates;
- Perimeter confirmation sample locations;
- Verification sample locations; and
- Stabilized surface elevations, perimeter sample locations and no less than one per 400 SF of stabilized surface area.

4. Permits and Other Authorizations

4.1 Community Air Monitoring Plan

The air monitoring program during the RAWP will be conducted in accordance with the Community Air Monitoring Plan (CAMP) provided in Appendix E. Three (3) perimeter air monitoring units (1 Upwind and 2 Downwind) were installed on the BCP Site on April 29, 2020 (Appendix E). These units are fixed to



monitor perimeter air quality and their location will not be adjusted as work area(s) shift over the course of the design investigations except when the work would undermine the units.

Additional air monitors (PID and particulate meters) will be utilized to monitor downwind air quality more locally to the areas being stabilized during active work shifts. The location of these work area specific perimeter air monitors will be adjusted as necessary as the work area shifts and/or with noticeably sustained shifts in prevalent wind directions. A weather station has been installed at the upwind monitoring station and will be a guide to determine prevalent wind direction. The prevalent wind direction and the location of the air monitors will be documented daily.

4.2 Field Modification Notifications

The NYSDEC BCP PM, or their designated representative, will be notified via electronic mail at minimum 1-week in advance of the work starting and will be notified via electronic mail and telephone if the following conditions occur:

- Field activities are delayed and/or rescheduled due to unsafe or unsuitable weather conditions and/or equipment malfunctions.
- Unusual conditions are identified in an area being stabilized (e.g. underground utility with non-aqueous phase liquid, underground storage tank, or materials that are grossly contaminated with materials not representative of the specific area being stabilized).

5. Reporting

The Solidification Satellite Areas RAWP scope will be incorporated into the results of the site-wide RAWP after the BCP remedial actions are completed. The results of the implementation of these remedial actions will be documented in the FER. To provide an ongoing transfer of information, the following reporting is proposed:

1. Progress Reporting (Weekly Tabular Summary)
 - a. the area(s) being worked in the previous week,
 - b. the dimension of treatment areas,
 - c. amount of reagents/materials used,
 - d. type/quantity of samples collected, and
 - e. any modifications to the program.
2. Summary table for each area stabilized (Weekly Summary Tables) including:
 - a. Volume stabilized;
 - b. Type of binding reagent (Portland Cement);
 - c. Quantity of breeze and reagent used;
 - d. Number of confirmation samples and results;
 - e. Number of verification samples and results; and
 - f. Survey data.



6. Bibliography

The bibliography provides a list of documents used in conjunction with this Source Control IRM Addendum.

1. Inventum Engineering, 2021, Secondary Containment IRM Work Plan – Closure, May.
2. Inventum Engineering, 2022a, Draft Remedial Investigation Report, March 18.
3. Inventum Engineering, 2022b, Draft Alternatives Analysis Report (AAR), September 29.
4. Inventum Engineering, 2023a, Pre-Design Investigation Work Plan, Revised February 15.
5. Inventum Engineering, 2023b, Source Area Solidification, Interim Remedial Measure Work Plan, September.
6. New York State Department of Environmental Conservation, 2010, DER-10: Technical Guidance for Site Investigation and Remediation, June.
7. New York State Department of Environmental Conservation, 2010, DER-31 Green Remediation, September.
8. New York State Department of Environmental Conservation, 2010, CP-51: Soil Cleanup Guidance Policy, October.



Tables





Table 1-1
Secondary Containment IRM Work Plan - Closure Sampling: Detections Only
Former Light Oil Area Tanks ST03, ST04, and ST05 "Bullet Tanks"
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

DRAFT

ANALYTE	SAMPLE ID:			F-LOA-01-01302024	F-LOA-02-01302024	F-LOA-03-01302024	F-LOA-04-01302024	F-LOA-05-01302024	F-LOA-06-01302024						
	LAB REPORT:			480-216732	480-216732	480-216732	480-216732	480-216732	480-216732						
	COLLECTION DATE:			1/30/2024	1/30/2024	1/30/2024	1/30/2024	1/30/2024	1/30/2024						
	SAMPLE DEPTH:			4' BGS	4.5' BGS	4' BGS	4' BGS	4' BGS	4' BGS						
	LOCATION:			BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB						
	EPA-TCLP	Part 375 Commercial SCO	Part 375 Industrial SCO	Northwest Corner, Below former ST03	Below Eastern Sump	Center	Northeast Corner, Below fomer ST04 Diesel Tank	West Side, Adjacent to Former Light Oil Building	Southeast Corner, Below former ST05 Gas Tank						
	(mg/l)	(mg/kg)	(mg/kg)												
VOLATILE ORGANICS BY GC/MS															
1,2,4-Trimethylbenzene		190	380	0.00087	<0.00086	U	<0.170	U	0.16	0.0036	J	0.31			
1,3,5-Trimethylbenzene		190	380	0.057	J	<0.00029	U	<0.190	U	0.11	0.0035	J	0.19		
2-Butanone (MEK)		500	1000	<0.200	U	0.01	J	<0.910	U	<0.140	U	0.003	J	<0.170	U
Acetone		500	1000	<0.280	U	0.052		<1.3	U	<0.200	U	0.04		<0.230	U
Benzene		44	89	2.4		0.0015	J	28		0.73		0.0035	J	1.6	
Chloromethane				<0.16	U	<0.00027	U	<0.073	U	<0.011	U	<0.027	U	0.014	J
Ethylbenzene		390	780	0.79		<0.00031	U	0.22	J	0.054		0.0016	J	0.087	J
Isopropylbenzene				<0.010	U	<0.00067	U	<0.046	U	<0.0072	U	<0.066	U	0.009	
p/m-Xylene				1.2		<0.00075	U	0.62		0.5		0.019		0.83	
Methyl Acetate				<0.032	U	<0.0027	U	<0.150	U	<0.023	U	<0.0027	U	0.081	J
o-Xylene				0.47		0.00086	J	0.23	J	0.1		0.0076		0.19	
Styrene				41	J	<0.00022	U	<0.074	U	0.072		<0.022		0.099	
Toluene		500	1000	0.28		0.00037	J	0.21	J	0.47		0.0031	J	0.73	
Xylenes, Total		500	1000	1.67		0.00086		0.85		0.6		0.0266		1.02	
Total VOCs				46.14		0.06473		29.28		1.926		0.0778		3.64	
SEMIVOLATILE ORGANICS BY GC/MS															
2,4-Dimethylphenol				<0.058	U	<0.054	U	0.086	J	<0.050	U	<0.052	U	<0.053	U
2-Methylnaphthalene				0.33	U	0.056	J	<0.048	U	0.24		0.16	J	0.082	J
2-Methylphenol		500	1000	0.032	J	<0.026	U	0.059	J	0.035	J	<0.025	U	0.043	J
3-Methylphenol/4-Methylphenol		500	1000	0.055	J	0.028	J	<0.028	U	0.066	J	0.031	J	0.1	J
Acenaphthene		500	1000	0.087	J	<0.033	U	<0.035	U	0.059	J	<0.032	U	<0.032	U
Acenaphthylene		500	1000	0.2	J	0.042	J	<0.031	U	0.14	J	0.078	J	0.066	J
Anthracene		500	1000	0.24		<0.055	U	<0.060	U	0.14	J	0.092	J	0.067	J
Benzo(a)anthracene		5.6	11	0.46		0.087	J	<0.024	U	0.27		0.12	J	0.16	J
Benzo(a)pyrene		1	1.1	0.38		0.076	J	<0.035	U	0.29		0.11	J	0.15	J
Benzo(b)fluoranthene		5.6	11	0.48		0.1	J	<0.031	U	0.36		0.13	J	0.19	J
Benzo(ghi)perylene		500	1000	0.29		0.077	J	<0.026	U	0.27		0.095	J	0.14	J
Benzo(k)fluoranthene		56	110	0.22	J	0.047	J	<0.031	U	0.16	J	0.067	J	0.0887	J
Biphenyl				0.06	J	<0.033	U	<0.035	U	0.041	J	<0.032	U	<0.032	U
Carbazole				0.07		<0.026	U	<0.028	U	0.056		0.032	J	<0.026	U
Chrysene		56	110	0.4		<0.050	U	<0.054	U	0.26		0.15	J	0.16	J
Dibenzofuran		350	1000	0.19	J	0.032	J	<0.028	U	0.11		0.067	J	0.04	J
Fluoranthene		500	1000	0.84		0.15	J	<0.033	U	0.47		0.23		0.26	
Fluorene		500	1000	0.26		0.045	J	<0.028	U	0.15	J	0.98	J	0.058	J
Indeno(1,2,3-cd)pyrene		5.6	11	0.25		0.064	J	<0.030	U	0.2	J	0.077	J	0.11	J
Naphthalene		500	1000	14		0.41		0.076	J	8.2		2.5		0.72	
Phenanthrene		500	1000	0.93		0.15	J	<0.035	U	0.49		0.32		0.21	J
Pyrene		500	1000	0.91		0.17	J	<0.028	U	0.55		0.24		0.3	
Total SVOCs				20.68		1.534		0.2210		12.56		5.479		2.945	



Table 1-1
Secondary Containment IRM Work Plan - Closure Sampling: Detections Only
Former Light Oil Area Tanks ST03, ST04, and ST05 "Bullet Tanks"
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

DRAFT

ANALYTE	SAMPLE ID:			F-LOA-01-01302024	F-LOA-02-01302024	F-LOA-03-01302024	F-LOA-04-01302024	F-LOA-05-01302024	F-LOA-06-01302024						
	LAB REPORT:			480-216732	480-216732	480-216732	480-216732	480-216732	480-216732						
	COLLECTION DATE:			1/30/2024	1/30/2024	1/30/2024	1/30/2024	1/30/2024	1/30/2024						
	SAMPLE DEPTH:			4' BGS	4.5' BGS	4' BGS	4' BGS	4' BGS	4' BGS						
	LOCATION:			BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB						
	EPA-TCLP	Part 375 Commercial SCO	Part 375 Industrial SCO	Northwest Corner, Below former ST03	Below Eastern Sump	Center	Northeast Corner, Below fomer ST04 Diesel Tank	West Side, Adjacent to Former Light Oil Building	Southeast Corner, Below former ST05 Gas Tank						
	(mg/l)	(mg/kg)	(mg/kg)												
MERCURY, TOTAL															
Mercury, Total		2.8	5.7	0.15	0.12	0.6	0.38	0.087	0.62						
GENERAL CHEMISTRY															
Sulfide, Reactive				74.3	<9.4	U	147	<9.4	U	19.5	<9.3				
pH (H)	>12.5, <2			8.4	HF	8.2	HF	8.3	HF	9.2	HF	8.8	HF	10	HF
Solids, Total				70.7		75.4		69.5		82.5		76.3		76.1	
TCLP VOLATILES BY EPA 1311															
Benzene	0.5			0.073	<0.0041	U	0.76	<0.0041	U	<0.0041	U	0.019			
SUM				0.073	-	U	0.76	-		-		0.019			
TCLP SEMIVOLATILES BY EPA 1311															
2-Methylphenol	200			<0.0040	U	<0.0020	U	0.0069	J	<0.0020	U	<0.0040	U	0.003	J
3-Methylphenol	200			<0.0040	U	<0.0020	U	0.0031	J	<0.0020	U	<0.0040	U	0.0056	J
4-Methylphenol	200			<0.0035	U	<0.0018	U	0.0031	J	<0.0018	U	<0.0035	U	0.0056	J
SUM				-		-		0.0131		-		-		0.0142	
TCLP METALS BY EPA 1311															
Arsenic, TCLP	5			<0.0056	U	0.0064	J	0.041		<0.015	U	0.007	J	0.007	J
Barium, TCLP	100			0.5	J	0.3	J	0.42	J	0.87	J	0.62	J	1.3	
Lead, TCLP	5			0.011	JB	0.0052	JB	0.018	JB	0.012	JB	0.019	JB	0.047	B
Mercury, TCLP	0.2			<0.000043	U	<0.000043	U	<0.00043	U	<0.000043	U	<0.000043	U	0.00008	J

* Comparison is not performed on parameters with non-numeric criteria.
EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.
NY-RESC: New York NYCRR Part 375 Commercial Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.
NY-RESI: New York NYCRR Part 375 Industrial Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

TCL and CP-51 Results are Pending

Qualifiers:
U - Not detected at the reported detection limit for the sample.
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Compound was found in the blank and sample.
HF - Analyzed outside of hold time.
Bold - Compound is detected
Red Highlight - Exceeds NYS Part 375 Industrial SCOs
Green Highlight - Exceeds NYS Part 375 Commercial SCOs
Yellow Highlight - Exceeds EPA Toxicity Characteristic Regulatory Levels



Table 1-2

DRAFT

Secondary Containment IRM Workplan - Closure Sampling: Detections Only
Former Light Oil Area Tanks ST03, ST04, and ST05 "Bullet Tanks" Excavation Water
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

ANALYTE	SAMPLE ID:		F-LOA-07-01302024	
	LAB REPORT:		480-216732	
	COLLECTION DATE:		1/30/2024	
	SAMPLE DEPTH:		Surface Water in Excavation	
	LOCATION:		Bullet Tank Sub-Slab	
	Class GA NYS Ambient Water Quality Standards and Guidance Values	Units	Eastern Side of Excavation	
VOCs 8260C				
1,2,4-TRIMETHYLBENZENE	5	ug/L	55	
BENZENE	1	ug/L	2000	
M,P-XYLENES	5	ug/L	410	
O-XYLENE (1,2-DIMETHYLBENZENE)	5	ug/L	110	
STYRENE	5	ug/L	59	
TOLUENE	5	ug/L	770	
Xylenes, Total	5	ug/L	520	
SVOCs 8270D				
2,4-DIMETHYLPHENOL	1	ug/L	160	
2-METHYLNAPHTHALENE	0	ug/L	100	
2-METHYLPHENOL (O-CRESOL)	1	ug/L	220	J
4-METHYLPHENOL (P-CRESOL)	1	ug/L	390	J
4-NITROANILINE	5	ug/L	<1.3	
ACENAPHTHENE	20	ug/L	20	J
ACENAPHTHYLENE	-	ug/L	40	
ACETOPHENONE	-	ug/L	46	
BENZO(A)ANTHRACENE	0.002	ug/L	7.7	J
BENZO(A)PYRENE	-	ug/L	6.4	J
BENZO(B)FLUORANTHENE	0.002	ug/L	10	J
BENZO(G,H,I)PERYLENE	-	ug/L	5.3	J
CARBAZOLE	-	ug/L	37	
CHRYSENE	0.002	ug/L	8.8	J
DIBENZOFURAN	-	ug/L	24	J
FLUORANTHENE	50	ug/L	26	
FLUORENE	50	ug/L	27	
INDENO(1,2,3-C,D)PYRENE	0.002	ug/L	4.2	J
NAPHTHALENE	10	ug/L	9900	
PHENANTHRENE	50	ug/L	38	
PHENOL	1	ug/L	640	J
Mercury 7470A				
MERCURY	0.0007	mg/L	0.15	
Nitrogen, Ammonia E350.1				
NITROGEN, AMMONIA (AS N)	2	mg/L	12.1	
GENERAL CHEMISTRY				
pH (H)	>12.5, <2		10.5	HF

TCL and CP-51 Results are Pending

Qualifiers:

U - Not detected at the reported detection limit for the sample.

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

B - Compound was found in the blank and sample.

HF - Analyzed outside of hold time.

Bold - Compound is detected

Red Highlight - Exceeds class GA Ambient Water Quality Standards



Table 1-3
Secondary Containment IRM Workplan - Closure Sampling: Detections Only
Former Light Oil Building Sub-Slab
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

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ANALYTE	SAMPLE ID:		FLOA-SUBSLAB-02052024
	LAB ID:		L2406251-01
	COLLECTION DATE:		2/5/2024
	SAMPLE DEPTH:		1' - 4' Below Slab
	SAMPLE MATRIX:		SOIL
	NY-RESC (mg/kg)	NY-RESI (mg/kg)	Collected from excavated fill pile
VOLATILE ORGANICS BY GC/MS			
1,2,4,5-Tetramethylbenzene			1.4
1,2,4-Trimethylbenzene	190	380	4.9
1,3,5-Trimethylbenzene	190	380	2
Benzene	44	89	17
Cyclohexane			1.6
Ethylbenzene	390	780	7.7
Isopropylbenzene			3.6
n-Propylbenzene	500	1000	1
Methyl acetate			0.093 J
Methyl cyclohexane			5.7
Naphthalene	500	1000	88
o-Xylene			2
p-Diethylbenzene			0.45
p-Ethyltoluene			3.3
p-Isopropyltoluene			0.66
sec-Butylbenzene	500	1000	0.12
p/m-Xylene			10
Styrene			0.25
Toluene	500	1000	2
Xylenes, Total			12
Total VOCs			151.773 -
SEMIVOLATILE ORGANICS BY GC/MS			
2-Methylnaphthalene			0.82
3-Methylphenol/4-Methylphenol	500	1000	0.068 J
Acenaphthene	500	1000	0.71
Acenaphthylene	500	1000	0.14 J
Anthracene	500	1000	0.6
Benzo(a)anthracene	5.6	11	0.51
Benzo(a)pyrene	1	1.1	0.34
Benzo(b)fluoranthene	5.6	11	0.45
Benzo(ghi)perylene	500	1000	0.19
Benzo(k)fluoranthene	56	110	0.17
Biphenyl			0.061 J
Carbazole			0.089 J
Chrysene	56	110	0.45
Dibenzo(a,h)anthracene	0.56	1.1	0.051 J
Dibenzofuran	350	1000	0.3
Fluoranthene	500	1000	1.9
Fluorene	500	1000	0.46
Indeno(1,2,3-cd)pyrene	5.6	11	0.22
Naphthalene	500	1000	16
Phenanthrene	500	1000	1.6
Phenol	500	1000	0.09 J
Pyrene	500	1000	1.6
Total SVOCs			26.819 -



Table 1-3

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Secondary Containment IRM Workplan - Closure Sampling: Detections Only
Former Light Oil Building Sub-Slab
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

GENERAL CHEMISTRY			
Solids, Total			71.1

EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of

NY-RESC: New York NYCRR Part 375 Commercial Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESI: New York NYCRR Part 375 Industrial Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

TCL and CP-51 Results are Pending

Qualifiers:

U - Not detected at the reported detection limit for the sample.

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

B - Compound was found in the blank and sample.

HF - Analyzed outside of hold time.

Bold - Compound is detected

Red Highlight - Exceeds NYS Part 375 Industrial SCOs

Green Highlight - Exceeds NYS Part 375 Commercial SCOs



Table 1-4
Secondary Containment IRM Workplan - Closure Sampling: Detections Only
Diesel Truck Loading/Unloading Pad
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

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ANALYTE	SAMPLE ID:			UNLOAD-01-02132024		UNLOAD-02-02132024	
	LAB REPORT:			J217087		J217087	
	COLLECTION DATE:			2/13/2024		2/13/2024	
	SAMPLE DEPTH:			2' BGS		3.5' BGS	
	LOCATION:			Beneath Diesel Truck loading/unloading pad, western side.		Beneath Diesel Truck loading/unloading pad, eastern side.	
	EPA-TCLP	Part 375 Commercial SCO	Part 375 Industrial SCO				
	(mg/l)	(mg/kg)	(mg/kg)				
VOLATILE ORGANICS BY GC/MS							
1,2,4-Trimethylbenzene		190	380	0.026	J	0.24	
1,3,5-Trimethylbenzene		190	380	<0.028	U	0.052	J
Benzene		44	89	5.5		5.7	
Ethylbenzene		390	780	0.16		0.12	
Isopropylbenzene				0.017	J	0.54	J
p/m-Xylene				0.06	J	0.56	
Methyl Acetate				0.32	J	0.13	J
o-Xylene				0.033	J	0.15	
Toluene		500	1000	0.45		0.28	
Xylenes, Total				0.093		0.71	
Total VOCs				6.633		8.242	
SEMIVOLATILE ORGANICS BY GC/MS							
2-Methylphenol		500	1000	<0.200	U	0.18	J
4-Chlorophenyl phenyl ether				0.58	J	<0.130	U
3-Methylphenol/4-Methylphenol		500	1000	<0.700		0.38	J
Acenaphthylene		500	1000	0.71	J	0.39	J
Anthracene		500	1000	0.51	J	0.27	J
Benzo(a)anthracene		5.6	11	0.97	J	0.59	J
Benzo(a)pyrene		1	1.1	1.1	J	0.62	J
Benzo(b)fluoranthene		5.6	11	1.5		0.92	J
Benzo(ghi)perylene		500	1000	0.56	J	0.38	J
Benzo(k)fluoranthene		56	110	0.62	J	0.32	J
Chrysene		56	110	1	J	0.6	J
Dibenzofuran		350	1000	0.2	J	0.13	J
Fluoranthene		500	1000	2		1.2	
Fluorene		500	1000	0.32	J	0.2	J
Indeno(1,2,3-cd)pyrene		5.6	11	0.48	J	0.32	J
Naphthalene		500	1000	2.1		1.5	
Phenanthrene		500	1000	1	J	0.59	J
Phenol		500	1000	0.33	J	0.24	J
Pyrene		500	1000	1.7		0.99	J
Total SVOCs				15.68		9.82	
MERCURY, TOTAL							
Mercury, Total		2.8	5.7	0.54		2.9	
GENERAL CHEMISTRY							
Sulfide, Reactive				<9.6	U	155	
pH (H)	>12.5, <2			10.3		8.6	
Ammonia, as N				8.3		31.7	
Solids, Total				62.1		75.9	



Table 1-4
Secondary Containment IRM Workplan - Closure Sampling: Detections Only
Diesel Truck Loading/Unloading Pad
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

DRAFT

ANALYTE	SAMPLE ID:		UNLOAD-01-02132024	UNLOAD-02-02132024
	LAB REPORT:		J217087	J217087
	COLLECTION DATE:		2/13/2024	2/13/2024
	SAMPLE DEPTH:		2' BGS	3.5' BGS
	LOCATION:		Beneath Diesel Truck loading/unloading pad, western side.	Beneath Diesel Truck loading/unloading pad, eastern side.
	EPA-TCLP	Part 375 Commercial SCO		
	(mg/l)	(mg/kg)	(mg/kg)	
TCLP VOLATILES BY EPA 1311				
Benzene	0.5	44	89	0.044 0.042
SUM				0.044 0.042
TCLP SEMIVOLATILES BY EPA 1311				
2-Methylphenol	200			<0.0016 U 0.0029 J
3-Methylphenol	200			<0.0016 U 0.0043 J
4-Methylphenol	200			<0.0014 U 0.0043 J
SUM				-
TCLP METALS BY EPA 1311				
Barium, TCLP	100			0.29 J 0.61 J
Cadmium, TCLP	1			<0.00050 U 0.00075 J
Lead, TCLP	5			0.0052 J 0.048
TCLP PESTICIDES BY EPA 1311				
Lindane	0.4			<0.0000060 U 0.000058 J

* Comparison is not performed on parameters with non-numeric criteria.

EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

NY-RESC: New York NYCRR Part 375 Commercial Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESI: New York NYCRR Part 375 Industrial Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

TCL and CP-51 Results are Pending

Qualifiers:

U - Not detected at the reported detection limit for the sample.

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

B - Compound was found in the blank and sample.

Bold - Compound is detected

Red Highlight - Exceeds NYS Part 375 Industrial SCOs

Green Highlight - Exceeds NYS Part 375 Commercial SCOs

Yellow Highlight - Exceeds EPA Toxicity Characteristic Regulatory Levels



Table 1-5
RI Data - TP-BCP-31
Detections Only

DRAFT

Riverview Innovation & Technology Campus, Inc.,

Analytes	Part 375 SCOs		Units	TP-BCP-31	
	Commercial	Industrial			
	Sample Date:			10/29/2020	
	Sample Interval:			0 - 1 ft	
	Formation:			Shallow Fill	
TCL VOCs (SW8260C)					
1,2,4-Trimethylbenzene	190	380	ug/kg	2.2	J
1,3,5-Trimethylbenzene	190	380	ug/kg	1.2	J
1,4-Dichlorobenzene	130,000	250,000	ug/kg	8.7	U
Benzene	44,000	89,000	ug/kg	1.9	J
Cyclohexane	-	-	ug/kg	1.7	J
Ethylbenzene	390,000	780,000	ug/kg	0.54	J
Methylcyclohexane	-	-	ug/kg	2.8	J
Toluene	500,000	1,000,000	ug/kg	1.3	J
m,p-Xylene	500,000	1,000,000	ug/kg	2.1	J
O-Xylene (1,2-Dimethylbenzene)	500,000	1,000,000	ug/kg	1.3	J
Xylenes, Total	500,000	1,000,000	ug/kg	3.4	J
TCL SVOCs (SW8270D)					
2-Methylnaphthalene	-	-	ug/kg	2000	DJ
Acenaphthene	500,000	1,000,000	ug/kg	1500	DJ
Acenaphthylene	500,000	1,000,000	ug/kg	830	DJ
Anthracene	500,000	1,000,000	ug/kg	1700	DJ
Benzo(A)Anthracene	5,600	11,000	ug/kg	9200	D
Benzo(A)Pyrene	1,000	1,100	ug/kg	17000	D
Benzo(B)Fluoranthene	5,600	11,000	ug/kg	16000	D
Benzo(G,H,I)Perylene	500,000	1,000,000	ug/kg	12000	D
Benzo(K)Fluoranthene	56,000	110,000	ug/kg	6200	
Carbazole	-	-	ug/kg	940	DJ
Chrysene	56,000	110,000	ug/kg	11000	D
Dibenz(A,H)Anthracene	560	1,100	ug/kg	2500	D
Dibenzofuran	350,000	1,000,000	ug/kg	950	DJ
Fluoranthene	500,000	1,000,000	ug/kg	14000	D
Fluorene	500,000	1,000,000	ug/kg	590	DJ
Indeno(1,2,3-C,D)Pyrene	5,600	11,000	ug/kg	11000	D
Naphthalene	500,000	1,000,000	ug/kg	2200	D
Phenanthrene	500,000	1,000,000	ug/kg	7500	D
Pyrene	500,000	1,000,000	ug/kg	13000	D



Table 1-5
RI Data - TP-BCP-31
Detections Only

DRAFT

Riverview Innovation & Technology Campus, Inc.,

Analytes	Part 375 SCOs		Units	TP-BCP-31	
	Commercial	Industrial			
	Sample Date:			10/29/2020	
	Sample Interval:			0 - 1 ft	
	Formation:			Shallow Fill	
TAL Metals (SW6010)					
Aluminum	-	-	mg/kg	1260	J
Antimony	-	-	mg/kg	<0.678	UJ
Arsenic	16	16	mg/kg	11.7	J
Barium	400	10,000	mg/kg	96.4	
Beryllium	590	2,700	mg/kg	1	
Cadmium	9.3	60	mg/kg	0.301	J
Calcium	-	-	mg/kg	804	
Chromium, Total	-	-	mg/kg	14.6	
Cobalt	-	-	mg/kg	4.2	J
Copper	270	10,000	mg/kg	42.1	J
Iron	-	-	mg/kg	24300	
Lead	1,000	3,900	mg/kg	19.6	J
Magnesium	-	-	mg/kg	168	J
Manganese	10,000	10,000	mg/kg	54.4	J
Nickel	310	10,000	mg/kg	12.5	
Potassium	-	-	mg/kg	329	
Selenium	1,500	6,800	mg/kg	2.5	
Silver	1,500	6,800	mg/kg	<0.089	U
Sodium	-	-	mg/kg	225	
Thallium	-	-	mg/kg	<0.816	U
Vanadium	-	-	mg/kg	22.6	
Zinc	10,000	10,000	mg/kg	21.4	
Mercury (SW7471)					
Mercury	2.8	5.7	mg/kg	0.04	
Total Cyanide (SW9012B)					
Cyanide	27	10,000	mg/kg	0.3	J
Pesticides (8081B)					
Chlordane (Technical)	2,400	4,700	ug/kg	9.7	J
PFAS (E537 Mod)					
Perfluorooctanesulfonic acid (PFOS)	440	440	ng/g	0.31	J
Perfluoropentanoic Acid (PFPeA)	-	-	ng/g	0.29	J
Perfluoroheptanoic acid (PFHpA)	-	-	ng/g	0.29	J
Perfluorooctanoic acid (PFOA)	500	600	ng/g	0.66	J
SOLIDS					
Total Solids	-	-	%	79.7	
TCL and CP-51 Results are Pending					
Qualifiers:					
U - Not detected at the reported detection limit for the sample.					
J - Presumptive evidence of compound.					
Bold - Compound is detected					
Red Highlight - Exceeds Part 375 SCOs for Industrial Criteria					
Green Highlight - Exceeds Part 375 SCOs for Commercial Criteria					



Table 1-6
RI Data - TP-BCP-52
Detections Only
Riverview Innovation & Technology Campus, Inc.,
Tonawanda, New York

DRAFT

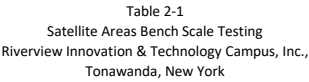
Analytes	Part 375 SCOs		Units	TP-BCP-52-28	
	Commercial	Industrial			
	Sample Date:			7/29/2021	
	Sample Interval:			28-inches	
	Formation:			Shallow Fill	
TCL VOCs (SW8260C)					
1,2,4-Trimethylbenzene	190	380	ug/kg	19	
1,3,5-Trimethylbenzene	190	380	ug/kg	10	
Methyl Ethyl Ketone (2-Butanone)	500,000	1,000,000	ug/kg	41	
Acetone	500,000	1,000,000	ug/kg	150	
Benzene	44,000	89,000	ug/kg	15	
Carbon Disulfide	-	-	ug/kg	0.61	J
Cyclohexane	-	-	ug/kg	2.5	J
Ethylbenzene	390,000	780,000	ug/kg	6.2	J
Isopropylbenzene (Cumene)	-	-	ug/kg	1	J
Methyl Acetate	-	-	ug/kg	1.3	J
Methylcyclohexane	-	-	ug/kg	5.1	J
Toluene	500,000	1,000,000	ug/kg	8.8	
m,p-Xylene	500,000	1,000,000	ug/kg	13	J
O-Xylene (1,2-Dimethylbenzene)	500,000	1,000,000	ug/kg	8.6	
Xylenes, Total	500,000	1,000,000	ug/kg	21.6	J
1,4-Dioxane (SW8270D)					
1,4-Dioxane (P-Dioxane)	100	100	ug/kg	NS	
TCL SVOCs (SW8270D)					
2-Methylnaphthalene	-	-	ug/kg	13000	J
Acenaphthene	500,000	1,000,000	ug/kg	8200	J
Acenaphthylene	500,000	1,000,000	ug/kg	72000	
Anthracene	500,000	1,000,000	ug/kg	110000	
Benzo(A)Anthracene	5,600	11,000	ug/kg	200000	
Benzo(A)Pyrene	1,000	1,100	ug/kg	240000	
Benzo(B)Fluoranthene	5,600	11,000	ug/kg	240000	
Benzo(G,H,I)Perylene	500,000	1,000,000	ug/kg	110000	
Benzo(K)Fluoranthene	56,000	110,000	ug/kg	99000	
Carbazole	-	-	ug/kg	24000	J
Chrysene	56,000	110,000	ug/kg	200000	
Dibenz(A,H)Anthracene	560	1,100	ug/kg	30000	J
Dibenzofuran	350,000	1,000,000	ug/kg	33000	J
Fluoranthene	500,000	1,000,000	ug/kg	510000	
Fluorene	500,000	1,000,000	ug/kg	63000	
Indeno(1,2,3-C,D)Pyrene	5,600	11,000	ug/kg	130000	
Naphthalene	500,000	1,000,000	ug/kg	40000	J
Phenanthrene	500,000	1,000,000	ug/kg	320000	
Pyrene	500,000	1,000,000	ug/kg	380000	



Table 1-6
RI Data - TP-BCP-52
Detections Only
Riverview Innovation & Technology Campus, Inc.,
Tonawanda, New York

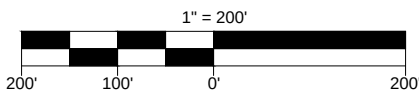
DRAFT

Analytes	Part 375 SCOs		Units	TP-BCP-52-28	
	Commercial	Industrial			
	Sample Date:			7/29/2021	
	Sample Interval:			28-inches	
	Formation:			Shallow Fill	
TAL Metals (SW6010)					
Aluminum	-	-	mg/kg	4790	
Arsenic	16	16	mg/kg	18	
Barium	400	10,000	mg/kg	85	
Beryllium	590	2,700	mg/kg	0.971	
Cadmium	9.3	60	mg/kg	0.548	J
Calcium	-	-	mg/kg	935	
Chromium, Total	-	-	mg/kg	9.4	
Cobalt	-	-	mg/kg	5.6	J
Copper	270	10,000	mg/kg	18.8	
Iron	-	-	mg/kg	16200	
Lead	1,000	3,900	mg/kg	16.5	
Magnesium	-	-	mg/kg	977	
Manganese	10,000	10,000	mg/kg	96.3	
Nickel	310	10,000	mg/kg	13.5	
Potassium	-	-	mg/kg	809	
Selenium	1,500	6,800	mg/kg	2.3	
Sodium	-	-	mg/kg	103	J
Vanadium	-	-	mg/kg	19.1	
Zinc	10,000	10,000	mg/kg	33.2	
Mercury (SW7471)					
Mercury	2.8	5.7	mg/kg	0.054	
Total Cyanide (SW9012B)					
Cyanide	27	10,000	mg/kg	0.67	
SOLIDS					
Total Solids	-	-	%	82.6	
TCL and CP-51 Results are Pending					
Qualifiers:					
U - Not detected at the reported detection limit for the sample.					
J - Presumptive evidence of compound.					
Bold - Compound is detected					
Red Highlight - Exceeds Part 375 SCOs for Industrial Criteria					
Green Highlight - Exceeds Part 375 SCOs for Commercial Criteria					

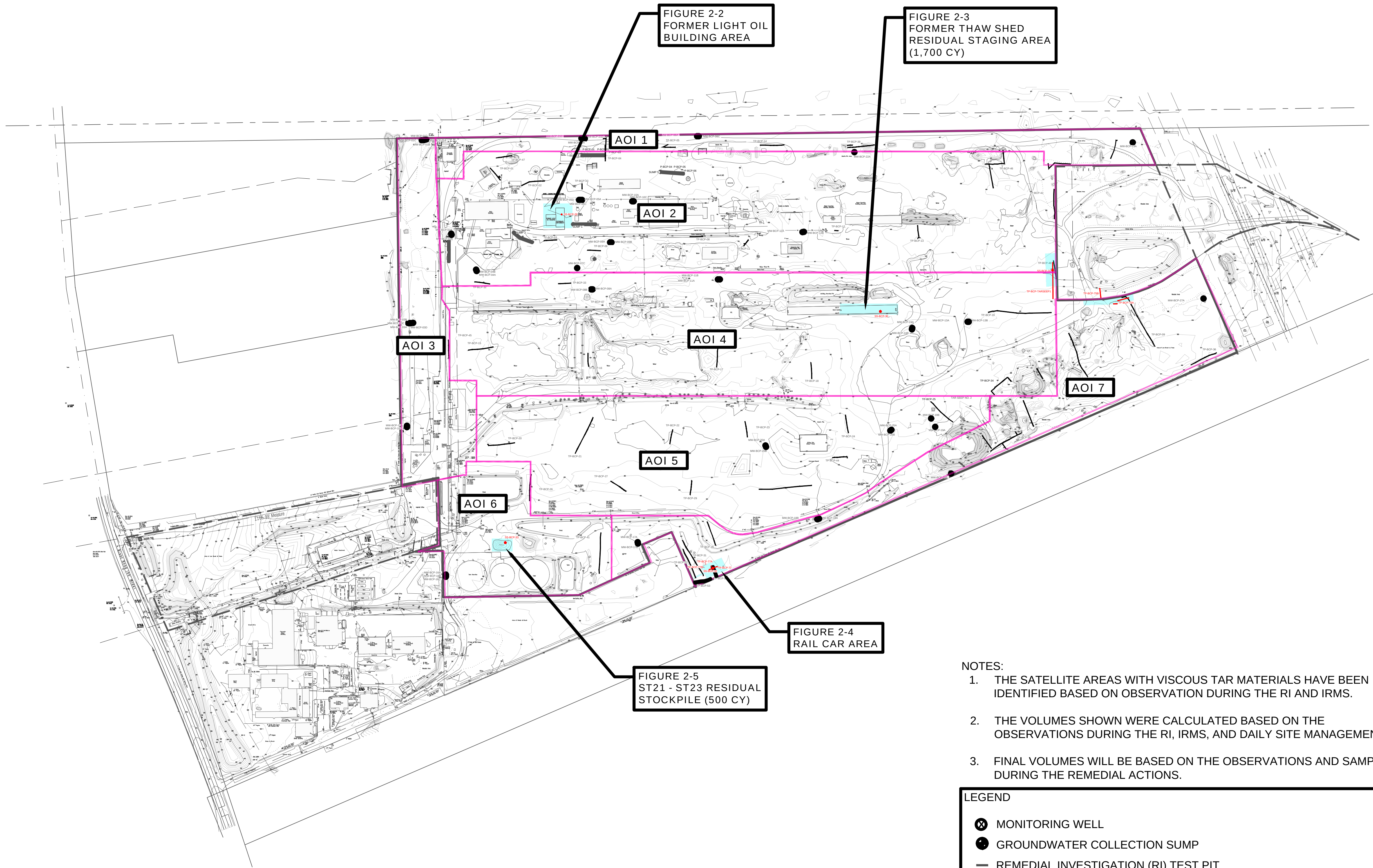


Figures



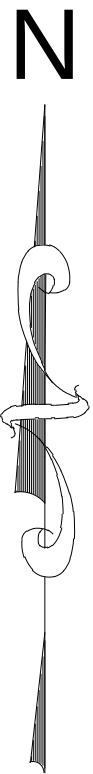


Reference: Niagara Boundary, Map Showing Topographic Survey of Property Owned by Riverview Innovation & Technology Campus Inc., April 2022



- NOTES:
1. THE SATELLITE AREAS WITH VISCOUS TAR MATERIALS HAVE BEEN IDENTIFIED BASED ON OBSERVATION DURING THE RI AND IRMS.
 2. THE VOLUMES SHOWN WERE CALCULATED BASED ON THE OBSERVATIONS DURING THE RI, IRMS, AND DAILY SITE MANAGEMENT.
 3. FINAL VOLUMES WILL BE BASED ON THE OBSERVATIONS AND SAMPLING DURING THE REMEDIAL ACTIONS.

LEGEND	
	MONITORING WELL
	GROUNDWATER COLLECTION SUMP
	REMEDIAL INVESTIGATION (RI) TEST PIT
	SATELLITE AREA BENCH-SCALE GRAB SAMPLE LOCATION
	SATELLITE AREA INVESTIGATION TEST PIT
	CONFIRMATION SAMPLE (PROPOSED)
	AOI (AREA OF INVESTIGATION) BOUNDARIES



SATELLITE SOLIDIFICATION AREAS
INVESTIGATION LOCATIONS &
RIVERVIEW INNOVATION &
TECHNOLOGY CAMPUS, INC.
3875 RIVER ROAD
TONAWANDA, NY 14150

INVENTUM ENGINEERING
441 CARLISLE DRIVE
SUITE C
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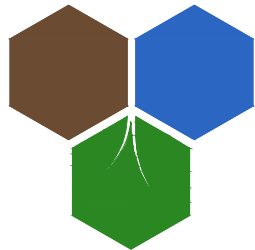
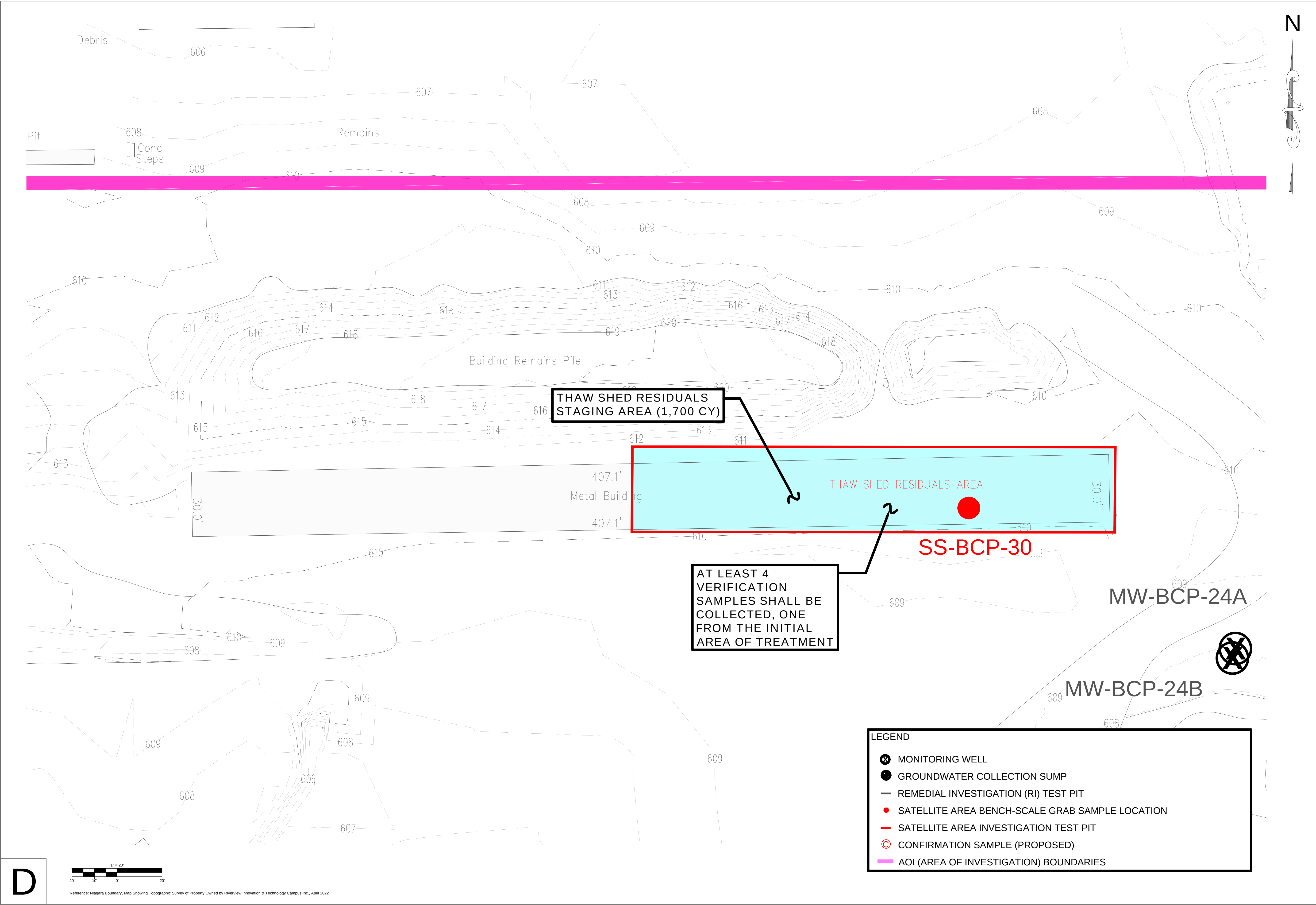


FIGURE 2 - 1
SATELLITE
SOLIDIFICATION RAWP

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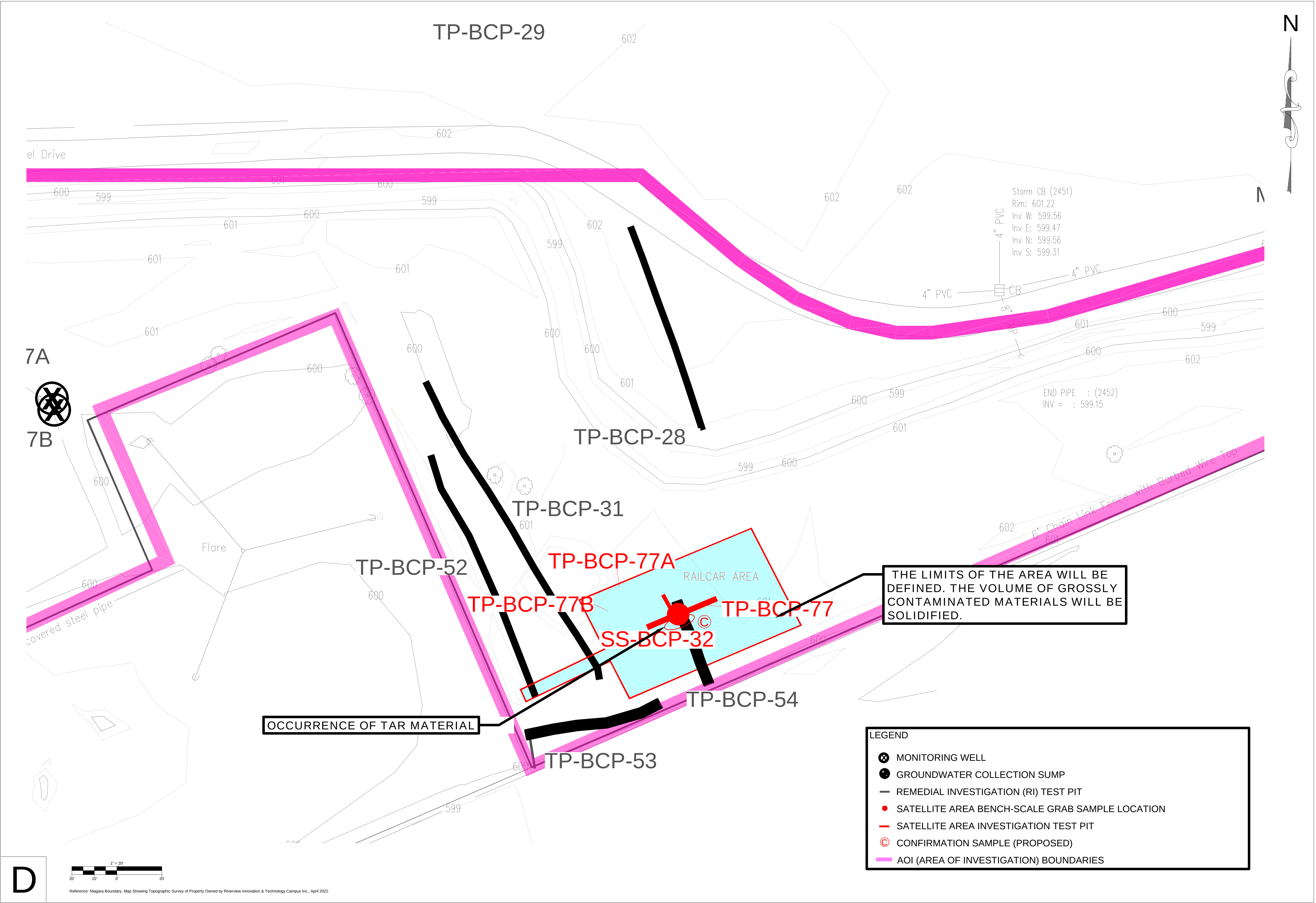


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FIGURE 2 - 3
SATELLITE
SOLIDIFICATION RAWP



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FIGURE 2 - 4

SATELLITE SOLIDIFICATION RAWP

Appendices



Appendix A – Test Pit Logs





Satellite Area Test Pit Log
RITC
3875 River Road Tonawanda, NY

Test Excavation:		Former Light Oil Area Test Excavation						
Date: 5/30/2024								
Notetaker Name: Corey Bryerton/Peter Zaffram								
Surface conditions:		SW corner of former Light Oil Area.						
ID	Distance from Start (ft)	Depth (in)	Soil Type	Color	Consistency	Moisture	PiD	Observations
ON to 6S	0 to 6	0 - 48	Sandy clay with gravel	Black	Medium dense, loose	Med	-	Heavy petroleum and ammonia like odors, trace amounts of tar like material
	0 to 6	48	Clay	Brown	Soft to medium stiff, medium plasticity	Med	-	No impacts observed in clay
Comments: Not considered a test pit. Lightly excavated into area. In fill layer 0-48 inches, concrete, wood, brick, and metal debris was observed. Fill primarily appears to be coal and coke breeze. The area the test excavation was conducted was excavated for concrete and foundation removal. Typical soil layering had been recently disturbed. Soils were not screened with a PiD. Sample not collected here.								



Satellite Area Test Pit Log
RITC
3875 River Road Tonawanda, NY

Test Excavation:	Former Light Oil Area Test Excavation							
Date: 5/30/2024								
Notetaker Name: Corey Bryerton/Peter Zaffram								
Surface conditions:	Northeast corner of former Light Oil Area. Test excavation was logged south to north							
ID	Distance from Start (ft)	Depth (in)	Soil Type	Color	Consistency	Moisture	PiD	Observations
ON to 6S	0 to 6	0 - 48	Sandy clay with gravel	Black	Medium dense, loose	Med	-	Heavy petroleum and ammonia like odors, trace amounts of tar like material
	0 to 6	48	Clay	Brown	Soft to medium stuff, medium plasticity	low	-	No impacts observed in clay
Comments: Not considered a test pit. Lightly excavated into area. Fill primarily appears to be coal and coke breeze. Soils were not screened with a PiD. The area the test excavation was conducted was excavated for concrete and foundation removal. Typical soil layering had been recently disturbed. Bench scale sample "SS-BCP-29" was collected from visually and olfactory impacted soils.								



Satellite Area Test Pit Log
RITC
3875 River Road Tonawanda, NY

Test Excavation:		Thaw Shed						
Date: 5/30/2024								
Notetaker Name: Corey Bryerton/Peter Zaffram								
Surface conditions:		Approximately 20 yards west of the east end of the thaw shed pile. Sample collected on south side of pile.						
ID	Distance from Start (ft)	Depth (in)	Soil Type	Color	Consistency	Moisture	PiD	Observations
-	-	0 - 18	Impacted sand and gravel (Breeze)	Black	Dense	medium to low	-	Heavy tar impacts. Viscous tar like material mixed with coal and coke breeze. Samples collected of grossly impacted soils for bench scale
Comments: Lightly excavated into south side of thaw shed material. Flowable tar was collected with soils for bench scales. Bench scale samples were collected from visually and olfactory impacted soils. Sample "SS-BCP-30" collected here.								



Satellite Area Test Pit Log
RITC
3875 River Road Tonawanda, NY

Test Pit No.	TP-BCP-TARSEEP1							
Date: 5/30/2024								
Notetaker Name: Corey Bryerton/Peter Zaffram								
Surface conditions:		Abundant overgrowth. Black clay and breeze on surface. On eastern BCP section of property along Site 110 and BCP boundary.						
ID	Distance from Start (ft)	Depth (in)	Soil Type	Color	Consistency	Moisture	PiD	Observations
0N to 140S	0 - 140	0 - 48	Sand and gravel (Breeze)	Black	Loose	Moist	-	Scattered slag like material, wood, brick, steel, v/trace tar like material
	0 - 140	48	Clay	Brown	Medium stiff, low plasticity	Low	-	No observed impacts
140N to 150S	140 - 150	0 - 36'	Sand and gravel (Breeze)	Black	Loose	Moist	-	Scattered slag like material, wood, brick, steel, v/trace tar like material
	140 - 150	36	Clay	Brown	Medium stiff, low plasticity	Moist	-	Native Clay
Comments: In fill layer 0 - 48 inches, minor concrete, wood, brick, and metal debris was observed. Fill primarily appears to be coal and coke breeze. Soils were not screened with a PiD. Bench scale samples were collected from visually and olfactory impacted soils. Sample SS-BCP-31" collected here.								



Satellite Area Test Pit Log
RITC
3875 River Road Tonawanda, NY

Test Pit No.	TP-BCP-77B							
Date: 5/30/2024								
Notetaker Name: Corey Bryerton/Peter Zaffram								
Surface conditions:		South edge of RITC property near SE corner of 3821 River Road.						
ID	Distance from Start (ft)	Depth (in)	Soil Type	Color	Consistency	Moisture	PiD	Observations
0W to 5E	0 - 5	0 - 30	Sand and Gravel	Black	Loose	Medium	-	
	0 - 5	30 - 36	Tar Like Material	Black	Loose	Medium	-	Thin Tar like material lense
	0 - 5	36	Clay	Brown	Stiff, low plasticity	Medium	-	No impacts observed in clay
5W to 20E	5 - 20	0 - 36	Sand and Gravel	Black	Loose	Medium	-	
	5 - 20	36	Clay	Brown	Stiff, low plasticity	Medium	-	No impacts observed in clay
Comments: Fill primarily appears to be coal and coke breeze. Connects to TP-BCP-77A and 77. Not sample collected.								



Satellite Area Test Pit Log
RITC
3875 River Road Tonawanda, NY

Test Pit No.	TP-BCP-77A							
Date: 5/30/2024								
Notetaker Name: Corey Bryerton/Peter Zaffram								
Surface conditions:		South edge of RITC property near SE corner of 3821 River Road.						
ID	Distance from Start (ft)	Depth (in)	Soil Type	Color	Consistency	Moisture	PiD	Observations
0S to 10N	0 - 10	0 - 36	Sand and Gravel	Black	Loose	Medium	-	
		36	Clay	Brown	Stiff, low plasticity	Medium	-	No impacts observed in clay
Comments: Fill primarily appears to be coal and coke breeze. Connects to TP-BCP-77 and 77B. No sample collected.								



Satellite Area Test Pit Log
RITC
3875 River Road Tonawanda, NY

Test Pit No.	TP-BCP-77							
Date: 5/30/2024								
Notetaker Name: Corey Bryerton/Peter Zaffram								
Surface conditions:		South edge of RITC property near SE corner of 3821 River Road.						
ID	Distance from Start (ft)	Depth (in)	Soil Type	Color	Consistency	Moisture	PiD	Observations
0E to 15W	0 - 15	0 - 36	Top soil, Clay, coal, gravel	Black	Loose	Medium	-	Slight petrol odors, no visible tar like material
Comments: Fill primarily appears to be coal and coke breeze Connects to TP-BCP-77A and 77B. Sample "SS-BCP-32" collected here.								

Appendix B – Laboratory Report/Chain of Custody



ANALYTICAL REPORT

PREPARED FOR

Attn: John Black
Inventum Engineering LLC
441 Carlisle Drive
Suite C
Herndon, Virginia 20170

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JOB DESCRIPTION

RITC - 3875 River Road, Tonawanda NY

JOB NUMBER

480-216732-1

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Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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Definitions/Glossary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present

Eurofins Buffalo

Definitions/Glossary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Inventum Engineering LLC
Project: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Job ID: 480-216732-1

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Job Narrative 480-216732-1

Revision 2

The report being provided is a revision of the original report sent on 2/19/2024. The report (revision 2) is being revised to add additional analytes to method 8260.

Report revision history

Revision 1 - 9/11/2024 - The report being provided is a revision of the original report sent on 2/19/2024. The report (revision 1) is being revised due to a sample switch during the extraction process.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/30/2024 4:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 6.4°C and 7.9°C.

GC/MS VOA

Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: F-LOA-07-01292024 (480-216732-7). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample(s) was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The sample was analyzed within the 7-day holding time specified for unpreserved samples: F-LOA-07-01292024 (480-216732-7).

Method 8260C: The following samples were analyzed using medium level soil analysis due to the nature of the sample matrix: F-LOA-01-01302024 (480-216732-1), F-LOA-04-01302024 (480-216732-4) and F-LOA-06-01302024 (480-216732-6). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample was analyzed using medium level soil analysis and diluted to bring the concentration of target analytes within the calibration range: F-LOA-03-01302024 (480-216732-3). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample was analyzed using medium level soil analysis and diluted to bring the concentration of target analytes within the calibration range: F-LOA-03-01302024 (480-216732-3). Elevated reporting limits (RLs) are provided.

Method 8260C - TCLP: The following samples were diluted due to the nature of the sample matrix: F-LOA-01-01302024 (480-216732-1), F-LOA-02-01302024 (480-216732-2), F-LOA-03-01302024 (480-216732-3), F-LOA-04-01302024 (480-216732-4), F-LOA-05-01302024 (480-216732-5), F-LOA-06-01302024 (480-216732-6) and (LB 480-699601/1-A). Elevated reporting limits (RLs) are provided.

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

GC/MS Semi VOA

Method 8270D: Due to the matrix, the initial volume(s) used for the following sample deviated from the standard procedure: F-LOA-07-01292024 (480-216732-7). The reporting limits (RLs) have been adjusted proportionately.

Method 8270D: The continuing calibration verification (CCV) associated with batch 480-699935 recovered outside acceptance criteria, low biased, for 4-Nitroaniline, Bis(2-chloroethyl)ether and Hexachlorocyclopentadiene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

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Case Narrative

Client: Inventum Engineering LLC
Project: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Job ID: 480-216732-1 (Continued)

Eurofins Buffalo

Method 8270D: The following sample required a dilution due to the nature of the sample matrix: F-LOA-07-01292024 (480-216732-7). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8270D: The continuing calibration verification (CCV) associated with batch 480-700197 recovered outside acceptance criteria, low biased, for multiple analytes. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: F-LOA-03-01302024 (480-216732-3). These results have been reported and qualified.

Method 8270D: The following samples were diluted to bring the concentration of target analytes within the calibration range: F-LOA-01-01302024 (480-216732-1), F-LOA-04-01302024 (480-216732-4), (480-216732-E-4-A MS) and (480-216732-E-4-B MSD). Elevated reporting limits (RLs) are provided.

Method 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 480-699565 and analytical batch 480-699735 were below the method detection limit (MDL) for 2,4-Dinitrophenol. Percent recovery and RPD could not be calculated. The associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8270D - TCLP: Elevated reporting limits are provided for the following samples due to insufficient sample provided for preparation: F-LOA-01-01302024 (480-216732-1) and F-LOA-05-01302024 (480-216732-5).

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

Herbicides

Method 8151A - TCLP: Elevated reporting limits are provided for the following samples due to insufficient sample provided for preparation: F-LOA-01-01302024 (480-216732-1) and F-LOA-05-01302024 (480-216732-5).

Method 8151A - TCLP: Surrogate recovery for the following samples were outside control limits: F-LOA-03-01302024 (480-216732-3), F-LOA-04-01302024 (480-216732-4) and F-LOA-06-01302024 (480-216732-6). This is routine for TCLP herbicides, due to the pH effects created during the leaching process, inhibiting the herbicide derivatization of the free acid components.

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

Pesticides

Method 8081B - TCLP: Elevated reporting limits are provided for the following samples due to insufficient sample provided for preparation: F-LOA-01-01302024 (480-216732-1) and F-LOA-05-01302024 (480-216732-5).

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

PFAS

Method 1633_B24: Due to lab error, samples F-LOA-04-01302024 (480-216732-4) were swapped on Promochrom B positions 5 and 6 during solid phase extraction and eluted into the the incorrect position. The error was identified and data have been revised.

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

Metals

Method 7470A: Due to interference with the sample matrix, the standard mercury preparation procedure was inadequate for the following samples(s): F-LOA-07-01292024 (480-216732-7). This was demonstrated when the potassium permanganate reagent was added and the characteristic purple color faded rapidly. This loss of color indicates oxidizing conditions were not maintained. The sample(s) was prepared and analyzed at a 1/6 dilution, which maintained the purple color during digestion.

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

General Chemistry

Method 9040C: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The

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Case Narrative

Client: Inventum Engineering LLC
Project: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Job ID: 480-216732-1 (Continued)

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following sample has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: F-LOA-07-01292024 (480-216732-7).

Method 9045D: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: F-LOA-01-01302024 (480-216732-1), F-LOA-02-01302024 (480-216732-2), F-LOA-03-01302024 (480-216732-3), F-LOA-04-01302024 (480-216732-4), F-LOA-05-01302024 (480-216732-5) and F-LOA-06-01302024 (480-216732-6).

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

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Detection Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-01-01302024

Lab Sample ID: 480-216732-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.073		0.010	0.0041	mg/L	10		8260C	TCLP
1,2,4-Trimethylbenzene	87		68	19	ug/Kg	1	✱	8260C	Total/NA
1,3,5-Trimethylbenzene	57	J	68	21	ug/Kg	1	✱	8260C	Total/NA
Benzene	2400		68	13	ug/Kg	1	✱	8260C	Total/NA
Ethylbenzene	790		68	20	ug/Kg	1	✱	8260C	Total/NA
m,p-Xylene	1200		140	38	ug/Kg	1	✱	8260C	Total/NA
o-Xylene	470		68	8.8	ug/Kg	1	✱	8260C	Total/NA
Styrene	41	J	68	16	ug/Kg	1	✱	8260C	Total/NA
Toluene	280		68	18	ug/Kg	1	✱	8260C	Total/NA
Xylenes, Total	1700		140	38	ug/Kg	1	✱	8260C	Total/NA
2-Methylnaphthalene	330		240	48	ug/Kg	1	✱	8270D	Total/NA
2-Methylphenol	32	J	240	28	ug/Kg	1	✱	8270D	Total/NA
4-Methylphenol	55	J	460	28	ug/Kg	1	✱	8270D	Total/NA
Acenaphthene	87	J	240	35	ug/Kg	1	✱	8270D	Total/NA
Acenaphthylene	200	J	240	31	ug/Kg	1	✱	8270D	Total/NA
Anthracene	240		240	59	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]anthracene	460		240	24	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]pyrene	380		240	35	ug/Kg	1	✱	8270D	Total/NA
Benzo[b]fluoranthene	480		240	38	ug/Kg	1	✱	8270D	Total/NA
Benzo[g,h,i]perylene	290		240	25	ug/Kg	1	✱	8270D	Total/NA
Benzo[k]fluoranthene	220	J	240	31	ug/Kg	1	✱	8270D	Total/NA
Biphenyl	60	J	240	35	ug/Kg	1	✱	8270D	Total/NA
Carbazole	70	J	240	28	ug/Kg	1	✱	8270D	Total/NA
Chrysene	400		240	53	ug/Kg	1	✱	8270D	Total/NA
Dibenzofuran	190	J	240	28	ug/Kg	1	✱	8270D	Total/NA
Fluoranthene	840		240	25	ug/Kg	1	✱	8270D	Total/NA
Fluorene	260		240	28	ug/Kg	1	✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	250		240	30	ug/Kg	1	✱	8270D	Total/NA
Naphthalene	14000	E	240	31	ug/Kg	1	✱	8270D	Total/NA
Phenanthrene	930		240	35	ug/Kg	1	✱	8270D	Total/NA
Pyrene	910		240	28	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]anthracene - DL	480	J	2400	240	ug/Kg	10	✱	8270D	Total/NA
Benzo[a]pyrene - DL	410	J	2400	350	ug/Kg	10	✱	8270D	Total/NA
Benzo[b]fluoranthene - DL	510	J	2400	380	ug/Kg	10	✱	8270D	Total/NA
Benzo[g,h,i]perylene - DL	280	J	2400	250	ug/Kg	10	✱	8270D	Total/NA
Fluoranthene - DL	950	J	2400	250	ug/Kg	10	✱	8270D	Total/NA
Fluorene - DL	310	J	2400	280	ug/Kg	10	✱	8270D	Total/NA
Naphthalene - DL	14000		2400	310	ug/Kg	10	✱	8270D	Total/NA
Phenanthrene - DL	930	J	2400	350	ug/Kg	10	✱	8270D	Total/NA
Pyrene - DL	830	J	2400	280	ug/Kg	10	✱	8270D	Total/NA
Barium	0.50	J	1.0	0.10	mg/L	1		6010C	TCLP
Lead	0.011	J B	0.020	0.0030	mg/L	1		6010C	TCLP
Mercury	0.15		0.024	0.0055	mg/Kg	1	✱	7471B	Total/NA
Flashpoint	>180		50.0	50.0	Degrees F	1		1010A	Total/NA
Sulfide, Reactive	74.3		9.3	9.3	mg/Kg	1		9034	Total/NA
pH	8.4	HF	0.1	0.1	SU	1		9045D	Total/NA
Temperature	17.9	HF	0.001	0.001	Degrees C	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Detection Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-02-01302024

Lab Sample ID: 480-216732-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	10	J	22	1.6	ug/Kg	1	✱	8260C	Total/NA
Acetone	52		22	3.8	ug/Kg	1	✱	8260C	Total/NA
Benzene	1.5	J	4.5	0.22	ug/Kg	1	✱	8260C	Total/NA
o-Xylene	0.86	J	4.5	0.58	ug/Kg	1	✱	8260C	Total/NA
Toluene	0.37	J	4.5	0.34	ug/Kg	1	✱	8260C	Total/NA
Xylenes, Total	0.86	J	8.9	0.75	ug/Kg	1	✱	8260C	Total/NA
2-Methylnaphthalene	56	J	220	45	ug/Kg	1	✱	8270D	Total/NA
4-Methylphenol	28	J	440	26	ug/Kg	1	✱	8270D	Total/NA
Acenaphthylene	42	J	220	29	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]anthracene	87	J	220	22	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]pyrene	76	J	220	33	ug/Kg	1	✱	8270D	Total/NA
Benzo[b]fluoranthene	100	J	220	36	ug/Kg	1	✱	8270D	Total/NA
Benzo[g,h,i]perylene	77	J	220	24	ug/Kg	1	✱	8270D	Total/NA
Benzo[k]fluoranthene	47	J	220	29	ug/Kg	1	✱	8270D	Total/NA
Dibenzofuran	32	J	220	26	ug/Kg	1	✱	8270D	Total/NA
Fluoranthene	150	J	220	24	ug/Kg	1	✱	8270D	Total/NA
Fluorene	45	J	220	26	ug/Kg	1	✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	64	J	220	28	ug/Kg	1	✱	8270D	Total/NA
Naphthalene	410		220	29	ug/Kg	1	✱	8270D	Total/NA
Phenanthrene	150	J	220	33	ug/Kg	1	✱	8270D	Total/NA
Pyrene	170	J	220	26	ug/Kg	1	✱	8270D	Total/NA
Arsenic	0.0064	J	0.015	0.0056	mg/L	1		6010C	TCLP
Barium	0.30	J	1.0	0.10	mg/L	1		6010C	TCLP
Lead	0.0052	J B	0.020	0.0030	mg/L	1		6010C	TCLP
Mercury	0.12		0.027	0.0063	mg/Kg	1	✱	7471B	Total/NA
Flashpoint	>180		50.0	50.0	Degrees F	1		1010A	Total/NA
pH	8.2	HF	0.1	0.1	SU	1		9045D	Total/NA
Temperature	17.8	HF	0.001	0.001	Degrees C	1		9045D	Total/NA

Client Sample ID: F-LOA-03-01302024

Lab Sample ID: 480-216732-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.76		0.010	0.0041	mg/L	10		8260C	TCLP
Benzene	41000	E	310	58	ug/Kg	4	✱	8260C	Total/NA
Ethylbenzene	220	J	310	89	ug/Kg	4	✱	8260C	Total/NA
m,p-Xylene	620		610	170	ug/Kg	4	✱	8260C	Total/NA
o-Xylene	230	J	310	40	ug/Kg	4	✱	8260C	Total/NA
Toluene	210	J	310	82	ug/Kg	4	✱	8260C	Total/NA
Xylenes, Total	850		610	170	ug/Kg	4	✱	8260C	Total/NA
Benzene - DL	28000		610	120	ug/Kg	8	✱	8260C	Total/NA
Ethylbenzene - DL	210	J	610	180	ug/Kg	8	✱	8260C	Total/NA
m,p-Xylene - DL	600	J	1200	340	ug/Kg	8	✱	8260C	Total/NA
o-Xylene - DL	220	J	610	80	ug/Kg	8	✱	8260C	Total/NA
Xylenes, Total - DL	820	J	1200	340	ug/Kg	8	✱	8260C	Total/NA
2,4-Dimethylphenol	86	J	240	58	ug/Kg	1	✱	8270D	Total/NA
2-Methylphenol	59	J	240	28	ug/Kg	1	✱	8270D	Total/NA
Naphthalene	76	J	240	31	ug/Kg	1	✱	8270D	Total/NA
2-Methylphenol	0.0069	J	0.020	0.0016	mg/L	1		8270D	TCLP
3-Methylphenol	0.0031	J	0.040	0.0016	mg/L	1		8270D	TCLP
4-Methylphenol	0.0031	J	0.040	0.0014	mg/L	1		8270D	TCLP
Arsenic	0.041		0.015	0.0056	mg/L	1		6010C	TCLP

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Detection Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-03-01302024 (Continued)

Lab Sample ID: 480-216732-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.42	J	1.0	0.10	mg/L	1		6010C	TCLP
Lead	0.018	J B	0.020	0.0030	mg/L	1		6010C	TCLP
Mercury	0.060		0.029	0.0067	mg/Kg	1	✱	7471B	Total/NA
Flashpoint	>180		50.0	50.0	Degrees F	1		1010A	Total/NA
Sulfide, Reactive	147		9.1	9.1	mg/Kg	1		9034	Total/NA
pH	8.3	HF	0.1	0.1	SU	1		9045D	Total/NA
Temperature	17.9	HF	0.001	0.001	Degrees C	1		9045D	Total/NA

Client Sample ID: F-LOA-04-01302024

Lab Sample ID: 480-216732-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	160		48	13	ug/Kg	1	✱	8260C	Total/NA
1,3,5-Trimethylbenzene	110		48	14	ug/Kg	1	✱	8260C	Total/NA
Benzene	730		48	9.1	ug/Kg	1	✱	8260C	Total/NA
Ethylbenzene	54		48	14	ug/Kg	1	✱	8260C	Total/NA
m,p-Xylene	500		96	27	ug/Kg	1	✱	8260C	Total/NA
o-Xylene	100		48	6.2	ug/Kg	1	✱	8260C	Total/NA
Styrene	72		48	12	ug/Kg	1	✱	8260C	Total/NA
Toluene	470		48	13	ug/Kg	1	✱	8260C	Total/NA
Xylenes, Total	600		96	27	ug/Kg	1	✱	8260C	Total/NA
2-Methylnaphthalene	240		210	41	ug/Kg	1	✱	8270D	Total/NA
2-Methylphenol	35	J	210	24	ug/Kg	1	✱	8270D	Total/NA
4-Methylphenol	66	J	400	24	ug/Kg	1	✱	8270D	Total/NA
Acenaphthene	59	J	210	30	ug/Kg	1	✱	8270D	Total/NA
Acenaphthylene	140	J	210	27	ug/Kg	1	✱	8270D	Total/NA
Anthracene	140	J	210	51	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]anthracene	270		210	21	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]pyrene	290		210	30	ug/Kg	1	✱	8270D	Total/NA
Benzo[b]fluoranthene	360		210	33	ug/Kg	1	✱	8270D	Total/NA
Benzo[g,h,i]perylene	270		210	22	ug/Kg	1	✱	8270D	Total/NA
Benzo[k]fluoranthene	160	J	210	27	ug/Kg	1	✱	8270D	Total/NA
Biphenyl	41	J	210	30	ug/Kg	1	✱	8270D	Total/NA
Carbazole	56	J	210	24	ug/Kg	1	✱	8270D	Total/NA
Chrysene	260		210	46	ug/Kg	1	✱	8270D	Total/NA
Dibenzofuran	110	J	210	24	ug/Kg	1	✱	8270D	Total/NA
Fluoranthene	470		210	22	ug/Kg	1	✱	8270D	Total/NA
Fluorene	150	J	210	24	ug/Kg	1	✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	200	J	210	25	ug/Kg	1	✱	8270D	Total/NA
Naphthalene	8600	E	210	27	ug/Kg	1	✱	8270D	Total/NA
Phenanthrene	490		210	30	ug/Kg	1	✱	8270D	Total/NA
Pyrene	550		210	24	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]anthracene - DL	280	J	2100	210	ug/Kg	10	✱	8270D	Total/NA
Benzo[a]pyrene - DL	300	J	2100	300	ug/Kg	10	✱	8270D	Total/NA
Benzo[b]fluoranthene - DL	520	J	2100	330	ug/Kg	10	✱	8270D	Total/NA
Benzo[g,h,i]perylene - DL	230	J	2100	220	ug/Kg	10	✱	8270D	Total/NA
Fluoranthene - DL	570	J	2100	220	ug/Kg	10	✱	8270D	Total/NA
Naphthalene - DL	8200		2100	270	ug/Kg	10	✱	8270D	Total/NA
Phenanthrene - DL	490	J	2100	300	ug/Kg	10	✱	8270D	Total/NA
Pyrene - DL	490	J	2100	240	ug/Kg	10	✱	8270D	Total/NA
Barium	0.87	J	1.0	0.10	mg/L	1		6010C	TCLP
Lead	0.012	J B	0.020	0.0030	mg/L	1		6010C	TCLP

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Detection Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-04-01302024 (Continued)

Lab Sample ID: 480-216732-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.38		0.025	0.0058	mg/Kg	1	✱	7471B	Total/NA
Flashpoint	>180		50.0	50.0	Degrees F	1		1010A	Total/NA
pH	9.2	HF	0.1	0.1	SU	1		9045D	Total/NA
Temperature	17.9	HF	0.001	0.001	Degrees C	1		9045D	Total/NA

Client Sample ID: F-LOA-05-01302024

Lab Sample ID: 480-216732-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	3.6	J	4.4	0.84	ug/Kg	1	✱	8260C	Total/NA
1,3,5-Trimethylbenzene	3.5	J	4.4	0.28	ug/Kg	1	✱	8260C	Total/NA
2-Butanone (MEK)	3.0	J	22	1.6	ug/Kg	1	✱	8260C	Total/NA
Acetone	40		22	3.7	ug/Kg	1	✱	8260C	Total/NA
Benzene	3.5	J	4.4	0.22	ug/Kg	1	✱	8260C	Total/NA
Ethylbenzene	1.6	J	4.4	0.30	ug/Kg	1	✱	8260C	Total/NA
m,p-Xylene	19		8.8	0.74	ug/Kg	1	✱	8260C	Total/NA
o-Xylene	7.6		4.4	0.57	ug/Kg	1	✱	8260C	Total/NA
Toluene	3.1	J	4.4	0.33	ug/Kg	1	✱	8260C	Total/NA
Xylenes, Total	27		8.8	0.74	ug/Kg	1	✱	8260C	Total/NA
2-Methylnaphthalene	160	J	220	43	ug/Kg	1	✱	8270D	Total/NA
4-Methylphenol	31	J	420	25	ug/Kg	1	✱	8270D	Total/NA
Acenaphthylene	78	J	220	28	ug/Kg	1	✱	8270D	Total/NA
Anthracene	92	J	220	53	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]anthracene	120	J	220	22	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]pyrene	110	J	220	32	ug/Kg	1	✱	8270D	Total/NA
Benzo[b]fluoranthene	130	J	220	34	ug/Kg	1	✱	8270D	Total/NA
Benzo[g,h,i]perylene	95	J	220	23	ug/Kg	1	✱	8270D	Total/NA
Benzo[k]fluoranthene	67	J	220	28	ug/Kg	1	✱	8270D	Total/NA
Carbazole	32	J	220	25	ug/Kg	1	✱	8270D	Total/NA
Chrysene	150	J	220	48	ug/Kg	1	✱	8270D	Total/NA
Dibenzofuran	67	J	220	25	ug/Kg	1	✱	8270D	Total/NA
Fluoranthene	230		220	23	ug/Kg	1	✱	8270D	Total/NA
Fluorene	98	J	220	25	ug/Kg	1	✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	77	J	220	27	ug/Kg	1	✱	8270D	Total/NA
Naphthalene	2500		220	28	ug/Kg	1	✱	8270D	Total/NA
Phenanthrene	320		220	32	ug/Kg	1	✱	8270D	Total/NA
Pyrene	240		220	25	ug/Kg	1	✱	8270D	Total/NA
Arsenic	0.0070	J	0.015	0.0056	mg/L	1		6010C	TCLP
Barium	0.62	J	1.0	0.10	mg/L	1		6010C	TCLP
Lead	0.019	J B	0.020	0.0030	mg/L	1		6010C	TCLP
Mercury	0.087		0.024	0.0056	mg/Kg	1	✱	7471B	Total/NA
Flashpoint	>180		50.0	50.0	Degrees F	1		1010A	Total/NA
Sulfide, Reactive	19.5		9.8	9.8	mg/Kg	1		9034	Total/NA
pH	8.8	HF	0.1	0.1	SU	1		9045D	Total/NA
Temperature	17.8	HF	0.001	0.001	Degrees C	1		9045D	Total/NA

Client Sample ID: F-LOA-06-01302024

Lab Sample ID: 480-216732-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.019		0.010	0.0041	mg/L	10		8260C	TCLP
1,2,4-Trimethylbenzene	310		56	16	ug/Kg	1	✱	8260C	Total/NA
1,3,5-Trimethylbenzene	190		56	17	ug/Kg	1	✱	8260C	Total/NA
Benzene	1600		56	11	ug/Kg	1	✱	8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Detection Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-06-01302024 (Continued)

Lab Sample ID: 480-216732-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloromethane	14	J	56	13	ug/Kg	1	✱	8260C	Total/NA
Ethylbenzene	87		56	16	ug/Kg	1	✱	8260C	Total/NA
Isopropylbenzene	9.0	J	56	8.5	ug/Kg	1	✱	8260C	Total/NA
m,p-Xylene	830		110	31	ug/Kg	1	✱	8260C	Total/NA
Methyl acetate	81	J	280	27	ug/Kg	1	✱	8260C	Total/NA
o-Xylene	190		56	7.3	ug/Kg	1	✱	8260C	Total/NA
Styrene	99		56	14	ug/Kg	1	✱	8260C	Total/NA
Toluene	730		56	15	ug/Kg	1	✱	8260C	Total/NA
Xylenes, Total	1000		110	31	ug/Kg	1	✱	8260C	Total/NA
2-Methylnaphthalene	82	J	220	44	ug/Kg	1	✱	8270D	Total/NA
2-Methylphenol	43	J	220	26	ug/Kg	1	✱	8270D	Total/NA
4-Methylphenol	100	J	420	26	ug/Kg	1	✱	8270D	Total/NA
Acenaphthylene	66	J	220	28	ug/Kg	1	✱	8270D	Total/NA
Anthracene	67	J	220	54	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]anthracene	160	J	220	22	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]pyrene	150	J	220	32	ug/Kg	1	✱	8270D	Total/NA
Benzo[b]fluoranthene	190	J	220	35	ug/Kg	1	✱	8270D	Total/NA
Benzo[g,h,i]perylene	140	J	220	23	ug/Kg	1	✱	8270D	Total/NA
Benzo[k]fluoranthene	87	J	220	28	ug/Kg	1	✱	8270D	Total/NA
Chrysene	160	J	220	49	ug/Kg	1	✱	8270D	Total/NA
Dibenzofuran	40	J	220	26	ug/Kg	1	✱	8270D	Total/NA
Fluoranthene	260		220	23	ug/Kg	1	✱	8270D	Total/NA
Fluorene	58	J	220	26	ug/Kg	1	✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	110	J	220	27	ug/Kg	1	✱	8270D	Total/NA
Naphthalene	720		220	28	ug/Kg	1	✱	8270D	Total/NA
Phenanthrene	210	J	220	32	ug/Kg	1	✱	8270D	Total/NA
Phenol	230		220	33	ug/Kg	1	✱	8270D	Total/NA
Pyrene	300		220	26	ug/Kg	1	✱	8270D	Total/NA
2-Methylphenol	0.0030	J	0.025	0.0020	mg/L	1		8270D	TCLP
3-Methylphenol	0.0056	J	0.050	0.0020	mg/L	1		8270D	TCLP
4-Methylphenol	0.0056	J	0.050	0.0018	mg/L	1		8270D	TCLP
Arsenic	0.0070	J	0.015	0.0056	mg/L	1		6010C	TCLP
Barium	1.3		1.0	0.10	mg/L	1		6010C	TCLP
Lead	0.047	B	0.020	0.0030	mg/L	1		6010C	TCLP
Mercury	0.000080	J	0.00020	0.000043	mg/L	1		7470A	TCLP
Mercury	0.62		0.027	0.0062	mg/Kg	1	✱	7471B	Total/NA
Flashpoint	>180		50.0	50.0	Degrees F	1		1010A	Total/NA
pH	10	HF	0.1	0.1	SU	1		9045D	Total/NA
Temperature	17.8	HF	0.001	0.001	Degrees C	1		9045D	Total/NA

Client Sample ID: F-LOA-07-01292024

Lab Sample ID: 480-216732-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	55		50	38	ug/L	50		8260C	Total/NA
Benzene	2000		50	21	ug/L	50		8260C	Total/NA
m,p-Xylene	410		100	33	ug/L	50		8260C	Total/NA
o-Xylene	110		50	38	ug/L	50		8260C	Total/NA
Styrene	59		50	37	ug/L	50		8260C	Total/NA
Toluene	770		50	26	ug/L	50		8260C	Total/NA
Xylenes, Total	520		100	33	ug/L	50		8260C	Total/NA
2,4-Dimethylphenol	160		25	2.5	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Detection Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-07-01292024 (Continued)

Lab Sample ID: 480-216732-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	100		25	3.0	ug/L	1		8270D	Total/NA
2-Methylphenol	340	E	25	2.0	ug/L	1		8270D	Total/NA
4-Chloroaniline	640	E	25	3.0	ug/L	1		8270D	Total/NA
4-Methylphenol	680	E	50	1.8	ug/L	1		8270D	Total/NA
Acenaphthene	20	J	25	2.1	ug/L	1		8270D	Total/NA
Acenaphthylene	40		25	1.9	ug/L	1		8270D	Total/NA
Acetophenone	46		25	2.7	ug/L	1		8270D	Total/NA
Benzo(a)anthracene	7.7	J	25	1.8	ug/L	1		8270D	Total/NA
Benzo[a]pyrene	6.4	J	25	2.4	ug/L	1		8270D	Total/NA
Benzo[b]fluoranthene	10	J	25	1.7	ug/L	1		8270D	Total/NA
Benzo[g,h,i]perylene	5.3	J	25	1.8	ug/L	1		8270D	Total/NA
Carbazole	37		25	1.5	ug/L	1		8270D	Total/NA
Chrysene	8.8	J	25	1.7	ug/L	1		8270D	Total/NA
Dibenzofuran	24	J	50	2.6	ug/L	1		8270D	Total/NA
Fluoranthene	26		25	2.0	ug/L	1		8270D	Total/NA
Fluorene	27		25	1.8	ug/L	1		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	4.2	J	25	2.4	ug/L	1		8270D	Total/NA
Naphthalene	1200	E	25	3.8	ug/L	1		8270D	Total/NA
Phenanthrene	38		25	2.2	ug/L	1		8270D	Total/NA
Phenol	830	E	25	2.0	ug/L	1		8270D	Total/NA
Pyrene	21	J	25	1.7	ug/L	1		8270D	Total/NA
2-Methylphenol - DL	220	J	1300	100	ug/L	50		8270D	Total/NA
4-Methylphenol - DL	390	J	2500	90	ug/L	50		8270D	Total/NA
Naphthalene - DL	9900		1300	190	ug/L	50		8270D	Total/NA
Phenol - DL	640	J	1300	98	ug/L	50		8270D	Total/NA
Mercury	0.15		0.0012	0.00026	mg/L	1		7470A	Total/NA
Flashpoint	>180		50.0	50.0	Degrees F	1		1010A	Total/NA
Ammonia	12.1		0.20	0.090	mg/L	10		350.1	Total/NA
pH	10.5	HF	0.100	0.100	SU	1		9040C	Total/NA
Temperature	18.9	HF	0.00100	0.00100	Degrees C	1		9040C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-01-01302024

Lab Sample ID: 480-216732-1

Date Collected: 01/30/24 14:15

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 70.7

Method: SW846 8260C - TCLP Volatiles - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			02/05/24 13:57	10
1,2-Dichloroethane	ND		0.010	0.0021	mg/L			02/05/24 13:57	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			02/05/24 13:57	10
Benzene	0.073		0.010	0.0041	mg/L			02/05/24 13:57	10
Carbon tetrachloride	ND		0.010	0.0027	mg/L			02/05/24 13:57	10
Chlorobenzene	ND		0.010	0.0075	mg/L			02/05/24 13:57	10
Chloroform	ND		0.010	0.0034	mg/L			02/05/24 13:57	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			02/05/24 13:57	10
Trichloroethene	ND		0.010	0.0046	mg/L			02/05/24 13:57	10
Vinyl chloride	ND		0.010	0.0090	mg/L			02/05/24 13:57	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		77 - 120		02/05/24 13:57	10
4-Bromofluorobenzene (Surr)	94		73 - 120		02/05/24 13:57	10
Dibromofluoromethane (Surr)	91		75 - 123		02/05/24 13:57	10
Toluene-d8 (Surr)	99		80 - 120		02/05/24 13:57	10

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		68	19	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,1,2,2-Tetrachloroethane	ND		68	11	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		68	34	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,1,2-Trichloroethane	ND		68	14	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,1-Dichloroethane	ND		68	21	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,1-Dichloroethene	ND		68	24	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,2,4-Trichlorobenzene	ND		68	26	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,2,4-Trimethylbenzene	87		68	19	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,2-Dibromo-3-Chloropropane	ND		68	34	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,2-Dibromoethane	ND		68	12	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,2-Dichlorobenzene	ND		68	17	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,2-Dichloroethane	ND		68	28	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,2-Dichloropropane	ND		68	11	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,3,5-Trimethylbenzene	57 J		68	21	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,3-Dichlorobenzene	ND		68	18	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
1,4-Dichlorobenzene	ND		68	9.5	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
2-Butanone (MEK)	ND		340	200	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
2-Hexanone	ND		340	140	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
4-Methyl-2-pentanone (MIBK)	ND		340	22	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
Acetone	ND		340	280	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
Benzene	2400		68	13	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
Bromodichloromethane	ND		68	14	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
Bromoform	ND		68	34	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
Bromomethane	ND		68	15	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
Carbon disulfide	ND		68	31	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
Carbon tetrachloride	ND		68	17	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
Chlorobenzene	ND		68	9.0	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
Chloroethane	ND		68	14	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
Chloroform	ND		68	47	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
Chloromethane	ND		68	16	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1
cis-1,2-Dichloroethene	ND		68	19	ug/Kg	✱	02/02/24 09:13	02/02/24 13:45	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-01-01302024

Lab Sample ID: 480-216732-1

Date Collected: 01/30/24 14:15

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 70.7

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		68	16	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Cyclohexane	ND		68	15	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Dibromochloromethane	ND		68	33	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Dichlorodifluoromethane	ND		68	30	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Ethylbenzene	790		68	20	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Isopropylbenzene	ND		68	10	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
m,p-Xylene	1200		140	38	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Methyl acetate	ND		340	32	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Methyl tert-butyl ether	ND		68	26	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Methylcyclohexane	ND		68	32	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Methylene Chloride	ND		68	13	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
o-Xylene	470		68	8.8	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Styrene	41 J		68	16	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Tetrachloroethene	ND		68	9.1	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Toluene	280		68	18	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
trans-1,2-Dichloroethene	ND		68	16	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
trans-1,3-Dichloropropene	ND		68	6.7	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Trichloroethene	ND		68	19	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Trichlorofluoromethane	ND		68	32	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Vinyl chloride	ND		68	23	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1
Xylenes, Total	1700		140	38	ug/Kg	☆	02/02/24 09:13	02/02/24 13:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		53 - 146	02/02/24 09:13	02/02/24 13:45	1
4-Bromofluorobenzene (Surr)	96		49 - 148	02/02/24 09:13	02/02/24 13:45	1
Dibromofluoromethane (Surr)	90		60 - 140	02/02/24 09:13	02/02/24 13:45	1
Toluene-d8 (Surr)	97		50 - 149	02/02/24 09:13	02/02/24 13:45	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		140	77	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
2,4,5-Trichlorophenol	ND		240	65	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
2,4,6-Trichlorophenol	ND		240	48	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
2,4-Dichlorophenol	ND		240	25	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
2,4-Dimethylphenol	ND		240	58	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
2,4-Dinitrophenol	ND		2300	1100	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
2,4-Dinitrotoluene	ND		240	49	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
2,6-Dinitrotoluene	ND		240	28	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
2-Chloronaphthalene	ND		240	39	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
2-Chlorophenol	ND		460	44	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
2-Methylnaphthalene	330		240	48	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
2-Methylphenol	32 J		240	28	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
2-Nitroaniline	ND		460	35	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
2-Nitrophenol	ND		240	67	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
3,3'-Dichlorobenzidine	ND		460	280	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
3-Nitroaniline	ND		460	66	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
4,6-Dinitro-2-methylphenol	ND		460	240	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
4-Bromophenyl phenyl ether	ND		240	34	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
4-Chloro-3-methylphenol	ND		240	59	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1
4-Chloroaniline	ND		240	59	ug/Kg	☆	01/31/24 16:11	02/01/24 19:26	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-01-01302024

Lab Sample ID: 480-216732-1

Date Collected: 01/30/24 14:15

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 70.7

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		240	30	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
4-Methylphenol	55	J	460	28	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
4-Nitroaniline	ND		460	130	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
4-Nitrophenol	ND		460	170	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Acenaphthene	87	J	240	35	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Acenaphthylene	200	J	240	31	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Acetophenone	ND		240	32	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Anthracene	240		240	59	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Atrazine	ND		240	83	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Benzaldehyde	ND		240	190	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Benzo[a]anthracene	460		240	24	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Benzo[a]pyrene	380		240	35	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Benzo[b]fluoranthene	480		240	38	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Benzo[g,h,i]perylene	290		240	25	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Benzo[k]fluoranthene	220	J	240	31	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Biphenyl	60	J	240	35	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
bis (2-chloroisopropyl) ether	ND		240	48	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Bis(2-chloroethoxy)methane	ND		240	51	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Bis(2-chloroethyl)ether	ND		240	31	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Bis(2-ethylhexyl) phthalate	ND		240	82	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Butyl benzyl phthalate	ND		240	39	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Caprolactam	ND		240	72	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Carbazole	70	J	240	28	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Chrysene	400		240	53	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Dibenz(a,h)anthracene	ND		240	42	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Dibenzofuran	190	J	240	28	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Diethyl phthalate	ND		240	31	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Dimethyl phthalate	ND		240	28	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Di-n-butyl phthalate	ND		240	41	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Di-n-octyl phthalate	ND		240	28	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Fluoranthene	840		240	25	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Fluorene	260		240	28	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Hexachlorobenzene	ND		240	32	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Hexachlorobutadiene	ND		240	35	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Hexachlorocyclopentadiene	ND		240	32	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Hexachloroethane	ND		240	31	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Indeno[1,2,3-cd]pyrene	250		240	30	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Isophorone	ND		240	51	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Naphthalene	14000	E	240	31	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Nitrobenzene	ND		240	27	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
N-Nitrosodi-n-propylamine	ND		240	41	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
N-Nitrosodiphenylamine	ND		240	190	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Pentachlorophenol	ND		460	240	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Phenanthrene	930		240	35	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Phenol	ND		240	37	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Pyrene	910		240	28	ug/Kg	✱	01/31/24 16:11	02/01/24 19:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	88		54 - 120				01/31/24 16:11	02/01/24 19:26	1
2-Fluorobiphenyl (Surr)	98		60 - 120				01/31/24 16:11	02/01/24 19:26	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-01-01302024

Lab Sample ID: 480-216732-1

Date Collected: 01/30/24 14:15

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 70.7

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	81		52 - 120	01/31/24 16:11	02/01/24 19:26	1
Nitrobenzene-d5 (Surr)	91		53 - 120	01/31/24 16:11	02/01/24 19:26	1
Phenol-d5 (Surr)	87		54 - 120	01/31/24 16:11	02/01/24 19:26	1
p-Terphenyl-d14 (Surr)	99		79 - 130	01/31/24 16:11	02/01/24 19:26	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1400	770	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
2,4,5-Trichlorophenol	ND		2400	650	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
2,4,6-Trichlorophenol	ND		2400	480	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
2,4-Dichlorophenol	ND		2400	250	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
2,4-Dimethylphenol	ND		2400	580	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
2,4-Dinitrophenol	ND		23000	11000	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
2,4-Dinitrotoluene	ND		2400	490	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
2,6-Dinitrotoluene	ND		2400	280	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
2-Chloronaphthalene	ND		2400	390	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
2-Chlorophenol	ND		4600	440	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
2-Methylnaphthalene	ND		2400	480	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
2-Methylphenol	ND		2400	280	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
2-Nitroaniline	ND		4600	350	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
2-Nitrophenol	ND		2400	670	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
3,3'-Dichlorobenzidine	ND		4600	2800	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
3-Nitroaniline	ND		4600	660	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
4,6-Dinitro-2-methylphenol	ND		4600	2400	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
4-Bromophenyl phenyl ether	ND		2400	340	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
4-Chloro-3-methylphenol	ND		2400	590	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
4-Chloroaniline	ND		2400	590	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
4-Chlorophenyl phenyl ether	ND		2400	300	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
4-Methylphenol	ND		4600	280	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
4-Nitroaniline	ND		4600	1300	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
4-Nitrophenol	ND		4600	1700	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Acenaphthene	ND		2400	350	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Acenaphthylene	ND		2400	310	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Acetophenone	ND		2400	320	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Anthracene	ND		2400	590	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Atrazine	ND		2400	830	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Benzaldehyde	ND		2400	1900	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Benzo[a]anthracene	480	J	2400	240	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Benzo[a]pyrene	410	J	2400	350	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Benzo[b]fluoranthene	510	J	2400	380	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Benzo[g,h,i]perylene	280	J	2400	250	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Benzo[k]fluoranthene	ND		2400	310	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Biphenyl	ND		2400	350	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
bis (2-chloroisopropyl) ether	ND		2400	480	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Bis(2-chloroethoxy)methane	ND		2400	510	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Bis(2-chloroethyl)ether	ND		2400	310	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Bis(2-ethylhexyl) phthalate	ND		2400	820	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Butyl benzyl phthalate	ND		2400	390	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Caprolactam	ND		2400	720	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-01-01302024

Lab Sample ID: 480-216732-1

Date Collected: 01/30/24 14:15

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 70.7

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	ND		2400	280	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Chrysene	ND		2400	530	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Dibenz(a,h)anthracene	ND		2400	420	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Dibenzofuran	ND		2400	280	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Diethyl phthalate	ND		2400	310	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Dimethyl phthalate	ND		2400	280	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Di-n-butyl phthalate	ND		2400	410	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Di-n-octyl phthalate	ND		2400	280	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Fluoranthene	950	J	2400	250	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Fluorene	310	J	2400	280	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Hexachlorobenzene	ND		2400	320	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Hexachlorobutadiene	ND		2400	350	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Hexachlorocyclopentadiene	ND		2400	320	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Hexachloroethane	ND		2400	310	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Indeno[1,2,3-cd]pyrene	ND		2400	300	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Isophorone	ND		2400	510	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Naphthalene	14000		2400	310	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Nitrobenzene	ND		2400	270	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
N-Nitrosodi-n-propylamine	ND		2400	410	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
N-Nitrosodiphenylamine	ND		2400	1900	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Pentachlorophenol	ND		4600	2400	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Phenanthrene	930	J	2400	350	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Phenol	ND		2400	370	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10
Pyrene	830	J	2400	280	ug/Kg	☆	01/31/24 16:11	02/02/24 13:53	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	63		54 - 120	01/31/24 16:11	02/02/24 13:53	10
2-Fluorobiphenyl (Surr)	72		60 - 120	01/31/24 16:11	02/02/24 13:53	10
2-Fluorophenol (Surr)	74		52 - 120	01/31/24 16:11	02/02/24 13:53	10
Nitrobenzene-d5 (Surr)	67		53 - 120	01/31/24 16:11	02/02/24 13:53	10
Phenol-d5 (Surr)	65		54 - 120	01/31/24 16:11	02/02/24 13:53	10
p-Terphenyl-d14 (Surr)	87		79 - 130	01/31/24 16:11	02/02/24 13:53	10

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.10	0.0045	mg/L		02/02/24 13:57	02/05/24 16:36	1
2,4,5-Trichlorophenol	ND		0.050	0.0048	mg/L		02/02/24 13:57	02/05/24 16:36	1
2,4,6-Trichlorophenol	ND		0.050	0.0060	mg/L		02/02/24 13:57	02/05/24 16:36	1
2,4-Dinitrotoluene	ND		0.050	0.0043	mg/L		02/02/24 13:57	02/05/24 16:36	1
2-Methylphenol	ND		0.050	0.0040	mg/L		02/02/24 13:57	02/05/24 16:36	1
3-Methylphenol	ND		0.10	0.0040	mg/L		02/02/24 13:57	02/05/24 16:36	1
4-Methylphenol	ND		0.10	0.0035	mg/L		02/02/24 13:57	02/05/24 16:36	1
Hexachlorobenzene	ND		0.050	0.0050	mg/L		02/02/24 13:57	02/05/24 16:36	1
Hexachlorobutadiene	ND		0.050	0.0068	mg/L		02/02/24 13:57	02/05/24 16:36	1
Hexachloroethane	ND		0.050	0.0058	mg/L		02/02/24 13:57	02/05/24 16:36	1
Nitrobenzene	ND		0.050	0.0028	mg/L		02/02/24 13:57	02/05/24 16:36	1
Pentachlorophenol	ND		0.10	0.022	mg/L		02/02/24 13:57	02/05/24 16:36	1
Pyridine	ND		0.25	0.0040	mg/L		02/02/24 13:57	02/05/24 16:36	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-01-01302024

Lab Sample ID: 480-216732-1

Date Collected: 01/30/24 14:15

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 70.7

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		41 - 120	02/02/24 13:57	02/05/24 16:36	1
2-Fluorobiphenyl (Surr)	99		48 - 120	02/02/24 13:57	02/05/24 16:36	1
2-Fluorophenol (Surr)	56		35 - 120	02/02/24 13:57	02/05/24 16:36	1
Nitrobenzene-d5 (Surr)	103		46 - 120	02/02/24 13:57	02/05/24 16:36	1
Phenol-d5 (Surr)	42		22 - 120	02/02/24 13:57	02/05/24 16:36	1
p-Terphenyl-d14 (Surr)	114		60 - 148	02/02/24 13:57	02/05/24 16:36	1

Method: SW846 8081B - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.0050	0.000073	mg/L		02/02/24 13:49	02/05/24 13:54	1
Endrin	ND		0.00050	0.000035	mg/L		02/02/24 13:49	02/05/24 13:54	1
gamma-BHC (Lindane)	ND		0.00050	0.000015	mg/L		02/02/24 13:49	02/05/24 13:54	1
Heptachlor	ND		0.00050	0.000021	mg/L		02/02/24 13:49	02/05/24 13:54	1
Heptachlor epoxide	ND		0.00050	0.000013	mg/L		02/02/24 13:49	02/05/24 13:54	1
Methoxychlor	ND		0.00050	0.000035	mg/L		02/02/24 13:49	02/05/24 13:54	1
Toxaphene	ND		0.0050	0.00030	mg/L		02/02/24 13:49	02/05/24 13:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	69		20 - 120	02/02/24 13:49	02/05/24 13:54	1
DCB Decachlorobiphenyl (Surr)	90		20 - 120	02/02/24 13:49	02/05/24 13:54	1
Tetrachloro-m-xylene (Surr)	58		44 - 120	02/02/24 13:49	02/05/24 13:54	1
Tetrachloro-m-xylene (Surr)	55		44 - 120	02/02/24 13:49	02/05/24 13:54	1

Method: SW846 8151 - TCLP Herbicides - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.0050	0.0010	mg/L		02/02/24 09:11	02/05/24 14:46	1
Silvex (2,4,5-TP)	ND		0.0050	0.00090	mg/L		02/02/24 09:11	02/05/24 14:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	53		21 - 143	02/02/24 09:11	02/05/24 14:46	1
2,4-Dichlorophenylacetic acid (Surr)	51		21 - 143	02/02/24 09:11	02/05/24 14:46	1

Method: SW846 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		02/02/24 09:46	02/03/24 00:27	1
Barium	0.50	J	1.0	0.10	mg/L		02/02/24 09:46	02/03/24 00:27	1
Cadmium	ND		0.0020	0.00050	mg/L		02/02/24 09:46	02/03/24 00:27	1
Chromium	ND		0.020	0.010	mg/L		02/02/24 09:46	02/03/24 00:27	1
Lead	0.011	J B	0.020	0.0030	mg/L		02/02/24 09:46	02/03/24 00:27	1
Selenium	ND		0.025	0.0087	mg/L		02/02/24 09:46	02/03/24 00:27	1
Silver	ND		0.0060	0.0017	mg/L		02/02/24 09:46	02/03/24 00:27	1

Method: SW846 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000043	mg/L		02/02/24 11:25	02/02/24 16:00	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.15		0.024	0.0055	mg/Kg	☆	02/01/24 12:04	02/01/24 14:24	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-01-01302024

Lab Sample ID: 480-216732-1

Date Collected: 01/30/24 14:15

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 70.7

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive (SW846 9012)	ND		9.3	9.3	mg/Kg		02/01/24 11:40	02/02/24 13:28	1
Sulfide, Reactive (SW846 9034)	74.3		9.3	9.3	mg/Kg		02/01/24 11:40	02/02/24 16:25	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010A)	>180		50.0	50.0	Degrees F			01/31/24 10:41	1
pH (SW846 9045D)	8.4	HF	0.1	0.1	SU			02/02/24 13:43	1
Temperature (SW846 9045D)	17.9	HF	0.001	0.001	Degrees C			02/02/24 13:43	1

Client Sample ID: F-LOA-02-01302024

Lab Sample ID: 480-216732-2

Date Collected: 01/30/24 13:30

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 75.4

Method: SW846 8260C - TCLP Volatiles - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			02/05/24 14:20	10
1,2-Dichloroethene	ND		0.010	0.0021	mg/L			02/05/24 14:20	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			02/05/24 14:20	10
Benzene	ND		0.010	0.0041	mg/L			02/05/24 14:20	10
Carbon tetrachloride	ND		0.010	0.0027	mg/L			02/05/24 14:20	10
Chlorobenzene	ND		0.010	0.0075	mg/L			02/05/24 14:20	10
Chloroform	ND		0.010	0.0034	mg/L			02/05/24 14:20	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			02/05/24 14:20	10
Trichloroethene	ND		0.010	0.0046	mg/L			02/05/24 14:20	10
Vinyl chloride	ND		0.010	0.0090	mg/L			02/05/24 14:20	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		77 - 120		02/05/24 14:20	10
4-Bromofluorobenzene (Surr)	96		73 - 120		02/05/24 14:20	10
Dibromofluoromethane (Surr)	88		75 - 123		02/05/24 14:20	10
Toluene-d8 (Surr)	100		80 - 120		02/05/24 14:20	10

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.5	0.32	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,1,2,2-Tetrachloroethane	ND		4.5	0.73	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.5	1.0	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,1,2-Trichloroethane	ND		4.5	0.58	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,1-Dichloroethane	ND		4.5	0.55	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,1-Dichloroethene	ND		4.5	0.55	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,2,4-Trichlorobenzene	ND		4.5	0.27	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,2,4-Trimethylbenzene	ND		4.5	0.86	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,2-Dibromo-3-Chloropropane	ND		4.5	2.2	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,2-Dibromoethane	ND		4.5	0.57	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,2-Dichlorobenzene	ND		4.5	0.35	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,2-Dichloroethane	ND		4.5	0.22	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,2-Dichloropropane	ND		4.5	2.2	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,3,5-Trimethylbenzene	ND		4.5	0.29	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,3-Dichlorobenzene	ND		4.5	0.23	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
1,4-Dichlorobenzene	ND		4.5	0.63	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
2-Butanone (MEK)	10 J		22	1.6	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1
2-Hexanone	ND		22	2.2	ug/Kg	✱	01/31/24 16:00	01/31/24 22:02	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-02-01302024

Lab Sample ID: 480-216732-2

Date Collected: 01/30/24 13:30

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 75.4

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		22	1.5	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Acetone	52		22	3.8	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Benzene	1.5	J	4.5	0.22	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Bromodichloromethane	ND		4.5	0.60	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Bromoform	ND		4.5	2.2	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Bromomethane	ND		4.5	0.40	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Carbon disulfide	ND		4.5	2.2	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Carbon tetrachloride	ND		4.5	0.43	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Chlorobenzene	ND		4.5	0.59	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Chloroethane	ND		4.5	1.0	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Chloroform	ND		4.5	0.28	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Chloromethane	ND		4.5	0.27	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
cis-1,2-Dichloroethene	ND		4.5	0.57	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
cis-1,3-Dichloropropene	ND		4.5	0.64	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Cyclohexane	ND		4.5	0.63	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Dibromochloromethane	ND		4.5	0.57	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Dichlorodifluoromethane	ND		4.5	0.37	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Ethylbenzene	ND		4.5	0.31	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Isopropylbenzene	ND		4.5	0.67	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
m,p-Xylene	ND		8.9	0.75	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Methyl acetate	ND		22	2.7	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Methyl tert-butyl ether	ND		4.5	0.44	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Methylcyclohexane	ND		4.5	0.68	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Methylene Chloride	ND		4.5	2.1	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
o-Xylene	0.86	J	4.5	0.58	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Styrene	ND		4.5	0.22	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Tetrachloroethene	ND		4.5	0.60	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Toluene	0.37	J	4.5	0.34	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
trans-1,2-Dichloroethene	ND		4.5	0.46	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
trans-1,3-Dichloropropene	ND		4.5	2.0	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Trichloroethene	ND		4.5	0.98	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Trichlorofluoromethane	ND		4.5	0.42	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Vinyl chloride	ND		4.5	0.55	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1
Xylenes, Total	0.86	J	8.9	0.75	ug/Kg	☆	01/31/24 16:00	01/31/24 22:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		64 - 126	01/31/24 16:00	01/31/24 22:02	1
4-Bromofluorobenzene (Surr)	106		72 - 126	01/31/24 16:00	01/31/24 22:02	1
Dibromofluoromethane (Surr)	108		60 - 140	01/31/24 16:00	01/31/24 22:02	1
Toluene-d8 (Surr)	96		71 - 125	01/31/24 16:00	01/31/24 22:02	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		130	73	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
2,4,5-Trichlorophenol	ND		220	61	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
2,4,6-Trichlorophenol	ND		220	45	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
2,4-Dichlorophenol	ND		220	24	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
2,4-Dimethylphenol	ND		220	54	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
2,4-Dinitrophenol	ND		2200	1000	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
2,4-Dinitrotoluene	ND		220	46	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-02-01302024

Lab Sample ID: 480-216732-2

Date Collected: 01/30/24 13:30

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 75.4

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		220	26	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
2-Chloronaphthalene	ND		220	37	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
2-Chlorophenol	ND		440	41	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
2-Methylnaphthalene	56	J	220	45	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
2-Methylphenol	ND		220	26	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
2-Nitroaniline	ND		440	33	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
2-Nitrophenol	ND		220	63	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
3,3'-Dichlorobenzidine	ND		440	260	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
3-Nitroaniline	ND		440	62	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
4,6-Dinitro-2-methylphenol	ND		440	220	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
4-Bromophenyl phenyl ether	ND		220	32	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
4-Chloro-3-methylphenol	ND		220	55	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
4-Chloroaniline	ND		220	55	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
4-Chlorophenyl phenyl ether	ND		220	28	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
4-Methylphenol	28	J	440	26	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
4-Nitroaniline	ND		440	120	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
4-Nitrophenol	ND		440	160	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Acenaphthene	ND		220	33	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Acenaphthylene	42	J	220	29	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Acetophenone	ND		220	30	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Anthracene	ND		220	55	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Atrazine	ND		220	78	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Benzaldehyde	ND		220	180	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Benzo[a]anthracene	87	J	220	22	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Benzo[a]pyrene	76	J	220	33	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Benzo[b]fluoranthene	100	J	220	36	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Benzo[g,h,i]perylene	77	J	220	24	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Benzo[k]fluoranthene	47	J	220	29	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Biphenyl	ND		220	33	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
bis (2-chloroisopropyl) ether	ND		220	45	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Bis(2-chloroethoxy)methane	ND		220	48	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Bis(2-chloroethyl)ether	ND		220	29	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Bis(2-ethylhexyl) phthalate	ND		220	77	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Butyl benzyl phthalate	ND		220	37	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Caprolactam	ND		220	67	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Carbazole	ND		220	26	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Chrysene	ND		220	50	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Dibenz(a,h)anthracene	ND		220	40	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Dibenzofuran	32	J	220	26	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Diethyl phthalate	ND		220	29	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Dimethyl phthalate	ND		220	26	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Di-n-butyl phthalate	ND		220	38	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Di-n-octyl phthalate	ND		220	26	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Fluoranthene	150	J	220	24	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Fluorene	45	J	220	26	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Hexachlorobenzene	ND		220	30	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Hexachlorobutadiene	ND		220	33	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Hexachlorocyclopentadiene	ND		220	30	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Hexachloroethane	ND		220	29	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-02-01302024

Lab Sample ID: 480-216732-2

Date Collected: 01/30/24 13:30

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 75.4

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	64	J	220	28	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Isophorone	ND		220	48	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Naphthalene	410		220	29	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Nitrobenzene	ND		220	25	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
N-Nitrosodi-n-propylamine	ND		220	38	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
N-Nitrosodiphenylamine	ND		220	180	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Pentachlorophenol	ND		440	220	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Phenanthrene	150	J	220	33	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Phenol	ND		220	34	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1
Pyrene	170	J	220	26	ug/Kg	☆	01/31/24 16:11	02/01/24 19:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	97		54 - 120	01/31/24 16:11	02/01/24 19:50	1
2-Fluorobiphenyl (Surr)	105		60 - 120	01/31/24 16:11	02/01/24 19:50	1
2-Fluorophenol (Surr)	89		52 - 120	01/31/24 16:11	02/01/24 19:50	1
Nitrobenzene-d5 (Surr)	101		53 - 120	01/31/24 16:11	02/01/24 19:50	1
Phenol-d5 (Surr)	96		54 - 120	01/31/24 16:11	02/01/24 19:50	1
p-Terphenyl-d14 (Surr)	118		79 - 130	01/31/24 16:11	02/01/24 19:50	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.050	0.0023	mg/L		02/02/24 13:57	02/05/24 17:00	1
2,4,5-Trichlorophenol	ND		0.025	0.0024	mg/L		02/02/24 13:57	02/05/24 17:00	1
2,4,6-Trichlorophenol	ND		0.025	0.0030	mg/L		02/02/24 13:57	02/05/24 17:00	1
2,4-Dinitrotoluene	ND		0.025	0.0021	mg/L		02/02/24 13:57	02/05/24 17:00	1
2-Methylphenol	ND		0.025	0.0020	mg/L		02/02/24 13:57	02/05/24 17:00	1
3-Methylphenol	ND		0.050	0.0020	mg/L		02/02/24 13:57	02/05/24 17:00	1
4-Methylphenol	ND		0.050	0.0018	mg/L		02/02/24 13:57	02/05/24 17:00	1
Hexachlorobenzene	ND		0.025	0.0025	mg/L		02/02/24 13:57	02/05/24 17:00	1
Hexachlorobutadiene	ND		0.025	0.0034	mg/L		02/02/24 13:57	02/05/24 17:00	1
Hexachloroethane	ND		0.025	0.0029	mg/L		02/02/24 13:57	02/05/24 17:00	1
Nitrobenzene	ND		0.025	0.0014	mg/L		02/02/24 13:57	02/05/24 17:00	1
Pentachlorophenol	ND		0.050	0.011	mg/L		02/02/24 13:57	02/05/24 17:00	1
Pyridine	ND		0.13	0.0020	mg/L		02/02/24 13:57	02/05/24 17:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	77		41 - 120	02/02/24 13:57	02/05/24 17:00	1
2-Fluorobiphenyl (Surr)	83		48 - 120	02/02/24 13:57	02/05/24 17:00	1
2-Fluorophenol (Surr)	47		35 - 120	02/02/24 13:57	02/05/24 17:00	1
Nitrobenzene-d5 (Surr)	86		46 - 120	02/02/24 13:57	02/05/24 17:00	1
Phenol-d5 (Surr)	34		22 - 120	02/02/24 13:57	02/05/24 17:00	1
p-Terphenyl-d14 (Surr)	100		60 - 148	02/02/24 13:57	02/05/24 17:00	1

Method: SW846 8081B - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.0025	0.000036	mg/L		02/02/24 13:49	02/05/24 14:14	1
Endrin	ND		0.00025	0.000017	mg/L		02/02/24 13:49	02/05/24 14:14	1
gamma-BHC (Lindane)	ND		0.00025	0.0000075	mg/L		02/02/24 13:49	02/05/24 14:14	1
Heptachlor	ND		0.00025	0.000011	mg/L		02/02/24 13:49	02/05/24 14:14	1
Heptachlor epoxide	ND		0.00025	0.0000066	mg/L		02/02/24 13:49	02/05/24 14:14	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-02-01302024

Lab Sample ID: 480-216732-2

Date Collected: 01/30/24 13:30

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 75.4

Method: SW846 8081B - Organochlorine Pesticides (GC) - TCLP (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methoxychlor	ND		0.00025	0.000018	mg/L		02/02/24 13:49	02/05/24 14:14	1
Toxaphene	ND		0.0025	0.00015	mg/L		02/02/24 13:49	02/05/24 14:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	57		20 - 120				02/02/24 13:49	02/05/24 14:14	1
DCB Decachlorobiphenyl (Surr)	76		20 - 120				02/02/24 13:49	02/05/24 14:14	1
Tetrachloro-m-xylene (Surr)	66		44 - 120				02/02/24 13:49	02/05/24 14:14	1
Tetrachloro-m-xylene (Surr)	83		44 - 120				02/02/24 13:49	02/05/24 14:14	1

Method: SW846 8151 - TCLP Herbicides - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.0025	0.00050	mg/L		02/02/24 09:11	02/05/24 15:04	1
Silvex (2,4,5-TP)	ND		0.0025	0.00045	mg/L		02/02/24 09:11	02/05/24 15:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	31		21 - 143				02/02/24 09:11	02/05/24 15:04	1
2,4-Dichlorophenylacetic acid (Surr)	25		21 - 143				02/02/24 09:11	02/05/24 15:04	1

Method: SW846 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0064	J	0.015	0.0056	mg/L		02/02/24 09:46	02/03/24 00:41	1
Barium	0.30	J	1.0	0.10	mg/L		02/02/24 09:46	02/03/24 00:41	1
Cadmium	ND		0.0020	0.00050	mg/L		02/02/24 09:46	02/03/24 00:41	1
Chromium	ND		0.020	0.010	mg/L		02/02/24 09:46	02/03/24 00:41	1
Lead	0.0052	J B	0.020	0.0030	mg/L		02/02/24 09:46	02/03/24 00:41	1
Selenium	ND		0.025	0.0087	mg/L		02/02/24 09:46	02/03/24 00:41	1
Silver	ND		0.0060	0.0017	mg/L		02/02/24 09:46	02/03/24 00:41	1

Method: SW846 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000043	mg/L		02/02/24 11:25	02/02/24 16:01	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12		0.027	0.0063	mg/Kg	☆	02/01/24 12:04	02/01/24 14:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive (SW846 9012)	ND		9.4	9.4	mg/Kg		02/01/24 11:40	02/02/24 13:31	1
Sulfide, Reactive (SW846 9034)	ND		9.4	9.4	mg/Kg		02/01/24 11:40	02/02/24 16:25	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010A)	>180		50.0	50.0	Degrees F			01/31/24 11:06	1
pH (SW846 9045D)	8.2	HF	0.1	0.1	SU			02/02/24 13:43	1
Temperature (SW846 9045D)	17.8	HF	0.001	0.001	Degrees C			02/02/24 13:43	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-03-01302024

Lab Sample ID: 480-216732-3

Date Collected: 01/30/24 14:00

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 69.5

Method: SW846 8260C - TCLP Volatiles - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			02/05/24 14:42	10
1,2-Dichloroethane	ND		0.010	0.0021	mg/L			02/05/24 14:42	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			02/05/24 14:42	10
Benzene	0.76		0.010	0.0041	mg/L			02/05/24 14:42	10
Carbon tetrachloride	ND		0.010	0.0027	mg/L			02/05/24 14:42	10
Chlorobenzene	ND		0.010	0.0075	mg/L			02/05/24 14:42	10
Chloroform	ND		0.010	0.0034	mg/L			02/05/24 14:42	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			02/05/24 14:42	10
Trichloroethene	ND		0.010	0.0046	mg/L			02/05/24 14:42	10
Vinyl chloride	ND		0.010	0.0090	mg/L			02/05/24 14:42	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		77 - 120		02/05/24 14:42	10
4-Bromofluorobenzene (Surr)	98		73 - 120		02/05/24 14:42	10
Dibromofluoromethane (Surr)	94		75 - 123		02/05/24 14:42	10
Toluene-d8 (Surr)	105		80 - 120		02/05/24 14:42	10

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		310	85	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,1,2,2-Tetrachloroethane	ND		310	50	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		310	150	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,1,2-Trichloroethane	ND		310	65	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,1-Dichloroethane	ND		310	95	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,1-Dichloroethene	ND		310	110	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,2,4-Trichlorobenzene	ND		310	120	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,2,4-Trimethylbenzene	ND		310	86	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,2-Dibromo-3-Chloropropane	ND		310	150	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,2-Dibromoethane	ND		310	54	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,2-Dichlorobenzene	ND		310	78	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,2-Dichloroethane	ND		310	130	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,2-Dichloropropane	ND		310	50	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,3,5-Trimethylbenzene	ND		310	93	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,3-Dichlorobenzene	ND		310	82	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
1,4-Dichlorobenzene	ND		310	43	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
2-Butanone (MEK)	ND		1500	910	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
2-Hexanone	ND		1500	630	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
4-Methyl-2-pentanone (MIBK)	ND		1500	98	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
Acetone	ND		1500	1300	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
Benzene	41000	E	310	58	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
Bromodichloromethane	ND		310	61	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
Bromoform	ND		310	150	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
Bromomethane	ND		310	68	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
Carbon disulfide	ND		310	140	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
Carbon tetrachloride	ND		310	78	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
Chlorobenzene	ND		310	41	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
Chloroethane	ND		310	64	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
Chloroform	ND		310	210	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
Chloromethane	ND		310	73	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4
cis-1,2-Dichloroethene	ND		310	85	ug/Kg	✱	02/02/24 09:13	02/02/24 14:19	4

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-03-01302024

Lab Sample ID: 480-216732-3

Date Collected: 01/30/24 14:00

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 69.5

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		310	73	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Cyclohexane	ND		310	68	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Dibromochloromethane	ND		310	150	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Dichlorodifluoromethane	ND		310	130	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Ethylbenzene	220	J	310	89	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Isopropylbenzene	ND		310	46	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
m,p-Xylene	620		610	170	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Methyl acetate	ND		1500	150	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Methyl tert-butyl ether	ND		310	120	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Methylcyclohexane	ND		310	140	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Methylene Chloride	ND		310	61	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
o-Xylene	230	J	310	40	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Styrene	ND		310	74	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Tetrachloroethene	ND		310	41	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Toluene	210	J	310	82	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
trans-1,2-Dichloroethene	ND		310	73	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
trans-1,3-Dichloropropene	ND		310	30	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Trichloroethene	ND		310	85	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Trichlorofluoromethane	ND		310	140	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Vinyl chloride	ND		310	100	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4
Xylenes, Total	850		610	170	ug/Kg	☆	02/02/24 09:13	02/02/24 14:19	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		53 - 146	02/02/24 09:13	02/02/24 14:19	4
4-Bromofluorobenzene (Surr)	93		49 - 148	02/02/24 09:13	02/02/24 14:19	4
Dibromofluoromethane (Surr)	88		60 - 140	02/02/24 09:13	02/02/24 14:19	4
Toluene-d8 (Surr)	96		50 - 149	02/02/24 09:13	02/02/24 14:19	4

Method: SW846 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		610	170	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,1,2,2-Tetrachloroethane	ND		610	100	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		610	310	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,1,2-Trichloroethane	ND		610	130	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,1-Dichloroethane	ND		610	190	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,1-Dichloroethene	ND		610	210	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,2,4-Trichlorobenzene	ND		610	230	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,2,4-Trimethylbenzene	ND		610	170	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,2-Dibromo-3-Chloropropane	ND		610	310	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,2-Dibromoethane	ND		610	110	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,2-Dichlorobenzene	ND		610	160	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,2-Dichloroethane	ND		610	250	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,2-Dichloropropane	ND		610	100	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,3,5-Trimethylbenzene	ND		610	190	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,3-Dichlorobenzene	ND		610	160	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
1,4-Dichlorobenzene	ND		610	86	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
2-Butanone (MEK)	ND		3100	1800	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
2-Hexanone	ND		3100	1300	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
4-Methyl-2-pentanone (MIBK)	ND		3100	200	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8
Acetone	ND		3100	2500	ug/Kg	☆	02/02/24 09:13	02/05/24 12:09	8

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-03-01302024

Lab Sample ID: 480-216732-3

Date Collected: 01/30/24 14:00

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 69.5

Method: SW846 8260C - Volatile Organic Compounds by GC/MS - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	28000		610	120	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Bromodichloromethane	ND		610	120	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Bromoform	ND		610	310	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Bromomethane	ND		610	140	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Carbon disulfide	ND		610	280	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Carbon tetrachloride	ND		610	160	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Chlorobenzene	ND		610	81	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Chloroethane	ND		610	130	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Chloroform	ND		610	420	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Chloromethane	ND		610	150	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
cis-1,2-Dichloroethene	ND		610	170	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
cis-1,3-Dichloropropene	ND		610	150	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Cyclohexane	ND		610	140	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Dibromochloromethane	ND		610	300	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Dichlorodifluoromethane	ND		610	270	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Ethylbenzene	210 J		610	180	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Isopropylbenzene	ND		610	92	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
m,p-Xylene	600 J		1200	340	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Methyl acetate	ND		3100	290	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Methyl tert-butyl ether	ND		610	230	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Methylcyclohexane	ND		610	290	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Methylene Chloride	ND		610	120	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
o-Xylene	220 J		610	80	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Styrene	ND		610	150	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Tetrachloroethene	ND		610	83	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Toluene	ND		610	160	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
trans-1,2-Dichloroethene	ND		610	150	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
trans-1,3-Dichloropropene	ND		610	60	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Trichloroethene	ND		610	170	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Trichlorofluoromethane	ND		610	290	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Vinyl chloride	ND		610	210	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8
Xylenes, Total	820 J		1200	340	ug/Kg	✱	02/02/24 09:13	02/05/24 12:09	8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		53 - 146	02/02/24 09:13	02/05/24 12:09	8
4-Bromofluorobenzene (Surr)	97		49 - 148	02/02/24 09:13	02/05/24 12:09	8
Dibromofluoromethane (Surr)	91		60 - 140	02/02/24 09:13	02/05/24 12:09	8
Toluene-d8 (Surr)	99		50 - 149	02/02/24 09:13	02/05/24 12:09	8

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		140	78	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
2,4,5-Trichlorophenol	ND		240	65	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
2,4,6-Trichlorophenol	ND		240	48	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
2,4-Dichlorophenol	ND		240	26	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
2,4-Dimethylphenol	86 J		240	58	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
2,4-Dinitrophenol	ND		2400	1100	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
2,4-Dinitrotoluene	ND		240	50	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
2,6-Dinitrotoluene	ND		240	28	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
2-Chloronaphthalene	ND		240	40	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-03-01302024

Lab Sample ID: 480-216732-3

Date Collected: 01/30/24 14:00

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 69.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		470	44	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
2-Methylnaphthalene	ND		240	48	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
2-Methylphenol	59	J	240	28	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
2-Nitroaniline	ND		470	35	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
2-Nitrophenol	ND		240	68	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
3,3'-Dichlorobenzidine	ND		470	280	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
3-Nitroaniline	ND		470	67	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
4,6-Dinitro-2-methylphenol	ND		470	240	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
4-Bromophenyl phenyl ether	ND		240	34	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
4-Chloro-3-methylphenol	ND		240	60	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
4-Chloroaniline	ND		240	60	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
4-Chlorophenyl phenyl ether	ND		240	30	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
4-Methylphenol	ND		470	28	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
4-Nitroaniline	ND		470	130	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
4-Nitrophenol	ND		470	170	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Acenaphthene	ND		240	35	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Acenaphthylene	ND		240	31	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Acetophenone	ND		240	33	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Anthracene	ND		240	60	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Atrazine	ND		240	84	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Benzaldehyde	ND		240	190	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Benzo[a]anthracene	ND		240	24	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Benzo[a]pyrene	ND		240	35	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Benzo[b]fluoranthene	ND		240	38	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Benzo[g,h,i]perylene	ND		240	26	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Benzo[k]fluoranthene	ND		240	31	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Biphenyl	ND		240	35	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
bis (2-chloroisopropyl) ether	ND		240	48	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Bis(2-chloroethoxy)methane	ND		240	51	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Bis(2-chloroethyl)ether	ND		240	31	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Bis(2-ethylhexyl) phthalate	ND		240	82	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Butyl benzyl phthalate	ND		240	40	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Caprolactam	ND		240	72	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Carbazole	ND		240	28	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Chrysene	ND		240	54	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Dibenz(a,h)anthracene	ND		240	43	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Dibenzofuran	ND		240	28	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Diethyl phthalate	ND		240	31	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Dimethyl phthalate	ND		240	28	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Di-n-butyl phthalate	ND		240	41	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Di-n-octyl phthalate	ND		240	28	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Fluoranthene	ND		240	26	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Fluorene	ND		240	28	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Hexachlorobenzene	ND		240	33	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Hexachlorobutadiene	ND		240	35	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Hexachlorocyclopentadiene	ND		240	33	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Hexachloroethane	ND		240	31	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Indeno[1,2,3-cd]pyrene	ND		240	30	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1
Isophorone	ND		240	51	ug/Kg	☆	01/31/24 16:11	02/01/24 20:14	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-03-01302024

Lab Sample ID: 480-216732-3

Date Collected: 01/30/24 14:00

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 69.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	76	J	240	31	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
Nitrobenzene	ND		240	27	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
N-Nitrosodi-n-propylamine	ND		240	41	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
N-Nitrosodiphenylamine	ND		240	200	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
Pentachlorophenol	ND		470	240	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
Phenanthrene	ND		240	35	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
Phenol	ND		240	37	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1
Pyrene	ND		240	28	ug/Kg	✱	01/31/24 16:11	02/01/24 20:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	92		54 - 120	01/31/24 16:11	02/01/24 20:14	1
2-Fluorobiphenyl (Surr)	108		60 - 120	01/31/24 16:11	02/01/24 20:14	1
2-Fluorophenol (Surr)	91		52 - 120	01/31/24 16:11	02/01/24 20:14	1
Nitrobenzene-d5 (Surr)	104		53 - 120	01/31/24 16:11	02/01/24 20:14	1
Phenol-d5 (Surr)	97		54 - 120	01/31/24 16:11	02/01/24 20:14	1
p-Terphenyl-d14 (Surr)	131	S1+	79 - 130	01/31/24 16:11	02/01/24 20:14	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.040	0.0018	mg/L		02/02/24 13:57	02/05/24 17:24	1
2,4,5-Trichlorophenol	ND		0.020	0.0019	mg/L		02/02/24 13:57	02/05/24 17:24	1
2,4,6-Trichlorophenol	ND		0.020	0.0024	mg/L		02/02/24 13:57	02/05/24 17:24	1
2,4-Dinitrotoluene	ND		0.020	0.0017	mg/L		02/02/24 13:57	02/05/24 17:24	1
2-Methylphenol	0.0069	J	0.020	0.0016	mg/L		02/02/24 13:57	02/05/24 17:24	1
3-Methylphenol	0.0031	J	0.040	0.0016	mg/L		02/02/24 13:57	02/05/24 17:24	1
4-Methylphenol	0.0031	J	0.040	0.0014	mg/L		02/02/24 13:57	02/05/24 17:24	1
Hexachlorobenzene	ND		0.020	0.0020	mg/L		02/02/24 13:57	02/05/24 17:24	1
Hexachlorobutadiene	ND		0.020	0.0027	mg/L		02/02/24 13:57	02/05/24 17:24	1
Hexachloroethane	ND		0.020	0.0023	mg/L		02/02/24 13:57	02/05/24 17:24	1
Nitrobenzene	ND		0.020	0.0011	mg/L		02/02/24 13:57	02/05/24 17:24	1
Pentachlorophenol	ND		0.040	0.0088	mg/L		02/02/24 13:57	02/05/24 17:24	1
Pyridine	ND		0.10	0.0016	mg/L		02/02/24 13:57	02/05/24 17:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	87		41 - 120	02/02/24 13:57	02/05/24 17:24	1
2-Fluorobiphenyl (Surr)	89		48 - 120	02/02/24 13:57	02/05/24 17:24	1
2-Fluorophenol (Surr)	51		35 - 120	02/02/24 13:57	02/05/24 17:24	1
Nitrobenzene-d5 (Surr)	91		46 - 120	02/02/24 13:57	02/05/24 17:24	1
Phenol-d5 (Surr)	39		22 - 120	02/02/24 13:57	02/05/24 17:24	1
p-Terphenyl-d14 (Surr)	95		60 - 148	02/02/24 13:57	02/05/24 17:24	1

Method: SW846 8081B - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.0020	0.000029	mg/L		02/02/24 13:49	02/05/24 14:34	1
Endrin	ND		0.00020	0.000014	mg/L		02/02/24 13:49	02/05/24 14:34	1
gamma-BHC (Lindane)	ND		0.00020	0.0000060	mg/L		02/02/24 13:49	02/05/24 14:34	1
Heptachlor	ND		0.00020	0.0000085	mg/L		02/02/24 13:49	02/05/24 14:34	1
Heptachlor epoxide	ND		0.00020	0.0000053	mg/L		02/02/24 13:49	02/05/24 14:34	1
Methoxychlor	ND		0.00020	0.000014	mg/L		02/02/24 13:49	02/05/24 14:34	1
Toxaphene	ND		0.0020	0.00012	mg/L		02/02/24 13:49	02/05/24 14:34	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-03-01302024

Lab Sample ID: 480-216732-3

Date Collected: 01/30/24 14:00

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 69.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	55		20 - 120	02/02/24 13:49	02/05/24 14:34	1
DCB Decachlorobiphenyl (Surr)	67		20 - 120	02/02/24 13:49	02/05/24 14:34	1
Tetrachloro-m-xylene (Surr)	61		44 - 120	02/02/24 13:49	02/05/24 14:34	1
Tetrachloro-m-xylene (Surr)	66		44 - 120	02/02/24 13:49	02/05/24 14:34	1

Method: SW846 8151 - TCLP Herbicides - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.0020	0.00040	mg/L		02/02/24 09:11	02/05/24 15:23	1
Silvex (2,4,5-TP)	ND		0.0020	0.00036	mg/L		02/02/24 09:11	02/05/24 15:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	18	S1-	21 - 143	02/02/24 09:11	02/05/24 15:23	1
2,4-Dichlorophenylacetic acid (Surr)	17	S1-	21 - 143	02/02/24 09:11	02/05/24 15:23	1

Method: SW846 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.041		0.015	0.0056	mg/L		02/02/24 09:46	02/03/24 00:44	1
Barium	0.42 J		1.0	0.10	mg/L		02/02/24 09:46	02/03/24 00:44	1
Cadmium	ND		0.0020	0.00050	mg/L		02/02/24 09:46	02/03/24 00:44	1
Chromium	ND		0.020	0.010	mg/L		02/02/24 09:46	02/03/24 00:44	1
Lead	0.018 J B		0.020	0.0030	mg/L		02/02/24 09:46	02/03/24 00:44	1
Selenium	ND		0.025	0.0087	mg/L		02/02/24 09:46	02/03/24 00:44	1
Silver	ND		0.0060	0.0017	mg/L		02/02/24 09:46	02/03/24 00:44	1

Method: SW846 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000043	mg/L		02/02/24 11:25	02/02/24 16:02	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.060		0.029	0.0067	mg/Kg	☆	02/01/24 12:04	02/01/24 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive (SW846 9012)	ND		9.1	9.1	mg/Kg		02/01/24 11:40	02/02/24 13:32	1
Sulfide, Reactive (SW846 9034)	147		9.1	9.1	mg/Kg		02/01/24 11:40	02/02/24 16:25	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010A)	>180		50.0	50.0	Degrees F			02/01/24 09:04	1
pH (SW846 9045D)	8.3	HF	0.1	0.1	SU			02/02/24 13:43	1
Temperature (SW846 9045D)	17.9	HF	0.001	0.001	Degrees C			02/02/24 13:43	1

Client Sample ID: F-LOA-04-01302024

Lab Sample ID: 480-216732-4

Date Collected: 01/30/24 11:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 82.5

Method: SW846 8260C - TCLP Volatiles - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			02/05/24 15:04	10
1,2-Dichloroethane	ND		0.010	0.0021	mg/L			02/05/24 15:04	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			02/05/24 15:04	10
Benzene	ND		0.010	0.0041	mg/L			02/05/24 15:04	10
Carbon tetrachloride	ND		0.010	0.0027	mg/L			02/05/24 15:04	10

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-04-01302024

Lab Sample ID: 480-216732-4

Date Collected: 01/30/24 11:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 82.5

Method: SW846 8260C - TCLP Volatiles - TCLP (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.010	0.0075	mg/L			02/05/24 15:04	10
Chloroform	ND		0.010	0.0034	mg/L			02/05/24 15:04	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			02/05/24 15:04	10
Trichloroethene	ND		0.010	0.0046	mg/L			02/05/24 15:04	10
Vinyl chloride	ND		0.010	0.0090	mg/L			02/05/24 15:04	10

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		77 - 120					02/05/24 15:04	10
4-Bromofluorobenzene (Surr)	93		73 - 120					02/05/24 15:04	10
Dibromofluoromethane (Surr)	95		75 - 123					02/05/24 15:04	10
Toluene-d8 (Surr)	101		80 - 120					02/05/24 15:04	10

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		48	13	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,1,2,2-Tetrachloroethane	ND		48	7.8	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		48	24	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,1,2-Trichloroethane	ND		48	10	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,1-Dichloroethane	ND		48	15	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,1-Dichloroethene	ND		48	17	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,2,4-Trichlorobenzene	ND		48	18	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,2,4-Trimethylbenzene	160		48	13	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,2-Dibromo-3-Chloropropane	ND		48	24	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,2-Dibromoethane	ND		48	8.4	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,2-Dichlorobenzene	ND		48	12	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,2-Dichloroethane	ND		48	20	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,2-Dichloropropane	ND		48	7.8	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,3,5-Trimethylbenzene	110		48	14	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,3-Dichlorobenzene	ND		48	13	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
1,4-Dichlorobenzene	ND		48	6.7	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
2-Butanone (MEK)	ND		240	140	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
2-Hexanone	ND		240	98	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
4-Methyl-2-pentanone (MIBK)	ND		240	15	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Acetone	ND		240	200	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Benzene	730		48	9.1	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Bromodichloromethane	ND		48	9.6	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Bromoform	ND		48	24	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Bromomethane	ND		48	11	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Carbon disulfide	ND		48	22	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Carbon tetrachloride	ND		48	12	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Chlorobenzene	ND		48	6.3	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Chloroethane	ND		48	10	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Chloroform	ND		48	33	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Chloromethane	ND		48	11	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
cis-1,2-Dichloroethene	ND		48	13	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
cis-1,3-Dichloropropene	ND		48	11	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Cyclohexane	ND		48	11	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Dibromochloromethane	ND		48	23	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Dichlorodifluoromethane	ND		48	21	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1
Ethylbenzene	54		48	14	ug/Kg	✱	02/02/24 09:13	02/02/24 14:42	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-04-01302024

Lab Sample ID: 480-216732-4

Date Collected: 01/30/24 11:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 82.5

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		48	7.2	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
m,p-Xylene	500		96	27	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
Methyl acetate	ND		240	23	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
Methyl tert-butyl ether	ND		48	18	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
Methylcyclohexane	ND		48	22	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
Methylene Chloride	ND		48	9.5	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
o-Xylene	100		48	6.2	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
Styrene	72		48	12	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
Tetrachloroethene	ND		48	6.4	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
Toluene	470		48	13	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
trans-1,2-Dichloroethene	ND		48	11	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
trans-1,3-Dichloropropene	ND		48	4.7	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
Trichloroethene	ND		48	13	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
Trichlorofluoromethane	ND		48	22	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
Vinyl chloride	ND		48	16	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1
Xylenes, Total	600		96	27	ug/Kg	☆	02/02/24 09:13	02/02/24 14:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		53 - 146	02/02/24 09:13	02/02/24 14:42	1
4-Bromofluorobenzene (Surr)	94		49 - 148	02/02/24 09:13	02/02/24 14:42	1
Dibromofluoromethane (Surr)	89		60 - 140	02/02/24 09:13	02/02/24 14:42	1
Toluene-d8 (Surr)	99		50 - 149	02/02/24 09:13	02/02/24 14:42	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		120	66	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
2,4,5-Trichlorophenol	ND		210	56	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
2,4,6-Trichlorophenol	ND		210	41	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
2,4-Dichlorophenol	ND		210	22	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
2,4-Dimethylphenol	ND		210	50	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
2,4-Dinitrophenol	ND		2000	950	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
2,4-Dinitrotoluene	ND		210	42	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
2,6-Dinitrotoluene	ND		210	24	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
2-Chloronaphthalene	ND		210	34	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
2-Chlorophenol	ND		400	37	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
2-Methylnaphthalene	240		210	41	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
2-Methylphenol	35 J		210	24	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
2-Nitroaniline	ND		400	30	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
2-Nitrophenol	ND		210	58	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
3,3'-Dichlorobenzidine	ND		400	240	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
3-Nitroaniline	ND		400	57	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
4,6-Dinitro-2-methylphenol	ND		400	210	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
4-Bromophenyl phenyl ether	ND		210	29	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
4-Chloro-3-methylphenol	ND		210	51	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
4-Chloroaniline	ND		210	51	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
4-Chlorophenyl phenyl ether	ND		210	25	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
4-Methylphenol	66 J		400	24	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
4-Nitroaniline	ND		400	110	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
4-Nitrophenol	ND		400	140	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Acenaphthene	59 J		210	30	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-04-01302024

Lab Sample ID: 480-216732-4

Date Collected: 01/30/24 11:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 82.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	140	J	210	27	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Acetophenone	ND		210	28	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Anthracene	140	J	210	51	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Atrazine	ND		210	71	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Benzaldehyde	ND		210	160	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Benzo[a]anthracene	270		210	21	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Benzo[a]pyrene	290		210	30	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Benzo[b]fluoranthene	360		210	33	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Benzo[g,h,i]perylene	270		210	22	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Benzo[k]fluoranthene	160	J	210	27	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Biphenyl	41	J	210	30	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
bis (2-chloroisopropyl) ether	ND		210	41	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Bis(2-chloroethoxy)methane	ND		210	43	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Bis(2-chloroethyl)ether	ND		210	27	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Bis(2-ethylhexyl) phthalate	ND		210	70	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Butyl benzyl phthalate	ND	F1	210	34	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Caprolactam	ND		210	62	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Carbazole	56	J	210	24	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Chrysene	260		210	46	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Dibenz(a,h)anthracene	ND		210	36	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Dibenzofuran	110	J	210	24	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Diethyl phthalate	ND		210	27	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Dimethyl phthalate	ND		210	24	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Di-n-butyl phthalate	ND		210	35	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Di-n-octyl phthalate	ND		210	24	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Fluoranthene	470		210	22	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Fluorene	150	J	210	24	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Hexachlorobenzene	ND		210	28	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Hexachlorobutadiene	ND		210	30	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Hexachlorocyclopentadiene	ND		210	28	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Hexachloroethane	ND		210	27	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Indeno[1,2,3-cd]pyrene	200	J	210	25	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Isophorone	ND		210	43	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Naphthalene	8600	E	210	27	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Nitrobenzene	ND		210	23	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
N-Nitrosodi-n-propylamine	ND		210	35	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
N-Nitrosodiphenylamine	ND		210	170	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Pentachlorophenol	ND		400	210	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Phenanthrene	490		210	30	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Phenol	ND		210	31	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Pyrene	550		210	24	ug/Kg	☆	01/31/24 16:11	02/01/24 19:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	91		54 - 120				01/31/24 16:11	02/01/24 19:02	1
2-Fluorobiphenyl (Surr)	100		60 - 120				01/31/24 16:11	02/01/24 19:02	1
2-Fluorophenol (Surr)	81		52 - 120				01/31/24 16:11	02/01/24 19:02	1
Nitrobenzene-d5 (Surr)	93		53 - 120				01/31/24 16:11	02/01/24 19:02	1
Phenol-d5 (Surr)	87		54 - 120				01/31/24 16:11	02/01/24 19:02	1
p-Terphenyl-d14 (Surr)	108		79 - 130				01/31/24 16:11	02/01/24 19:02	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-04-01302024

Lab Sample ID: 480-216732-4

Date Collected: 01/30/24 11:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 82.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND	F1	1200	660	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
2,4,5-Trichlorophenol	ND		2100	560	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
2,4,6-Trichlorophenol	ND		2100	410	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
2,4-Dichlorophenol	ND		2100	220	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
2,4-Dimethylphenol	ND		2100	500	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
2,4-Dinitrophenol	ND		20000	9500	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
2,4-Dinitrotoluene	ND		2100	420	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
2,6-Dinitrotoluene	ND		2100	240	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
2-Chloronaphthalene	ND		2100	340	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
2-Chlorophenol	ND		4000	370	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
2-Methylnaphthalene	ND		2100	410	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
2-Methylphenol	ND		2100	240	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
2-Nitroaniline	ND		4000	300	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
2-Nitrophenol	ND		2100	580	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
3,3'-Dichlorobenzidine	ND		4000	2400	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
3-Nitroaniline	ND		4000	570	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
4,6-Dinitro-2-methylphenol	ND		4000	2100	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
4-Bromophenyl phenyl ether	ND		2100	290	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
4-Chloro-3-methylphenol	ND		2100	510	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
4-Chloroaniline	ND		2100	510	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
4-Chlorophenyl phenyl ether	ND		2100	250	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
4-Methylphenol	ND		4000	240	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
4-Nitroaniline	ND		4000	1100	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
4-Nitrophenol	ND		4000	1400	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Acenaphthene	ND		2100	300	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Acenaphthylene	ND		2100	270	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Acetophenone	ND		2100	280	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Anthracene	ND		2100	510	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Atrazine	ND		2100	710	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Benzaldehyde	ND		2100	1600	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Benzo[a]anthracene	280	J	2100	210	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Benzo[a]pyrene	300	J	2100	300	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Benzo[b]fluoranthene	520	J	2100	330	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Benzo[g,h,i]perylene	230	J	2100	220	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Benzo[k]fluoranthene	ND		2100	270	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Biphenyl	ND		2100	300	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
bis (2-chloroisopropyl) ether	ND		2100	410	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Bis(2-chloroethoxy)methane	ND		2100	430	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Bis(2-chloroethyl)ether	ND		2100	270	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Bis(2-ethylhexyl) phthalate	ND		2100	700	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Butyl benzyl phthalate	ND		2100	340	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Caprolactam	ND		2100	620	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Carbazole	ND		2100	240	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Chrysene	ND		2100	460	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Dibenz(a,h)anthracene	ND		2100	360	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Dibenzofuran	ND		2100	240	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Diethyl phthalate	ND		2100	270	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Dimethyl phthalate	ND		2100	240	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10
Di-n-butyl phthalate	ND		2100	350	ug/Kg	✱	01/31/24 16:11	02/02/24 13:29	10

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-04-01302024

Lab Sample ID: 480-216732-4

Date Collected: 01/30/24 11:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 82.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	ND		2100	240	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Fluoranthene	570	J	2100	220	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Fluorene	ND		2100	240	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Hexachlorobenzene	ND		2100	280	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Hexachlorobutadiene	ND		2100	300	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Hexachlorocyclopentadiene	ND		2100	280	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Hexachloroethane	ND		2100	270	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Indeno[1,2,3-cd]pyrene	ND		2100	250	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Isophorone	ND		2100	430	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Naphthalene	8200		2100	270	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Nitrobenzene	ND		2100	230	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
N-Nitrosodi-n-propylamine	ND		2100	350	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
N-Nitrosodiphenylamine	ND		2100	1700	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Pentachlorophenol	ND		4000	2100	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Phenanthrene	490	J	2100	300	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Phenol	ND		2100	310	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10
Pyrene	490	J	2100	240	ug/Kg	☆	01/31/24 16:11	02/02/24 13:29	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	63		54 - 120	01/31/24 16:11	02/02/24 13:29	10
2-Fluorobiphenyl (Surr)	78		60 - 120	01/31/24 16:11	02/02/24 13:29	10
2-Fluorophenol (Surr)	77		52 - 120	01/31/24 16:11	02/02/24 13:29	10
Nitrobenzene-d5 (Surr)	73		53 - 120	01/31/24 16:11	02/02/24 13:29	10
Phenol-d5 (Surr)	70		54 - 120	01/31/24 16:11	02/02/24 13:29	10
p-Terphenyl-d14 (Surr)	84		79 - 130	01/31/24 16:11	02/02/24 13:29	10

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.050	0.0023	mg/L		02/02/24 13:57	02/05/24 17:49	1
2,4,5-Trichlorophenol	ND		0.025	0.0024	mg/L		02/02/24 13:57	02/05/24 17:49	1
2,4,6-Trichlorophenol	ND		0.025	0.0030	mg/L		02/02/24 13:57	02/05/24 17:49	1
2,4-Dinitrotoluene	ND		0.025	0.0021	mg/L		02/02/24 13:57	02/05/24 17:49	1
2-Methylphenol	ND		0.025	0.0020	mg/L		02/02/24 13:57	02/05/24 17:49	1
3-Methylphenol	ND		0.050	0.0020	mg/L		02/02/24 13:57	02/05/24 17:49	1
4-Methylphenol	ND		0.050	0.0018	mg/L		02/02/24 13:57	02/05/24 17:49	1
Hexachlorobenzene	ND		0.025	0.0025	mg/L		02/02/24 13:57	02/05/24 17:49	1
Hexachlorobutadiene	ND		0.025	0.0034	mg/L		02/02/24 13:57	02/05/24 17:49	1
Hexachloroethane	ND		0.025	0.0029	mg/L		02/02/24 13:57	02/05/24 17:49	1
Nitrobenzene	ND		0.025	0.0014	mg/L		02/02/24 13:57	02/05/24 17:49	1
Pentachlorophenol	ND		0.050	0.011	mg/L		02/02/24 13:57	02/05/24 17:49	1
Pyridine	ND		0.13	0.0020	mg/L		02/02/24 13:57	02/05/24 17:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	84		41 - 120	02/02/24 13:57	02/05/24 17:49	1
2-Fluorobiphenyl (Surr)	97		48 - 120	02/02/24 13:57	02/05/24 17:49	1
2-Fluorophenol (Surr)	57		35 - 120	02/02/24 13:57	02/05/24 17:49	1
Nitrobenzene-d5 (Surr)	100		46 - 120	02/02/24 13:57	02/05/24 17:49	1
Phenol-d5 (Surr)	40		22 - 120	02/02/24 13:57	02/05/24 17:49	1
p-Terphenyl-d14 (Surr)	104		60 - 148	02/02/24 13:57	02/05/24 17:49	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-04-01302024

Lab Sample ID: 480-216732-4

Date Collected: 01/30/24 11:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 82.5

Method: SW846 8081B - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.0025	0.000036	mg/L		02/02/24 13:49	02/05/24 14:53	1
Endrin	ND		0.00025	0.000017	mg/L		02/02/24 13:49	02/05/24 14:53	1
gamma-BHC (Lindane)	ND		0.00025	0.0000075	mg/L		02/02/24 13:49	02/05/24 14:53	1
Heptachlor	ND		0.00025	0.000011	mg/L		02/02/24 13:49	02/05/24 14:53	1
Heptachlor epoxide	ND		0.00025	0.0000066	mg/L		02/02/24 13:49	02/05/24 14:53	1
Methoxychlor	ND		0.00025	0.000018	mg/L		02/02/24 13:49	02/05/24 14:53	1
Toxaphene	ND		0.0025	0.00015	mg/L		02/02/24 13:49	02/05/24 14:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	64		20 - 120	02/02/24 13:49	02/05/24 14:53	1
DCB Decachlorobiphenyl (Surr)	81		20 - 120	02/02/24 13:49	02/05/24 14:53	1
Tetrachloro-m-xylene (Surr)	61		44 - 120	02/02/24 13:49	02/05/24 14:53	1
Tetrachloro-m-xylene (Surr)	69		44 - 120	02/02/24 13:49	02/05/24 14:53	1

Method: SW846 8151 - TCLP Herbicides - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.0025	0.00050	mg/L		02/02/24 09:11	02/05/24 15:42	1
Silvex (2,4,5-TP)	ND		0.0025	0.00045	mg/L		02/02/24 09:11	02/05/24 15:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	17	S1-	21 - 143	02/02/24 09:11	02/05/24 15:42	1
2,4-Dichlorophenylacetic acid (Surr)	19	S1-	21 - 143	02/02/24 09:11	02/05/24 15:42	1

Method: EPA Draft 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.97	0.045	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluoropentanoic acid (PFPeA)	ND		0.48	0.025	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorohexanoic acid (PFHxA)	ND		0.24	0.025	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluoroheptanoic acid (PFHpA)	ND		0.24	0.027	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorooctanoic acid (PFOA)	ND		0.24	0.051	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorononanoic acid (PFNA)	ND		0.24	0.015	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorodecanoic acid (PFDA)	ND		0.24	0.091	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluoroundecanoic acid (PFUnA)	ND		0.24	0.034	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorododecanoic acid (PFDoA)	ND		0.24	0.068	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorotridecanoic acid (PFTriA)	ND		0.24	0.034	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorotetradecanoic acid (PFTeDA)	ND		0.24	0.021	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.24	0.017	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.24	0.016	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.24	0.024	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.24	0.034	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.24	0.068	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorononanesulfonic acid (PFNS)	ND		0.24	0.034	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.24	0.024	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.24	0.021	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
4:2 FTS	ND		0.97	0.093	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
6:2 FTS	ND		0.97	0.59	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
8:2 FTS	ND		0.97	0.14	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
Perfluorooctanesulfonamide (PFOSA)	ND		0.24	0.015	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-04-01302024

Lab Sample ID: 480-216732-4

Date Collected: 01/30/24 11:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 82.5

Method: EPA Draft 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NMeFOSA	ND		0.24	0.029	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
NEtFOSA	ND		0.24	0.038	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
NMeFOSAA	ND		0.24	0.030	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
NEtFOSAA	ND		0.24	0.029	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
NMeFOSE	ND		2.4	0.12	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
NEtFOSE	ND		2.4	0.13	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
HFPO-DA (GenX)	ND		0.97	0.11	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.97	0.098	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
PFMBA	ND		0.48	0.023	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
NFDHA	ND		0.48	0.058	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
PFMPA	ND		0.48	0.11	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
9CI-PF3ONS	ND		0.97	0.062	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
11CI-PF3OUdS	ND		0.97	0.15	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
PFEESA	ND		0.48	0.048	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
3:3 FTCA	ND		1.2	0.21	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
5:3 FTCA	ND		6.1	0.44	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1
7:3 FTCA	ND		6.1	0.37	ug/Kg	☆	02/09/24 09:10	02/14/24 03:50	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	76		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C5 PFPeA	74		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C5 PFHxA	76		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C4 PFHpA	76		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C8 PFOA	80		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C9 PFNA	81		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C6 PFDA	76		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C7 PFUnA	72		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C2 PFDoA	69		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C2 PFTeDA	56		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C3 PFBS	80		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C3 PFHxS	74		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C8 PFOS	70		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C8 FOSA	81		20 - 150	02/09/24 09:10	02/14/24 03:50	1
d3-NMeFOSAA	72		20 - 150	02/09/24 09:10	02/14/24 03:50	1
d5-NEtFOSAA	74		20 - 150	02/09/24 09:10	02/14/24 03:50	1
M2-4:2 FTS	72		20 - 150	02/09/24 09:10	02/14/24 03:50	1
M2-6:2 FTS	78		20 - 150	02/09/24 09:10	02/14/24 03:50	1
M2-8:2 FTS	71		20 - 150	02/09/24 09:10	02/14/24 03:50	1
13C3 HFPO-DA	80		20 - 150	02/09/24 09:10	02/14/24 03:50	1
d7-N-MeFOSE-M	61		20 - 150	02/09/24 09:10	02/14/24 03:50	1
d9-N-EtFOSE-M	62		20 - 150	02/09/24 09:10	02/14/24 03:50	1
d5-NEtPFOSA	49		20 - 150	02/09/24 09:10	02/14/24 03:50	1
d3-NMePFOSA	51		20 - 150	02/09/24 09:10	02/14/24 03:50	1

Method: SW846 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		02/02/24 09:46	02/03/24 00:48	1
Barium	0.87	J	1.0	0.10	mg/L		02/02/24 09:46	02/03/24 00:48	1
Cadmium	ND		0.0020	0.00050	mg/L		02/02/24 09:46	02/03/24 00:48	1
Chromium	ND		0.020	0.010	mg/L		02/02/24 09:46	02/03/24 00:48	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-04-01302024

Lab Sample ID: 480-216732-4

Date Collected: 01/30/24 11:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 82.5

Method: SW846 6010C - Metals (ICP) - TCLP (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.012	J B	0.020	0.0030	mg/L		02/02/24 09:46	02/03/24 00:48	1
Selenium	ND		0.025	0.0087	mg/L		02/02/24 09:46	02/03/24 00:48	1
Silver	ND		0.0060	0.0017	mg/L		02/02/24 09:46	02/03/24 00:48	1

Method: SW846 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000043	mg/L		02/02/24 11:25	02/02/24 16:04	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.38		0.025	0.0058	mg/Kg	☼	02/01/24 12:04	02/01/24 14:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive (SW846 9012)	ND		9.4	9.4	mg/Kg		02/01/24 11:40	02/02/24 13:34	1
Sulfide, Reactive (SW846 9034)	ND		9.4	9.4	mg/Kg		02/01/24 11:40	02/02/24 16:25	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010A)	>180		50.0	50.0	Degrees F			02/01/24 09:04	1
pH (SW846 9045D)	9.2	HF	0.1	0.1	SU			02/02/24 13:43	1
Temperature (SW846 9045D)	17.9	HF	0.001	0.001	Degrees C			02/02/24 13:43	1

Client Sample ID: F-LOA-05-01302024

Lab Sample ID: 480-216732-5

Date Collected: 01/30/24 13:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 76.3

Method: SW846 8260C - TCLP Volatiles - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			02/05/24 15:27	10
1,2-Dichloroethane	ND		0.010	0.0021	mg/L			02/05/24 15:27	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			02/05/24 15:27	10
Benzene	ND		0.010	0.0041	mg/L			02/05/24 15:27	10
Carbon tetrachloride	ND		0.010	0.0027	mg/L			02/05/24 15:27	10
Chlorobenzene	ND		0.010	0.0075	mg/L			02/05/24 15:27	10
Chloroform	ND		0.010	0.0034	mg/L			02/05/24 15:27	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			02/05/24 15:27	10
Trichloroethene	ND		0.010	0.0046	mg/L			02/05/24 15:27	10
Vinyl chloride	ND		0.010	0.0090	mg/L			02/05/24 15:27	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		77 - 120		02/05/24 15:27	10
4-Bromofluorobenzene (Surr)	97		73 - 120		02/05/24 15:27	10
Dibromofluoromethane (Surr)	90		75 - 123		02/05/24 15:27	10
Toluene-d8 (Surr)	100		80 - 120		02/05/24 15:27	10

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.4	0.32	ug/Kg	☼	01/31/24 16:00	01/31/24 22:27	1
1,1,2,2-Tetrachloroethane	ND		4.4	0.71	ug/Kg	☼	01/31/24 16:00	01/31/24 22:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.4	1.0	ug/Kg	☼	01/31/24 16:00	01/31/24 22:27	1
1,1,2-Trichloroethane	ND		4.4	0.57	ug/Kg	☼	01/31/24 16:00	01/31/24 22:27	1
1,1-Dichloroethane	ND		4.4	0.54	ug/Kg	☼	01/31/24 16:00	01/31/24 22:27	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-05-01302024

Lab Sample ID: 480-216732-5

Date Collected: 01/30/24 13:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 76.3

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		4.4	0.54	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
1,2,4-Trichlorobenzene	ND		4.4	0.27	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
1,2,4-Trimethylbenzene	3.6	J	4.4	0.84	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
1,2-Dibromo-3-Chloropropane	ND		4.4	2.2	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
1,2-Dibromoethane	ND		4.4	0.56	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
1,2-Dichlorobenzene	ND		4.4	0.34	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
1,2-Dichloroethane	ND		4.4	0.22	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
1,2-Dichloropropane	ND		4.4	2.2	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
1,3,5-Trimethylbenzene	3.5	J	4.4	0.28	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
1,3-Dichlorobenzene	ND		4.4	0.23	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
1,4-Dichlorobenzene	ND		4.4	0.61	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
2-Butanone (MEK)	3.0	J	22	1.6	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
2-Hexanone	ND		22	2.2	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
4-Methyl-2-pentanone (MIBK)	ND		22	1.4	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Acetone	40		22	3.7	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Benzene	3.5	J	4.4	0.22	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Bromodichloromethane	ND		4.4	0.59	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Bromoform	ND		4.4	2.2	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Bromomethane	ND		4.4	0.39	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Carbon disulfide	ND		4.4	2.2	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Carbon tetrachloride	ND		4.4	0.42	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Chlorobenzene	ND		4.4	0.58	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Chloroethane	ND		4.4	0.99	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Chloroform	ND		4.4	0.27	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Chloromethane	ND		4.4	0.27	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
cis-1,2-Dichloroethene	ND		4.4	0.56	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
cis-1,3-Dichloropropene	ND		4.4	0.63	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Cyclohexane	ND		4.4	0.61	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Dibromochloromethane	ND		4.4	0.56	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Dichlorodifluoromethane	ND		4.4	0.36	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Ethylbenzene	1.6	J	4.4	0.30	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Isopropylbenzene	ND		4.4	0.66	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
m,p-Xylene	19		8.8	0.74	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Methyl acetate	ND		22	2.7	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Methyl tert-butyl ether	ND		4.4	0.43	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Methylcyclohexane	ND		4.4	0.67	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Methylene Chloride	ND		4.4	2.0	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
o-Xylene	7.6		4.4	0.57	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Styrene	ND		4.4	0.22	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Tetrachloroethene	ND		4.4	0.59	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Toluene	3.1	J	4.4	0.33	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
trans-1,2-Dichloroethene	ND		4.4	0.45	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
trans-1,3-Dichloropropene	ND		4.4	1.9	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Trichloroethene	ND		4.4	0.97	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Trichlorofluoromethane	ND		4.4	0.42	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Vinyl chloride	ND		4.4	0.54	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1
Xylenes, Total	27		8.8	0.74	ug/Kg	☆	01/31/24 16:00	01/31/24 22:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		64 - 126	01/31/24 16:00	01/31/24 22:27	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-05-01302024

Lab Sample ID: 480-216732-5

Date Collected: 01/30/24 13:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 76.3

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		72 - 126	01/31/24 16:00	01/31/24 22:27	1
Dibromofluoromethane (Surr)	106		60 - 140	01/31/24 16:00	01/31/24 22:27	1
Toluene-d8 (Surr)	97		71 - 125	01/31/24 16:00	01/31/24 22:27	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		130	70	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
2,4,5-Trichlorophenol	ND		220	59	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
2,4,6-Trichlorophenol	ND		220	43	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
2,4-Dichlorophenol	ND		220	23	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
2,4-Dimethylphenol	ND		220	52	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
2,4-Dinitrophenol	ND		2100	1000	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
2,4-Dinitrotoluene	ND		220	45	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
2,6-Dinitrotoluene	ND		220	25	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
2-Chloronaphthalene	ND		220	36	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
2-Chlorophenol	ND		420	39	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
2-Methylnaphthalene	160	J	220	43	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
2-Methylphenol	ND		220	25	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
2-Nitroaniline	ND		420	32	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
2-Nitrophenol	ND		220	61	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
3,3'-Dichlorobenzidine	ND		420	250	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
3-Nitroaniline	ND		420	60	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
4,6-Dinitro-2-methylphenol	ND		420	220	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
4-Bromophenyl phenyl ether	ND		220	31	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
4-Chloro-3-methylphenol	ND		220	53	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
4-Chloroaniline	ND		220	53	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
4-Chlorophenyl phenyl ether	ND		220	27	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
4-Methylphenol	31	J	420	25	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
4-Nitroaniline	ND		420	110	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
4-Nitrophenol	ND		420	150	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Acenaphthene	ND		220	32	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Acenaphthylene	78	J	220	28	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Acetophenone	ND		220	29	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Anthracene	92	J	220	53	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Atrazine	ND		220	75	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Benzaldehyde	ND		220	170	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Benzo[a]anthracene	120	J	220	22	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Benzo[a]pyrene	110	J	220	32	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Benzo[b]fluoranthene	130	J	220	34	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Benzo[g,h,i]perylene	95	J	220	23	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Benzo[k]fluoranthene	67	J	220	28	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Biphenyl	ND		220	32	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
bis (2-chloroisopropyl) ether	ND		220	43	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Bis(2-chloroethoxy)methane	ND		220	46	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Bis(2-chloroethyl)ether	ND		220	28	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Bis(2-ethylhexyl) phthalate	ND		220	74	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Butyl benzyl phthalate	ND		220	36	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Caprolactam	ND		220	65	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Carbazole	32	J	220	25	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-05-01302024

Lab Sample ID: 480-216732-5

Date Collected: 01/30/24 13:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 76.3

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	150	J	220	48	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Dibenz(a,h)anthracene	ND		220	38	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Dibenzofuran	67	J	220	25	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Diethyl phthalate	ND		220	28	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Dimethyl phthalate	ND		220	25	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Di-n-butyl phthalate	ND		220	37	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Di-n-octyl phthalate	ND		220	25	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Fluoranthene	230		220	23	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Fluorene	98	J	220	25	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Hexachlorobenzene	ND		220	29	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Hexachlorobutadiene	ND		220	32	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Hexachlorocyclopentadiene	ND		220	29	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Hexachloroethane	ND		220	28	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Indeno[1,2,3-cd]pyrene	77	J	220	27	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Isophorone	ND		220	46	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Naphthalene	2500		220	28	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Nitrobenzene	ND		220	24	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
N-Nitrosodi-n-propylamine	ND		220	37	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
N-Nitrosodiphenylamine	ND		220	180	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Pentachlorophenol	ND		420	220	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Phenanthrene	320		220	32	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Phenol	ND		220	33	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1
Pyrene	240		220	25	ug/Kg	☆	01/31/24 16:11	02/01/24 20:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	82		54 - 120	01/31/24 16:11	02/01/24 20:38	1
2-Fluorobiphenyl (Surr)	105		60 - 120	01/31/24 16:11	02/01/24 20:38	1
2-Fluorophenol (Surr)	87		52 - 120	01/31/24 16:11	02/01/24 20:38	1
Nitrobenzene-d5 (Surr)	101		53 - 120	01/31/24 16:11	02/01/24 20:38	1
Phenol-d5 (Surr)	93		54 - 120	01/31/24 16:11	02/01/24 20:38	1
p-Terphenyl-d14 (Surr)	115		79 - 130	01/31/24 16:11	02/01/24 20:38	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.10	0.0045	mg/L		02/02/24 13:57	02/05/24 18:13	1
2,4,5-Trichlorophenol	ND		0.050	0.0048	mg/L		02/02/24 13:57	02/05/24 18:13	1
2,4,6-Trichlorophenol	ND		0.050	0.0060	mg/L		02/02/24 13:57	02/05/24 18:13	1
2,4-Dinitrotoluene	ND		0.050	0.0043	mg/L		02/02/24 13:57	02/05/24 18:13	1
2-Methylphenol	ND		0.050	0.0040	mg/L		02/02/24 13:57	02/05/24 18:13	1
3-Methylphenol	ND		0.10	0.0040	mg/L		02/02/24 13:57	02/05/24 18:13	1
4-Methylphenol	ND		0.10	0.0035	mg/L		02/02/24 13:57	02/05/24 18:13	1
Hexachlorobenzene	ND		0.050	0.0050	mg/L		02/02/24 13:57	02/05/24 18:13	1
Hexachlorobutadiene	ND		0.050	0.0068	mg/L		02/02/24 13:57	02/05/24 18:13	1
Hexachloroethane	ND		0.050	0.0058	mg/L		02/02/24 13:57	02/05/24 18:13	1
Nitrobenzene	ND		0.050	0.0028	mg/L		02/02/24 13:57	02/05/24 18:13	1
Pentachlorophenol	ND		0.10	0.022	mg/L		02/02/24 13:57	02/05/24 18:13	1
Pyridine	ND		0.25	0.0040	mg/L		02/02/24 13:57	02/05/24 18:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	78		41 - 120	02/02/24 13:57	02/05/24 18:13	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-05-01302024

Lab Sample ID: 480-216732-5

Date Collected: 01/30/24 13:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 76.3

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	89		48 - 120	02/02/24 13:57	02/05/24 18:13	1
2-Fluorophenol (Surr)	54		35 - 120	02/02/24 13:57	02/05/24 18:13	1
Nitrobenzene-d5 (Surr)	92		46 - 120	02/02/24 13:57	02/05/24 18:13	1
Phenol-d5 (Surr)	39		22 - 120	02/02/24 13:57	02/05/24 18:13	1
p-Terphenyl-d14 (Surr)	100		60 - 148	02/02/24 13:57	02/05/24 18:13	1

Method: SW846 8081B - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.0050	0.000073	mg/L		02/02/24 13:49	02/05/24 15:13	1
Endrin	ND		0.00050	0.000035	mg/L		02/02/24 13:49	02/05/24 15:13	1
gamma-BHC (Lindane)	ND		0.00050	0.000015	mg/L		02/02/24 13:49	02/05/24 15:13	1
Heptachlor	ND		0.00050	0.000021	mg/L		02/02/24 13:49	02/05/24 15:13	1
Heptachlor epoxide	ND		0.00050	0.000013	mg/L		02/02/24 13:49	02/05/24 15:13	1
Methoxychlor	ND		0.00050	0.000035	mg/L		02/02/24 13:49	02/05/24 15:13	1
Toxaphene	ND		0.0050	0.00030	mg/L		02/02/24 13:49	02/05/24 15:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	64		20 - 120	02/02/24 13:49	02/05/24 15:13	1
DCB Decachlorobiphenyl (Surr)	81		20 - 120	02/02/24 13:49	02/05/24 15:13	1
Tetrachloro-m-xylene (Surr)	78		44 - 120	02/02/24 13:49	02/05/24 15:13	1
Tetrachloro-m-xylene (Surr)	76		44 - 120	02/02/24 13:49	02/05/24 15:13	1

Method: SW846 8151 - TCLP Herbicides - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.0050	0.0010	mg/L		02/02/24 09:11	02/05/24 16:00	1
Silvex (2,4,5-TP)	ND		0.0050	0.00090	mg/L		02/02/24 09:11	02/05/24 16:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	43		21 - 143	02/02/24 09:11	02/05/24 16:00	1
2,4-Dichlorophenylacetic acid (Surr)	21		21 - 143	02/02/24 09:11	02/05/24 16:00	1

Method: SW846 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0070	J	0.015	0.0056	mg/L		02/02/24 09:46	02/03/24 00:52	1
Barium	0.62	J	1.0	0.10	mg/L		02/02/24 09:46	02/03/24 00:52	1
Cadmium	ND		0.0020	0.00050	mg/L		02/02/24 09:46	02/03/24 00:52	1
Chromium	ND		0.020	0.010	mg/L		02/02/24 09:46	02/03/24 00:52	1
Lead	0.019	J B	0.020	0.0030	mg/L		02/02/24 09:46	02/03/24 00:52	1
Selenium	ND		0.025	0.0087	mg/L		02/02/24 09:46	02/03/24 00:52	1
Silver	ND		0.0060	0.0017	mg/L		02/02/24 09:46	02/03/24 00:52	1

Method: SW846 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000043	mg/L		02/02/24 11:25	02/02/24 16:05	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.087		0.024	0.0056	mg/Kg	☆	02/01/24 12:04	02/01/24 14:34	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-05-01302024

Lab Sample ID: 480-216732-5

Date Collected: 01/30/24 13:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 76.3

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive (SW846 9012)	ND		9.8	9.8	mg/Kg		02/01/24 11:40	02/02/24 13:35	1
Sulfide, Reactive (SW846 9034)	19.5		9.8	9.8	mg/Kg		02/01/24 11:40	02/02/24 16:25	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010A)	>180		50.0	50.0	Degrees F			02/01/24 09:04	1
pH (SW846 9045D)	8.8	HF	0.1	0.1	SU			02/02/24 13:43	1
Temperature (SW846 9045D)	17.8	HF	0.001	0.001	Degrees C			02/02/24 13:43	1

Client Sample ID: F-LOA-06-01302024

Lab Sample ID: 480-216732-6

Date Collected: 01/30/24 11:30

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 76.1

Method: SW846 8260C - TCLP Volatiles - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			02/05/24 15:49	10
1,2-Dichloroethene	ND		0.010	0.0021	mg/L			02/05/24 15:49	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			02/05/24 15:49	10
Benzene	0.019		0.010	0.0041	mg/L			02/05/24 15:49	10
Carbon tetrachloride	ND		0.010	0.0027	mg/L			02/05/24 15:49	10
Chlorobenzene	ND		0.010	0.0075	mg/L			02/05/24 15:49	10
Chloroform	ND		0.010	0.0034	mg/L			02/05/24 15:49	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			02/05/24 15:49	10
Trichloroethene	ND		0.010	0.0046	mg/L			02/05/24 15:49	10
Vinyl chloride	ND		0.010	0.0090	mg/L			02/05/24 15:49	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		77 - 120					02/05/24 15:49	10
4-Bromofluorobenzene (Surr)	97		73 - 120					02/05/24 15:49	10
Dibromofluoromethane (Surr)	95		75 - 123					02/05/24 15:49	10
Toluene-d8 (Surr)	106		80 - 120					02/05/24 15:49	10

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		56	16	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,1,2,2-Tetrachloroethane	ND		56	9.2	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		56	28	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,1,2-Trichloroethane	ND		56	12	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,1-Dichloroethane	ND		56	17	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,1-Dichloroethene	ND		56	20	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,2,4-Trichlorobenzene	ND		56	21	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,2,4-Trimethylbenzene	310		56	16	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,2-Dibromo-3-Chloropropane	ND		56	28	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,2-Dibromoethane	ND		56	9.9	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,2-Dichlorobenzene	ND		56	14	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,2-Dichloroethane	ND		56	23	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,2-Dichloropropane	ND		56	9.1	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,3,5-Trimethylbenzene	190		56	17	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,3-Dichlorobenzene	ND		56	15	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
1,4-Dichlorobenzene	ND		56	7.9	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
2-Butanone (MEK)	ND		280	170	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1
2-Hexanone	ND		280	120	ug/Kg	✧	02/02/24 09:13	02/02/24 15:05	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-06-01302024

Lab Sample ID: 480-216732-6

Date Collected: 01/30/24 11:30

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 76.1

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		280	18	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Acetone	ND		280	230	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Benzene	1600		56	11	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Bromodichloromethane	ND		56	11	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Bromoform	ND		56	28	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Bromomethane	ND		56	12	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Carbon disulfide	ND		56	26	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Carbon tetrachloride	ND		56	14	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Chlorobenzene	ND		56	7.4	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Chloroethane	ND		56	12	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Chloroform	ND		56	39	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Chloromethane	14 J		56	13	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
cis-1,2-Dichloroethene	ND		56	16	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
cis-1,3-Dichloropropene	ND		56	13	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Cyclohexane	ND		56	13	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Dibromochloromethane	ND		56	27	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Dichlorodifluoromethane	ND		56	25	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Ethylbenzene	87		56	16	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Isopropylbenzene	9.0 J		56	8.5	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
m,p-Xylene	830		110	31	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Methyl acetate	81 J		280	27	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Methyl tert-butyl ether	ND		56	21	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Methylcyclohexane	ND		56	26	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Methylene Chloride	ND		56	11	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
o-Xylene	190		56	7.3	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Styrene	99		56	14	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Tetrachloroethene	ND		56	7.6	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Toluene	730		56	15	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
trans-1,2-Dichloroethene	ND		56	13	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
trans-1,3-Dichloropropene	ND		56	5.5	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Trichloroethene	ND		56	16	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Trichlorofluoromethane	ND		56	26	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Vinyl chloride	ND		56	19	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1
Xylenes, Total	1000		110	31	ug/Kg	☆	02/02/24 09:13	02/02/24 15:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		53 - 146	02/02/24 09:13	02/02/24 15:05	1
4-Bromofluorobenzene (Surr)	95		49 - 148	02/02/24 09:13	02/02/24 15:05	1
Dibromofluoromethane (Surr)	88		60 - 140	02/02/24 09:13	02/02/24 15:05	1
Toluene-d8 (Surr)	99		50 - 149	02/02/24 09:13	02/02/24 15:05	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		130	71	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
2,4,5-Trichlorophenol	ND		220	59	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
2,4,6-Trichlorophenol	ND		220	44	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
2,4-Dichlorophenol	ND		220	23	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
2,4-Dimethylphenol	ND		220	53	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
2,4-Dinitrophenol	ND		2100	1000	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
2,4-Dinitrotoluene	ND		220	45	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-06-01302024

Lab Sample ID: 480-216732-6

Date Collected: 01/30/24 11:30

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 76.1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		220	26	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
2-Chloronaphthalene	ND		220	36	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
2-Chlorophenol	ND		420	40	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
2-Methylnaphthalene	82	J	220	44	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
2-Methylphenol	43	J	220	26	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
2-Nitroaniline	ND		420	32	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
2-Nitrophenol	ND		220	62	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
3,3'-Dichlorobenzidine	ND		420	260	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
3-Nitroaniline	ND		420	60	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
4,6-Dinitro-2-methylphenol	ND		420	220	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
4-Bromophenyl phenyl ether	ND		220	31	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
4-Chloro-3-methylphenol	ND		220	54	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
4-Chloroaniline	ND		220	54	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
4-Chlorophenyl phenyl ether	ND		220	27	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
4-Methylphenol	100	J	420	26	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
4-Nitroaniline	ND		420	110	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
4-Nitrophenol	ND		420	150	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Acenaphthene	ND		220	32	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Acenaphthylene	66	J	220	28	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Acetophenone	ND		220	30	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Anthracene	67	J	220	54	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Atrazine	ND		220	76	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Benzaldehyde	ND		220	170	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Benzo[a]anthracene	160	J	220	22	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Benzo[a]pyrene	150	J	220	32	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Benzo[b]fluoranthene	190	J	220	35	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Benzo[g,h,i]perylene	140	J	220	23	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Benzo[k]fluoranthene	87	J	220	28	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Biphenyl	ND		220	32	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
bis (2-chloroisopropyl) ether	ND		220	44	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Bis(2-chloroethoxy)methane	ND		220	46	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Bis(2-chloroethyl)ether	ND		220	28	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Bis(2-ethylhexyl) phthalate	ND		220	75	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Butyl benzyl phthalate	ND		220	36	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Caprolactam	ND		220	66	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Carbazole	ND		220	26	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Chrysene	160	J	220	49	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Dibenz(a,h)anthracene	ND		220	39	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Dibenzofuran	40	J	220	26	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Diethyl phthalate	ND		220	28	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Dimethyl phthalate	ND		220	26	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Di-n-butyl phthalate	ND		220	37	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Di-n-octyl phthalate	ND		220	26	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Fluoranthene	260		220	23	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Fluorene	58	J	220	26	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Hexachlorobenzene	ND		220	30	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Hexachlorobutadiene	ND		220	32	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Hexachlorocyclopentadiene	ND		220	30	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1
Hexachloroethane	ND		220	28	ug/Kg	✱	01/31/24 16:11	02/01/24 21:03	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-06-01302024

Lab Sample ID: 480-216732-6

Date Collected: 01/30/24 11:30

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 76.1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	110	J	220	27	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
Isophorone	ND		220	46	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
Naphthalene	720		220	28	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
Nitrobenzene	ND		220	24	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
N-Nitrosodi-n-propylamine	ND		220	37	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
N-Nitrosodiphenylamine	ND		220	180	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
Pentachlorophenol	ND		420	220	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
Phenanthrene	210	J	220	32	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
Phenol	230		220	33	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1
Pyrene	300		220	26	ug/Kg	☆	01/31/24 16:11	02/01/24 21:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	92		54 - 120	01/31/24 16:11	02/01/24 21:03	1
2-Fluorobiphenyl (Surr)	110		60 - 120	01/31/24 16:11	02/01/24 21:03	1
2-Fluorophenol (Surr)	88		52 - 120	01/31/24 16:11	02/01/24 21:03	1
Nitrobenzene-d5 (Surr)	100		53 - 120	01/31/24 16:11	02/01/24 21:03	1
Phenol-d5 (Surr)	96		54 - 120	01/31/24 16:11	02/01/24 21:03	1
p-Terphenyl-d14 (Surr)	116		79 - 130	01/31/24 16:11	02/01/24 21:03	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.050	0.0023	mg/L		02/02/24 13:57	02/05/24 18:38	1
2,4,5-Trichlorophenol	ND		0.025	0.0024	mg/L		02/02/24 13:57	02/05/24 18:38	1
2,4,6-Trichlorophenol	ND		0.025	0.0030	mg/L		02/02/24 13:57	02/05/24 18:38	1
2,4-Dinitrotoluene	ND		0.025	0.0021	mg/L		02/02/24 13:57	02/05/24 18:38	1
2-Methylphenol	0.0030	J	0.025	0.0020	mg/L		02/02/24 13:57	02/05/24 18:38	1
3-Methylphenol	0.0056	J	0.050	0.0020	mg/L		02/02/24 13:57	02/05/24 18:38	1
4-Methylphenol	0.0056	J	0.050	0.0018	mg/L		02/02/24 13:57	02/05/24 18:38	1
Hexachlorobenzene	ND		0.025	0.0025	mg/L		02/02/24 13:57	02/05/24 18:38	1
Hexachlorobutadiene	ND		0.025	0.0034	mg/L		02/02/24 13:57	02/05/24 18:38	1
Hexachloroethane	ND		0.025	0.0029	mg/L		02/02/24 13:57	02/05/24 18:38	1
Nitrobenzene	ND		0.025	0.0014	mg/L		02/02/24 13:57	02/05/24 18:38	1
Pentachlorophenol	ND		0.050	0.011	mg/L		02/02/24 13:57	02/05/24 18:38	1
Pyridine	ND		0.13	0.0020	mg/L		02/02/24 13:57	02/05/24 18:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	82		41 - 120	02/02/24 13:57	02/05/24 18:38	1
2-Fluorobiphenyl (Surr)	89		48 - 120	02/02/24 13:57	02/05/24 18:38	1
2-Fluorophenol (Surr)	50		35 - 120	02/02/24 13:57	02/05/24 18:38	1
Nitrobenzene-d5 (Surr)	91		46 - 120	02/02/24 13:57	02/05/24 18:38	1
Phenol-d5 (Surr)	36		22 - 120	02/02/24 13:57	02/05/24 18:38	1
p-Terphenyl-d14 (Surr)	103		60 - 148	02/02/24 13:57	02/05/24 18:38	1

Method: SW846 8081B - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.0025	0.000036	mg/L		02/02/24 13:49	02/05/24 15:32	1
Endrin	ND		0.00025	0.000017	mg/L		02/02/24 13:49	02/05/24 15:32	1
gamma-BHC (Lindane)	ND		0.00025	0.0000075	mg/L		02/02/24 13:49	02/05/24 15:32	1
Heptachlor	ND		0.00025	0.000011	mg/L		02/02/24 13:49	02/05/24 15:32	1
Heptachlor epoxide	ND		0.00025	0.0000066	mg/L		02/02/24 13:49	02/05/24 15:32	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-06-01302024

Lab Sample ID: 480-216732-6

Date Collected: 01/30/24 11:30

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 76.1

Method: SW846 8081B - Organochlorine Pesticides (GC) - TCLP (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methoxychlor	ND		0.00025	0.000018	mg/L		02/02/24 13:49	02/05/24 15:32	1
Toxaphene	ND		0.0025	0.00015	mg/L		02/02/24 13:49	02/05/24 15:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	55		20 - 120				02/02/24 13:49	02/05/24 15:32	1
DCB Decachlorobiphenyl (Surr)	69		20 - 120				02/02/24 13:49	02/05/24 15:32	1
Tetrachloro-m-xylene (Surr)	70		44 - 120				02/02/24 13:49	02/05/24 15:32	1
Tetrachloro-m-xylene (Surr)	70		44 - 120				02/02/24 13:49	02/05/24 15:32	1

Method: SW846 8151 - TCLP Herbicides - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.0025	0.00050	mg/L		02/02/24 09:11	02/05/24 16:18	1
Silvex (2,4,5-TP)	ND		0.0025	0.00045	mg/L		02/02/24 09:11	02/05/24 16:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	10	S1-	21 - 143				02/02/24 09:11	02/05/24 16:18	1
2,4-Dichlorophenylacetic acid (Surr)	15	S1-	21 - 143				02/02/24 09:11	02/05/24 16:18	1

Method: SW846 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0070	J	0.015	0.0056	mg/L		02/02/24 09:46	02/03/24 00:55	1
Barium	1.3		1.0	0.10	mg/L		02/02/24 09:46	02/03/24 00:55	1
Cadmium	ND		0.0020	0.00050	mg/L		02/02/24 09:46	02/03/24 00:55	1
Chromium	ND		0.020	0.010	mg/L		02/02/24 09:46	02/03/24 00:55	1
Lead	0.047	B	0.020	0.0030	mg/L		02/02/24 09:46	02/03/24 00:55	1
Selenium	ND		0.025	0.0087	mg/L		02/02/24 09:46	02/03/24 00:55	1
Silver	ND		0.0060	0.0017	mg/L		02/02/24 09:46	02/03/24 00:55	1

Method: SW846 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000080	J	0.00020	0.000043	mg/L		02/02/24 11:25	02/02/24 16:06	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.62		0.027	0.0062	mg/Kg	☆	02/01/24 12:04	02/01/24 14:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive (SW846 9012)	ND		9.3	9.3	mg/Kg		02/01/24 11:40	02/02/24 13:36	1
Sulfide, Reactive (SW846 9034)	ND		9.3	9.3	mg/Kg		02/01/24 11:40	02/02/24 16:25	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010A)	>180		50.0	50.0	Degrees F			02/01/24 09:04	1
pH (SW846 9045D)	10	HF	0.1	0.1	SU			02/02/24 13:43	1
Temperature (SW846 9045D)	17.8	HF	0.001	0.001	Degrees C			02/02/24 13:43	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-07-01292024

Lab Sample ID: 480-216732-7

Date Collected: 01/29/24 13:30

Matrix: Water

Date Received: 01/30/24 16:00

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		50	41	ug/L			02/01/24 19:57	50
1,1,2,2-Tetrachloroethane	ND		50	11	ug/L			02/01/24 19:57	50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		50	16	ug/L			02/01/24 19:57	50
1,1,2-Trichloroethane	ND		50	12	ug/L			02/01/24 19:57	50
1,1-Dichloroethane	ND		50	19	ug/L			02/01/24 19:57	50
1,1-Dichloroethene	ND		50	15	ug/L			02/01/24 19:57	50
1,2,4-Trichlorobenzene	ND		50	21	ug/L			02/01/24 19:57	50
1,2,4-Trimethylbenzene	55		50	38	ug/L			02/01/24 19:57	50
1,2-Dibromo-3-Chloropropane	ND		50	20	ug/L			02/01/24 19:57	50
1,2-Dibromoethane	ND		50	37	ug/L			02/01/24 19:57	50
1,2-Dichlorobenzene	ND		50	40	ug/L			02/01/24 19:57	50
1,2-Dichloroethane	ND		50	11	ug/L			02/01/24 19:57	50
1,2-Dichloropropane	ND		50	36	ug/L			02/01/24 19:57	50
1,3,5-Trimethylbenzene	ND		50	39	ug/L			02/01/24 19:57	50
1,3-Dichlorobenzene	ND		50	39	ug/L			02/01/24 19:57	50
1,4-Dichlorobenzene	ND		50	42	ug/L			02/01/24 19:57	50
2-Butanone (MEK)	ND		500	66	ug/L			02/01/24 19:57	50
2-Hexanone	ND		250	62	ug/L			02/01/24 19:57	50
4-Methyl-2-pentanone (MIBK)	ND		250	110	ug/L			02/01/24 19:57	50
Acetone	ND		500	150	ug/L			02/01/24 19:57	50
Benzene	2000		50	21	ug/L			02/01/24 19:57	50
Bromodichloromethane	ND		50	20	ug/L			02/01/24 19:57	50
Bromoform	ND		50	13	ug/L			02/01/24 19:57	50
Bromomethane	ND		50	35	ug/L			02/01/24 19:57	50
Carbon disulfide	ND		50	9.5	ug/L			02/01/24 19:57	50
Carbon tetrachloride	ND		50	14	ug/L			02/01/24 19:57	50
Chlorobenzene	ND		50	38	ug/L			02/01/24 19:57	50
Chloroethane	ND		50	16	ug/L			02/01/24 19:57	50
Chloroform	ND		50	17	ug/L			02/01/24 19:57	50
Chloromethane	ND		50	18	ug/L			02/01/24 19:57	50
cis-1,2-Dichloroethene	ND		50	41	ug/L			02/01/24 19:57	50
cis-1,3-Dichloropropene	ND		50	18	ug/L			02/01/24 19:57	50
Cyclohexane	ND		50	9.0	ug/L			02/01/24 19:57	50
Dibromochloromethane	ND		50	16	ug/L			02/01/24 19:57	50
Dichlorodifluoromethane	ND		50	34	ug/L			02/01/24 19:57	50
Ethylbenzene	ND		50	37	ug/L			02/01/24 19:57	50
Isopropylbenzene	ND		50	40	ug/L			02/01/24 19:57	50
m,p-Xylene	410		100	33	ug/L			02/01/24 19:57	50
Methyl acetate	ND		130	65	ug/L			02/01/24 19:57	50
Methyl tert-butyl ether	ND		50	8.0	ug/L			02/01/24 19:57	50
Methylcyclohexane	ND		50	8.0	ug/L			02/01/24 19:57	50
Methylene Chloride	ND		50	22	ug/L			02/01/24 19:57	50
o-Xylene	110		50	38	ug/L			02/01/24 19:57	50
Styrene	59		50	37	ug/L			02/01/24 19:57	50
Tetrachloroethene	ND		50	18	ug/L			02/01/24 19:57	50
Toluene	770		50	26	ug/L			02/01/24 19:57	50
trans-1,2-Dichloroethene	ND		50	45	ug/L			02/01/24 19:57	50
trans-1,3-Dichloropropene	ND		50	19	ug/L			02/01/24 19:57	50
Trichloroethene	ND		50	23	ug/L			02/01/24 19:57	50

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-07-01292024

Lab Sample ID: 480-216732-7

Date Collected: 01/29/24 13:30

Matrix: Water

Date Received: 01/30/24 16:00

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		50	44	ug/L			02/01/24 19:57	50
Vinyl chloride	ND		50	45	ug/L			02/01/24 19:57	50
Xylenes, Total	520		100	33	ug/L			02/01/24 19:57	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		77 - 120					02/01/24 19:57	50
4-Bromofluorobenzene (Surr)	94		73 - 120					02/01/24 19:57	50
Dibromofluoromethane (Surr)	96		75 - 123					02/01/24 19:57	50
Toluene-d8 (Surr)	109		80 - 120					02/01/24 19:57	50

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		50	5.5	ug/L		02/01/24 13:52	02/06/24 16:26	1
2,4,5-Trichlorophenol	ND		25	2.4	ug/L		02/01/24 13:52	02/06/24 16:26	1
2,4,6-Trichlorophenol	ND		25	3.1	ug/L		02/01/24 13:52	02/06/24 16:26	1
2,4-Dichlorophenol	ND		25	2.6	ug/L		02/01/24 13:52	02/06/24 16:26	1
2,4-Dimethylphenol	160		25	2.5	ug/L		02/01/24 13:52	02/06/24 16:26	1
2,4-Dinitrophenol	ND		50	11	ug/L		02/01/24 13:52	02/06/24 16:26	1
2,4-Dinitrotoluene	ND		25	2.2	ug/L		02/01/24 13:52	02/06/24 16:26	1
2,6-Dinitrotoluene	ND		25	2.0	ug/L		02/01/24 13:52	02/06/24 16:26	1
2-Chloronaphthalene	ND		25	2.3	ug/L		02/01/24 13:52	02/06/24 16:26	1
2-Chlorophenol	ND		25	2.7	ug/L		02/01/24 13:52	02/06/24 16:26	1
2-Methylnaphthalene	100		25	3.0	ug/L		02/01/24 13:52	02/06/24 16:26	1
2-Methylphenol	340	E	25	2.0	ug/L		02/01/24 13:52	02/06/24 16:26	1
2-Nitroaniline	ND		50	2.1	ug/L		02/01/24 13:52	02/06/24 16:26	1
2-Nitrophenol	ND		25	2.4	ug/L		02/01/24 13:52	02/06/24 16:26	1
3,3'-Dichlorobenzidine	ND		25	2.0	ug/L		02/01/24 13:52	02/06/24 16:26	1
3-Nitroaniline	ND		50	2.4	ug/L		02/01/24 13:52	02/06/24 16:26	1
4,6-Dinitro-2-methylphenol	ND		50	11	ug/L		02/01/24 13:52	02/06/24 16:26	1
4-Bromophenyl phenyl ether	ND		25	2.3	ug/L		02/01/24 13:52	02/06/24 16:26	1
4-Chloro-3-methylphenol	ND		25	2.3	ug/L		02/01/24 13:52	02/06/24 16:26	1
4-Chloroaniline	640	E	25	3.0	ug/L		02/01/24 13:52	02/06/24 16:26	1
4-Chlorophenyl phenyl ether	ND		25	1.8	ug/L		02/01/24 13:52	02/06/24 16:26	1
4-Methylphenol	680	E	50	1.8	ug/L		02/01/24 13:52	02/06/24 16:26	1
4-Nitroaniline	ND		50	1.3	ug/L		02/01/24 13:52	02/06/24 16:26	1
4-Nitrophenol	ND		50	7.6	ug/L		02/01/24 13:52	02/06/24 16:26	1
Acenaphthene	20	J	25	2.1	ug/L		02/01/24 13:52	02/06/24 16:26	1
Acenaphthylene	40		25	1.9	ug/L		02/01/24 13:52	02/06/24 16:26	1
Acetophenone	46		25	2.7	ug/L		02/01/24 13:52	02/06/24 16:26	1
Anthracene	ND		25	1.4	ug/L		02/01/24 13:52	02/06/24 16:26	1
Atrazine	ND		25	2.3	ug/L		02/01/24 13:52	02/06/24 16:26	1
Benzaldehyde	ND		25	1.3	ug/L		02/01/24 13:52	02/06/24 16:26	1
Benzo(a)anthracene	7.7	J	25	1.8	ug/L		02/01/24 13:52	02/06/24 16:26	1
Benzo[a]pyrene	6.4	J	25	2.4	ug/L		02/01/24 13:52	02/06/24 16:26	1
Benzo[b]fluoranthene	10	J	25	1.7	ug/L		02/01/24 13:52	02/06/24 16:26	1
Benzo[g,h,i]perylene	5.3	J	25	1.8	ug/L		02/01/24 13:52	02/06/24 16:26	1
Benzo[k]fluoranthene	ND		25	3.7	ug/L		02/01/24 13:52	02/06/24 16:26	1
Biphenyl	ND		25	3.3	ug/L		02/01/24 13:52	02/06/24 16:26	1
bis (2-chloroisopropyl) ether	ND		25	2.6	ug/L		02/01/24 13:52	02/06/24 16:26	1
Bis(2-chloroethoxy)methane	ND		25	1.8	ug/L		02/01/24 13:52	02/06/24 16:26	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-07-01292024

Lab Sample ID: 480-216732-7

Date Collected: 01/29/24 13:30

Matrix: Water

Date Received: 01/30/24 16:00

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		25	2.0	ug/L		02/01/24 13:52	02/06/24 16:26	1
Bis(2-ethylhexyl) phthalate	ND		25	11	ug/L		02/01/24 13:52	02/06/24 16:26	1
Butyl benzyl phthalate	ND		25	5.0	ug/L		02/01/24 13:52	02/06/24 16:26	1
Caprolactam	ND		25	11	ug/L		02/01/24 13:52	02/06/24 16:26	1
Carbazole	37		25	1.5	ug/L		02/01/24 13:52	02/06/24 16:26	1
Chrysene	8.8	J	25	1.7	ug/L		02/01/24 13:52	02/06/24 16:26	1
Dibenz(a,h)anthracene	ND		25	2.1	ug/L		02/01/24 13:52	02/06/24 16:26	1
Dibenzofuran	24	J	50	2.6	ug/L		02/01/24 13:52	02/06/24 16:26	1
Diethyl phthalate	ND		25	1.1	ug/L		02/01/24 13:52	02/06/24 16:26	1
Dimethyl phthalate	ND		25	1.8	ug/L		02/01/24 13:52	02/06/24 16:26	1
Di-n-butyl phthalate	ND		25	1.6	ug/L		02/01/24 13:52	02/06/24 16:26	1
Di-n-octyl phthalate	ND		25	2.4	ug/L		02/01/24 13:52	02/06/24 16:26	1
Fluoranthene	26		25	2.0	ug/L		02/01/24 13:52	02/06/24 16:26	1
Fluorene	27		25	1.8	ug/L		02/01/24 13:52	02/06/24 16:26	1
Hexachlorobenzene	ND		25	2.6	ug/L		02/01/24 13:52	02/06/24 16:26	1
Hexachlorobutadiene	ND		25	3.4	ug/L		02/01/24 13:52	02/06/24 16:26	1
Hexachlorocyclopentadiene	ND		25	3.0	ug/L		02/01/24 13:52	02/06/24 16:26	1
Hexachloroethane	ND		25	3.0	ug/L		02/01/24 13:52	02/06/24 16:26	1
Indeno[1,2,3-cd]pyrene	4.2	J	25	2.4	ug/L		02/01/24 13:52	02/06/24 16:26	1
Isophorone	ND		25	2.2	ug/L		02/01/24 13:52	02/06/24 16:26	1
Naphthalene	1200	E	25	3.8	ug/L		02/01/24 13:52	02/06/24 16:26	1
Nitrobenzene	ND		25	1.5	ug/L		02/01/24 13:52	02/06/24 16:26	1
N-Nitrosodi-n-propylamine	ND		25	2.7	ug/L		02/01/24 13:52	02/06/24 16:26	1
N-Nitrosodiphenylamine	ND		25	2.6	ug/L		02/01/24 13:52	02/06/24 16:26	1
Pentachlorophenol	ND		50	11	ug/L		02/01/24 13:52	02/06/24 16:26	1
Phenanthrene	38		25	2.2	ug/L		02/01/24 13:52	02/06/24 16:26	1
Phenol	830	E	25	2.0	ug/L		02/01/24 13:52	02/06/24 16:26	1
Pyrene	21	J	25	1.7	ug/L		02/01/24 13:52	02/06/24 16:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	115		41 - 120	02/01/24 13:52	02/06/24 16:26	1
2-Fluorobiphenyl (Surr)	109		48 - 120	02/01/24 13:52	02/06/24 16:26	1
2-Fluorophenol (Surr)	89		35 - 120	02/01/24 13:52	02/06/24 16:26	1
Nitrobenzene-d5 (Surr)	94		46 - 120	02/01/24 13:52	02/06/24 16:26	1
Phenol-d5 (Surr)	63		22 - 120	02/01/24 13:52	02/06/24 16:26	1
p-Terphenyl-d14 (Surr)	123		60 - 148	02/01/24 13:52	02/06/24 16:26	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		2500	280	ug/L		02/01/24 13:52	02/08/24 18:00	50
2,4,5-Trichlorophenol	ND		1300	120	ug/L		02/01/24 13:52	02/08/24 18:00	50
2,4,6-Trichlorophenol	ND		1300	150	ug/L		02/01/24 13:52	02/08/24 18:00	50
2,4-Dichlorophenol	ND		1300	130	ug/L		02/01/24 13:52	02/08/24 18:00	50
2,4-Dimethylphenol	ND		1300	130	ug/L		02/01/24 13:52	02/08/24 18:00	50
2,4-Dinitrophenol	ND		2500	560	ug/L		02/01/24 13:52	02/08/24 18:00	50
2,4-Dinitrotoluene	ND		1300	110	ug/L		02/01/24 13:52	02/08/24 18:00	50
2,6-Dinitrotoluene	ND		1300	100	ug/L		02/01/24 13:52	02/08/24 18:00	50
2-Chloronaphthalene	ND		1300	120	ug/L		02/01/24 13:52	02/08/24 18:00	50
2-Chlorophenol	ND		1300	130	ug/L		02/01/24 13:52	02/08/24 18:00	50
2-Methylnaphthalene	ND		1300	150	ug/L		02/01/24 13:52	02/08/24 18:00	50

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-07-01292024

Lab Sample ID: 480-216732-7

Date Collected: 01/29/24 13:30

Matrix: Water

Date Received: 01/30/24 16:00

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	220	J	1300	100	ug/L		02/01/24 13:52	02/08/24 18:00	50
2-Nitroaniline	ND		2500	110	ug/L		02/01/24 13:52	02/08/24 18:00	50
2-Nitrophenol	ND		1300	120	ug/L		02/01/24 13:52	02/08/24 18:00	50
3,3'-Dichlorobenzidine	ND		1300	100	ug/L		02/01/24 13:52	02/08/24 18:00	50
3-Nitroaniline	ND		2500	120	ug/L		02/01/24 13:52	02/08/24 18:00	50
4,6-Dinitro-2-methylphenol	ND		2500	550	ug/L		02/01/24 13:52	02/08/24 18:00	50
4-Bromophenyl phenyl ether	ND		1300	110	ug/L		02/01/24 13:52	02/08/24 18:00	50
4-Chloro-3-methylphenol	ND		1300	110	ug/L		02/01/24 13:52	02/08/24 18:00	50
4-Chloroaniline	ND		1300	150	ug/L		02/01/24 13:52	02/08/24 18:00	50
4-Chlorophenyl phenyl ether	ND		1300	88	ug/L		02/01/24 13:52	02/08/24 18:00	50
4-Methylphenol	390	J	2500	90	ug/L		02/01/24 13:52	02/08/24 18:00	50
4-Nitroaniline	ND		2500	63	ug/L		02/01/24 13:52	02/08/24 18:00	50
4-Nitrophenol	ND		2500	380	ug/L		02/01/24 13:52	02/08/24 18:00	50
Acenaphthene	ND		1300	100	ug/L		02/01/24 13:52	02/08/24 18:00	50
Acenaphthylene	ND		1300	95	ug/L		02/01/24 13:52	02/08/24 18:00	50
Acetophenone	ND		1300	140	ug/L		02/01/24 13:52	02/08/24 18:00	50
Anthracene	ND		1300	70	ug/L		02/01/24 13:52	02/08/24 18:00	50
Atrazine	ND		1300	120	ug/L		02/01/24 13:52	02/08/24 18:00	50
Benzaldehyde	ND		1300	67	ug/L		02/01/24 13:52	02/08/24 18:00	50
Benzo(a)anthracene	ND		1300	90	ug/L		02/01/24 13:52	02/08/24 18:00	50
Benzo[a]pyrene	ND		1300	120	ug/L		02/01/24 13:52	02/08/24 18:00	50
Benzo[b]fluoranthene	ND		1300	85	ug/L		02/01/24 13:52	02/08/24 18:00	50
Benzo[g,h,i]perylene	ND		1300	88	ug/L		02/01/24 13:52	02/08/24 18:00	50
Benzo[k]fluoranthene	ND		1300	180	ug/L		02/01/24 13:52	02/08/24 18:00	50
Biphenyl	ND		1300	160	ug/L		02/01/24 13:52	02/08/24 18:00	50
bis (2-chloroisopropyl) ether	ND		1300	130	ug/L		02/01/24 13:52	02/08/24 18:00	50
Bis(2-chloroethoxy)methane	ND		1300	88	ug/L		02/01/24 13:52	02/08/24 18:00	50
Bis(2-chloroethyl)ether	ND		1300	100	ug/L		02/01/24 13:52	02/08/24 18:00	50
Bis(2-ethylhexyl) phthalate	ND		1300	550	ug/L		02/01/24 13:52	02/08/24 18:00	50
Butyl benzyl phthalate	ND		1300	250	ug/L		02/01/24 13:52	02/08/24 18:00	50
Caprolactam	ND		1300	550	ug/L		02/01/24 13:52	02/08/24 18:00	50
Carbazole	ND		1300	75	ug/L		02/01/24 13:52	02/08/24 18:00	50
Chrysene	ND		1300	83	ug/L		02/01/24 13:52	02/08/24 18:00	50
Dibenz(a,h)anthracene	ND		1300	110	ug/L		02/01/24 13:52	02/08/24 18:00	50
Dibenzofuran	ND		2500	130	ug/L		02/01/24 13:52	02/08/24 18:00	50
Diethyl phthalate	ND		1300	55	ug/L		02/01/24 13:52	02/08/24 18:00	50
Dimethyl phthalate	ND		1300	90	ug/L		02/01/24 13:52	02/08/24 18:00	50
Di-n-butyl phthalate	ND		1300	78	ug/L		02/01/24 13:52	02/08/24 18:00	50
Di-n-octyl phthalate	ND		1300	120	ug/L		02/01/24 13:52	02/08/24 18:00	50
Fluoranthene	ND		1300	100	ug/L		02/01/24 13:52	02/08/24 18:00	50
Fluorene	ND		1300	90	ug/L		02/01/24 13:52	02/08/24 18:00	50
Hexachlorobenzene	ND		1300	130	ug/L		02/01/24 13:52	02/08/24 18:00	50
Hexachlorobutadiene	ND		1300	170	ug/L		02/01/24 13:52	02/08/24 18:00	50
Hexachlorocyclopentadiene	ND		1300	150	ug/L		02/01/24 13:52	02/08/24 18:00	50
Hexachloroethane	ND		1300	150	ug/L		02/01/24 13:52	02/08/24 18:00	50
Indeno[1,2,3-cd]pyrene	ND		1300	120	ug/L		02/01/24 13:52	02/08/24 18:00	50
Isophorone	ND		1300	110	ug/L		02/01/24 13:52	02/08/24 18:00	50
Naphthalene	9900		1300	190	ug/L		02/01/24 13:52	02/08/24 18:00	50
Nitrobenzene	ND		1300	73	ug/L		02/01/24 13:52	02/08/24 18:00	50

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-07-01292024

Lab Sample ID: 480-216732-7

Date Collected: 01/29/24 13:30

Matrix: Water

Date Received: 01/30/24 16:00

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		1300	140	ug/L		02/01/24 13:52	02/08/24 18:00	50
N-Nitrosodiphenylamine	ND		1300	130	ug/L		02/01/24 13:52	02/08/24 18:00	50
Pentachlorophenol	ND		2500	550	ug/L		02/01/24 13:52	02/08/24 18:00	50
Phenanthrene	ND		1300	110	ug/L		02/01/24 13:52	02/08/24 18:00	50
Phenol	640	J	1300	98	ug/L		02/01/24 13:52	02/08/24 18:00	50
Pyrene	ND		1300	85	ug/L		02/01/24 13:52	02/08/24 18:00	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	126	S1+	41 - 120	02/01/24 13:52	02/08/24 18:00	50
2-Fluorobiphenyl (Surr)	89		48 - 120	02/01/24 13:52	02/08/24 18:00	50
2-Fluorophenol (Surr)	58		35 - 120	02/01/24 13:52	02/08/24 18:00	50
Nitrobenzene-d5 (Surr)	59		46 - 120	02/01/24 13:52	02/08/24 18:00	50
Phenol-d5 (Surr)	38		22 - 120	02/01/24 13:52	02/08/24 18:00	50
p-Terphenyl-d14 (Surr)	50	S1-	60 - 148	02/01/24 13:52	02/08/24 18:00	50

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.15		0.0012	0.00026	mg/L		02/02/24 11:25	02/02/24 15:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	12.1		0.20	0.090	mg/L			02/01/24 08:16	10
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010A)	>180		50.0	50.0	Degrees F			02/01/24 09:04	1
pH (SW846 9040C)	10.5	HF	0.100	0.100	SU			02/01/24 16:50	1
Temperature (SW846 9040C)	18.9	HF	0.00100	0.00100	Degrees C			02/01/24 16:50	1

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Surrogate Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: 8260C - TCLP Volatiles

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)
LCS 480-699845/6	Lab Control Sample	94	94	95	98
MB 480-699845/8	Method Blank	98	95	99	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260C - TCLP Volatiles

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)
480-216732-1	F-LOA-01-01302024	93	94	91	99
480-216732-2	F-LOA-02-01302024	91	96	88	100
480-216732-3	F-LOA-03-01302024	94	98	94	105
480-216732-4	F-LOA-04-01302024	97	93	95	101
480-216732-5	F-LOA-05-01302024	93	97	90	100
480-216732-6	F-LOA-06-01302024	97	97	95	106
LB 480-699601/1-A	Method Blank	94	96	91	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (53-146)	BFB (49-148)	DBFM (60-140)	TOL (50-149)
480-216732-1	F-LOA-01-01302024	96	96	90	97
480-216732-3	F-LOA-03-01302024	100	93	88	96
480-216732-3 - DL	F-LOA-03-01302024	97	97	91	99
480-216732-4	F-LOA-04-01302024	100	94	89	99
480-216732-6	F-LOA-06-01302024	99	95	88	99
LCS 480-699607/1-A	Lab Control Sample	94	94	92	98
MB 480-699607/3-A	Method Blank	95	95	93	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

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Surrogate Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCA (64-126)	BFB (72-126)	DBFM (60-140)	TOL (71-125)
480-216732-2	F-LOA-02-01302024	107	106	108	96
480-216732-5	F-LOA-05-01302024	107	108	106	97
LCS 480-699570/1-A	Lab Control Sample	99	105	105	98
LCSD 480-699570/2-A	Lab Control Sample Dup	98	106	103	97
MB 480-699570/3-A	Method Blank	100	106	106	96
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					
BFB = 4-Bromofluorobenzene (Surr)					
DBFM = Dibromofluoromethane (Surr)					
TOL = Toluene-d8 (Surr)					

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)
480-216732-7	F-LOA-07-01292024	102	94	96	109
LCS 480-699604/6	Lab Control Sample	94	89	94	103
MB 480-699604/8	Method Blank	101	96	101	108
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					
BFB = 4-Bromofluorobenzene (Surr)					
DBFM = Dibromofluoromethane (Surr)					
TOL = Toluene-d8 (Surr)					

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	TBP (54-120)	FBP (60-120)	2FP (52-120)	NBZ (53-120)	PHL (54-120)	TPHd14 (79-130)
480-216732-1	F-LOA-01-01302024	88	98	81	91	87	99
480-216732-1 - DL	F-LOA-01-01302024	63	72	74	67	65	87
480-216732-2	F-LOA-02-01302024	97	105	89	101	96	118
480-216732-3	F-LOA-03-01302024	92	108	91	104	97	131 S1+
480-216732-4	F-LOA-04-01302024	91	100	81	93	87	108
480-216732-4 - DL	F-LOA-04-01302024	63	78	77	73	70	84
480-216732-4 MS	F-LOA-04-01302024	105	105	89	101	94	113
480-216732-4 MS - DL	F-LOA-04-01302024	91	88	86	80	85	88
480-216732-4 MSD	F-LOA-04-01302024	98	105	87	98	90	106
480-216732-4 MSD - DL	F-LOA-04-01302024	92	89	85	81	81	94
480-216732-5	F-LOA-05-01302024	82	105	87	101	93	115
480-216732-6	F-LOA-06-01302024	92	110	88	100	96	116
LCS 480-699565/2-A	Lab Control Sample	94	101	89	95	96	118
MB 480-699565/1-A	Method Blank	88	103	94	103	102	120
Surrogate Legend							
TBP = 2,4,6-Tribromophenol (Surr)							
FBP = 2-Fluorobiphenyl (Surr)							

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Surrogate Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHD14 = p-Terphenyl-d14 (Surr)

Job ID: 480-216732-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (41-120)	FBP (48-120)	2FP (35-120)	NBZ (46-120)	PHL (22-120)	TPHD14 (60-148)
LCS 480-699753/2-A	Lab Control Sample	96	97	56	97	43	111
LCSD 480-699753/3-A	Lab Control Sample Dup	95	94	55	94	42	105
MB 480-699753/1-A	Method Blank	66	88	51	90	35	99

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHD14 = p-Terphenyl-d14 (Surr)

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

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (41-120)	FBP (48-120)	2FP (35-120)	NBZ (46-120)	PHL (22-120)	TPHD14 (60-148)
480-216732-1	F-LOA-01-01302024	90	99	56	103	42	114
480-216732-2	F-LOA-02-01302024	77	83	47	86	34	100
480-216732-3	F-LOA-03-01302024	87	89	51	91	39	95
480-216732-4	F-LOA-04-01302024	84	97	57	100	40	104
480-216732-5	F-LOA-05-01302024	78	89	54	92	39	100
480-216732-6	F-LOA-06-01302024	82	89	50	91	36	103
LB 480-699598/1-F	Method Blank	84	94	54	98	38	109

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHD14 = p-Terphenyl-d14 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (41-120)	FBP (48-120)	2FP (35-120)	NBZ (46-120)	PHL (22-120)	TPHD14 (60-148)
480-216732-7	F-LOA-07-01292024	115	109	89	94	63	123
480-216732-7 - DL	F-LOA-07-01292024	126 S1+	89	58	59	38	50 S1-
LCS 480-699657/2-A	Lab Control Sample	91	103	71	94	55	108
MB 480-699657/1-A	Method Blank	60	110	75	88	52	135

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)

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Surrogate Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHD14 = p-Terphenyl-d14 (Surr)

Job ID: 480-216732-1

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1 (20-120)	DCBP2 (20-120)	TCX1 (44-120)	TCX2 (44-120)
LCS 480-699748/2-A	Lab Control Sample	47	63	71	76
LCSD 480-699748/3-A	Lab Control Sample Dup	51	68	63	66
MB 480-699748/1-A	Method Blank	42	57	72	76

Surrogate Legend

DCBP = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1 (20-120)	DCBP2 (20-120)	TCX1 (44-120)	TCX2 (44-120)
480-216732-1	F-LOA-01-01302024	69	90	58	55
480-216732-2	F-LOA-02-01302024	57	76	66	83
480-216732-3	F-LOA-03-01302024	55	67	61	66
480-216732-4	F-LOA-04-01302024	64	81	61	69
480-216732-5	F-LOA-05-01302024	64	81	78	76
480-216732-6	F-LOA-06-01302024	55	69	70	70
LB 480-699598/1-E	Method Blank	57	75	54	61

Surrogate Legend

DCBP = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

Method: 8151 - TCLP Herbicides

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCPAA1 (21-143)	DCPAA2 (21-143)
LCS 480-699705/2-A	Lab Control Sample	88	83
LCSD 480-699705/3-A	Lab Control Sample Dup	106	84
MB 480-699705/1-A	Method Blank	85	82

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid (Surr)

Method: 8151 - TCLP Herbicides

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCPAA1 (21-143)	DCPAA2 (21-143)
480-216732-1	F-LOA-01-01302024	53	51
480-216732-2	F-LOA-02-01302024	31	25
480-216732-3	F-LOA-03-01302024	18 S1-	17 S1-

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Surrogate Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: 8151 - TCLP Herbicides (Continued)

Matrix: Solid

Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPAA1 (21-143)	DCPAA2 (21-143)
480-216732-4	F-LOA-04-01302024	17 S1-	19 S1-
480-216732-5	F-LOA-05-01302024	43	21
480-216732-6	F-LOA-06-01302024	10 S1-	15 S1-
LB 480-699598/1-B	Method Blank	30	21

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid (Surr)

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Isotope Dilution Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: Draft 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (20-150)	PFPeA (20-150)	13C5PHA (20-150)	C4PFHA (20-150)	C8PFOA (20-150)	C9PFNA (20-150)	C6PFDA (20-150)	13C7PUA (20-150)
480-216732-4	F-LOA-04-01302024	76	74	76	76	80	81	76	72
LCS 280-642488/3-A	Lab Control Sample	81	87	86	81	91	80	82	71
LLCS 280-642488/2-A	Lab Control Sample	78	94	88	89	83	80	77	71
MB 280-642488/1-A	Method Blank	86	90	83	81	89	80	77	69

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (20-150)	PFTDA (20-150)	C3PFBS (20-150)	C3PFHS (20-150)	C8PFOS (20-150)	PFOSA (20-150)	d3NMFOS (20-150)	d5NEFOS (20-150)
480-216732-4	F-LOA-04-01302024	69	56	80	74	70	81	72	74
LCS 280-642488/3-A	Lab Control Sample	73	60	95	92	80	87	73	75
LLCS 280-642488/2-A	Lab Control Sample	62	45	84	79	82	91	77	69
MB 280-642488/1-A	Method Blank	62	48	95	77	71	90	69	64

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (20-150)	M262FTS (20-150)	M282FTS (20-150)	HFPODA (20-150)	NMFM (20-150)	NEFM (20-150)	d5NPFSA (20-150)	d3NMFSA (20-150)
480-216732-4	F-LOA-04-01302024	72	78	71	80	61	62	49	51
LCS 280-642488/3-A	Lab Control Sample	88	82	74	75	65	64	56	63
LLCS 280-642488/2-A	Lab Control Sample	78	70	75	88	56	57	54	59
MB 280-642488/1-A	Method Blank	92	80	78	89	62	58	45	47

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFSA = d3-NMePFOSA

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: 8260C - TCLP Volatiles

Lab Sample ID: MB 480-699845/8

Matrix: Solid

Analysis Batch: 699845

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.0010	0.00029	mg/L			02/05/24 12:33	1
1,2-Dichloroethane	ND		0.0010	0.00021	mg/L			02/05/24 12:33	1
2-Butanone (MEK)	ND		0.0050	0.0013	mg/L			02/05/24 12:33	1
Benzene	ND		0.0010	0.00041	mg/L			02/05/24 12:33	1
Carbon tetrachloride	ND		0.0010	0.00027	mg/L			02/05/24 12:33	1
Chlorobenzene	ND		0.0010	0.00075	mg/L			02/05/24 12:33	1
Chloroform	ND		0.0010	0.00034	mg/L			02/05/24 12:33	1
Tetrachloroethene	ND		0.0010	0.00036	mg/L			02/05/24 12:33	1
Trichloroethene	ND		0.0010	0.00046	mg/L			02/05/24 12:33	1
Vinyl chloride	ND		0.0010	0.00090	mg/L			02/05/24 12:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		02/05/24 12:33	1
4-Bromofluorobenzene (Surr)	95		73 - 120		02/05/24 12:33	1
Dibromofluoromethane (Surr)	99		75 - 123		02/05/24 12:33	1
Toluene-d8 (Surr)	102		80 - 120		02/05/24 12:33	1

Lab Sample ID: LCS 480-699845/6

Matrix: Solid

Analysis Batch: 699845

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	0.0250	0.0263		mg/L		105	66 - 127
1,2-Dichloroethane	0.0250	0.0250		mg/L		100	75 - 120
2-Butanone (MEK)	0.125	0.109		mg/L		87	57 - 140
Benzene	0.0250	0.0256		mg/L		102	71 - 124
Carbon tetrachloride	0.0250	0.0257		mg/L		103	72 - 134
Chlorobenzene	0.0250	0.0251		mg/L		100	80 - 120
Chloroform	0.0250	0.0244		mg/L		98	73 - 127
Tetrachloroethene	0.0250	0.0271		mg/L		109	74 - 122
Trichloroethene	0.0250	0.0259		mg/L		104	74 - 123
Vinyl chloride	0.0250	0.0272		mg/L		109	65 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		77 - 120
4-Bromofluorobenzene (Surr)	94		73 - 120
Dibromofluoromethane (Surr)	95		75 - 123
Toluene-d8 (Surr)	98		80 - 120

Lab Sample ID: LB 480-699601/1-A

Matrix: Solid

Analysis Batch: 699845

Client Sample ID: Method Blank

Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			02/05/24 13:23	10
1,2-Dichloroethane	ND		0.010	0.0021	mg/L			02/05/24 13:23	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			02/05/24 13:23	10
Benzene	ND		0.010	0.0041	mg/L			02/05/24 13:23	10

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: 8260C - TCLP Volatiles (Continued)

Lab Sample ID: LB 480-699601/1-A
Matrix: Solid
Analysis Batch: 699845

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.010	0.0027	mg/L			02/05/24 13:23	10
Chlorobenzene	ND		0.010	0.0075	mg/L			02/05/24 13:23	10
Chloroform	ND		0.010	0.0034	mg/L			02/05/24 13:23	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			02/05/24 13:23	10
Trichloroethene	ND		0.010	0.0046	mg/L			02/05/24 13:23	10
Vinyl chloride	ND		0.010	0.0090	mg/L			02/05/24 13:23	10
Surrogate	LB %Recovery	LB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		77 - 120					02/05/24 13:23	10
4-Bromofluorobenzene (Surr)	96		73 - 120					02/05/24 13:23	10
Dibromofluoromethane (Surr)	91		75 - 123					02/05/24 13:23	10
Toluene-d8 (Surr)	97		80 - 120					02/05/24 13:23	10

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-699570/3-A
Matrix: Solid
Analysis Batch: 699571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699570

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.36	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.81	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,1,2-Trichloroethane	ND		5.0	0.65	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,1-Dichloroethane	ND		5.0	0.61	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,1-Dichloroethene	ND		5.0	0.61	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,2,4-Trichlorobenzene	ND		5.0	0.30	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,2,4-Trimethylbenzene	ND		5.0	0.96	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,2-Dibromo-3-Chloropropane	ND		5.0	2.5	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,2-Dibromoethane	ND		5.0	0.64	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,2-Dichlorobenzene	ND		5.0	0.39	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,2-Dichloroethane	ND		5.0	0.25	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,2-Dichloropropane	ND		5.0	2.5	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,3,5-Trimethylbenzene	ND		5.0	0.32	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,3-Dichlorobenzene	ND		5.0	0.26	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
1,4-Dichlorobenzene	ND		5.0	0.70	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
2-Butanone (MEK)	ND		25	1.8	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
2-Hexanone	ND		25	2.5	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.6	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Acetone	ND		25	4.2	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Benzene	ND		5.0	0.25	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Bromodichloromethane	ND		5.0	0.67	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Bromoform	ND		5.0	2.5	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Bromomethane	ND		5.0	0.45	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Carbon disulfide	ND		5.0	2.5	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Carbon tetrachloride	ND		5.0	0.48	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Chlorobenzene	ND		5.0	0.66	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Chloroethane	ND		5.0	1.1	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Chloroform	ND		5.0	0.31	ug/Kg		01/31/24 17:51	01/31/24 21:38	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: MB 480-699570/3-A

Matrix: Solid

Analysis Batch: 699571

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 699570

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		5.0	0.30	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
cis-1,2-Dichloroethene	ND		5.0	0.64	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
cis-1,3-Dichloropropene	ND		5.0	0.72	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Cyclohexane	ND		5.0	0.70	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Dibromochloromethane	ND		5.0	0.64	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Dichlorodifluoromethane	ND		5.0	0.41	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Ethylbenzene	ND		5.0	0.35	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
m,p-Xylene	ND		10	0.84	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Methyl acetate	ND		25	3.0	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Methylcyclohexane	ND		5.0	0.76	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Methylene Chloride	ND		5.0	2.3	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
o-Xylene	ND		5.0	0.65	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Styrene	ND		5.0	0.25	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Tetrachloroethene	ND		5.0	0.67	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Toluene	ND		5.0	0.38	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
trans-1,2-Dichloroethene	ND		5.0	0.52	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
trans-1,3-Dichloropropene	ND		5.0	2.2	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Trichloroethene	ND		5.0	1.1	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Trichlorofluoromethane	ND		5.0	0.47	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Vinyl chloride	ND		5.0	0.61	ug/Kg		01/31/24 17:51	01/31/24 21:38	1
Xylenes, Total	ND		10	0.84	ug/Kg		01/31/24 17:51	01/31/24 21:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		64 - 126	01/31/24 17:51	01/31/24 21:38	1
4-Bromofluorobenzene (Surr)	106		72 - 126	01/31/24 17:51	01/31/24 21:38	1
Dibromofluoromethane (Surr)	106		60 - 140	01/31/24 17:51	01/31/24 21:38	1
Toluene-d8 (Surr)	96		71 - 125	01/31/24 17:51	01/31/24 21:38	1

Lab Sample ID: LCS 480-699570/1-A

Matrix: Solid

Analysis Batch: 699571

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 699570

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1,1-Trichloroethane	50.0	46.2		ug/Kg		92	77 - 121
1,1,2,2-Tetrachloroethane	50.0	40.6		ug/Kg		81	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	41.8		ug/Kg		84	60 - 140
1,1,2-Trichloroethane	50.0	42.0		ug/Kg		84	78 - 122
1,1-Dichloroethane	50.0	46.1		ug/Kg		92	73 - 126
1,1-Dichloroethene	50.0	44.0		ug/Kg		88	59 - 125
1,2,4-Trichlorobenzene	50.0	45.2		ug/Kg		90	64 - 120
1,2,4-Trimethylbenzene	50.0	43.0		ug/Kg		86	74 - 120
1,2-Dibromo-3-Chloropropane	50.0	44.0		ug/Kg		88	63 - 124
1,2-Dibromoethane	50.0	45.5		ug/Kg		91	78 - 120
1,2-Dichlorobenzene	50.0	42.9		ug/Kg		86	75 - 120
1,2-Dichloroethane	50.0	47.3		ug/Kg		95	77 - 122
1,2-Dichloropropane	50.0	45.6		ug/Kg		91	75 - 124

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: LCS 480-699570/1-A

Matrix: Solid

Analysis Batch: 699571

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 699570

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3,5-Trimethylbenzene	50.0	43.2		ug/Kg		86	74 - 120
1,3-Dichlorobenzene	50.0	43.4		ug/Kg		87	74 - 120
1,4-Dichlorobenzene	50.0	42.1		ug/Kg		84	73 - 120
2-Butanone (MEK)	250	271		ug/Kg		108	70 - 134
2-Hexanone	250	221		ug/Kg		88	59 - 130
4-Methyl-2-pentanone (MIBK)	250	214		ug/Kg		85	65 - 133
Acetone	250	271		ug/Kg		109	61 - 137
Benzene	50.0	46.1		ug/Kg		92	79 - 127
Bromodichloromethane	50.0	47.0		ug/Kg		94	80 - 122
Bromoform	50.0	48.7		ug/Kg		97	68 - 126
Bromomethane	50.0	46.1		ug/Kg		92	37 - 149
Carbon disulfide	50.0	41.6		ug/Kg		83	64 - 131
Carbon tetrachloride	50.0	47.5		ug/Kg		95	75 - 135
Chlorobenzene	50.0	44.9		ug/Kg		90	76 - 124
Chloroethane	50.0	48.2		ug/Kg		96	69 - 135
Chloroform	50.0	46.4		ug/Kg		93	80 - 120
Chloromethane	50.0	44.3		ug/Kg		89	63 - 127
cis-1,2-Dichloroethene	50.0	47.3		ug/Kg		95	81 - 120
cis-1,3-Dichloropropene	50.0	46.6		ug/Kg		93	80 - 120
Cyclohexane	50.0	43.2		ug/Kg		86	65 - 120
Dibromochloromethane	50.0	48.3		ug/Kg		97	76 - 125
Dichlorodifluoromethane	50.0	43.5		ug/Kg		87	57 - 142
Ethylbenzene	50.0	44.3		ug/Kg		89	80 - 120
Isopropylbenzene	50.0	42.4		ug/Kg		85	72 - 120
m,p-Xylene	50.0	44.4		ug/Kg		89	70 - 130
Methyl acetate	100	98.9		ug/Kg		99	55 - 136
Methyl tert-butyl ether	50.0	47.2		ug/Kg		94	63 - 125
Methylcyclohexane	50.0	45.1		ug/Kg		90	60 - 140
Methylene Chloride	50.0	48.2		ug/Kg		96	61 - 127
o-Xylene	50.0	44.5		ug/Kg		89	70 - 130
Styrene	50.0	44.1		ug/Kg		88	80 - 120
Tetrachloroethene	50.0	44.8		ug/Kg		90	74 - 122
Toluene	50.0	44.0		ug/Kg		88	74 - 128
trans-1,2-Dichloroethene	50.0	46.0		ug/Kg		92	78 - 126
trans-1,3-Dichloropropene	50.0	44.9		ug/Kg		90	73 - 123
Trichloroethene	50.0	47.4		ug/Kg		95	77 - 129
Trichlorofluoromethane	50.0	49.2		ug/Kg		98	65 - 146
Vinyl chloride	50.0	45.8		ug/Kg		92	61 - 133
Xylenes, Total	100	88.9		ug/Kg		89	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		64 - 126
4-Bromofluorobenzene (Surr)	105		72 - 126
Dibromofluoromethane (Surr)	105		60 - 140
Toluene-d8 (Surr)	98		71 - 125

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: LCSD 480-699570/2-A

Matrix: Solid

Analysis Batch: 699571

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 699570

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane	50.0	47.3		ug/Kg		95	77 - 121	2	20
1,1,2,2-Tetrachloroethane	50.0	44.1		ug/Kg		88	80 - 120	8	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	43.0		ug/Kg		86	60 - 140	3	20
1,1,2-Trichloroethane	50.0	45.1		ug/Kg		90	78 - 122	7	20
1,1-Dichloroethane	50.0	46.3		ug/Kg		93	73 - 126	0	20
1,1-Dichloroethene	50.0	43.5		ug/Kg		87	59 - 125	1	20
1,2,4-Trichlorobenzene	50.0	44.4		ug/Kg		89	64 - 120	2	20
1,2,4-Trimethylbenzene	50.0	43.1		ug/Kg		86	74 - 120	0	20
1,2-Dibromo-3-Chloropropane	50.0	46.2		ug/Kg		92	63 - 124	5	20
1,2-Dibromoethane	50.0	48.1		ug/Kg		96	78 - 120	6	20
1,2-Dichlorobenzene	50.0	44.2		ug/Kg		88	75 - 120	3	20
1,2-Dichloroethane	50.0	49.1		ug/Kg		98	77 - 122	4	20
1,2-Dichloropropane	50.0	47.5		ug/Kg		95	75 - 124	4	20
1,3,5-Trimethylbenzene	50.0	42.7		ug/Kg		85	74 - 120	1	20
1,3-Dichlorobenzene	50.0	44.5		ug/Kg		89	74 - 120	2	20
1,4-Dichlorobenzene	50.0	43.1		ug/Kg		86	73 - 120	2	20
2-Butanone (MEK)	250	229		ug/Kg		92	70 - 134	17	20
2-Hexanone	250	232		ug/Kg		93	59 - 130	5	20
4-Methyl-2-pentanone (MIBK)	250	227		ug/Kg		91	65 - 133	6	20
Acetone	250	282		ug/Kg		113	61 - 137	4	20
Benzene	50.0	46.2		ug/Kg		92	79 - 127	0	20
Bromodichloromethane	50.0	48.5		ug/Kg		97	80 - 122	3	20
Bromoform	50.0	51.5		ug/Kg		103	68 - 126	6	20
Bromomethane	50.0	48.2		ug/Kg		96	37 - 149	5	20
Carbon disulfide	50.0	40.5		ug/Kg		81	64 - 131	3	20
Carbon tetrachloride	50.0	47.0		ug/Kg		94	75 - 135	1	20
Chlorobenzene	50.0	45.7		ug/Kg		91	76 - 124	2	20
Chloroethane	50.0	46.7		ug/Kg		93	69 - 135	3	20
Chloroform	50.0	46.1		ug/Kg		92	80 - 120	1	20
Chloromethane	50.0	43.3		ug/Kg		87	63 - 127	2	20
cis-1,2-Dichloroethene	50.0	46.6		ug/Kg		93	81 - 120	1	20
cis-1,3-Dichloropropene	50.0	48.4		ug/Kg		97	80 - 120	4	20
Cyclohexane	50.0	43.2		ug/Kg		86	65 - 120	0	20
Dibromochloromethane	50.0	50.6		ug/Kg		101	76 - 125	5	20
Dichlorodifluoromethane	50.0	42.0		ug/Kg		84	57 - 142	4	20
Ethylbenzene	50.0	44.6		ug/Kg		89	80 - 120	1	20
Isopropylbenzene	50.0	43.2		ug/Kg		86	72 - 120	2	20
m,p-Xylene	50.0	44.0		ug/Kg		88	70 - 130	1	20
Methyl acetate	100	85.3		ug/Kg		85	55 - 136	15	20
Methyl tert-butyl ether	50.0	48.1		ug/Kg		96	63 - 125	2	20
Methylcyclohexane	50.0	45.2		ug/Kg		90	60 - 140	0	20
Methylene Chloride	50.0	49.7		ug/Kg		99	61 - 127	3	20
o-Xylene	50.0	44.3		ug/Kg		89	70 - 130	0	20
Styrene	50.0	44.2		ug/Kg		88	80 - 120	0	20
Tetrachloroethene	50.0	45.5		ug/Kg		91	74 - 122	1	20
Toluene	50.0	44.4		ug/Kg		89	74 - 128	1	20
trans-1,2-Dichloroethene	50.0	46.2		ug/Kg		92	78 - 126	0	20
trans-1,3-Dichloropropene	50.0	46.4		ug/Kg		93	73 - 123	3	20

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: LCSD 480-699570/2-A

Matrix: Solid

Analysis Batch: 699571

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 699570

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Trichloroethene	50.0	46.1		ug/Kg		92	77 - 129	3	20
Trichlorofluoromethane	50.0	48.1		ug/Kg		96	65 - 146	2	20
Vinyl chloride	50.0	44.4		ug/Kg		89	61 - 133	3	20
Xylenes, Total	100	88.3		ug/Kg		88	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		64 - 126
4-Bromofluorobenzene (Surr)	106		72 - 126
Dibromofluoromethane (Surr)	103		60 - 140
Toluene-d8 (Surr)	97		71 - 125

Lab Sample ID: MB 480-699604/8

Matrix: Water

Analysis Batch: 699604

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			02/01/24 12:49	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			02/01/24 12:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			02/01/24 12:49	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			02/01/24 12:49	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			02/01/24 12:49	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			02/01/24 12:49	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			02/01/24 12:49	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			02/01/24 12:49	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			02/01/24 12:49	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			02/01/24 12:49	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			02/01/24 12:49	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			02/01/24 12:49	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			02/01/24 12:49	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			02/01/24 12:49	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			02/01/24 12:49	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			02/01/24 12:49	1
2-Butanone (MEK)	ND		10	1.3	ug/L			02/01/24 12:49	1
2-Hexanone	ND		5.0	1.2	ug/L			02/01/24 12:49	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			02/01/24 12:49	1
Acetone	ND		10	3.0	ug/L			02/01/24 12:49	1
Benzene	ND		1.0	0.41	ug/L			02/01/24 12:49	1
Bromodichloromethane	ND		1.0	0.39	ug/L			02/01/24 12:49	1
Bromoform	ND		1.0	0.26	ug/L			02/01/24 12:49	1
Bromomethane	ND		1.0	0.69	ug/L			02/01/24 12:49	1
Carbon disulfide	ND		1.0	0.19	ug/L			02/01/24 12:49	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			02/01/24 12:49	1
Chlorobenzene	ND		1.0	0.75	ug/L			02/01/24 12:49	1
Chloroethane	ND		1.0	0.32	ug/L			02/01/24 12:49	1
Chloroform	ND		1.0	0.34	ug/L			02/01/24 12:49	1
Chloromethane	ND		1.0	0.35	ug/L			02/01/24 12:49	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			02/01/24 12:49	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			02/01/24 12:49	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: MB 480-699604/8

Matrix: Water

Analysis Batch: 699604

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyclohexane	ND		1.0	0.18	ug/L			02/01/24 12:49	1
Dibromochloromethane	ND		1.0	0.32	ug/L			02/01/24 12:49	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			02/01/24 12:49	1
Ethylbenzene	ND		1.0	0.74	ug/L			02/01/24 12:49	1
Isopropylbenzene	ND		1.0	0.79	ug/L			02/01/24 12:49	1
m,p-Xylene	ND		2.0	0.66	ug/L			02/01/24 12:49	1
Methyl acetate	ND		2.5	1.3	ug/L			02/01/24 12:49	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			02/01/24 12:49	1
Methylcyclohexane	ND		1.0	0.16	ug/L			02/01/24 12:49	1
Methylene Chloride	ND		1.0	0.44	ug/L			02/01/24 12:49	1
o-Xylene	ND		1.0	0.76	ug/L			02/01/24 12:49	1
Styrene	ND		1.0	0.73	ug/L			02/01/24 12:49	1
Tetrachloroethene	ND		1.0	0.36	ug/L			02/01/24 12:49	1
Toluene	ND		1.0	0.51	ug/L			02/01/24 12:49	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			02/01/24 12:49	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			02/01/24 12:49	1
Trichloroethene	ND		1.0	0.46	ug/L			02/01/24 12:49	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			02/01/24 12:49	1
Vinyl chloride	ND		1.0	0.90	ug/L			02/01/24 12:49	1
Xylenes, Total	ND		2.0	0.66	ug/L			02/01/24 12:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		77 - 120		02/01/24 12:49	1
4-Bromofluorobenzene (Surr)	96		73 - 120		02/01/24 12:49	1
Dibromofluoromethane (Surr)	101		75 - 123		02/01/24 12:49	1
Toluene-d8 (Surr)	108		80 - 120		02/01/24 12:49	1

Lab Sample ID: LCS 480-699604/6

Matrix: Water

Analysis Batch: 699604

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	25.0	22.2		ug/L		89	73 - 126
1,1,2,2-Tetrachloroethane	25.0	24.9		ug/L		99	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	20.9		ug/L		84	61 - 148
1,1,2-Trichloroethane	25.0	22.9		ug/L		91	76 - 122
1,1-Dichloroethane	25.0	22.6		ug/L		90	77 - 120
1,1-Dichloroethene	25.0	22.6		ug/L		90	66 - 127
1,2,4-Trichlorobenzene	25.0	25.7		ug/L		103	79 - 122
1,2,4-Trimethylbenzene	25.0	26.7		ug/L		107	76 - 121
1,2-Dibromo-3-Chloropropane	25.0	23.1		ug/L		93	56 - 134
1,2-Dibromoethane	25.0	22.9		ug/L		92	77 - 120
1,2-Dichlorobenzene	25.0	24.7		ug/L		99	80 - 124
1,2-Dichloroethane	25.0	23.4		ug/L		94	75 - 120
1,2-Dichloropropane	25.0	23.3		ug/L		93	76 - 120
1,3,5-Trimethylbenzene	25.0	28.2		ug/L		113	77 - 121
1,3-Dichlorobenzene	25.0	23.8		ug/L		95	77 - 120
1,4-Dichlorobenzene	25.0	23.8		ug/L		95	80 - 120

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: LCS 480-699604/6

Matrix: Water

Analysis Batch: 699604

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Butanone (MEK)	125	103		ug/L		82	57 - 140
2-Hexanone	125	97.0		ug/L		78	65 - 127
4-Methyl-2-pentanone (MIBK)	125	114		ug/L		91	71 - 125
Acetone	125	129		ug/L		103	56 - 142
Benzene	25.0	23.9		ug/L		96	71 - 124
Bromodichloromethane	25.0	23.9		ug/L		96	80 - 122
Bromoform	25.0	20.6		ug/L		82	61 - 132
Bromomethane	25.0	22.6		ug/L		90	55 - 144
Carbon disulfide	25.0	22.6		ug/L		91	59 - 134
Carbon tetrachloride	25.0	22.3		ug/L		89	72 - 134
Chlorobenzene	25.0	23.4		ug/L		94	80 - 120
Chloroethane	25.0	23.8		ug/L		95	69 - 136
Chloroform	25.0	22.6		ug/L		91	73 - 127
Chloromethane	25.0	21.3		ug/L		85	68 - 124
cis-1,2-Dichloroethene	25.0	23.2		ug/L		93	74 - 124
cis-1,3-Dichloropropene	25.0	23.2		ug/L		93	74 - 124
Cyclohexane	25.0	20.1		ug/L		81	59 - 135
Dibromochloromethane	25.0	24.5		ug/L		98	75 - 125
Dichlorodifluoromethane	25.0	18.7		ug/L		75	59 - 135
Ethylbenzene	25.0	22.5		ug/L		90	77 - 123
Isopropylbenzene	25.0	28.8		ug/L		115	77 - 122
m,p-Xylene	25.0	23.3		ug/L		93	76 - 122
Methyl acetate	50.0	39.3		ug/L		79	74 - 133
Methyl tert-butyl ether	25.0	24.1		ug/L		97	77 - 120
Methylcyclohexane	25.0	19.2		ug/L		77	68 - 134
Methylene Chloride	25.0	26.7		ug/L		107	75 - 124
o-Xylene	25.0	24.6		ug/L		98	76 - 122
Styrene	25.0	22.1		ug/L		89	80 - 120
Tetrachloroethene	25.0	24.2		ug/L		97	74 - 122
Toluene	25.0	25.0		ug/L		100	80 - 122
trans-1,2-Dichloroethene	25.0	22.8		ug/L		91	73 - 127
trans-1,3-Dichloropropene	25.0	24.6		ug/L		98	80 - 120
Trichloroethene	25.0	23.1		ug/L		92	74 - 123
Trichlorofluoromethane	25.0	22.7		ug/L		91	62 - 150
Vinyl chloride	25.0	22.5		ug/L		90	65 - 133
Xylenes, Total	50.0	47.9		ug/L		96	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		77 - 120
4-Bromofluorobenzene (Surr)	89		73 - 120
Dibromofluoromethane (Surr)	94		75 - 123
Toluene-d8 (Surr)	103		80 - 120

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: MB 480-699607/3-A

Matrix: Solid

Analysis Batch: 699697

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 699607

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	28	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,1,2,2-Tetrachloroethane	ND		100	16	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		100	50	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,1,2-Trichloroethane	ND		100	21	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,1-Dichloroethane	ND		100	31	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,1-Dichloroethene	ND		100	35	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,2,4-Trichlorobenzene	ND		100	38	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,2,4-Trimethylbenzene	ND		100	28	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,2-Dibromo-3-Chloropropane	ND		100	50	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,2-Dibromoethane	ND		100	18	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,2-Dichlorobenzene	ND		100	26	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,2-Dichloroethane	ND		100	41	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,2-Dichloropropane	ND		100	16	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,3,5-Trimethylbenzene	ND		100	30	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,3-Dichlorobenzene	ND		100	27	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
1,4-Dichlorobenzene	ND		100	14	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
2-Butanone (MEK)	ND		500	300	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
2-Hexanone	ND		500	210	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
4-Methyl-2-pentanone (MIBK)	ND		500	32	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Acetone	ND		500	410	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Benzene	ND		100	19	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Bromodichloromethane	ND		100	20	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Bromoform	ND		100	50	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Bromomethane	ND		100	22	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Carbon disulfide	ND		100	46	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Carbon tetrachloride	ND		100	26	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Chlorobenzene	ND		100	13	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Chloroethane	ND		100	21	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Chloroform	ND		100	69	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Chloromethane	ND		100	24	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
cis-1,2-Dichloroethene	ND		100	28	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
cis-1,3-Dichloropropene	ND		100	24	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Cyclohexane	ND		100	22	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Dibromochloromethane	ND		100	48	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Dichlorodifluoromethane	ND		100	44	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Ethylbenzene	ND		100	29	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Isopropylbenzene	ND		100	15	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
m,p-Xylene	ND		200	55	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Methyl acetate	ND		500	48	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Methyl tert-butyl ether	ND		100	38	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Methylcyclohexane	ND		100	47	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Methylene Chloride	ND		100	20	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
o-Xylene	ND		100	13	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Styrene	ND		100	24	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Tetrachloroethene	ND		100	13	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Toluene	ND		100	27	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
trans-1,2-Dichloroethene	ND		100	24	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
trans-1,3-Dichloropropene	ND		100	9.8	ug/Kg		02/02/24 09:13	02/02/24 13:07	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: MB 480-699607/3-A

Matrix: Solid

Analysis Batch: 699697

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 699607

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		100	28	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Trichlorofluoromethane	ND		100	47	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Vinyl chloride	ND		100	34	ug/Kg		02/02/24 09:13	02/02/24 13:07	1
Xylenes, Total	ND		200	55	ug/Kg		02/02/24 09:13	02/02/24 13:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		53 - 146	02/02/24 09:13	02/02/24 13:07	1
4-Bromofluorobenzene (Surr)	95		49 - 148	02/02/24 09:13	02/02/24 13:07	1
Dibromofluoromethane (Surr)	93		60 - 140	02/02/24 09:13	02/02/24 13:07	1
Toluene-d8 (Surr)	100		50 - 149	02/02/24 09:13	02/02/24 13:07	1

Lab Sample ID: LCS 480-699607/1-A

Matrix: Solid

Analysis Batch: 699697

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 699607

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	2500	2410		ug/Kg		96	68 - 130
1,1,2,2-Tetrachloroethane	2500	2340		ug/Kg		94	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	2500	2170		ug/Kg		87	10 - 179
1,1,2-Trichloroethane	2500	2360		ug/Kg		95	80 - 120
1,1-Dichloroethane	2500	2480		ug/Kg		99	78 - 121
1,1-Dichloroethene	2500	2010		ug/Kg		80	48 - 133
1,2,4-Trichlorobenzene	2500	2710		ug/Kg		108	70 - 140
1,2,4-Trimethylbenzene	2500	2740		ug/Kg		109	77 - 127
1,2-Dibromo-3-Chloropropane	2500	1920		ug/Kg		77	56 - 122
1,2-Dibromoethane	2500	2260		ug/Kg		90	80 - 120
1,2-Dichlorobenzene	2500	2550		ug/Kg		102	78 - 125
1,2-Dichloroethane	2500	2200		ug/Kg		88	74 - 127
1,2-Dichloropropane	2500	2400		ug/Kg		96	80 - 120
1,3,5-Trimethylbenzene	2500	2750		ug/Kg		110	79 - 120
1,3-Dichlorobenzene	2500	2580		ug/Kg		103	80 - 120
1,4-Dichlorobenzene	2500	2500		ug/Kg		100	80 - 120
2-Butanone (MEK)	12500	12100		ug/Kg		96	54 - 149
2-Hexanone	12500	11400		ug/Kg		92	59 - 127
4-Methyl-2-pentanone (MIBK)	12500	10900		ug/Kg		87	74 - 120
Acetone	12500	11600		ug/Kg		93	47 - 141
Benzene	2500	2380		ug/Kg		95	77 - 125
Bromodichloromethane	2500	2270		ug/Kg		91	71 - 121
Bromoform	2500	2440		ug/Kg		97	48 - 125
Bromomethane	2500	1910		ug/Kg		77	39 - 149
Carbon disulfide	2500	2020		ug/Kg		81	40 - 136
Carbon tetrachloride	2500	2410		ug/Kg		96	54 - 135
Chlorobenzene	2500	2370		ug/Kg		95	76 - 126
Chloroethane	2500	1900		ug/Kg		76	23 - 150
Chloroform	2500	2270		ug/Kg		91	78 - 120
Chloromethane	2500	2440		ug/Kg		98	61 - 124
cis-1,2-Dichloroethene	2500	2350		ug/Kg		94	79 - 124
cis-1,3-Dichloropropene	2500	2280		ug/Kg		91	75 - 121

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: LCS 480-699607/1-A

Matrix: Solid

Analysis Batch: 699697

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 699607

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyclohexane	2500	2620		ug/Kg		105	49 - 129
Dibromochloromethane	2500	2270		ug/Kg		91	64 - 120
Dichlorodifluoromethane	2500	1990		ug/Kg		80	10 - 150
Ethylbenzene	2500	2470		ug/Kg		99	78 - 124
Isopropylbenzene	2500	2780		ug/Kg		111	76 - 120
m,p-Xylene	2500	2440		ug/Kg		98	77 - 125
Methyl acetate	5000	4860		ug/Kg		97	71 - 123
Methyl tert-butyl ether	2500	2160		ug/Kg		86	67 - 137
Methylcyclohexane	2500	2360		ug/Kg		94	50 - 130
Methylene Chloride	2500	2210		ug/Kg		88	75 - 118
o-Xylene	2500	2400		ug/Kg		96	80 - 124
Styrene	2500	2470		ug/Kg		99	80 - 120
Tetrachloroethene	2500	2530		ug/Kg		101	73 - 133
Toluene	2500	2450		ug/Kg		98	75 - 124
trans-1,2-Dichloroethene	2500	2440		ug/Kg		97	74 - 129
trans-1,3-Dichloropropene	2500	2140		ug/Kg		86	73 - 120
Trichloroethene	2500	2370		ug/Kg		95	75 - 131
Trichlorofluoromethane	2500	1920		ug/Kg		77	29 - 158
Vinyl chloride	2500	2280		ug/Kg		91	59 - 124
Xylenes, Total	5000	4840		ug/Kg		97	78 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		53 - 146
4-Bromofluorobenzene (Surr)	94		49 - 148
Dibromofluoromethane (Surr)	92		60 - 140
Toluene-d8 (Surr)	98		50 - 149

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

Lab Sample ID: MB 480-699565/1-A

Matrix: Solid

Analysis Batch: 699589

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 699565

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		99	55	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
2,4,5-Trichlorophenol	ND		170	46	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
2,4,6-Trichlorophenol	ND		170	34	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
2,4-Dichlorophenol	ND		170	18	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
2,4-Dimethylphenol	ND		170	41	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
2,4-Dinitrophenol	ND		1700	780	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
2,4-Dinitrotoluene	ND		170	35	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
2,6-Dinitrotoluene	ND		170	20	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
2-Chloronaphthalene	ND		170	28	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
2-Chlorophenol	ND		330	31	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
2-Methylnaphthalene	ND		170	34	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
2-Methylphenol	ND		170	20	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
2-Nitroaniline	ND		330	25	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
2-Nitrophenol	ND		170	48	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
3,3'-Dichlorobenzidine	ND		330	200	ug/Kg		01/31/24 16:11	02/01/24 17:24	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: MB 480-699565/1-A

Matrix: Solid

Analysis Batch: 699589

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 699565

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitroaniline	ND		330	47	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
4,6-Dinitro-2-methylphenol	ND		330	170	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
4-Bromophenyl phenyl ether	ND		170	24	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
4-Chloro-3-methylphenol	ND		170	42	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
4-Chloroaniline	ND		170	42	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
4-Chlorophenyl phenyl ether	ND		170	21	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
4-Methylphenol	ND		330	20	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
4-Nitroaniline	ND		330	88	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
4-Nitrophenol	ND		330	120	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Acenaphthene	ND		170	25	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Acenaphthylene	ND		170	22	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Acetophenone	ND		170	23	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Anthracene	ND		170	42	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Atrazine	ND		170	59	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Benzaldehyde	ND		170	130	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Benzo[a]anthracene	ND		170	17	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Benzo[a]pyrene	ND		170	25	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Biphenyl	ND		170	25	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
bis (2-chloroisopropyl) ether	ND		170	34	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Bis(2-chloroethoxy)methane	ND		170	36	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Bis(2-chloroethyl)ether	ND		170	22	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Bis(2-ethylhexyl) phthalate	ND		170	58	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Butyl benzyl phthalate	ND		170	28	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Caprolactam	ND		170	51	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Carbazole	ND		170	20	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Chrysene	ND		170	38	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Dibenzofuran	ND		170	20	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Diethyl phthalate	ND		170	22	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Dimethyl phthalate	ND		170	20	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Di-n-butyl phthalate	ND		170	29	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Di-n-octyl phthalate	ND		170	20	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Fluoranthene	ND		170	18	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Fluorene	ND		170	20	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Hexachlorobenzene	ND		170	23	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Hexachlorobutadiene	ND		170	25	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Hexachlorocyclopentadiene	ND		170	23	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Hexachloroethane	ND		170	22	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Isophorone	ND		170	36	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Naphthalene	ND		170	22	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Nitrobenzene	ND		170	19	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
N-Nitrosodi-n-propylamine	ND		170	29	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
N-Nitrosodiphenylamine	ND		170	140	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Pentachlorophenol	ND		330	170	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Phenanthrene	ND		170	25	ug/Kg		01/31/24 16:11	02/01/24 17:24	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: MB 480-699565/1-A

Matrix: Solid

Analysis Batch: 699589

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 699565

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		170	26	ug/Kg		01/31/24 16:11	02/01/24 17:24	1
Pyrene	ND		170	20	ug/Kg		01/31/24 16:11	02/01/24 17:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	88		54 - 120	01/31/24 16:11	02/01/24 17:24	1
2-Fluorobiphenyl (Surr)	103		60 - 120	01/31/24 16:11	02/01/24 17:24	1
2-Fluorophenol (Surr)	94		52 - 120	01/31/24 16:11	02/01/24 17:24	1
Nitrobenzene-d5 (Surr)	103		53 - 120	01/31/24 16:11	02/01/24 17:24	1
Phenol-d5 (Surr)	102		54 - 120	01/31/24 16:11	02/01/24 17:24	1
p-Terphenyl-d14 (Surr)	120		79 - 130	01/31/24 16:11	02/01/24 17:24	1

Lab Sample ID: LCS 480-699565/2-A

Matrix: Solid

Analysis Batch: 699589

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 699565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	1640	816		ug/Kg		50	23 - 120
2,4,5-Trichlorophenol	1640	1550		ug/Kg		95	59 - 126
2,4,6-Trichlorophenol	1640	1570		ug/Kg		96	59 - 123
2,4-Dichlorophenol	1640	1570		ug/Kg		96	61 - 120
2,4-Dimethylphenol	1640	1420		ug/Kg		87	59 - 120
2,4-Dinitrophenol	3270	2350		ug/Kg		72	41 - 146
2,4-Dinitrotoluene	1640	1420		ug/Kg		87	63 - 120
2,6-Dinitrotoluene	1640	1490		ug/Kg		91	66 - 120
2-Chloronaphthalene	1640	1610		ug/Kg		98	57 - 120
2-Chlorophenol	1640	1510		ug/Kg		93	53 - 120
2-Methylnaphthalene	1640	1500		ug/Kg		91	59 - 120
2-Methylphenol	1640	1480		ug/Kg		90	54 - 120
2-Nitroaniline	1640	1650		ug/Kg		101	61 - 120
2-Nitrophenol	1640	1520		ug/Kg		93	56 - 120
3,3'-Dichlorobenzidine	3270	2780		ug/Kg		85	54 - 120
3-Nitroaniline	1640	1230		ug/Kg		75	48 - 120
4,6-Dinitro-2-methylphenol	3270	2900		ug/Kg		89	49 - 122
4-Bromophenyl phenyl ether	1640	1620		ug/Kg		99	58 - 120
4-Chloro-3-methylphenol	1640	1460		ug/Kg		89	61 - 120
4-Chloroaniline	1640	1230		ug/Kg		75	38 - 120
4-Chlorophenyl phenyl ether	1640	1450		ug/Kg		89	63 - 124
4-Methylphenol	1640	1540		ug/Kg		94	55 - 120
4-Nitroaniline	1640	1360		ug/Kg		83	56 - 120
4-Nitrophenol	3270	2910		ug/Kg		89	43 - 147
Acenaphthene	1640	1620		ug/Kg		99	62 - 120
Acenaphthylene	1640	1580		ug/Kg		97	58 - 121
Acetophenone	1640	1510		ug/Kg		92	54 - 120
Anthracene	1640	1600		ug/Kg		98	62 - 120
Atrazine	3270	2530		ug/Kg		77	60 - 127
Benzaldehyde	3270	2470		ug/Kg		75	10 - 150
Benzo[a]anthracene	1640	1680		ug/Kg		103	65 - 120
Benzo[a]pyrene	1640	1640		ug/Kg		101	64 - 120

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: LCS 480-699565/2-A

Matrix: Solid

Analysis Batch: 699589

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 699565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[b]fluoranthene	1640	1650		ug/Kg		101	64 - 120
Benzo[g,h,i]perylene	1640	1750		ug/Kg		107	45 - 145
Benzo[k]fluoranthene	1640	1540		ug/Kg		94	65 - 120
Biphenyl	1640	1640		ug/Kg		101	59 - 120
bis (2-chloroisopropyl) ether	1640	1570		ug/Kg		96	44 - 120
Bis(2-chloroethoxy)methane	1640	1550		ug/Kg		95	55 - 120
Bis(2-chloroethyl)ether	1640	1460		ug/Kg		89	45 - 120
Bis(2-ethylhexyl) phthalate	1640	1910		ug/Kg		116	61 - 133
Butyl benzyl phthalate	1640	1940		ug/Kg		119	61 - 129
Caprolactam	3270	2600		ug/Kg		79	47 - 120
Carbazole	1640	1550		ug/Kg		95	65 - 120
Chrysene	1640	1650		ug/Kg		101	64 - 120
Dibenz(a,h)anthracene	1640	1690		ug/Kg		103	54 - 132
Dibenzofuran	1640	1550		ug/Kg		94	63 - 120
Diethyl phthalate	1640	1490		ug/Kg		91	66 - 120
Dimethyl phthalate	1640	1550		ug/Kg		95	65 - 124
Di-n-butyl phthalate	1640	1560		ug/Kg		96	58 - 130
Di-n-octyl phthalate	1640	1730		ug/Kg		105	57 - 133
Fluoranthene	1640	1410		ug/Kg		86	62 - 120
Fluorene	1640	1500		ug/Kg		92	63 - 120
Hexachlorobenzene	1640	1580		ug/Kg		96	60 - 120
Hexachlorobutadiene	1640	1400		ug/Kg		85	45 - 120
Hexachlorocyclopentadiene	1640	1220		ug/Kg		74	47 - 120
Hexachloroethane	1640	1380		ug/Kg		84	41 - 120
Indeno[1,2,3-cd]pyrene	1640	1720		ug/Kg		105	56 - 134
Isophorone	1640	1590		ug/Kg		97	56 - 120
Naphthalene	1640	1480		ug/Kg		90	55 - 120
Nitrobenzene	1640	1510		ug/Kg		92	54 - 120
N-Nitrosodi-n-propylamine	1640	1600		ug/Kg		98	52 - 120
N-Nitrosodiphenylamine	1640	1760		ug/Kg		108	51 - 128
Pentachlorophenol	3270	2570		ug/Kg		79	10 - 120
Phenanthrene	1640	1630		ug/Kg		99	60 - 120
Phenol	1640	1510		ug/Kg		92	53 - 120
Pyrene	1640	2010		ug/Kg		123	61 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	94		54 - 120
2-Fluorobiphenyl (Surr)	101		60 - 120
2-Fluorophenol (Surr)	89		52 - 120
Nitrobenzene-d5 (Surr)	95		53 - 120
Phenol-d5 (Surr)	96		54 - 120
p-Terphenyl-d14 (Surr)	118		79 - 130

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: 480-216732-4 MS

Matrix: Solid

Analysis Batch: 699589

Client Sample ID: F-LOA-04-01302024

Prep Type: Total/NA

Prep Batch: 699565

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	ND		1970	1040		ug/Kg	✱	53	13 - 120
2,4,5-Trichlorophenol	ND		1970	1890		ug/Kg	✱	96	46 - 120
2,4,6-Trichlorophenol	ND		1970	2010		ug/Kg	✱	102	41 - 123
2,4-Dichlorophenol	ND		1970	1960		ug/Kg	✱	100	45 - 120
2,4-Dimethylphenol	ND		1970	1790		ug/Kg	✱	91	52 - 120
2,4-Dinitrophenol	ND		3930	3010		ug/Kg	✱	76	41 - 146
2,4-Dinitrotoluene	ND		1970	1880		ug/Kg	✱	95	63 - 125
2,6-Dinitrotoluene	ND		1970	1950		ug/Kg	✱	99	66 - 120
2-Chloronaphthalene	ND		1970	2030		ug/Kg	✱	103	57 - 120
2-Chlorophenol	ND		1970	1800		ug/Kg	✱	91	43 - 120
2-Methylnaphthalene	240		1970	2140		ug/Kg	✱	97	55 - 120
2-Methylphenol	35	J	1970	1720		ug/Kg	✱	86	48 - 120
2-Nitroaniline	ND		1970	2120		ug/Kg	✱	108	61 - 120
2-Nitrophenol	ND		1970	1970		ug/Kg	✱	100	37 - 120
3,3'-Dichlorobenzidine	ND		3930	3640		ug/Kg	✱	92	37 - 126
3-Nitroaniline	ND		1970	1660		ug/Kg	✱	84	48 - 120
4,6-Dinitro-2-methylphenol	ND		3930	3940		ug/Kg	✱	100	23 - 149
4-Bromophenyl phenyl ether	ND		1970	2170		ug/Kg	✱	110	58 - 120
4-Chloro-3-methylphenol	ND		1970	1810		ug/Kg	✱	92	49 - 125
4-Chloroaniline	ND		1970	1560		ug/Kg	✱	79	38 - 120
4-Chlorophenyl phenyl ether	ND		1970	1820		ug/Kg	✱	92	63 - 124
4-Methylphenol	66	J	1970	1820		ug/Kg	✱	89	50 - 120
4-Nitroaniline	ND		1970	1660		ug/Kg	✱	84	47 - 120
4-Nitrophenol	ND		3930	3980		ug/Kg	✱	101	31 - 147
Acenaphthene	59	J	1970	2060		ug/Kg	✱	102	60 - 120
Acenaphthylene	140	J	1970	2160		ug/Kg	✱	103	58 - 121
Acetophenone	ND		1970	1790		ug/Kg	✱	91	47 - 120
Anthracene	140	J	1970	2210		ug/Kg	✱	106	62 - 120
Atrazine	ND		3930	3120		ug/Kg	✱	79	60 - 150
Benzaldehyde	ND		3930	3040		ug/Kg	✱	77	10 - 150
Benzo[a]anthracene	270		1970	2500		ug/Kg	✱	113	65 - 120
Benzo[a]pyrene	290		1970	2470		ug/Kg	✱	111	64 - 120
Benzo[b]fluoranthene	360		1970	2380		ug/Kg	✱	102	10 - 150
Benzo[g,h,i]perylene	270		1970	2810		ug/Kg	✱	129	45 - 145
Benzo[k]fluoranthene	160	J	1970	2300		ug/Kg	✱	109	23 - 150
Biphenyl	41	J	1970	2130		ug/Kg	✱	106	58 - 120
bis (2-chloroisopropyl) ether	ND		1970	1830		ug/Kg	✱	93	31 - 120
Bis(2-chloroethoxy)methane	ND		1970	1970		ug/Kg	✱	100	52 - 120
Bis(2-chloroethyl)ether	ND		1970	1810		ug/Kg	✱	92	45 - 120
Bis(2-ethylhexyl) phthalate	ND		1970	2280		ug/Kg	✱	116	61 - 133
Butyl benzyl phthalate	ND	F1	1970	2400	F1	ug/Kg	✱	122	61 - 120
Caprolactam	ND		3930	3320		ug/Kg	✱	84	37 - 133
Carbazole	56	J	1970	2100		ug/Kg	✱	104	59 - 120
Chrysene	260		1970	2390		ug/Kg	✱	108	64 - 120
Dibenz(a,h)anthracene	ND		1970	2430		ug/Kg	✱	123	54 - 132
Dibenzofuran	110	J	1970	2090		ug/Kg	✱	101	62 - 120
Diethyl phthalate	ND		1970	1880		ug/Kg	✱	96	66 - 120
Dimethyl phthalate	ND		1970	2020		ug/Kg	✱	103	65 - 124

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: 480-216732-4 MS

Matrix: Solid

Analysis Batch: 699589

Client Sample ID: F-LOA-04-01302024

Prep Type: Total/NA

Prep Batch: 699565

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Di-n-butyl phthalate	ND		1970	1960		ug/Kg	☼	99	58 - 130
Di-n-octyl phthalate	ND		1970	2270		ug/Kg	☼	115	57 - 133
Fluoranthene	470		1970	2340		ug/Kg	☼	95	62 - 120
Fluorene	150	J	1970	2040		ug/Kg	☼	96	63 - 120
Hexachlorobenzene	ND		1970	1990		ug/Kg	☼	101	60 - 120
Hexachlorobutadiene	ND		1970	1740		ug/Kg	☼	88	45 - 120
Hexachlorocyclopentadiene	ND		1970	1530		ug/Kg	☼	78	31 - 120
Hexachloroethane	ND		1970	1720		ug/Kg	☼	87	21 - 120
Indeno[1,2,3-cd]pyrene	200	J	1970	2630		ug/Kg	☼	123	56 - 134
Isophorone	ND		1970	2020		ug/Kg	☼	103	56 - 120
Naphthalene	8600	E	1970	11000	E 4	ug/Kg	☼	124	46 - 120
Nitrobenzene	ND		1970	1980		ug/Kg	☼	101	49 - 120
N-Nitrosodi-n-propylamine	ND		1970	1850		ug/Kg	☼	94	46 - 120
N-Nitrosodiphenylamine	ND		1970	2390		ug/Kg	☼	121	20 - 128
Pentachlorophenol	ND		3930	3520		ug/Kg	☼	89	10 - 136
Phenanthrene	490		1970	2760		ug/Kg	☼	115	60 - 122
Phenol	ND		1970	1860		ug/Kg	☼	95	50 - 120
Pyrene	550		1970	3120		ug/Kg	☼	130	61 - 133

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	105		54 - 120
2-Fluorobiphenyl (Surr)	105		60 - 120
2-Fluorophenol (Surr)	89		52 - 120
Nitrobenzene-d5 (Surr)	101		53 - 120
Phenol-d5 (Surr)	94		54 - 120
p-Terphenyl-d14 (Surr)	113		79 - 130

Lab Sample ID: 480-216732-4 MSD

Matrix: Solid

Analysis Batch: 699589

Client Sample ID: F-LOA-04-01302024

Prep Type: Total/NA

Prep Batch: 699565

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	ND		2010	1020		ug/Kg	☼	51	13 - 120	2	50
2,4,5-Trichlorophenol	ND		2010	1920		ug/Kg	☼	95	46 - 120	2	18
2,4,6-Trichlorophenol	ND		2010	1990		ug/Kg	☼	99	41 - 123	1	19
2,4-Dichlorophenol	ND		2010	1880		ug/Kg	☼	93	45 - 120	4	19
2,4-Dimethylphenol	ND		2010	1750		ug/Kg	☼	87	52 - 120	2	42
2,4-Dinitrophenol	ND		4030	2630		ug/Kg	☼	65	41 - 146	13	22
2,4-Dinitrotoluene	ND		2010	1720		ug/Kg	☼	85	63 - 125	8	20
2,6-Dinitrotoluene	ND		2010	1900		ug/Kg	☼	94	66 - 120	2	15
2-Chloronaphthalene	ND		2010	2060		ug/Kg	☼	102	57 - 120	2	21
2-Chlorophenol	ND		2010	1780		ug/Kg	☼	88	43 - 120	1	25
2-Methylnaphthalene	240		2010	2030		ug/Kg	☼	89	55 - 120	5	21
2-Methylphenol	35	J	2010	1700		ug/Kg	☼	83	48 - 120	1	27
2-Nitroaniline	ND		2010	2080		ug/Kg	☼	103	61 - 120	2	15
2-Nitrophenol	ND		2010	1930		ug/Kg	☼	96	37 - 120	2	18
3,3'-Dichlorobenzidine	ND		4030	3500		ug/Kg	☼	87	37 - 126	4	25
3-Nitroaniline	ND		2010	1500		ug/Kg	☼	74	48 - 120	10	19

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: 480-216732-4 MSD

Matrix: Solid

Analysis Batch: 699589

Client Sample ID: F-LOA-04-01302024

Prep Type: Total/NA

Prep Batch: 699565

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4,6-Dinitro-2-methylphenol	ND		4030	3580		ug/Kg	✖	89	23 - 149	10	15
4-Bromophenyl phenyl ether	ND		2010	2050		ug/Kg	✖	102	58 - 120	5	15
4-Chloro-3-methylphenol	ND		2010	1630		ug/Kg	✖	81	49 - 125	10	27
4-Chloroaniline	ND		2010	1390		ug/Kg	✖	69	38 - 120	12	22
4-Chlorophenyl phenyl ether	ND		2010	1740		ug/Kg	✖	86	63 - 124	5	16
4-Methylphenol	66	J	2010	1810		ug/Kg	✖	87	50 - 120	0	24
4-Nitroaniline	ND		2010	1610		ug/Kg	✖	80	47 - 120	3	24
4-Nitrophenol	ND		4030	3740		ug/Kg	✖	93	31 - 147	6	25
Acenaphthene	59	J	2010	2010		ug/Kg	✖	97	60 - 120	2	35
Acenaphthylene	140	J	2010	2130		ug/Kg	✖	99	58 - 121	1	18
Acetophenone	ND		2010	1800		ug/Kg	✖	89	47 - 120	0	20
Anthracene	140	J	2010	2150		ug/Kg	✖	100	62 - 120	3	15
Atrazine	ND		4030	2810		ug/Kg	✖	70	60 - 150	11	20
Benzaldehyde	ND		4030	2920		ug/Kg	✖	73	10 - 150	4	20
Benzo[a]anthracene	270		2010	2390		ug/Kg	✖	105	65 - 120	4	15
Benzo[a]pyrene	290		2010	2410		ug/Kg	✖	105	64 - 120	3	15
Benzo[b]fluoranthene	360		2010	2220		ug/Kg	✖	92	10 - 150	7	15
Benzo[g,h,i]perylene	270		2010	2810		ug/Kg	✖	126	45 - 145	0	15
Benzo[k]fluoranthene	160	J	2010	2270		ug/Kg	✖	105	23 - 150	1	22
Biphenyl	41	J	2010	2180		ug/Kg	✖	106	58 - 120	2	20
bis (2-chloroisopropyl) ether	ND		2010	1810		ug/Kg	✖	90	31 - 120	1	24
Bis(2-chloroethoxy)methane	ND		2010	1900		ug/Kg	✖	94	52 - 120	4	17
Bis(2-chloroethyl)ether	ND		2010	1740		ug/Kg	✖	86	45 - 120	4	21
Bis(2-ethylhexyl) phthalate	ND		2010	2260		ug/Kg	✖	112	61 - 133	1	15
Butyl benzyl phthalate	ND	F1	2010	2290		ug/Kg	✖	114	61 - 120	5	16
Caprolactam	ND		4030	2860		ug/Kg	✖	71	37 - 133	15	20
Carbazole	56	J	2010	2000		ug/Kg	✖	96	59 - 120	5	20
Chrysene	260		2010	2320		ug/Kg	✖	102	64 - 120	3	15
Dibenz(a,h)anthracene	ND		2010	2400		ug/Kg	✖	119	54 - 132	1	15
Dibenzofuran	110	J	2010	2030		ug/Kg	✖	95	62 - 120	3	15
Diethyl phthalate	ND		2010	1780		ug/Kg	✖	88	66 - 120	6	15
Dimethyl phthalate	ND		2010	1960		ug/Kg	✖	97	65 - 124	3	15
Di-n-butyl phthalate	ND		2010	1880		ug/Kg	✖	93	58 - 130	4	15
Di-n-octyl phthalate	ND		2010	2170		ug/Kg	✖	108	57 - 133	4	16
Fluoranthene	470		2010	2280		ug/Kg	✖	90	62 - 120	2	15
Fluorene	150	J	2010	1970		ug/Kg	✖	90	63 - 120	4	15
Hexachlorobenzene	ND		2010	1900		ug/Kg	✖	94	60 - 120	5	15
Hexachlorobutadiene	ND		2010	1750		ug/Kg	✖	87	45 - 120	1	44
Hexachlorocyclopentadiene	ND		2010	1550		ug/Kg	✖	77	31 - 120	1	49
Hexachloroethane	ND		2010	1730		ug/Kg	✖	86	21 - 120	1	46
Indeno[1,2,3-cd]pyrene	200	J	2010	2600		ug/Kg	✖	119	56 - 134	1	15
Isophorone	ND		2010	1930		ug/Kg	✖	96	56 - 120	5	17
Naphthalene	8600	E	2010	10700	E 4	ug/Kg	✖	105	46 - 120	3	29
Nitrobenzene	ND		2010	1940		ug/Kg	✖	96	49 - 120	2	24
N-Nitrosodi-n-propylamine	ND		2010	1820		ug/Kg	✖	90	46 - 120	2	31
N-Nitrosodiphenylamine	ND		2010	2320		ug/Kg	✖	115	20 - 128	3	15
Pentachlorophenol	ND		4030	3320		ug/Kg	✖	82	10 - 136	6	35
Phenanthrene	490		2010	2660		ug/Kg	✖	108	60 - 122	4	15
Phenol	ND		2010	1810		ug/Kg	✖	90	50 - 120	3	35

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: 480-216732-4 MSD

Matrix: Solid

Analysis Batch: 699589

Client Sample ID: F-LOA-04-01302024

Prep Type: Total/NA

Prep Batch: 699565

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Pyrene	550		2010	2990		ug/Kg	✱	121	61 - 133	4	35
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
2,4,6-Tribromophenol (Surr)	98		54 - 120								
2-Fluorobiphenyl (Surr)	105		60 - 120								
2-Fluorophenol (Surr)	87		52 - 120								
Nitrobenzene-d5 (Surr)	98		53 - 120								
Phenol-d5 (Surr)	90		54 - 120								
p-Terphenyl-d14 (Surr)	106		79 - 130								

Lab Sample ID: MB 480-699657/1-A

Matrix: Water

Analysis Batch: 699837

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 699657

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		10	1.1	ug/L		02/01/24 13:52	02/05/24 20:56	1
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		02/01/24 13:52	02/05/24 20:56	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		02/01/24 13:52	02/05/24 20:56	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		02/01/24 13:52	02/05/24 20:56	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		02/01/24 13:52	02/05/24 20:56	1
2,4-Dinitrophenol	ND		10	2.2	ug/L		02/01/24 13:52	02/05/24 20:56	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		02/01/24 13:52	02/05/24 20:56	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		02/01/24 13:52	02/05/24 20:56	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		02/01/24 13:52	02/05/24 20:56	1
2-Chlorophenol	ND		5.0	0.53	ug/L		02/01/24 13:52	02/05/24 20:56	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		02/01/24 13:52	02/05/24 20:56	1
2-Methylphenol	ND		5.0	0.40	ug/L		02/01/24 13:52	02/05/24 20:56	1
2-Nitroaniline	ND		10	0.42	ug/L		02/01/24 13:52	02/05/24 20:56	1
2-Nitrophenol	ND		5.0	0.48	ug/L		02/01/24 13:52	02/05/24 20:56	1
3,3'-Dichlorobenzidine	ND		5.0	0.40	ug/L		02/01/24 13:52	02/05/24 20:56	1
3-Nitroaniline	ND		10	0.48	ug/L		02/01/24 13:52	02/05/24 20:56	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		02/01/24 13:52	02/05/24 20:56	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		02/01/24 13:52	02/05/24 20:56	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		02/01/24 13:52	02/05/24 20:56	1
4-Chloroaniline	ND		5.0	0.59	ug/L		02/01/24 13:52	02/05/24 20:56	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		02/01/24 13:52	02/05/24 20:56	1
4-Methylphenol	ND		10	0.36	ug/L		02/01/24 13:52	02/05/24 20:56	1
4-Nitroaniline	ND		10	0.25	ug/L		02/01/24 13:52	02/05/24 20:56	1
4-Nitrophenol	ND		10	1.5	ug/L		02/01/24 13:52	02/05/24 20:56	1
Acenaphthene	ND		5.0	0.41	ug/L		02/01/24 13:52	02/05/24 20:56	1
Acenaphthylene	ND		5.0	0.38	ug/L		02/01/24 13:52	02/05/24 20:56	1
Acetophenone	ND		5.0	0.54	ug/L		02/01/24 13:52	02/05/24 20:56	1
Anthracene	ND		5.0	0.28	ug/L		02/01/24 13:52	02/05/24 20:56	1
Atrazine	ND		5.0	0.46	ug/L		02/01/24 13:52	02/05/24 20:56	1
Benzaldehyde	ND		5.0	0.27	ug/L		02/01/24 13:52	02/05/24 20:56	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		02/01/24 13:52	02/05/24 20:56	1
Benzo[a]pyrene	ND		5.0	0.47	ug/L		02/01/24 13:52	02/05/24 20:56	1
Benzo[b]fluoranthene	ND		5.0	0.34	ug/L		02/01/24 13:52	02/05/24 20:56	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: MB 480-699657/1-A

Matrix: Water

Analysis Batch: 699837

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 699657

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		5.0	0.35	ug/L		02/01/24 13:52	02/05/24 20:56	1
Benzo[k]fluoranthene	ND		5.0	0.73	ug/L		02/01/24 13:52	02/05/24 20:56	1
Biphenyl	ND		5.0	0.65	ug/L		02/01/24 13:52	02/05/24 20:56	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		02/01/24 13:52	02/05/24 20:56	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		02/01/24 13:52	02/05/24 20:56	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		02/01/24 13:52	02/05/24 20:56	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		02/01/24 13:52	02/05/24 20:56	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		02/01/24 13:52	02/05/24 20:56	1
Caprolactam	ND		5.0	2.2	ug/L		02/01/24 13:52	02/05/24 20:56	1
Carbazole	ND		5.0	0.30	ug/L		02/01/24 13:52	02/05/24 20:56	1
Chrysene	ND		5.0	0.33	ug/L		02/01/24 13:52	02/05/24 20:56	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		02/01/24 13:52	02/05/24 20:56	1
Dibenzofuran	ND		10	0.51	ug/L		02/01/24 13:52	02/05/24 20:56	1
Diethyl phthalate	ND		5.0	0.22	ug/L		02/01/24 13:52	02/05/24 20:56	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		02/01/24 13:52	02/05/24 20:56	1
Di-n-butyl phthalate	ND		5.0	0.31	ug/L		02/01/24 13:52	02/05/24 20:56	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		02/01/24 13:52	02/05/24 20:56	1
Fluoranthene	ND		5.0	0.40	ug/L		02/01/24 13:52	02/05/24 20:56	1
Fluorene	ND		5.0	0.36	ug/L		02/01/24 13:52	02/05/24 20:56	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		02/01/24 13:52	02/05/24 20:56	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		02/01/24 13:52	02/05/24 20:56	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		02/01/24 13:52	02/05/24 20:56	1
Hexachloroethane	ND		5.0	0.59	ug/L		02/01/24 13:52	02/05/24 20:56	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.47	ug/L		02/01/24 13:52	02/05/24 20:56	1
Isophorone	ND		5.0	0.43	ug/L		02/01/24 13:52	02/05/24 20:56	1
Naphthalene	ND		5.0	0.76	ug/L		02/01/24 13:52	02/05/24 20:56	1
Nitrobenzene	ND		5.0	0.29	ug/L		02/01/24 13:52	02/05/24 20:56	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		02/01/24 13:52	02/05/24 20:56	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		02/01/24 13:52	02/05/24 20:56	1
Pentachlorophenol	ND		10	2.2	ug/L		02/01/24 13:52	02/05/24 20:56	1
Phenanthrene	ND		5.0	0.44	ug/L		02/01/24 13:52	02/05/24 20:56	1
Phenol	ND		5.0	0.39	ug/L		02/01/24 13:52	02/05/24 20:56	1
Pyrene	ND		5.0	0.34	ug/L		02/01/24 13:52	02/05/24 20:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	60		41 - 120	02/01/24 13:52	02/05/24 20:56	1
2-Fluorobiphenyl (Surr)	110		48 - 120	02/01/24 13:52	02/05/24 20:56	1
2-Fluorophenol (Surr)	75		35 - 120	02/01/24 13:52	02/05/24 20:56	1
Nitrobenzene-d5 (Surr)	88		46 - 120	02/01/24 13:52	02/05/24 20:56	1
Phenol-d5 (Surr)	52		22 - 120	02/01/24 13:52	02/05/24 20:56	1
p-Terphenyl-d14 (Surr)	135		60 - 148	02/01/24 13:52	02/05/24 20:56	1

Lab Sample ID: LCS 480-699657/2-A

Matrix: Water

Analysis Batch: 699837

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 699657

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	32.0	17.6		ug/L		55	10 - 120

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: LCS 480-699657/2-A

Matrix: Water

Analysis Batch: 699837

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 699657

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4,5-Trichlorophenol	32.0	37.4		ug/L		117	65 - 126
2,4,6-Trichlorophenol	32.0	31.9		ug/L		100	64 - 120
2,4-Dichlorophenol	32.0	29.8		ug/L		93	63 - 120
2,4-Dimethylphenol	32.0	30.3		ug/L		95	47 - 120
2,4-Dinitrophenol	64.0	67.8		ug/L		106	31 - 137
2,4-Dinitrotoluene	32.0	32.4		ug/L		101	69 - 120
2,6-Dinitrotoluene	32.0	32.1		ug/L		100	68 - 120
2-Chloronaphthalene	32.0	30.4		ug/L		95	58 - 120
2-Chlorophenol	32.0	30.4		ug/L		95	48 - 120
2-Methylnaphthalene	32.0	28.4		ug/L		89	59 - 120
2-Methylphenol	32.0	27.4		ug/L		86	39 - 120
2-Nitroaniline	32.0	30.9		ug/L		96	54 - 127
2-Nitrophenol	32.0	29.9		ug/L		94	52 - 125
3,3'-Dichlorobenzidine	64.0	50.8		ug/L		79	49 - 135
3-Nitroaniline	32.0	21.4		ug/L		67	51 - 120
4,6-Dinitro-2-methylphenol	64.0	72.6		ug/L		114	46 - 136
4-Bromophenyl phenyl ether	32.0	31.7		ug/L		99	65 - 120
4-Chloro-3-methylphenol	32.0	27.7		ug/L		87	61 - 123
4-Chloroaniline	32.0	21.7		ug/L		68	30 - 120
4-Chlorophenyl phenyl ether	32.0	30.1		ug/L		94	62 - 120
4-Methylphenol	32.0	28.9		ug/L		90	29 - 131
4-Nitroaniline	32.0	34.5		ug/L		108	65 - 120
4-Nitrophenol	64.0	49.1		ug/L		77	45 - 120
Acenaphthene	32.0	32.9		ug/L		103	60 - 120
Acenaphthylene	32.0	32.4		ug/L		101	63 - 120
Acetophenone	32.0	31.2		ug/L		98	45 - 120
Anthracene	32.0	36.0		ug/L		113	67 - 120
Atrazine	64.0	77.9		ug/L		122	71 - 130
Benzaldehyde	64.0	61.0		ug/L		95	10 - 140
Benzo(a)anthracene	32.0	32.9		ug/L		103	70 - 121
Benzo[a]pyrene	32.0	34.3		ug/L		107	60 - 123
Benzo[b]fluoranthene	32.0	35.7		ug/L		111	66 - 126
Benzo[g,h,i]perylene	32.0	33.5		ug/L		105	66 - 150
Benzo[k]fluoranthene	32.0	34.9		ug/L		109	65 - 124
Biphenyl	32.0	31.5		ug/L		98	59 - 120
bis (2-chloroisopropyl) ether	32.0	29.3		ug/L		91	21 - 136
Bis(2-chloroethoxy)methane	32.0	30.2		ug/L		94	50 - 128
Bis(2-chloroethyl)ether	32.0	30.9		ug/L		97	44 - 120
Bis(2-ethylhexyl) phthalate	32.0	34.7		ug/L		108	63 - 139
Butyl benzyl phthalate	32.0	34.0		ug/L		106	70 - 129
Caprolactam	64.0	19.5		ug/L		30	22 - 120
Carbazole	32.0	37.6		ug/L		118	66 - 123
Chrysene	32.0	34.8		ug/L		109	69 - 120
Dibenz(a,h)anthracene	32.0	36.5		ug/L		114	65 - 135
Dibenzofuran	32.0	31.1		ug/L		97	66 - 120
Diethyl phthalate	32.0	35.3		ug/L		110	59 - 127
Dimethyl phthalate	32.0	33.6		ug/L		105	68 - 120
Di-n-butyl phthalate	32.0	36.7		ug/L		115	69 - 131
Di-n-octyl phthalate	32.0	34.0		ug/L		106	63 - 140

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: LCS 480-699657/2-A

Matrix: Water

Analysis Batch: 699837

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 699657

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoranthene	32.0	37.2		ug/L		116	69 - 126
Fluorene	32.0	34.6		ug/L		108	66 - 120
Hexachlorobenzene	32.0	36.2		ug/L		113	61 - 120
Hexachlorobutadiene	32.0	20.2		ug/L		63	35 - 120
Hexachlorocyclopentadiene	32.0	15.7		ug/L		49	31 - 120
Hexachloroethane	32.0	23.8		ug/L		75	33 - 120
Indeno[1,2,3-cd]pyrene	32.0	37.2		ug/L		116	69 - 146
Isophorone	32.0	30.5		ug/L		95	55 - 120
Naphthalene	32.0	28.9		ug/L		90	57 - 120
Nitrobenzene	32.0	29.5		ug/L		92	53 - 123
N-Nitrosodi-n-propylamine	32.0	31.4		ug/L		98	32 - 140
N-Nitrosodiphenylamine	32.0	33.3		ug/L		104	61 - 120
Pentachlorophenol	64.0	52.2		ug/L		82	10 - 136
Phenanthrene	32.0	32.9		ug/L		103	68 - 120
Phenol	32.0	19.1		ug/L		60	17 - 120
Pyrene	32.0	33.9		ug/L		106	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	91		41 - 120
2-Fluorobiphenyl (Surr)	103		48 - 120
2-Fluorophenol (Surr)	71		35 - 120
Nitrobenzene-d5 (Surr)	94		46 - 120
Phenol-d5 (Surr)	55		22 - 120
p-Terphenyl-d14 (Surr)	108		60 - 148

Lab Sample ID: MB 480-699753/1-A

Matrix: Solid

Analysis Batch: 699859

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 699753

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.010	0.00045	mg/L		02/02/24 13:57	02/05/24 14:59	1
2,4,5-Trichlorophenol	ND		0.0050	0.00048	mg/L		02/02/24 13:57	02/05/24 14:59	1
2,4,6-Trichlorophenol	ND		0.0050	0.00060	mg/L		02/02/24 13:57	02/05/24 14:59	1
2,4-Dinitrotoluene	ND		0.0050	0.00043	mg/L		02/02/24 13:57	02/05/24 14:59	1
3-Methylphenol	ND		0.010	0.00040	mg/L		02/02/24 13:57	02/05/24 14:59	1
2-Methylphenol	ND		0.0050	0.00040	mg/L		02/02/24 13:57	02/05/24 14:59	1
Pyridine	ND		0.025	0.00040	mg/L		02/02/24 13:57	02/05/24 14:59	1
4-Methylphenol	ND		0.010	0.00035	mg/L		02/02/24 13:57	02/05/24 14:59	1
Hexachlorobenzene	ND		0.0050	0.00050	mg/L		02/02/24 13:57	02/05/24 14:59	1
Hexachlorobutadiene	ND		0.0050	0.00068	mg/L		02/02/24 13:57	02/05/24 14:59	1
Hexachloroethane	ND		0.0050	0.00058	mg/L		02/02/24 13:57	02/05/24 14:59	1
Nitrobenzene	ND		0.0050	0.00028	mg/L		02/02/24 13:57	02/05/24 14:59	1
Pentachlorophenol	ND		0.010	0.0022	mg/L		02/02/24 13:57	02/05/24 14:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	66		41 - 120	02/02/24 13:57	02/05/24 14:59	1
2-Fluorobiphenyl (Surr)	88		48 - 120	02/02/24 13:57	02/05/24 14:59	1
2-Fluorophenol (Surr)	51		35 - 120	02/02/24 13:57	02/05/24 14:59	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: MB 480-699753/1-A

Matrix: Solid

Analysis Batch: 699859

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 699753

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	90		46 - 120	02/02/24 13:57	02/05/24 14:59	1
Phenol-d5 (Surr)	35		22 - 120	02/02/24 13:57	02/05/24 14:59	1
p-Terphenyl-d14 (Surr)	99		60 - 148	02/02/24 13:57	02/05/24 14:59	1

Lab Sample ID: LCS 480-699753/2-A

Matrix: Solid

Analysis Batch: 699859

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 699753

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dichlorobenzene	0.0500	0.0352		mg/L		70	42 - 120
2,4,5-Trichlorophenol	0.0500	0.0479		mg/L		96	65 - 126
2,4,6-Trichlorophenol	0.0500	0.0479		mg/L		96	64 - 120
2,4-Dinitrotoluene	0.0500	0.0533		mg/L		107	69 - 120
3-Methylphenol	0.0500	0.0425		mg/L		85	39 - 120
2-Methylphenol	0.0500	0.0421		mg/L		84	39 - 120
Pyridine	0.100	0.0437		mg/L		44	10 - 120
4-Methylphenol	0.0500	0.0425		mg/L		85	29 - 131
Hexachlorobenzene	0.0500	0.0479		mg/L		96	61 - 120
Hexachlorobutadiene	0.0500	0.0339		mg/L		68	35 - 120
Hexachloroethane	0.0500	0.0327		mg/L		65	33 - 120
Nitrobenzene	0.0500	0.0473		mg/L		95	53 - 123
Pentachlorophenol	0.100	0.0909		mg/L		91	10 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	96		41 - 120
2-Fluorobiphenyl (Surr)	97		48 - 120
2-Fluorophenol (Surr)	56		35 - 120
Nitrobenzene-d5 (Surr)	97		46 - 120
Phenol-d5 (Surr)	43		22 - 120
p-Terphenyl-d14 (Surr)	111		60 - 148

Lab Sample ID: LCSD 480-699753/3-A

Matrix: Solid

Analysis Batch: 699859

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 699753

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dichlorobenzene	0.0500	0.0348		mg/L		70	42 - 120	1	36
2,4,5-Trichlorophenol	0.0500	0.0489		mg/L		98	65 - 126	2	18
2,4,6-Trichlorophenol	0.0500	0.0459		mg/L		92	64 - 120	4	19
2,4-Dinitrotoluene	0.0500	0.0526		mg/L		105	69 - 120	1	20
3-Methylphenol	0.0500	0.0410		mg/L		82	39 - 120	4	30
2-Methylphenol	0.0500	0.0410		mg/L		82	39 - 120	3	27
Pyridine	0.100	0.0459		mg/L		46	10 - 120	5	49
4-Methylphenol	0.0500	0.0410		mg/L		82	29 - 131	4	24
Hexachlorobenzene	0.0500	0.0449		mg/L		90	61 - 120	6	15
Hexachlorobutadiene	0.0500	0.0325		mg/L		65	35 - 120	4	44
Hexachloroethane	0.0500	0.0333		mg/L		67	33 - 120	2	46
Nitrobenzene	0.0500	0.0450		mg/L		90	53 - 123	5	24

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: LCSD 480-699753/3-A

Matrix: Solid

Analysis Batch: 699859

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 699753

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Pentachlorophenol	0.100	0.0876		mg/L		88	10 - 136	4	37

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	95		41 - 120
2-Fluorobiphenyl (Surr)	94		48 - 120
2-Fluorophenol (Surr)	55		35 - 120
Nitrobenzene-d5 (Surr)	94		46 - 120
Phenol-d5 (Surr)	42		22 - 120
p-Terphenyl-d14 (Surr)	105		60 - 148

Lab Sample ID: LB 480-699598/1-F

Matrix: Solid

Analysis Batch: 699859

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 699753

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.040	0.0018	mg/L		02/02/24 13:57	02/05/24 16:12	1
2,4,5-Trichlorophenol	ND		0.020	0.0019	mg/L		02/02/24 13:57	02/05/24 16:12	1
2,4,6-Trichlorophenol	ND		0.020	0.0024	mg/L		02/02/24 13:57	02/05/24 16:12	1
2,4-Dinitrotoluene	ND		0.020	0.0017	mg/L		02/02/24 13:57	02/05/24 16:12	1
3-Methylphenol	ND		0.040	0.0016	mg/L		02/02/24 13:57	02/05/24 16:12	1
2-Methylphenol	ND		0.020	0.0016	mg/L		02/02/24 13:57	02/05/24 16:12	1
Pyridine	ND		0.10	0.0016	mg/L		02/02/24 13:57	02/05/24 16:12	1
4-Methylphenol	ND		0.040	0.0014	mg/L		02/02/24 13:57	02/05/24 16:12	1
Hexachlorobenzene	ND		0.020	0.0020	mg/L		02/02/24 13:57	02/05/24 16:12	1
Hexachlorobutadiene	ND		0.020	0.0027	mg/L		02/02/24 13:57	02/05/24 16:12	1
Hexachloroethane	ND		0.020	0.0023	mg/L		02/02/24 13:57	02/05/24 16:12	1
Nitrobenzene	ND		0.020	0.0011	mg/L		02/02/24 13:57	02/05/24 16:12	1
Pentachlorophenol	ND		0.040	0.0088	mg/L		02/02/24 13:57	02/05/24 16:12	1

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	84		41 - 120	02/02/24 13:57	02/05/24 16:12	1
2-Fluorobiphenyl (Surr)	94		48 - 120	02/02/24 13:57	02/05/24 16:12	1
2-Fluorophenol (Surr)	54		35 - 120	02/02/24 13:57	02/05/24 16:12	1
Nitrobenzene-d5 (Surr)	98		46 - 120	02/02/24 13:57	02/05/24 16:12	1
Phenol-d5 (Surr)	38		22 - 120	02/02/24 13:57	02/05/24 16:12	1
p-Terphenyl-d14 (Surr)	109		60 - 148	02/02/24 13:57	02/05/24 16:12	1

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

Lab Sample ID: 480-216732-4 MS

Matrix: Solid

Analysis Batch: 699735

Client Sample ID: F-LOA-04-01302024

Prep Type: Total/NA

Prep Batch: 699565

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane - DL	ND	F1	1970	798	J	ug/Kg	✖	41	13 - 120
2,4,5-Trichlorophenol - DL	ND		1970	1720	J	ug/Kg	✖	87	46 - 120
2,4,6-Trichlorophenol - DL	ND		1970	1750	J	ug/Kg	✖	89	41 - 123
2,4-Dichlorophenol - DL	ND		1970	1680	J	ug/Kg	✖	86	45 - 120

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: 480-216732-4 MS

Matrix: Solid

Analysis Batch: 699735

Client Sample ID: F-LOA-04-01302024

Prep Type: Total/NA

Prep Batch: 699565

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-Dimethylphenol - DL	ND		1970	1540	J	ug/Kg	✖	78	52 - 120
2,4-Dinitrophenol - DL	ND		3930	ND		ug/Kg	✖	NC	41 - 146
2,4-Dinitrotoluene - DL	ND		1970	1840	J	ug/Kg	✖	94	63 - 125
2,6-Dinitrotoluene - DL	ND		1970	1880	J	ug/Kg	✖	96	66 - 120
2-Chloronaphthalene - DL	ND		1970	1680	J	ug/Kg	✖	85	57 - 120
2-Chlorophenol - DL	ND		1970	1590	J	ug/Kg	✖	81	43 - 120
2-Methylnaphthalene - DL	ND		1970	2060		ug/Kg	✖	104	55 - 120
2-Methylphenol - DL	ND		1970	1900	J	ug/Kg	✖	96	48 - 120
2-Nitroaniline - DL	ND		1970	1900	J	ug/Kg	✖	97	61 - 120
2-Nitrophenol - DL	ND		1970	1660	J	ug/Kg	✖	85	37 - 120
3,3'-Dichlorobenzidine - DL	ND		3930	3410	J	ug/Kg	✖	87	37 - 126
3-Nitroaniline - DL	ND		1970	1700	J	ug/Kg	✖	86	48 - 120
4,6-Dinitro-2-methylphenol - DL	ND		3930	3470	J	ug/Kg	✖	88	23 - 149
4-Bromophenyl phenyl ether - DL	ND		1970	1910	J	ug/Kg	✖	97	58 - 120
4-Chloro-3-methylphenol - DL	ND		1970	1900	J	ug/Kg	✖	97	49 - 125
4-Chloroaniline - DL	ND		1970	1380	J	ug/Kg	✖	70	38 - 120
4-Chlorophenyl phenyl ether - DL	ND		1970	1800	J	ug/Kg	✖	92	63 - 124
4-Methylphenol - DL	ND		1970	1970	J	ug/Kg	✖	100	50 - 120
4-Nitroaniline - DL	ND		1970	1910	J	ug/Kg	✖	97	47 - 120
4-Nitrophenol - DL	ND		3930	3520	J	ug/Kg	✖	89	31 - 147
Acenaphthene - DL	ND		1970	1920	J	ug/Kg	✖	98	60 - 120
Acenaphthylene - DL	ND		1970	2000		ug/Kg	✖	102	58 - 121
Acetophenone - DL	ND		1970	1830	J	ug/Kg	✖	93	47 - 120
Anthracene - DL	ND		1970	2000		ug/Kg	✖	101	62 - 120
Atrazine - DL	ND		3930	3420		ug/Kg	✖	87	60 - 150
Benzaldehyde - DL	ND		3930	2730		ug/Kg	✖	69	10 - 150
Benzo[a]anthracene - DL	280	J	1970	2200		ug/Kg	✖	97	65 - 120
Benzo[a]pyrene - DL	300	J	1970	2180		ug/Kg	✖	96	64 - 120
Benzo[b]fluoranthene - DL	520	J	1970	2150		ug/Kg	✖	83	10 - 150
Benzo[g,h,i]perylene - DL	230	J	1970	2010		ug/Kg	✖	91	45 - 145
Benzo[k]fluoranthene - DL	ND		1970	2230		ug/Kg	✖	113	23 - 150
Biphenyl - DL	ND		1970	1800	J	ug/Kg	✖	92	58 - 120
bis (2-chloroisopropyl) ether - DL	ND		1970	1880	J	ug/Kg	✖	95	31 - 120
Bis(2-chloroethoxy)methane - DL	ND		1970	1710	J	ug/Kg	✖	87	52 - 120
Bis(2-chloroethyl)ether - DL	ND		1970	1570	J	ug/Kg	✖	80	45 - 120
Bis(2-ethylhexyl) phthalate - DL	ND		1970	1990	J	ug/Kg	✖	101	61 - 133
Butyl benzyl phthalate - DL	ND		1970	2160		ug/Kg	✖	110	61 - 120
Caprolactam - DL	ND		3930	3600		ug/Kg	✖	92	37 - 133
Carbazole - DL	ND		1970	1980	J	ug/Kg	✖	100	59 - 120
Chrysene - DL	ND		1970	2120		ug/Kg	✖	108	64 - 120
Dibenz(a,h)anthracene - DL	ND		1970	1820	J	ug/Kg	✖	92	54 - 132
Dibenzofuran - DL	ND		1970	1930	J	ug/Kg	✖	98	62 - 120
Diethyl phthalate - DL	ND		1970	1920	J	ug/Kg	✖	97	66 - 120
Dimethyl phthalate - DL	ND		1970	1800	J	ug/Kg	✖	92	65 - 124
Di-n-butyl phthalate - DL	ND		1970	1950	J	ug/Kg	✖	99	58 - 130
Di-n-octyl phthalate - DL	ND		1970	2080		ug/Kg	✖	106	57 - 133
Fluoranthene - DL	570	J	1970	2530		ug/Kg	✖	100	62 - 120
Fluorene - DL	ND		1970	2020		ug/Kg	✖	102	63 - 120
Hexachlorobenzene - DL	ND		1970	1630	J	ug/Kg	✖	83	60 - 120

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: 480-216732-4 MS

Matrix: Solid

Analysis Batch: 699735

Client Sample ID: F-LOA-04-01302024

Prep Type: Total/NA

Prep Batch: 699565

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexachlorobutadiene - DL	ND		1970	1560	J	ug/Kg	☼	79	45 - 120
Hexachlorocyclopentadiene - DL	ND		1970	1390	J	ug/Kg	☼	71	31 - 120
Hexachloroethane - DL	ND		1970	1540	J	ug/Kg	☼	78	21 - 120
Indeno[1,2,3-cd]pyrene - DL	ND		1970	1930	J	ug/Kg	☼	98	56 - 134
Isophorone - DL	ND		1970	1700	J	ug/Kg	☼	86	56 - 120
Naphthalene - DL	8200		1970	10400	4	ug/Kg	☼	112	46 - 120
Nitrobenzene - DL	ND		1970	1640	J	ug/Kg	☼	83	49 - 120
N-Nitrosodi-n-propylamine - DL	ND		1970	1790	J	ug/Kg	☼	91	46 - 120
N-Nitrosodiphenylamine - DL	ND		1970	1740	J	ug/Kg	☼	88	20 - 128
Pentachlorophenol - DL	ND		3930	3620	J	ug/Kg	☼	92	10 - 136
Phenanthrene - DL	490	J	1970	2490		ug/Kg	☼	102	60 - 122
Phenol - DL	ND		1970	1690	J	ug/Kg	☼	86	50 - 120
Pyrene - DL	490	J	1970	2520		ug/Kg	☼	103	61 - 133

Surrogate	MS %Recovery	MS Qualifier	MS Limits
2,4,6-Tribromophenol (Surr) - DL	91		54 - 120
2-Fluorobiphenyl (Surr) - DL	88		60 - 120
2-Fluorophenol (Surr) - DL	86		52 - 120
Nitrobenzene-d5 (Surr) - DL	80		53 - 120
Phenol-d5 (Surr) - DL	85		54 - 120
p-Terphenyl-d14 (Surr) - DL	88		79 - 130

Lab Sample ID: 480-216732-4 MSD

Matrix: Solid

Analysis Batch: 699735

Client Sample ID: F-LOA-04-01302024

Prep Type: Total/NA

Prep Batch: 699565

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane - DL	ND	F1	2010	934	J	ug/Kg	☼	46	13 - 120	16	50
2,4,5-Trichlorophenol - DL	ND		2010	1950	J	ug/Kg	☼	97	46 - 120	13	18
2,4,6-Trichlorophenol - DL	ND		2010	1750	J	ug/Kg	☼	87	41 - 123	0	19
2,4-Dichlorophenol - DL	ND		2010	1650	J	ug/Kg	☼	82	45 - 120	2	19
2,4-Dimethylphenol - DL	ND		2010	1660	J	ug/Kg	☼	82	52 - 120	7	42
2,4-Dinitrophenol - DL	ND		4030	ND		ug/Kg	☼	NC	41 - 146	NC	22
2,4-Dinitrotoluene - DL	ND		2010	1790	J	ug/Kg	☼	89	63 - 125	3	20
2,6-Dinitrotoluene - DL	ND		2010	1980	J	ug/Kg	☼	98	66 - 120	5	15
2-Chloronaphthalene - DL	ND		2010	1820	J	ug/Kg	☼	90	57 - 120	8	21
2-Chlorophenol - DL	ND		2010	1680	J	ug/Kg	☼	83	43 - 120	6	25
2-Methylnaphthalene - DL	ND		2010	2190		ug/Kg	☼	109	55 - 120	6	21
2-Methylphenol - DL	ND		2010	1880	J	ug/Kg	☼	93	48 - 120	1	27
2-Nitroaniline - DL	ND		2010	1960	J	ug/Kg	☼	98	61 - 120	3	15
2-Nitrophenol - DL	ND		2010	1700	J	ug/Kg	☼	85	37 - 120	2	18
3,3'-Dichlorobenzidine - DL	ND		4030	3450	J	ug/Kg	☼	86	37 - 126	1	25
3-Nitroaniline - DL	ND		2010	1690	J	ug/Kg	☼	84	48 - 120	0	19
4,6-Dinitro-2-methylphenol - DL	ND		4030	3620	J	ug/Kg	☼	90	23 - 149	4	15
4-Bromophenyl phenyl ether - DL	ND		2010	1810	J	ug/Kg	☼	90	58 - 120	5	15
4-Chloro-3-methylphenol - DL	ND		2010	2000	J	ug/Kg	☼	99	49 - 125	5	27
4-Chloroaniline - DL	ND		2010	1550	J	ug/Kg	☼	77	38 - 120	12	22
4-Chlorophenyl phenyl ether - DL	ND		2010	1810	J	ug/Kg	☼	90	63 - 124	0	16

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: 480-216732-4 MSD

Matrix: Solid

Analysis Batch: 699735

Client Sample ID: F-LOA-04-01302024

Prep Type: Total/NA

Prep Batch: 699565

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Methylphenol - DL	ND		2010	1950	J	ug/Kg	☼	97	50 - 120	1	24
4-Nitroaniline - DL	ND		2010	2170	J	ug/Kg	☼	108	47 - 120	13	24
4-Nitrophenol - DL	ND		4030	3810	J	ug/Kg	☼	95	31 - 147	8	25
Acenaphthene - DL	ND		2010	1980	J	ug/Kg	☼	98	60 - 120	3	35
Acenaphthylene - DL	ND		2010	2050	J	ug/Kg	☼	102	58 - 121	2	18
Acetophenone - DL	ND		2010	1920	J	ug/Kg	☼	95	47 - 120	5	20
Anthracene - DL	ND		2010	2150		ug/Kg	☼	107	62 - 120	8	15
Atrazine - DL	ND		4030	3570		ug/Kg	☼	89	60 - 150	4	20
Benzaldehyde - DL	ND		4030	2920		ug/Kg	☼	72	10 - 150	7	20
Benzo[a]anthracene - DL	280	J	2010	2320		ug/Kg	☼	101	65 - 120	5	15
Benzo[a]pyrene - DL	300	J	2010	2290		ug/Kg	☼	99	64 - 120	5	15
Benzo[b]fluoranthene - DL	520	J	2010	2180		ug/Kg	☼	82	10 - 150	1	15
Benzo[g,h,i]perylene - DL	230	J	2010	2070	J	ug/Kg	☼	91	45 - 145	3	15
Benzo[k]fluoranthene - DL	ND		2010	2380		ug/Kg	☼	118	23 - 150	6	22
Biphenyl - DL	ND		2010	1890	J	ug/Kg	☼	94	58 - 120	5	20
bis (2-chloroisopropyl) ether - DL	ND		2010	1990	J	ug/Kg	☼	99	31 - 120	6	24
Bis(2-chloroethoxy)methane - DL	ND		2010	1830	J	ug/Kg	☼	91	52 - 120	7	17
Bis(2-chloroethyl)ether - DL	ND		2010	1650	J	ug/Kg	☼	82	45 - 120	5	21
Bis(2-ethylhexyl) phthalate - DL	ND		2010	2010	J	ug/Kg	☼	100	61 - 133	1	15
Butyl benzyl phthalate - DL	ND		2010	2240		ug/Kg	☼	111	61 - 120	4	16
Caprolactam - DL	ND		4030	3690		ug/Kg	☼	92	37 - 133	2	20
Carbazole - DL	ND		2010	2030	J	ug/Kg	☼	101	59 - 120	2	20
Chrysene - DL	ND		2010	2370		ug/Kg	☼	118	64 - 120	11	15
Dibenz(a,h)anthracene - DL	ND		2010	1810	J	ug/Kg	☼	90	54 - 132	0	15
Dibenzofuran - DL	ND		2010	2000	J	ug/Kg	☼	99	62 - 120	4	15
Diethyl phthalate - DL	ND		2010	1950	J	ug/Kg	☼	97	66 - 120	2	15
Dimethyl phthalate - DL	ND		2010	1840	J	ug/Kg	☼	92	65 - 124	2	15
Di-n-butyl phthalate - DL	ND		2010	2050	J	ug/Kg	☼	102	58 - 130	5	15
Di-n-octyl phthalate - DL	ND		2010	2130		ug/Kg	☼	106	57 - 133	2	16
Fluoranthene - DL	570	J	2010	2620		ug/Kg	☼	102	62 - 120	3	15
Fluorene - DL	ND		2010	2140		ug/Kg	☼	106	63 - 120	6	15
Hexachlorobenzene - DL	ND		2010	1790	J	ug/Kg	☼	89	60 - 120	9	15
Hexachlorobutadiene - DL	ND		2010	1610	J	ug/Kg	☼	80	45 - 120	3	44
Hexachlorocyclopentadiene - DL	ND		2010	1470	J	ug/Kg	☼	73	31 - 120	6	49
Hexachloroethane - DL	ND		2010	1690	J	ug/Kg	☼	84	21 - 120	9	46
Indeno[1,2,3-cd]pyrene - DL	ND		2010	2010	J	ug/Kg	☼	100	56 - 134	4	15
Isophorone - DL	ND		2010	1770	J	ug/Kg	☼	88	56 - 120	4	17
Naphthalene - DL	8200		2010	11000	4	ug/Kg	☼	134	46 - 120	5	29
Nitrobenzene - DL	ND		2010	1730	J	ug/Kg	☼	86	49 - 120	5	24
N-Nitrosodi-n-propylamine - DL	ND		2010	1950	J	ug/Kg	☼	97	46 - 120	9	31
N-Nitrosodiphenylamine - DL	ND		2010	1820	J	ug/Kg	☼	91	20 - 128	5	15
Pentachlorophenol - DL	ND		4030	3890	J	ug/Kg	☼	97	10 - 136	7	35
Phenanthrene - DL	490	J	2010	2680		ug/Kg	☼	109	60 - 122	7	15
Phenol - DL	ND		2010	1790	J	ug/Kg	☼	89	50 - 120	5	35
Pyrene - DL	490	J	2010	2630		ug/Kg	☼	106	61 - 133	4	35

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

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

Lab Sample ID: 480-216732-4 MSD

Matrix: Solid

Analysis Batch: 699735

Client Sample ID: F-LOA-04-01302024

Prep Type: Total/NA

Prep Batch: 699565

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
2,4,6-Tribromophenol (Surr) - DL	92		54 - 120
2-Fluorobiphenyl (Surr) - DL	89		60 - 120
2-Fluorophenol (Surr) - DL	85		52 - 120
Nitrobenzene-d5 (Surr) - DL	81		53 - 120
Phenol-d5 (Surr) - DL	81		54 - 120
p-Terphenyl-d14 (Surr) - DL	94		79 - 130

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 480-699748/1-A

Matrix: Solid

Analysis Batch: 699852

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 699748

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.00050	0.0000073	mg/L		02/02/24 13:49	02/05/24 12:36	1
Endrin	ND		0.00050	0.0000035	mg/L		02/02/24 13:49	02/05/24 12:36	1
gamma-BHC (Lindane)	ND		0.00050	0.0000015	mg/L		02/02/24 13:49	02/05/24 12:36	1
Heptachlor	ND		0.00050	0.0000021	mg/L		02/02/24 13:49	02/05/24 12:36	1
Heptachlor epoxide	ND		0.00050	0.0000013	mg/L		02/02/24 13:49	02/05/24 12:36	1
Methoxychlor	ND		0.00050	0.0000035	mg/L		02/02/24 13:49	02/05/24 12:36	1
Toxaphene	ND		0.00050	0.000030	mg/L		02/02/24 13:49	02/05/24 12:36	1

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
DCB Decachlorobiphenyl (Surr)	42		20 - 120			02/02/24 13:49	02/05/24 12:36	1	
DCB Decachlorobiphenyl (Surr)	57		20 - 120			02/02/24 13:49	02/05/24 12:36	1	
Tetrachloro-m-xylene (Surr)	72		44 - 120			02/02/24 13:49	02/05/24 12:36	1	
Tetrachloro-m-xylene (Surr)	76		44 - 120			02/02/24 13:49	02/05/24 12:36	1	

Lab Sample ID: LCS 480-699748/2-A

Matrix: Solid

Analysis Batch: 699852

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 699748

	Spike	LCS	LCS						
Analyte	Added	Result	Qualifier	Unit	D	%Rec	%Rec	Limits	
Endrin	0.000500	0.000461		mg/L		92		65 - 135	
gamma-BHC (Lindane)	0.000500	0.000390		mg/L		78		56 - 120	
Heptachlor	0.000500	0.000393		mg/L		79		58 - 120	
Heptachlor epoxide	0.000500	0.000466		mg/L		93		65 - 125	
Methoxychlor	0.000500	0.000461		mg/L		92		50 - 150	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	47		20 - 120
DCB Decachlorobiphenyl (Surr)	63		20 - 120
Tetrachloro-m-xylene (Surr)	71		44 - 120
Tetrachloro-m-xylene (Surr)	76		44 - 120

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 480-699748/3-A

Matrix: Solid

Analysis Batch: 699852

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 699748

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Endrin	0.000500	0.000480		mg/L		96	65 - 135	4	24
gamma-BHC (Lindane)	0.000500	0.000380		mg/L		76	56 - 120	3	24
Heptachlor	0.000500	0.000366		mg/L		73	58 - 120	7	25
Heptachlor epoxide	0.000500	0.000473		mg/L		95	65 - 125	1	23
Methoxychlor	0.000500	0.000456		mg/L		91	50 - 150	1	26

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	51		20 - 120
DCB Decachlorobiphenyl (Surr)	68		20 - 120
Tetrachloro-m-xylene (Surr)	63		44 - 120
Tetrachloro-m-xylene (Surr)	66		44 - 120

Lab Sample ID: LB 480-699598/1-E

Matrix: Solid

Analysis Batch: 699852

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 699748

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.0020	0.000029	mg/L		02/02/24 13:49	02/05/24 13:35	1
Endrin	ND		0.00020	0.000014	mg/L		02/02/24 13:49	02/05/24 13:35	1
gamma-BHC (Lindane)	ND		0.00020	0.0000060	mg/L		02/02/24 13:49	02/05/24 13:35	1
Heptachlor	ND		0.00020	0.0000085	mg/L		02/02/24 13:49	02/05/24 13:35	1
Heptachlor epoxide	ND		0.00020	0.0000053	mg/L		02/02/24 13:49	02/05/24 13:35	1
Methoxychlor	ND		0.00020	0.000014	mg/L		02/02/24 13:49	02/05/24 13:35	1
Toxaphene	ND		0.0020	0.00012	mg/L		02/02/24 13:49	02/05/24 13:35	1

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	57		20 - 120	02/02/24 13:49	02/05/24 13:35	1
DCB Decachlorobiphenyl (Surr)	75		20 - 120	02/02/24 13:49	02/05/24 13:35	1
Tetrachloro-m-xylene (Surr)	54		44 - 120	02/02/24 13:49	02/05/24 13:35	1
Tetrachloro-m-xylene (Surr)	61		44 - 120	02/02/24 13:49	02/05/24 13:35	1

Method: 8151 - TCLP Herbicides

Lab Sample ID: MB 480-699705/1-A

Matrix: Solid

Analysis Batch: 699867

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 699705

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.00050	0.00010	mg/L		02/02/24 09:11	02/05/24 12:39	1
Silvex (2,4,5-TP)	ND		0.00050	0.000090	mg/L		02/02/24 09:11	02/05/24 12:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	85		21 - 143	02/02/24 09:11	02/05/24 12:39	1
2,4-Dichlorophenylacetic acid (Surr)	82		21 - 143	02/02/24 09:11	02/05/24 12:39	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: 8151 - TCLP Herbicides (Continued)

Lab Sample ID: LCS 480-699705/2-A

Matrix: Solid

Analysis Batch: 699867

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 699705

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-D	0.00200	0.00179		mg/L		90	36 - 150
Silvex (2,4,5-TP)	0.00200	0.00165		mg/L		82	49 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid (Surr)	88		21 - 143
2,4-Dichlorophenylacetic acid (Surr)	83		21 - 143

Lab Sample ID: LCSD 480-699705/3-A

Matrix: Solid

Analysis Batch: 699867

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 699705

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4-D	0.00200	0.00178		mg/L		89	36 - 150	1	50
Silvex (2,4,5-TP)	0.00200	0.00160		mg/L		80	49 - 150	3	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid (Surr)	106		21 - 143
2,4-Dichlorophenylacetic acid (Surr)	84		21 - 143

Lab Sample ID: LB 480-699598/1-B

Matrix: Solid

Analysis Batch: 699867

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 699705

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.0020	0.00040	mg/L		02/02/24 09:11	02/05/24 13:32	1
Silvex (2,4,5-TP)	ND		0.0020	0.00036	mg/L		02/02/24 09:11	02/05/24 13:32	1

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	30		21 - 143	02/02/24 09:11	02/05/24 13:32	1
2,4-Dichlorophenylacetic acid (Surr)	21		21 - 143	02/02/24 09:11	02/05/24 13:32	1

Method: Draft 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 280-642488/1-A

Matrix: Solid

Analysis Batch: 642832

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 642488

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.78	0.036	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluoropentanoic acid (PFPeA)	ND		0.39	0.021	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.021	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.022	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.041	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.012	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.074	ug/Kg		02/09/24 09:10	02/13/24 23:57	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: Draft 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 280-642488/1-A

Matrix: Solid

Analysis Batch: 642832

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 642488

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.027	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.055	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorotridecanoic acid (PFTriA)	ND		0.20	0.027	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorotetradecanoic acid (PFTeDA)	ND		0.20	0.017	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.014	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.20	0.013	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.020	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.20	0.027	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.055	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorononanesulfonic acid (PFNS)	ND		0.20	0.027	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20	0.020	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.20	0.017	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
4:2 FTS	ND		0.78	0.075	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
6:2 FTS	ND		0.78	0.47	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
8:2 FTS	ND		0.78	0.11	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
Perfluorooctanesulfonamide (PFOSA)	ND		0.20	0.012	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
NMeFOSA	ND		0.20	0.024	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
NEtFOSA	ND		0.20	0.030	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
NMeFOSAA	ND		0.20	0.025	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
NEtFOSAA	ND		0.20	0.024	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
NMeFOSE	ND		2.0	0.097	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
NEtFOSE	ND		2.0	0.11	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
HFPO-DA (GenX)	ND		0.78	0.092	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.78	0.079	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
PFMBA	ND		0.39	0.019	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
NFDHA	ND		0.39	0.047	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
PFMPA	ND		0.39	0.089	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
9CI-PF3ONS	ND		0.78	0.050	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
11CI-PF3OUdS	ND		0.78	0.12	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
PFEESA	ND		0.39	0.039	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
3:3 FTCA	ND		0.98	0.17	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
5:3 FTCA	ND		4.9	0.36	ug/Kg		02/09/24 09:10	02/13/24 23:57	1
7:3 FTCA	ND		4.9	0.30	ug/Kg		02/09/24 09:10	02/13/24 23:57	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	86		20 - 150	02/09/24 09:10	02/13/24 23:57	1
13C5 PFPeA	90		20 - 150	02/09/24 09:10	02/13/24 23:57	1
13C5 PFHxA	83		20 - 150	02/09/24 09:10	02/13/24 23:57	1
13C4 PFHpA	81		20 - 150	02/09/24 09:10	02/13/24 23:57	1
13C8 PFOA	89		20 - 150	02/09/24 09:10	02/13/24 23:57	1
13C9 PFNA	80		20 - 150	02/09/24 09:10	02/13/24 23:57	1
13C6 PFDA	77		20 - 150	02/09/24 09:10	02/13/24 23:57	1
13C7 PFUnA	69		20 - 150	02/09/24 09:10	02/13/24 23:57	1
13C2 PFDoA	62		20 - 150	02/09/24 09:10	02/13/24 23:57	1
13C2 PFTeDA	48		20 - 150	02/09/24 09:10	02/13/24 23:57	1
13C3 PFBS	95		20 - 150	02/09/24 09:10	02/13/24 23:57	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: Draft 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 280-642488/1-A

Matrix: Solid

Analysis Batch: 642832

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 642488

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	77		20 - 150	02/09/24 09:10	02/13/24 23:57	1
13C8 PFOS	71		20 - 150	02/09/24 09:10	02/13/24 23:57	1
13C8 FOSA	90		20 - 150	02/09/24 09:10	02/13/24 23:57	1
d3-NMeFOSAA	69		20 - 150	02/09/24 09:10	02/13/24 23:57	1
d5-NEtFOSAA	64		20 - 150	02/09/24 09:10	02/13/24 23:57	1
M2-4:2 FTS	92		20 - 150	02/09/24 09:10	02/13/24 23:57	1
M2-6:2 FTS	80		20 - 150	02/09/24 09:10	02/13/24 23:57	1
M2-8:2 FTS	78		20 - 150	02/09/24 09:10	02/13/24 23:57	1
13C3 HFPO-DA	89		20 - 150	02/09/24 09:10	02/13/24 23:57	1
d7-N-MeFOSE-M	62		20 - 150	02/09/24 09:10	02/13/24 23:57	1
d9-N-EtFOSE-M	58		20 - 150	02/09/24 09:10	02/13/24 23:57	1
d5-NEtPFOSA	45		20 - 150	02/09/24 09:10	02/13/24 23:57	1
d3-NMePFOSA	47		20 - 150	02/09/24 09:10	02/13/24 23:57	1

Lab Sample ID: LCS 280-642488/3-A

Matrix: Solid

Analysis Batch: 642832

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 642488

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	3.02	2.93		ug/Kg		97	40 - 150
Perfluoropentanoic acid (PFPeA)	3.02	2.68		ug/Kg		89	40 - 150
Perfluorohexanoic acid (PFHxA)	3.02	3.07		ug/Kg		102	40 - 150
Perfluoroheptanoic acid (PFHpA)	3.02	2.99		ug/Kg		99	40 - 150
Perfluorooctanoic acid (PFOA)	3.02	2.66		ug/Kg		88	40 - 150
Perfluorononanoic acid (PFNA)	3.02	2.85		ug/Kg		94	40 - 150
Perfluorodecanoic acid (PFDA)	3.02	3.18		ug/Kg		105	40 - 150
Perfluoroundecanoic acid (PFUnA)	3.02	3.12		ug/Kg		103	40 - 150
Perfluorododecanoic acid (PFDoA)	3.02	3.09		ug/Kg		102	40 - 150
Perfluorotridecanoic acid (PFTriA)	3.02	2.61		ug/Kg		86	40 - 150
Perfluorotetradecanoic acid (PFTeDA)	3.02	2.90		ug/Kg		96	40 - 150
Perfluorobutanesulfonic acid (PFBS)	2.68	2.50		ug/Kg		93	40 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.83	2.67		ug/Kg		94	40 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.75	2.50		ug/Kg		91	40 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.87	2.87		ug/Kg		100	40 - 150
Perfluorooctanesulfonic acid (PFOS)	2.81	2.88		ug/Kg		102	40 - 150
Perfluorononanesulfonic acid (PFNS)	2.90	2.93		ug/Kg		101	40 - 150
Perfluorodecanesulfonic acid (PFDS)	2.91	2.60		ug/Kg		89	40 - 150
Perfluorododecanesulfonic acid (PFDoS)	2.93	1.92		ug/Kg		66	40 - 150
4:2 FTS	7.52	6.65		ug/Kg		88	40 - 150
6:2 FTS	11.4	11.2		ug/Kg		98	40 - 150

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: Draft 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 280-642488/3-A

Matrix: Solid

Analysis Batch: 642832

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 642488

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
8:2 FTS	11.6	11.5		ug/Kg		100	40 - 150
Perfluorooctanesulfonamide (PFOSA)	3.02	2.47		ug/Kg		82	40 - 150
NMeFOSA	3.02	2.89		ug/Kg		96	40 - 150
NEtFOSA	3.02	3.19		ug/Kg		106	40 - 150
NMeFOSAA	3.02	3.09		ug/Kg		102	40 - 150
NEtFOSAA	3.02	2.71		ug/Kg		90	40 - 150
NMeFOSE	15.1	15.5		ug/Kg		103	40 - 150
NEtFOSE	30.2	28.7		ug/Kg		95	40 - 150
HFPO-DA (GenX)	3.02	2.98		ug/Kg		99	40 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.85	3.06		ug/Kg		107	40 - 150
PFMBA	6.04	5.28		ug/Kg		87	40 - 150
NFDHA	3.02	2.80		ug/Kg		93	40 - 150
PFMPA	6.04	5.59		ug/Kg		93	40 - 150
9Cl-PF3ONS	7.51	8.76		ug/Kg		117	40 - 150
11Cl-PF3OUdS	7.59	7.53		ug/Kg		99	40 - 150
PFEESA	5.39	5.06		ug/Kg		94	40 - 150
3:3 FTCA	15.1	12.4		ug/Kg		82	40 - 150
5:3 FTCA	30.2	26.6		ug/Kg		88	40 - 150
7:3 FTCA	30.2	27.4		ug/Kg		91	40 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	81		20 - 150
13C5 PFPeA	87		20 - 150
13C5 PFHxA	86		20 - 150
13C4 PFHpA	81		20 - 150
13C8 PFOA	91		20 - 150
13C9 PFNA	80		20 - 150
13C6 PFDA	82		20 - 150
13C7 PFUnA	71		20 - 150
13C2 PFDoA	73		20 - 150
13C2 PFTeDA	60		20 - 150
13C3 PFBS	95		20 - 150
13C3 PFHxS	92		20 - 150
13C8 PFOS	80		20 - 150
13C8 FOSA	87		20 - 150
d3-NMeFOSAA	73		20 - 150
d5-NEtFOSAA	75		20 - 150
M2-4:2 FTS	88		20 - 150
M2-6:2 FTS	82		20 - 150
M2-8:2 FTS	74		20 - 150
13C3 HFPO-DA	75		20 - 150
d7-N-MeFOSE-M	65		20 - 150
d9-N-EtFOSE-M	64		20 - 150
d5-NEtPFOSA	56		20 - 150
d3-NMePFOSA	63		20 - 150

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: Draft 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 280-642488/2-A

Matrix: Solid

Analysis Batch: 642832

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 642488

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.302	0.291	J	ug/Kg		96	40 - 150
Perfluoropentanoic acid (PFPeA)	0.302	0.289	J	ug/Kg		96	40 - 150
Perfluorohexanoic acid (PFHxA)	0.302	0.287		ug/Kg		95	40 - 150
Perfluoroheptanoic acid (PFHpA)	0.302	0.282		ug/Kg		93	40 - 150
Perfluorooctanoic acid (PFOA)	0.302	0.310		ug/Kg		103	40 - 150
Perfluorononanoic acid (PFNA)	0.302	0.288		ug/Kg		96	40 - 150
Perfluorodecanoic acid (PFDA)	0.302	0.304		ug/Kg		101	40 - 150
Perfluoroundecanoic acid (PFUnA)	0.302	0.380		ug/Kg		126	40 - 150
Perfluorododecanoic acid (PFDoA)	0.302	0.298		ug/Kg		99	40 - 150
Perfluorotridecanoic acid (PFTriA)	0.302	0.260		ug/Kg		86	40 - 150
Perfluorotetradecanoic acid (PFTeDA)	0.302	0.336		ug/Kg		111	40 - 150
Perfluorobutanesulfonic acid (PFBS)	0.268	0.250		ug/Kg		93	40 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.283	0.277		ug/Kg		98	40 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.275	0.252		ug/Kg		91	40 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.287	0.290		ug/Kg		101	40 - 150
Perfluorooctanesulfonic acid (PFOS)	0.281	0.273		ug/Kg		97	40 - 150
Perfluorononanesulfonic acid (PFNS)	0.290	0.253		ug/Kg		87	40 - 150
Perfluorodecanesulfonic acid (PFDS)	0.291	0.184	J	ug/Kg		63	40 - 150
Perfluorododecanesulfonic acid (PFDoS)	0.293	0.159	J	ug/Kg		54	40 - 150
4:2 FTS	0.752	0.650	J	ug/Kg		86	40 - 150
6:2 FTS	1.14	1.19		ug/Kg		104	40 - 150
8:2 FTS	1.16	1.06		ug/Kg		92	40 - 150
Perfluorooctanesulfonamide (PFOSA)	0.302	0.264		ug/Kg		88	40 - 150
NMeFOSA	0.302	0.346		ug/Kg		115	40 - 150
NEtFOSA	0.302	0.307		ug/Kg		102	40 - 150
NMeFOSAA	0.302	0.316		ug/Kg		105	40 - 150
NEtFOSAA	0.302	0.245		ug/Kg		81	40 - 150
NMeFOSE	1.51	1.66	J	ug/Kg		110	40 - 150
NEtFOSE	3.02	2.94		ug/Kg		97	40 - 150
HFPO-DA (GenX)	0.302	0.310	J	ug/Kg		103	40 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.285	0.263	J	ug/Kg		92	40 - 150
PFMBA	0.604	0.528		ug/Kg		87	40 - 150
NFDHA	0.302	0.271	J	ug/Kg		90	40 - 150
PFMPA	0.604	0.534		ug/Kg		88	40 - 150
9CI-PF3ONS	0.751	0.675	J	ug/Kg		90	40 - 150
11CI-PF3OUdS	0.759	0.437	J	ug/Kg		58	40 - 150
PFEESA	0.539	0.494		ug/Kg		92	40 - 150
3:3 FTCA	1.51	1.20		ug/Kg		80	40 - 150

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: Draft 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 280-642488/2-A
Matrix: Solid
Analysis Batch: 642832

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 642488

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
5:3 FTCA	3.02	2.74	J	ug/Kg		91	40 - 150
7:3 FTCA	3.02	2.84	J	ug/Kg		94	40 - 150

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C4 PFBA	78		20 - 150
13C5 PFPeA	94		20 - 150
13C5 PFHxA	88		20 - 150
13C4 PFHpA	89		20 - 150
13C8 PFOA	83		20 - 150
13C9 PFNA	80		20 - 150
13C6 PFDA	77		20 - 150
13C7 PFUnA	71		20 - 150
13C2 PFDoA	62		20 - 150
13C2 PFTeDA	45		20 - 150
13C3 PFBS	84		20 - 150
13C3 PFHxS	79		20 - 150
13C8 PFOS	82		20 - 150
13C8 FOSA	91		20 - 150
d3-NMeFOSAA	77		20 - 150
d5-NEtFOSAA	69		20 - 150
M2-4:2 FTS	78		20 - 150
M2-6:2 FTS	70		20 - 150
M2-8:2 FTS	75		20 - 150
13C3 HFPO-DA	88		20 - 150
d7-N-MeFOSE-M	56		20 - 150
d9-N-EtFOSE-M	57		20 - 150
d5-NEtPFOSA	54		20 - 150
d3-NMePFOSA	59		20 - 150

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-699709/2-A
Matrix: Solid
Analysis Batch: 699805

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699709

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		02/02/24 09:46	02/03/24 00:20	1
Barium	ND		1.0	0.10	mg/L		02/02/24 09:46	02/03/24 00:20	1
Cadmium	ND		0.0020	0.00050	mg/L		02/02/24 09:46	02/03/24 00:20	1
Chromium	ND		0.020	0.010	mg/L		02/02/24 09:46	02/03/24 00:20	1
Lead	ND		0.020	0.0030	mg/L		02/02/24 09:46	02/03/24 00:20	1
Selenium	ND		0.025	0.0087	mg/L		02/02/24 09:46	02/03/24 00:20	1
Silver	ND		0.0060	0.0017	mg/L		02/02/24 09:46	02/03/24 00:20	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 480-699709/3-A
Matrix: Solid
Analysis Batch: 699805

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699709

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.00	1.06		mg/L		106	80 - 120
Barium	1.00	1.03		mg/L		103	80 - 120
Cadmium	1.00	1.03		mg/L		103	80 - 120
Chromium	1.00	1.10		mg/L		110	80 - 120
Lead	1.00	1.04		mg/L		104	80 - 120
Selenium	1.00	1.07		mg/L		107	80 - 120
Silver	1.00	1.15		mg/L		115	80 - 120

Lab Sample ID: LB 480-699598/1-C
Matrix: Solid
Analysis Batch: 699805

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 699709

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		02/02/24 09:46	02/03/24 00:16	1
Barium	ND		1.0	0.10	mg/L		02/02/24 09:46	02/03/24 00:16	1
Cadmium	ND		0.0020	0.00050	mg/L		02/02/24 09:46	02/03/24 00:16	1
Chromium	ND		0.020	0.010	mg/L		02/02/24 09:46	02/03/24 00:16	1
Lead	0.00629	J	0.020	0.0030	mg/L		02/02/24 09:46	02/03/24 00:16	1
Selenium	ND		0.025	0.0087	mg/L		02/02/24 09:46	02/03/24 00:16	1
Silver	ND		0.0060	0.0017	mg/L		02/02/24 09:46	02/03/24 00:16	1

Method: 7470A - TCLP Mercury

Lab Sample ID: MB 480-699712/2-A
Matrix: Solid
Analysis Batch: 699779

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699712

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000043	mg/L		02/02/24 11:25	02/02/24 15:53	1

Lab Sample ID: LCS 480-699712/3-A
Matrix: Solid
Analysis Batch: 699779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699712

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00680	0.00632		mg/L		93	80 - 120

Lab Sample ID: LCSD 480-699712/4-A
Matrix: Solid
Analysis Batch: 699779

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 699712

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.00680	0.00641		mg/L		94	80 - 120	1	20

Lab Sample ID: LB 480-699598/1-D
Matrix: Solid
Analysis Batch: 699779

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 699712

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000043	mg/L		02/02/24 11:25	02/02/24 15:52	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 480-699711/1-A
Matrix: Water
Analysis Batch: 699779

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699711

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000043	mg/L		02/02/24 11:25	02/02/24 15:43	1

Lab Sample ID: LCS 480-699711/2-A
Matrix: Water
Analysis Batch: 699779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699711

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00669	0.00631		mg/L		94	80 - 120

Lab Sample ID: LCSD 480-699711/3-A
Matrix: Water
Analysis Batch: 699779

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 699711

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Mercury	0.00669	0.00630		mg/L		94	80 - 120	0	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-699638/1-A
Matrix: Solid
Analysis Batch: 699664

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699638

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020	0.0047	mg/Kg		02/01/24 12:04	02/01/24 14:22	1

Lab Sample ID: LCSSRM 480-699638/2-A ^10
Matrix: Solid
Analysis Batch: 699664

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699638

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	17.1	11.20		mg/Kg		65.5	36.0 - 109.9

Lab Sample ID: 480-216732-2 MS
Matrix: Solid
Analysis Batch: 699664

Client Sample ID: F-LOA-02-01302024
Prep Type: Total/NA
Prep Batch: 699638

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.12		0.461	0.486		mg/Kg	⊛	80	80 - 120

Lab Sample ID: 480-216732-2 MSD
Matrix: Solid
Analysis Batch: 699664

Client Sample ID: F-LOA-02-01302024
Prep Type: Total/NA
Prep Batch: 699638

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Mercury	0.12		0.453	0.500		mg/Kg	⊛	84	80 - 120	3	20

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: 1010A - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 480-699518/1
Matrix: Solid
Analysis Batch: 699518

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Flashpoint	81.0	82.00		Degrees F		101	97.5 - 102.5

Lab Sample ID: 480-216732-1 DU
Matrix: Solid
Analysis Batch: 699518

Client Sample ID: F-LOA-01-01302024
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Flashpoint	>180		>180.0		Degrees F		NC	10

Lab Sample ID: LCS 480-699519/1
Matrix: Solid
Analysis Batch: 699519

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Flashpoint	81.0	82.00		Degrees F		101	97.5 - 102.5

Lab Sample ID: 480-216732-2 DU
Matrix: Solid
Analysis Batch: 699519

Client Sample ID: F-LOA-02-01302024
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Flashpoint	>180		>180.0		Degrees F		NC	10

Lab Sample ID: LCS 480-699605/1
Matrix: Solid
Analysis Batch: 699605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Flashpoint	81.0	82.00		Degrees F		101	97.5 - 102.5

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-699609/3
Matrix: Water
Analysis Batch: 699609

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			02/01/24 08:11	1

Lab Sample ID: LCS 480-699609/4
Matrix: Water
Analysis Batch: 699609

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	1.00	0.987		mg/L		99	90 - 110

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: 9012 - Cyanide, Reactive

Lab Sample ID: MB 480-699681/1-A
Matrix: Solid
Analysis Batch: 699796

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699681

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive	ND		10.0	10.0	mg/Kg		02/01/24 11:40	02/02/24 13:25	1

Lab Sample ID: LCS 480-699681/2-A
Matrix: Solid
Analysis Batch: 699796

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699681

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Reactive	1000	508.8		mg/Kg		51	10 - 100

Lab Sample ID: 480-216732-1 DU
Matrix: Solid
Analysis Batch: 699796

Client Sample ID: F-LOA-01-01302024
Prep Type: Total/NA
Prep Batch: 699681

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Cyanide, Reactive	ND		ND		mg/Kg		NC	20

Method: 9034 - Sulfide, Reactive

Lab Sample ID: MB 480-699682/1-A
Matrix: Solid
Analysis Batch: 699790

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 699682

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Reactive	ND		10.0	10.0	mg/Kg		02/01/24 11:40	02/02/24 16:25	1

Lab Sample ID: LCS 480-699682/2-A
Matrix: Solid
Analysis Batch: 699790

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 699682

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide, Reactive	780	621.2		mg/Kg		80	10 - 100

Lab Sample ID: 480-216732-1 DU
Matrix: Solid
Analysis Batch: 699790

Client Sample ID: F-LOA-01-01302024
Prep Type: Total/NA
Prep Batch: 699682

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Sulfide, Reactive	74.3		77.79		mg/Kg		5	20

Method: 9045D - pH

Lab Sample ID: LCS 480-699787/1
Matrix: Solid
Analysis Batch: 699787

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.1		SU		101	99 - 101

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method: 9045D - pH (Continued)

Lab Sample ID: 480-216732-1 DU					Client Sample ID: F-LOA-01-01302024					
Matrix: Solid					Prep Type: Total/NA					
Analysis Batch: 699787										
	Sample	Sample		DU	DU					RPD
Analyte	Result	Qualifier		Result	Qualifier	Unit	D			Limit
pH	8.4	HF		8.6		SU			2	5
Temperature	17.9	HF		18.1		Degrees C			1	10

QC Association Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

GC/MS VOA

Prep Batch: 699570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-2	F-LOA-02-01302024	Total/NA	Solid	5035A_L	
480-216732-5	F-LOA-05-01302024	Total/NA	Solid	5035A_L	
MB 480-699570/3-A	Method Blank	Total/NA	Solid	5035A_L	
LCS 480-699570/1-A	Lab Control Sample	Total/NA	Solid	5035A_L	
LCSD 480-699570/2-A	Lab Control Sample Dup	Total/NA	Solid	5035A_L	

Analysis Batch: 699571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-2	F-LOA-02-01302024	Total/NA	Solid	8260C	699570
480-216732-5	F-LOA-05-01302024	Total/NA	Solid	8260C	699570
MB 480-699570/3-A	Method Blank	Total/NA	Solid	8260C	699570
LCS 480-699570/1-A	Lab Control Sample	Total/NA	Solid	8260C	699570
LCSD 480-699570/2-A	Lab Control Sample Dup	Total/NA	Solid	8260C	699570

Leach Batch: 699601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	1311	
480-216732-2	F-LOA-02-01302024	TCLP	Solid	1311	
480-216732-3	F-LOA-03-01302024	TCLP	Solid	1311	
480-216732-4	F-LOA-04-01302024	TCLP	Solid	1311	
480-216732-5	F-LOA-05-01302024	TCLP	Solid	1311	
480-216732-6	F-LOA-06-01302024	TCLP	Solid	1311	
LB 480-699601/1-A	Method Blank	TCLP	Solid	1311	

Analysis Batch: 699604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-7	F-LOA-07-01292024	Total/NA	Water	8260C	
MB 480-699604/8	Method Blank	Total/NA	Water	8260C	
LCS 480-699604/6	Lab Control Sample	Total/NA	Water	8260C	

Prep Batch: 699607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	Total/NA	Solid	5035A_H	
480-216732-3	F-LOA-03-01302024	Total/NA	Solid	5035A_H	
480-216732-3 - DL	F-LOA-03-01302024	Total/NA	Solid	5035A_H	
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	5035A_H	
480-216732-6	F-LOA-06-01302024	Total/NA	Solid	5035A_H	
MB 480-699607/3-A	Method Blank	Total/NA	Solid	5035A_H	
LCS 480-699607/1-A	Lab Control Sample	Total/NA	Solid	5035A_H	

Analysis Batch: 699697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	Total/NA	Solid	8260C	699607
480-216732-3	F-LOA-03-01302024	Total/NA	Solid	8260C	699607
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	8260C	699607
480-216732-6	F-LOA-06-01302024	Total/NA	Solid	8260C	699607
MB 480-699607/3-A	Method Blank	Total/NA	Solid	8260C	699607
LCS 480-699607/1-A	Lab Control Sample	Total/NA	Solid	8260C	699607

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QC Association Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

GC/MS VOA

Analysis Batch: 699828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-3 - DL	F-LOA-03-01302024	Total/NA	Solid	8260C	699607

Analysis Batch: 699845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	8260C	699601
480-216732-2	F-LOA-02-01302024	TCLP	Solid	8260C	699601
480-216732-3	F-LOA-03-01302024	TCLP	Solid	8260C	699601
480-216732-4	F-LOA-04-01302024	TCLP	Solid	8260C	699601
480-216732-5	F-LOA-05-01302024	TCLP	Solid	8260C	699601
480-216732-6	F-LOA-06-01302024	TCLP	Solid	8260C	699601
LB 480-699601/1-A	Method Blank	TCLP	Solid	8260C	699601
MB 480-699845/8	Method Blank	Total/NA	Solid	8260C	
LCS 480-699845/6	Lab Control Sample	Total/NA	Solid	8260C	

GC/MS Semi VOA

Prep Batch: 699565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	Total/NA	Solid	3550C	
480-216732-1 - DL	F-LOA-01-01302024	Total/NA	Solid	3550C	
480-216732-2	F-LOA-02-01302024	Total/NA	Solid	3550C	
480-216732-3	F-LOA-03-01302024	Total/NA	Solid	3550C	
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	3550C	
480-216732-4 - DL	F-LOA-04-01302024	Total/NA	Solid	3550C	
480-216732-5	F-LOA-05-01302024	Total/NA	Solid	3550C	
480-216732-6	F-LOA-06-01302024	Total/NA	Solid	3550C	
MB 480-699565/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-699565/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-216732-4 MS	F-LOA-04-01302024	Total/NA	Solid	3550C	
480-216732-4 MS - DL	F-LOA-04-01302024	Total/NA	Solid	3550C	
480-216732-4 MSD	F-LOA-04-01302024	Total/NA	Solid	3550C	
480-216732-4 MSD - DL	F-LOA-04-01302024	Total/NA	Solid	3550C	

Analysis Batch: 699589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	Total/NA	Solid	8270D	699565
480-216732-2	F-LOA-02-01302024	Total/NA	Solid	8270D	699565
480-216732-3	F-LOA-03-01302024	Total/NA	Solid	8270D	699565
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	8270D	699565
480-216732-5	F-LOA-05-01302024	Total/NA	Solid	8270D	699565
480-216732-6	F-LOA-06-01302024	Total/NA	Solid	8270D	699565
MB 480-699565/1-A	Method Blank	Total/NA	Solid	8270D	699565
LCS 480-699565/2-A	Lab Control Sample	Total/NA	Solid	8270D	699565
480-216732-4 MS	F-LOA-04-01302024	Total/NA	Solid	8270D	699565
480-216732-4 MSD	F-LOA-04-01302024	Total/NA	Solid	8270D	699565

Leach Batch: 699598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	1311	
480-216732-2	F-LOA-02-01302024	TCLP	Solid	1311	
480-216732-3	F-LOA-03-01302024	TCLP	Solid	1311	

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QC Association Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

GC/MS Semi VOA (Continued)

Leach Batch: 699598 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-4	F-LOA-04-01302024	TCLP	Solid	1311	
480-216732-5	F-LOA-05-01302024	TCLP	Solid	1311	
480-216732-6	F-LOA-06-01302024	TCLP	Solid	1311	
LB 480-699598/1-F	Method Blank	TCLP	Solid	1311	

Prep Batch: 699657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-7	F-LOA-07-01292024	Total/NA	Water	3510C	
480-216732-7 - DL	F-LOA-07-01292024	Total/NA	Water	3510C	
MB 480-699657/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-699657/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 699735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1 - DL	F-LOA-01-01302024	Total/NA	Solid	8270D	699565
480-216732-4 - DL	F-LOA-04-01302024	Total/NA	Solid	8270D	699565
480-216732-4 MS - DL	F-LOA-04-01302024	Total/NA	Solid	8270D	699565
480-216732-4 MSD - DL	F-LOA-04-01302024	Total/NA	Solid	8270D	699565

Prep Batch: 699753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	3510C	699598
480-216732-2	F-LOA-02-01302024	TCLP	Solid	3510C	699598
480-216732-3	F-LOA-03-01302024	TCLP	Solid	3510C	699598
480-216732-4	F-LOA-04-01302024	TCLP	Solid	3510C	699598
480-216732-5	F-LOA-05-01302024	TCLP	Solid	3510C	699598
480-216732-6	F-LOA-06-01302024	TCLP	Solid	3510C	699598
LB 480-699598/1-F	Method Blank	TCLP	Solid	3510C	699598
MB 480-699753/1-A	Method Blank	Total/NA	Solid	3510C	
LCS 480-699753/2-A	Lab Control Sample	Total/NA	Solid	3510C	
LCSD 480-699753/3-A	Lab Control Sample Dup	Total/NA	Solid	3510C	

Analysis Batch: 699837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-699657/1-A	Method Blank	Total/NA	Water	8270D	699657
LCS 480-699657/2-A	Lab Control Sample	Total/NA	Water	8270D	699657

Analysis Batch: 699859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	8270D	699753
480-216732-2	F-LOA-02-01302024	TCLP	Solid	8270D	699753
480-216732-3	F-LOA-03-01302024	TCLP	Solid	8270D	699753
480-216732-4	F-LOA-04-01302024	TCLP	Solid	8270D	699753
480-216732-5	F-LOA-05-01302024	TCLP	Solid	8270D	699753
480-216732-6	F-LOA-06-01302024	TCLP	Solid	8270D	699753
LB 480-699598/1-F	Method Blank	TCLP	Solid	8270D	699753
MB 480-699753/1-A	Method Blank	Total/NA	Solid	8270D	699753
LCS 480-699753/2-A	Lab Control Sample	Total/NA	Solid	8270D	699753
LCSD 480-699753/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D	699753

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QC Association Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

GC/MS Semi VOA

Analysis Batch: 699935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-7	F-LOA-07-01292024	Total/NA	Water	8270D	699657

Analysis Batch: 700197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-7 - DL	F-LOA-07-01292024	Total/NA	Water	8270D	699657

GC Semi VOA

Leach Batch: 699598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	1311	
480-216732-2	F-LOA-02-01302024	TCLP	Solid	1311	
480-216732-3	F-LOA-03-01302024	TCLP	Solid	1311	
480-216732-4	F-LOA-04-01302024	TCLP	Solid	1311	
480-216732-5	F-LOA-05-01302024	TCLP	Solid	1311	
480-216732-6	F-LOA-06-01302024	TCLP	Solid	1311	
LB 480-699598/1-B	Method Blank	TCLP	Solid	1311	
LB 480-699598/1-E	Method Blank	TCLP	Solid	1311	

Prep Batch: 699705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	8151A	699598
480-216732-2	F-LOA-02-01302024	TCLP	Solid	8151A	699598
480-216732-3	F-LOA-03-01302024	TCLP	Solid	8151A	699598
480-216732-4	F-LOA-04-01302024	TCLP	Solid	8151A	699598
480-216732-5	F-LOA-05-01302024	TCLP	Solid	8151A	699598
480-216732-6	F-LOA-06-01302024	TCLP	Solid	8151A	699598
LB 480-699598/1-B	Method Blank	TCLP	Solid	8151A	699598
MB 480-699705/1-A	Method Blank	Total/NA	Solid	8151A	
LCS 480-699705/2-A	Lab Control Sample	Total/NA	Solid	8151A	
LCSD 480-699705/3-A	Lab Control Sample Dup	Total/NA	Solid	8151A	

Prep Batch: 699748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	3510C	699598
480-216732-2	F-LOA-02-01302024	TCLP	Solid	3510C	699598
480-216732-3	F-LOA-03-01302024	TCLP	Solid	3510C	699598
480-216732-4	F-LOA-04-01302024	TCLP	Solid	3510C	699598
480-216732-5	F-LOA-05-01302024	TCLP	Solid	3510C	699598
480-216732-6	F-LOA-06-01302024	TCLP	Solid	3510C	699598
LB 480-699598/1-E	Method Blank	TCLP	Solid	3510C	699598
MB 480-699748/1-A	Method Blank	Total/NA	Solid	3510C	
LCS 480-699748/2-A	Lab Control Sample	Total/NA	Solid	3510C	
LCSD 480-699748/3-A	Lab Control Sample Dup	Total/NA	Solid	3510C	

Analysis Batch: 699852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	8081B	699748
480-216732-2	F-LOA-02-01302024	TCLP	Solid	8081B	699748
480-216732-3	F-LOA-03-01302024	TCLP	Solid	8081B	699748
480-216732-4	F-LOA-04-01302024	TCLP	Solid	8081B	699748

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QC Association Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

GC Semi VOA (Continued)

Analysis Batch: 699852 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-5	F-LOA-05-01302024	TCLP	Solid	8081B	699748
480-216732-6	F-LOA-06-01302024	TCLP	Solid	8081B	699748
LB 480-699598/1-E	Method Blank	TCLP	Solid	8081B	699748
MB 480-699748/1-A	Method Blank	Total/NA	Solid	8081B	699748
LCS 480-699748/2-A	Lab Control Sample	Total/NA	Solid	8081B	699748
LCSD 480-699748/3-A	Lab Control Sample Dup	Total/NA	Solid	8081B	699748

Analysis Batch: 699867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	8151	699705
480-216732-2	F-LOA-02-01302024	TCLP	Solid	8151	699705
480-216732-3	F-LOA-03-01302024	TCLP	Solid	8151	699705
480-216732-4	F-LOA-04-01302024	TCLP	Solid	8151	699705
480-216732-5	F-LOA-05-01302024	TCLP	Solid	8151	699705
480-216732-6	F-LOA-06-01302024	TCLP	Solid	8151	699705
LB 480-699598/1-B	Method Blank	TCLP	Solid	8151	699705
MB 480-699705/1-A	Method Blank	Total/NA	Solid	8151	699705
LCS 480-699705/2-A	Lab Control Sample	Total/NA	Solid	8151	699705
LCSD 480-699705/3-A	Lab Control Sample Dup	Total/NA	Solid	8151	699705

LCMS

Prep Batch: 642488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	1633 Shake	
MB 280-642488/1-A	Method Blank	Total/NA	Solid	1633 Shake	
LCS 280-642488/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LLCS 280-642488/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	

Analysis Batch: 642832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	Draft 1633	642488
MB 280-642488/1-A	Method Blank	Total/NA	Solid	Draft 1633	642488
LCS 280-642488/3-A	Lab Control Sample	Total/NA	Solid	Draft 1633	642488
LLCS 280-642488/2-A	Lab Control Sample	Total/NA	Solid	Draft 1633	642488

Metals

Leach Batch: 699598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	1311	
480-216732-2	F-LOA-02-01302024	TCLP	Solid	1311	
480-216732-3	F-LOA-03-01302024	TCLP	Solid	1311	
480-216732-4	F-LOA-04-01302024	TCLP	Solid	1311	
480-216732-5	F-LOA-05-01302024	TCLP	Solid	1311	
480-216732-6	F-LOA-06-01302024	TCLP	Solid	1311	
LB 480-699598/1-C	Method Blank	TCLP	Solid	1311	
LB 480-699598/1-D	Method Blank	TCLP	Solid	1311	

Prep Batch: 699638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	Total/NA	Solid	7471B	

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QC Association Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Metals (Continued)

Prep Batch: 699638 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-2	F-LOA-02-01302024	Total/NA	Solid	7471B	
480-216732-3	F-LOA-03-01302024	Total/NA	Solid	7471B	
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	7471B	
480-216732-5	F-LOA-05-01302024	Total/NA	Solid	7471B	
480-216732-6	F-LOA-06-01302024	Total/NA	Solid	7471B	
MB 480-699638/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-699638/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	
480-216732-2 MS	F-LOA-02-01302024	Total/NA	Solid	7471B	
480-216732-2 MSD	F-LOA-02-01302024	Total/NA	Solid	7471B	

Analysis Batch: 699664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	Total/NA	Solid	7471B	699638
480-216732-2	F-LOA-02-01302024	Total/NA	Solid	7471B	699638
480-216732-3	F-LOA-03-01302024	Total/NA	Solid	7471B	699638
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	7471B	699638
480-216732-5	F-LOA-05-01302024	Total/NA	Solid	7471B	699638
480-216732-6	F-LOA-06-01302024	Total/NA	Solid	7471B	699638
MB 480-699638/1-A	Method Blank	Total/NA	Solid	7471B	699638
LCSSRM 480-699638/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	699638
480-216732-2 MS	F-LOA-02-01302024	Total/NA	Solid	7471B	699638
480-216732-2 MSD	F-LOA-02-01302024	Total/NA	Solid	7471B	699638

Prep Batch: 699709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	3010A	699598
480-216732-2	F-LOA-02-01302024	TCLP	Solid	3010A	699598
480-216732-3	F-LOA-03-01302024	TCLP	Solid	3010A	699598
480-216732-4	F-LOA-04-01302024	TCLP	Solid	3010A	699598
480-216732-5	F-LOA-05-01302024	TCLP	Solid	3010A	699598
480-216732-6	F-LOA-06-01302024	TCLP	Solid	3010A	699598
LB 480-699598/1-C	Method Blank	TCLP	Solid	3010A	699598
MB 480-699709/2-A	Method Blank	Total/NA	Solid	3010A	
LCS 480-699709/3-A	Lab Control Sample	Total/NA	Solid	3010A	

Prep Batch: 699711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-7	F-LOA-07-01292024	Total/NA	Water	7470A	
MB 480-699711/1-A	Method Blank	Total/NA	Water	7470A	
LCS 480-699711/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 480-699711/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	

Prep Batch: 699712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	7470A	699598
480-216732-2	F-LOA-02-01302024	TCLP	Solid	7470A	699598
480-216732-3	F-LOA-03-01302024	TCLP	Solid	7470A	699598
480-216732-4	F-LOA-04-01302024	TCLP	Solid	7470A	699598
480-216732-5	F-LOA-05-01302024	TCLP	Solid	7470A	699598
480-216732-6	F-LOA-06-01302024	TCLP	Solid	7470A	699598
LB 480-699598/1-D	Method Blank	TCLP	Solid	7470A	699598

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QC Association Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Metals (Continued)

Prep Batch: 699712 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-699712/2-A	Method Blank	Total/NA	Solid	7470A	
LCS 480-699712/3-A	Lab Control Sample	Total/NA	Solid	7470A	
LCSD 480-699712/4-A	Lab Control Sample Dup	Total/NA	Solid	7470A	

Analysis Batch: 699779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	7470A	699712
480-216732-2	F-LOA-02-01302024	TCLP	Solid	7470A	699712
480-216732-3	F-LOA-03-01302024	TCLP	Solid	7470A	699712
480-216732-4	F-LOA-04-01302024	TCLP	Solid	7470A	699712
480-216732-5	F-LOA-05-01302024	TCLP	Solid	7470A	699712
480-216732-6	F-LOA-06-01302024	TCLP	Solid	7470A	699712
480-216732-7	F-LOA-07-01292024	Total/NA	Water	7470A	699711
LB 480-699598/1-D	Method Blank	TCLP	Solid	7470A	699712
MB 480-699711/1-A	Method Blank	Total/NA	Water	7470A	699711
MB 480-699712/2-A	Method Blank	Total/NA	Solid	7470A	699712
LCS 480-699711/2-A	Lab Control Sample	Total/NA	Water	7470A	699711
LCS 480-699712/3-A	Lab Control Sample	Total/NA	Solid	7470A	699712
LCSD 480-699711/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	699711
LCSD 480-699712/4-A	Lab Control Sample Dup	Total/NA	Solid	7470A	699712

Analysis Batch: 699805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	TCLP	Solid	6010C	699709
480-216732-2	F-LOA-02-01302024	TCLP	Solid	6010C	699709
480-216732-3	F-LOA-03-01302024	TCLP	Solid	6010C	699709
480-216732-4	F-LOA-04-01302024	TCLP	Solid	6010C	699709
480-216732-5	F-LOA-05-01302024	TCLP	Solid	6010C	699709
480-216732-6	F-LOA-06-01302024	TCLP	Solid	6010C	699709
LB 480-699598/1-C	Method Blank	TCLP	Solid	6010C	699709
MB 480-699709/2-A	Method Blank	Total/NA	Solid	6010C	699709
LCS 480-699709/3-A	Lab Control Sample	Total/NA	Solid	6010C	699709

General Chemistry

Analysis Batch: 699518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	Total/NA	Solid	1010A	
LCS 480-699518/1	Lab Control Sample	Total/NA	Solid	1010A	
480-216732-1 DU	F-LOA-01-01302024	Total/NA	Solid	1010A	

Analysis Batch: 699519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-2	F-LOA-02-01302024	Total/NA	Solid	1010A	
LCS 480-699519/1	Lab Control Sample	Total/NA	Solid	1010A	
480-216732-2 DU	F-LOA-02-01302024	Total/NA	Solid	1010A	

Analysis Batch: 699563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	Total/NA	Solid	Moisture	
480-216732-2	F-LOA-02-01302024	Total/NA	Solid	Moisture	

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QC Association Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

General Chemistry (Continued)

Analysis Batch: 699563 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-3	F-LOA-03-01302024	Total/NA	Solid	Moisture	
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	Moisture	
480-216732-5	F-LOA-05-01302024	Total/NA	Solid	Moisture	
480-216732-6	F-LOA-06-01302024	Total/NA	Solid	Moisture	
480-216732-6 DU	F-LOA-06-01302024	Total/NA	Solid	Moisture	

Analysis Batch: 699605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-3	F-LOA-03-01302024	Total/NA	Solid	1010A	
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	1010A	
480-216732-5	F-LOA-05-01302024	Total/NA	Solid	1010A	
480-216732-6	F-LOA-06-01302024	Total/NA	Solid	1010A	
480-216732-7	F-LOA-07-01292024	Total/NA	Water	1010A	
LCS 480-699605/1	Lab Control Sample	Total/NA	Solid	1010A	

Analysis Batch: 699609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-7	F-LOA-07-01292024	Total/NA	Water	350.1	
MB 480-699609/3	Method Blank	Total/NA	Water	350.1	
LCS 480-699609/4	Lab Control Sample	Total/NA	Water	350.1	

Prep Batch: 699681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	Total/NA	Solid	7.3.3	
480-216732-2	F-LOA-02-01302024	Total/NA	Solid	7.3.3	
480-216732-3	F-LOA-03-01302024	Total/NA	Solid	7.3.3	
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	7.3.3	
480-216732-5	F-LOA-05-01302024	Total/NA	Solid	7.3.3	
480-216732-6	F-LOA-06-01302024	Total/NA	Solid	7.3.3	
MB 480-699681/1-A	Method Blank	Total/NA	Solid	7.3.3	
LCS 480-699681/2-A	Lab Control Sample	Total/NA	Solid	7.3.3	
480-216732-1 DU	F-LOA-01-01302024	Total/NA	Solid	7.3.3	

Prep Batch: 699682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	Total/NA	Solid	7.3.4	
480-216732-2	F-LOA-02-01302024	Total/NA	Solid	7.3.4	
480-216732-3	F-LOA-03-01302024	Total/NA	Solid	7.3.4	
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	7.3.4	
480-216732-5	F-LOA-05-01302024	Total/NA	Solid	7.3.4	
480-216732-6	F-LOA-06-01302024	Total/NA	Solid	7.3.4	
MB 480-699682/1-A	Method Blank	Total/NA	Solid	7.3.4	
LCS 480-699682/2-A	Lab Control Sample	Total/NA	Solid	7.3.4	
480-216732-1 DU	F-LOA-01-01302024	Total/NA	Solid	7.3.4	

Analysis Batch: 699684

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-7	F-LOA-07-01292024	Total/NA	Water	9040C	
LCS 480-699684/1	Lab Control Sample	Total/NA	Water	9040C	

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QC Association Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

General Chemistry

Analysis Batch: 699787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	Total/NA	Solid	9045D	
480-216732-2	F-LOA-02-01302024	Total/NA	Solid	9045D	
480-216732-3	F-LOA-03-01302024	Total/NA	Solid	9045D	
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	9045D	
480-216732-5	F-LOA-05-01302024	Total/NA	Solid	9045D	
480-216732-6	F-LOA-06-01302024	Total/NA	Solid	9045D	
LCS 480-699787/1	Lab Control Sample	Total/NA	Solid	9045D	
480-216732-1 DU	F-LOA-01-01302024	Total/NA	Solid	9045D	

Analysis Batch: 699790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	Total/NA	Solid	9034	699682
480-216732-2	F-LOA-02-01302024	Total/NA	Solid	9034	699682
480-216732-3	F-LOA-03-01302024	Total/NA	Solid	9034	699682
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	9034	699682
480-216732-5	F-LOA-05-01302024	Total/NA	Solid	9034	699682
480-216732-6	F-LOA-06-01302024	Total/NA	Solid	9034	699682
MB 480-699682/1-A	Method Blank	Total/NA	Solid	9034	699682
LCS 480-699682/2-A	Lab Control Sample	Total/NA	Solid	9034	699682
480-216732-1 DU	F-LOA-01-01302024	Total/NA	Solid	9034	699682

Analysis Batch: 699796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-216732-1	F-LOA-01-01302024	Total/NA	Solid	9012	699681
480-216732-2	F-LOA-02-01302024	Total/NA	Solid	9012	699681
480-216732-3	F-LOA-03-01302024	Total/NA	Solid	9012	699681
480-216732-4	F-LOA-04-01302024	Total/NA	Solid	9012	699681
480-216732-5	F-LOA-05-01302024	Total/NA	Solid	9012	699681
480-216732-6	F-LOA-06-01302024	Total/NA	Solid	9012	699681
MB 480-699681/1-A	Method Blank	Total/NA	Solid	9012	699681
LCS 480-699681/2-A	Lab Control Sample	Total/NA	Solid	9012	699681
480-216732-1 DU	F-LOA-01-01302024	Total/NA	Solid	9012	699681

Lab Chronicle

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-01-01302024

Lab Sample ID: 480-216732-1

Date Collected: 01/30/24 14:15

Matrix: Solid

Date Received: 01/30/24 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			699601	SMP	EET BUF	02/01/24 08:05 - 02/02/24 09:34 ¹
TCLP	Analysis	8260C		10	699845	CC	EET BUF	02/05/24 13:57
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3510C			699753	LSC	EET BUF	02/02/24 13:57
TCLP	Analysis	8270D		1	699859	EMD	EET BUF	02/05/24 16:36
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3510C			699748	LSC	EET BUF	02/02/24 13:49
TCLP	Analysis	8081B		1	699852	MAN	EET BUF	02/05/24 13:54
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	8151A			699705	JMP	EET BUF	02/02/24 09:11
TCLP	Analysis	8151		1	699867	MAN	EET BUF	02/05/24 14:46
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3010A			699709	ESB	EET BUF	02/02/24 09:46
TCLP	Analysis	6010C		1	699805	BMB	EET BUF	02/03/24 00:27
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	7470A			699712	NVK	EET BUF	02/02/24 11:25
TCLP	Analysis	7470A		1	699779	NVK	EET BUF	02/02/24 16:00
Total/NA	Analysis	1010A		1	699518	KM	EET BUF	01/31/24 10:41
Total/NA	Prep	7.3.3			699681	AM	EET BUF	02/01/24 11:40
Total/NA	Analysis	9012		1	699796	AM	EET BUF	02/02/24 13:28
Total/NA	Prep	7.3.4			699682	AM	EET BUF	02/01/24 11:40
Total/NA	Analysis	9034		1	699790	AM	EET BUF	02/02/24 16:25
Total/NA	Analysis	9045D		1	699787	KB	EET BUF	02/02/24 13:43
Total/NA	Analysis	Moisture		1	699563	JMM	EET BUF	01/31/24 15:56

Client Sample ID: F-LOA-01-01302024

Lab Sample ID: 480-216732-1

Date Collected: 01/30/24 14:15

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 70.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035A_H			699607	ZN	EET BUF	02/02/24 09:13
Total/NA	Analysis	8260C		1	699697	ZN	EET BUF	02/02/24 13:45
Total/NA	Prep	3550C			699565	SJM	EET BUF	01/31/24 16:11
Total/NA	Analysis	8270D		1	699589	EMD	EET BUF	02/01/24 19:26
Total/NA	Prep	3550C	DL		699565	SJM	EET BUF	01/31/24 16:11
Total/NA	Analysis	8270D	DL	10	699735	EMD	EET BUF	02/02/24 13:53
Total/NA	Prep	7471B			699638	NVK	EET BUF	02/01/24 12:04
Total/NA	Analysis	7471B		1	699664	NVK	EET BUF	02/01/24 14:24

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Lab Chronicle

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-02-01302024

Lab Sample ID: 480-216732-2

Date Collected: 01/30/24 13:30

Matrix: Solid

Date Received: 01/30/24 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			699601	SMP	EET BUF	02/01/24 08:05 - 02/02/24 09:34 ¹
TCLP	Analysis	8260C		10	699845	CC	EET BUF	02/05/24 14:20
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3510C			699753	LSC	EET BUF	02/02/24 13:57
TCLP	Analysis	8270D		1	699859	EMD	EET BUF	02/05/24 17:00
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3510C			699748	LSC	EET BUF	02/02/24 13:49
TCLP	Analysis	8081B		1	699852	MAN	EET BUF	02/05/24 14:14
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	8151A			699705	JMP	EET BUF	02/02/24 09:11
TCLP	Analysis	8151		1	699867	MAN	EET BUF	02/05/24 15:04
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3010A			699709	ESB	EET BUF	02/02/24 09:46
TCLP	Analysis	6010C		1	699805	BMB	EET BUF	02/03/24 00:41
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	7470A			699712	NVK	EET BUF	02/02/24 11:25
TCLP	Analysis	7470A		1	699779	NVK	EET BUF	02/02/24 16:01
Total/NA	Analysis	1010A		1	699519	KM	EET BUF	01/31/24 11:06
Total/NA	Prep	7.3.3			699681	AM	EET BUF	02/01/24 11:40
Total/NA	Analysis	9012		1	699796	AM	EET BUF	02/02/24 13:31
Total/NA	Prep	7.3.4			699682	AM	EET BUF	02/01/24 11:40
Total/NA	Analysis	9034		1	699790	AM	EET BUF	02/02/24 16:25
Total/NA	Analysis	9045D		1	699787	KB	EET BUF	02/02/24 13:43
Total/NA	Analysis	Moisture		1	699563	JMM	EET BUF	01/31/24 15:56

Client Sample ID: F-LOA-02-01302024

Lab Sample ID: 480-216732-2

Date Collected: 01/30/24 13:30

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 75.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035A_L			699570	CDC	EET BUF	01/31/24 16:00
Total/NA	Analysis	8260C		1	699571	CDC	EET BUF	01/31/24 22:02
Total/NA	Prep	3550C			699565	SJM	EET BUF	01/31/24 16:11
Total/NA	Analysis	8270D		1	699589	EMD	EET BUF	02/01/24 19:50
Total/NA	Prep	7471B			699638	NVK	EET BUF	02/01/24 12:04
Total/NA	Analysis	7471B		1	699664	NVK	EET BUF	02/01/24 14:26

Client Sample ID: F-LOA-03-01302024

Lab Sample ID: 480-216732-3

Date Collected: 01/30/24 14:00

Matrix: Solid

Date Received: 01/30/24 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			699601	SMP	EET BUF	02/01/24 08:05 - 02/02/24 09:34 ¹
TCLP	Analysis	8260C		10	699845	CC	EET BUF	02/05/24 14:42

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Lab Chronicle

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-03-01302024

Lab Sample ID: 480-216732-3

Date Collected: 01/30/24 14:00

Matrix: Solid

Date Received: 01/30/24 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3510C			699753	LSC	EET BUF	02/02/24 13:57
TCLP	Analysis	8270D		1	699859	EMD	EET BUF	02/05/24 17:24
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3510C			699748	LSC	EET BUF	02/02/24 13:49
TCLP	Analysis	8081B		1	699852	MAN	EET BUF	02/05/24 14:34
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	8151A			699705	JMP	EET BUF	02/02/24 09:11
TCLP	Analysis	8151		1	699867	MAN	EET BUF	02/05/24 15:23
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3010A			699709	ESB	EET BUF	02/02/24 09:46
TCLP	Analysis	6010C		1	699805	BMB	EET BUF	02/03/24 00:44
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	7470A			699712	NVK	EET BUF	02/02/24 11:25
TCLP	Analysis	7470A		1	699779	NVK	EET BUF	02/02/24 16:02
Total/NA	Analysis	1010A		1	699605	KM	EET BUF	02/01/24 09:04
Total/NA	Prep	7.3.3			699681	AM	EET BUF	02/01/24 11:40
Total/NA	Analysis	9012		1	699796	AM	EET BUF	02/02/24 13:32
Total/NA	Prep	7.3.4			699682	AM	EET BUF	02/01/24 11:40
Total/NA	Analysis	9034		1	699790	AM	EET BUF	02/02/24 16:25
Total/NA	Analysis	9045D		1	699787	KB	EET BUF	02/02/24 13:43
Total/NA	Analysis	Moisture		1	699563	JMM	EET BUF	01/31/24 15:56

Client Sample ID: F-LOA-03-01302024

Lab Sample ID: 480-216732-3

Date Collected: 01/30/24 14:00

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 69.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035A_H			699607	ZN	EET BUF	02/02/24 09:13
Total/NA	Analysis	8260C		4	699697	ZN	EET BUF	02/02/24 14:19
Total/NA	Prep	5035A_H	DL		699607	ZN	EET BUF	02/02/24 09:13
Total/NA	Analysis	8260C	DL	8	699828	ZN	EET BUF	02/05/24 12:09
Total/NA	Prep	3550C			699565	SJM	EET BUF	01/31/24 16:11
Total/NA	Analysis	8270D		1	699589	EMD	EET BUF	02/01/24 20:14
Total/NA	Prep	7471B			699638	NVK	EET BUF	02/01/24 12:04
Total/NA	Analysis	7471B		1	699664	NVK	EET BUF	02/01/24 14:31

Client Sample ID: F-LOA-04-01302024

Lab Sample ID: 480-216732-4

Date Collected: 01/30/24 11:45

Matrix: Solid

Date Received: 01/30/24 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			699601	SMP	EET BUF	02/01/24 08:05 - 02/02/24 09:34 ¹
TCLP	Analysis	8260C		10	699845	CC	EET BUF	02/05/24 15:04

Eurofins Buffalo

Lab Chronicle

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-04-01302024

Lab Sample ID: 480-216732-4

Date Collected: 01/30/24 11:45

Matrix: Solid

Date Received: 01/30/24 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3510C			699753	LSC	EET BUF	02/02/24 13:57
TCLP	Analysis	8270D		1	699859	EMD	EET BUF	02/05/24 17:49
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3510C			699748	LSC	EET BUF	02/02/24 13:49
TCLP	Analysis	8081B		1	699852	MAN	EET BUF	02/05/24 14:53
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	8151A			699705	JMP	EET BUF	02/02/24 09:11
TCLP	Analysis	8151		1	699867	MAN	EET BUF	02/05/24 15:42
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3010A			699709	ESB	EET BUF	02/02/24 09:46
TCLP	Analysis	6010C		1	699805	BMB	EET BUF	02/03/24 00:48
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	7470A			699712	NVK	EET BUF	02/02/24 11:25
TCLP	Analysis	7470A		1	699779	NVK	EET BUF	02/02/24 16:04
Total/NA	Analysis	1010A		1	699605	KM	EET BUF	02/01/24 09:04
Total/NA	Prep	7.3.3			699681	AM	EET BUF	02/01/24 11:40
Total/NA	Analysis	9012		1	699796	AM	EET BUF	02/02/24 13:34
Total/NA	Prep	7.3.4			699682	AM	EET BUF	02/01/24 11:40
Total/NA	Analysis	9034		1	699790	AM	EET BUF	02/02/24 16:25
Total/NA	Analysis	9045D		1	699787	KB	EET BUF	02/02/24 13:43
Total/NA	Analysis	Moisture		1	699563	JMM	EET BUF	01/31/24 15:56

Client Sample ID: F-LOA-04-01302024

Lab Sample ID: 480-216732-4

Date Collected: 01/30/24 11:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 82.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035A_H			699607	ZN	EET BUF	02/02/24 09:13
Total/NA	Analysis	8260C		1	699697	ZN	EET BUF	02/02/24 14:42
Total/NA	Prep	3550C			699565	SJM	EET BUF	01/31/24 16:11
Total/NA	Analysis	8270D		1	699589	EMD	EET BUF	02/01/24 19:02
Total/NA	Prep	3550C	DL		699565	SJM	EET BUF	01/31/24 16:11
Total/NA	Analysis	8270D	DL	10	699735	EMD	EET BUF	02/02/24 13:29
Total/NA	Prep	1633 Shake			642488	MAC	EET DEN	02/09/24 09:10
Total/NA	Analysis	Draft 1633		1	642832	SM	EET DEN	02/14/24 03:50
Total/NA	Prep	7471B			699638	NVK	EET BUF	02/01/24 12:04
Total/NA	Analysis	7471B		1	699664	NVK	EET BUF	02/01/24 14:32

Eurofins Buffalo

Lab Chronicle

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-05-01302024

Lab Sample ID: 480-216732-5

Date Collected: 01/30/24 13:45

Matrix: Solid

Date Received: 01/30/24 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			699601	SMP	EET BUF	02/01/24 08:05 - 02/02/24 09:34 ¹
TCLP	Analysis	8260C		10	699845	CC	EET BUF	02/05/24 15:27
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3510C			699753	LSC	EET BUF	02/02/24 13:57
TCLP	Analysis	8270D		1	699859	EMD	EET BUF	02/05/24 18:13
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3510C			699748	LSC	EET BUF	02/02/24 13:49
TCLP	Analysis	8081B		1	699852	MAN	EET BUF	02/05/24 15:13
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	8151A			699705	JMP	EET BUF	02/02/24 09:11
TCLP	Analysis	8151		1	699867	MAN	EET BUF	02/05/24 16:00
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3010A			699709	ESB	EET BUF	02/02/24 09:46
TCLP	Analysis	6010C		1	699805	BMB	EET BUF	02/03/24 00:52
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	7470A			699712	NVK	EET BUF	02/02/24 11:25
TCLP	Analysis	7470A		1	699779	NVK	EET BUF	02/02/24 16:05
Total/NA	Analysis	1010A		1	699605	KM	EET BUF	02/01/24 09:04
Total/NA	Prep	7.3.3			699681	AM	EET BUF	02/01/24 11:40
Total/NA	Analysis	9012		1	699796	AM	EET BUF	02/02/24 13:35
Total/NA	Prep	7.3.4			699682	AM	EET BUF	02/01/24 11:40
Total/NA	Analysis	9034		1	699790	AM	EET BUF	02/02/24 16:25
Total/NA	Analysis	9045D		1	699787	KB	EET BUF	02/02/24 13:43
Total/NA	Analysis	Moisture		1	699563	JMM	EET BUF	01/31/24 15:56

Client Sample ID: F-LOA-05-01302024

Lab Sample ID: 480-216732-5

Date Collected: 01/30/24 13:45

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 76.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035A_L			699570	CDC	EET BUF	01/31/24 16:00
Total/NA	Analysis	8260C		1	699571	CDC	EET BUF	01/31/24 22:27
Total/NA	Prep	3550C			699565	SJM	EET BUF	01/31/24 16:11
Total/NA	Analysis	8270D		1	699589	EMD	EET BUF	02/01/24 20:38
Total/NA	Prep	7471B			699638	NVK	EET BUF	02/01/24 12:04
Total/NA	Analysis	7471B		1	699664	NVK	EET BUF	02/01/24 14:34

Client Sample ID: F-LOA-06-01302024

Lab Sample ID: 480-216732-6

Date Collected: 01/30/24 11:30

Matrix: Solid

Date Received: 01/30/24 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			699601	SMP	EET BUF	02/01/24 08:05 - 02/02/24 09:34 ¹
TCLP	Analysis	8260C		10	699845	CC	EET BUF	02/05/24 15:49

Eurofins Buffalo

Lab Chronicle

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-06-01302024

Lab Sample ID: 480-216732-6

Date Collected: 01/30/24 11:30

Matrix: Solid

Date Received: 01/30/24 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3510C			699753	LSC	EET BUF	02/02/24 13:57
TCLP	Analysis	8270D		1	699859	EMD	EET BUF	02/05/24 18:38
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3510C			699748	LSC	EET BUF	02/02/24 13:49
TCLP	Analysis	8081B		1	699852	MAN	EET BUF	02/05/24 15:32
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	8151A			699705	JMP	EET BUF	02/02/24 09:11
TCLP	Analysis	8151		1	699867	MAN	EET BUF	02/05/24 16:18
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	3010A			699709	ESB	EET BUF	02/02/24 09:46
TCLP	Analysis	6010C		1	699805	BMB	EET BUF	02/03/24 00:55
TCLP	Leach	1311			699598	SMP	EET BUF	02/01/24 07:58 - 02/02/24 08:59 ¹
TCLP	Prep	7470A			699712	NVK	EET BUF	02/02/24 11:25
TCLP	Analysis	7470A		1	699779	NVK	EET BUF	02/02/24 16:06
Total/NA	Analysis	1010A		1	699605	KM	EET BUF	02/01/24 09:04
Total/NA	Prep	7.3.3			699681	AM	EET BUF	02/01/24 11:40
Total/NA	Analysis	9012		1	699796	AM	EET BUF	02/02/24 13:36
Total/NA	Prep	7.3.4			699682	AM	EET BUF	02/01/24 11:40
Total/NA	Analysis	9034		1	699790	AM	EET BUF	02/02/24 16:25
Total/NA	Analysis	9045D		1	699787	KB	EET BUF	02/02/24 13:43
Total/NA	Analysis	Moisture		1	699563	JMM	EET BUF	01/31/24 15:56

Client Sample ID: F-LOA-06-01302024

Lab Sample ID: 480-216732-6

Date Collected: 01/30/24 11:30

Matrix: Solid

Date Received: 01/30/24 16:00

Percent Solids: 76.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035A_H			699607	ZN	EET BUF	02/02/24 09:13
Total/NA	Analysis	8260C		1	699697	ZN	EET BUF	02/02/24 15:05
Total/NA	Prep	3550C			699565	SJM	EET BUF	01/31/24 16:11
Total/NA	Analysis	8270D		1	699589	EMD	EET BUF	02/01/24 21:03
Total/NA	Prep	7471B			699638	NVK	EET BUF	02/01/24 12:04
Total/NA	Analysis	7471B		1	699664	NVK	EET BUF	02/01/24 14:37

Client Sample ID: F-LOA-07-01292024

Lab Sample ID: 480-216732-7

Date Collected: 01/29/24 13:30

Matrix: Water

Date Received: 01/30/24 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		50	699604	CC	EET BUF	02/01/24 19:57
Total/NA	Prep	3510C			699657	LSC	EET BUF	02/01/24 13:52
Total/NA	Analysis	8270D		1	699935	EMD	EET BUF	02/06/24 16:26
Total/NA	Prep	3510C	DL		699657	LSC	EET BUF	02/01/24 13:52
Total/NA	Analysis	8270D	DL	50	700197	EMD	EET BUF	02/08/24 18:00

Eurofins Buffalo

Lab Chronicle

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Client Sample ID: F-LOA-07-01292024
Date Collected: 01/29/24 13:30
Date Received: 01/30/24 16:00

Lab Sample ID: 480-216732-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			699711	NVK	EET BUF	02/02/24 11:25
Total/NA	Analysis	7470A		1	699779	NVK	EET BUF	02/02/24 15:51
Total/NA	Analysis	1010A		1	699605	KM	EET BUF	02/01/24 09:04
Total/NA	Analysis	350.1		10	699609	CLT	EET BUF	02/01/24 08:16
Total/NA	Analysis	9040C		1	699684	KB	EET BUF	02/01/24 16:50

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600
EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Laboratory: Eurofins Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	03-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1010A		Water	Flashpoint
6010C	3010A	Solid	Arsenic
6010C	3010A	Solid	Barium
6010C	3010A	Solid	Cadmium
6010C	3010A	Solid	Chromium
6010C	3010A	Solid	Lead
6010C	3010A	Solid	Selenium
6010C	3010A	Solid	Silver
7470A	7470A	Solid	Mercury
8081B	3510C	Solid	Chlordane (technical)
8081B	3510C	Solid	Endrin
8081B	3510C	Solid	gamma-BHC (Lindane)
8081B	3510C	Solid	Heptachlor
8081B	3510C	Solid	Heptachlor epoxide
8081B	3510C	Solid	Methoxychlor
8081B	3510C	Solid	Toxaphene
9012	7.3.3	Solid	Cyanide, Reactive
9034	7.3.4	Solid	Sulfide, Reactive
9040C		Water	pH
9040C		Water	Temperature
9045D		Solid	Temperature
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: Eurofins Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	59923	03-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Draft 1633	1633 Shake	Solid	11CI-PF3OUdS
Draft 1633	1633 Shake	Solid	3:3 FTCA
Draft 1633	1633 Shake	Solid	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
Draft 1633	1633 Shake	Solid	4:2 FTS
Draft 1633	1633 Shake	Solid	5:3 FTCA
Draft 1633	1633 Shake	Solid	6:2 FTS
Draft 1633	1633 Shake	Solid	7:3 FTCA
Draft 1633	1633 Shake	Solid	9CI-PF3ONS
Draft 1633	1633 Shake	Solid	HFPO-DA (GenX)
Draft 1633	1633 Shake	Solid	NEtFOSA
Draft 1633	1633 Shake	Solid	NEtFOSE
Draft 1633	1633 Shake	Solid	NFDHA

Eurofins Buffalo

Accreditation/Certification Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Laboratory: Eurofins Denver (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
Draft 1633	1633 Shake	Solid	NMeFOSA
Draft 1633	1633 Shake	Solid	NMeFOSE
Draft 1633	1633 Shake	Solid	Perfluorobutanesulfonic acid (PFBS)
Draft 1633	1633 Shake	Solid	Perfluorodecanesulfonic acid (PFDS)
Draft 1633	1633 Shake	Solid	Perfluorododecanesulfonic acid (PFDoS)
Draft 1633	1633 Shake	Solid	Perfluoroheptanesulfonic acid (PFHpS)
Draft 1633	1633 Shake	Solid	Perfluorohexanesulfonic acid (PFHxS)
Draft 1633	1633 Shake	Solid	Perfluorononanesulfonic acid (PFNS)
Draft 1633	1633 Shake	Solid	Perfluorooctanesulfonamide (PFOSA)
Draft 1633	1633 Shake	Solid	Perfluoropentanesulfonic acid (PFPeS)
Draft 1633	1633 Shake	Solid	PFEESA
Draft 1633	1633 Shake	Solid	PFMBA
Draft 1633	1633 Shake	Solid	PFMPA

Method Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

Method	Method Description	Protocol	Laboratory
8260C	TCLP Volatiles	SW846	EET BUF
8260C	Volatile Organic Compounds by GC/MS	SW846	EET BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET BUF
8081B	Organochlorine Pesticides (GC)	SW846	EET BUF
8151	TCLP Herbicides	SW846	EET BUF
Draft 1633	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET DEN
6010C	Metals (ICP)	SW846	EET BUF
7470A	Mercury (CVAA)	SW846	EET BUF
7470A	TCLP Mercury	SW846	EET BUF
7471B	Mercury (CVAA)	SW846	EET BUF
1010A	Ignitability, Pensky-Martens Closed-Cup Method	SW846	EET BUF
350.1	Nitrogen, Ammonia	EPA	EET BUF
9012	Cyanide, Reactive	SW846	EET BUF
9034	Sulfide, Reactive	SW846	EET BUF
9040C	pH	SW846	EET BUF
9045D	pH	SW846	EET BUF
Moisture	Percent Moisture	EPA	EET BUF
1311	TCLP Extraction	SW846	EET BUF
1633 Shake	Shake Extraction with SPE	EPA	EET DEN
3010A	Preparation, Total Metals	SW846	EET BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET BUF
3550C	Ultrasonic Extraction	SW846	EET BUF
5030C	Purge and Trap	SW846	EET BUF
5035A_H	Closed System Purge and Trap	SW846	EET BUF
5035A_L	Closed System Purge and Trap	SW846	EET BUF
7.3.3	Cyanide, Reactive	SW846	EET BUF
7.3.4	Sulfide, Reactive	SW846	EET BUF
7470A	Preparation, Mercury	SW846	EET BUF
7471B	Preparation, Mercury	SW846	EET BUF
8151A	Extraction (Herbicides)	SW846	EET BUF

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Inventum Engineering LLC
Project/Site: RITC - 3875 River Road, Tonawanda NY

Job ID: 480-216732-1

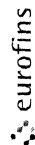
Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-216732-1	F-LOA-01-01302024	Solid	01/30/24 14:15	01/30/24 16:00
480-216732-2	F-LOA-02-01302024	Solid	01/30/24 13:30	01/30/24 16:00
480-216732-3	F-LOA-03-01302024	Solid	01/30/24 14:00	01/30/24 16:00
480-216732-4	F-LOA-04-01302024	Solid	01/30/24 11:45	01/30/24 16:00
480-216732-5	F-LOA-05-01302024	Solid	01/30/24 13:45	01/30/24 16:00
480-216732-6	F-LOA-06-01302024	Solid	01/30/24 11:30	01/30/24 16:00
480-216732-7	F-LOA-07-01292024	Water	01/29/24 13:30	01/30/24 16:00



[illegible]



Chain of Custody Record



Client Information (Sub Contract Lab)				Lab PM Fischer, Brian J	Carrier Tracking No(s)	COC No 480-84995.1
Client Contact: Shipping/Receiving				E-Mail Brian.Fischer@et.eurofinsus.com	State of Origin New York	Page Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Accreditations Required (See note) NELAP - New York		Job # 480-216732-1
Address 4955 Yarrow Street, City Anvada State, Zip CO, 80002 Phone: 303-736-0100(Tel) 303-431-7171(Fax) Email				Due Date Requested: 2/26/2024 TAT Requested (days):		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:
Project Name RITC - 3875 River Road, Tonawanda NY Site				PO # WO # Project # 48027311 SSOW#		
Sample Identification - Client ID (Lab ID)				Sample Date	Sample Time	Sample Type (C=Comp, G=grab) BT=Tissue, A=Air
F-LOA-04-01302024 (480-216732-4)				1/30/24	11:45 Eastern	Solid
Perform MS/MSD (Yes or No)				Field Filtered Sample (Yes or No)		1633_B24/1633_Shake 1633 B24 Standard List
Total Number of containers				X		1
Special Instructions/Note:						
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northeast, LLC						
Possible Hazard Identification				Return To Client ☐ Disposal By Lab ☐		Archive For Months
Unconfirmed				Special Instructions/QC Requirements:		
Deliverable Requested: I, II, III, IV, Other (specify)				Primary Deliverable Rank: 2		
Empty Kit Relinquished by:				Date:		
Relinquished by: <i>[Signature]</i>				Date/Time: 1/31/24 1:400		Company: TOS
Relinquished by:				Date/Time:		Company:
Relinquished by:				Date/Time:		Company:
Custody Seals Intact: Δ Yes Δ No				Custody Seal No.:		

Login Sample Receipt Checklist

Client: Inventum Engineering LLC

Job Number: 480-216732-1

Login Number: 216732

List Source: Eurofins Buffalo

List Number: 1

Creator: Stopa, Erik S

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	False	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	ADDITIONAL CONTAINER REQUESTED METHOD NOT ON COC
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	INN
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Inventum Engineering LLC

Job Number: 480-216732-1

Login Number: 216732

List Number: 2

Creator: Little, Matthew L

List Source: Eurofins Denver

List Creation: 02/01/24 01:03 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. James Edwards
Inventum Engineering LLC
441 Carlisle Drive
Suite C
Herndon, Virginia 20170

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JOB DESCRIPTION

3875 River Road - Tonawanda, NY

JOB NUMBER

480-217087-1

Eurofins Buffalo

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

Authorization



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Revision 2

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Definitions/Glossary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Inventum Engineering LLC
Project: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Job ID: 480-217087-1

Eurofins Buffalo

Job Narrative 480-217087-1

Revision 2

The report being provided is a revision of the original report sent on 2/28/2024. The report (revision 2) is being revised to add additional analytes to method method 8260.

Report revision history

Revision 1 - 2/28/2024 - The report being provided is a revision of the original report sent on 2/28/2024. The report (revision 1) is being revised to correct the job description.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 2/14/2024 10:29 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.2°C.

GC/MS VOA

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-700987 recovered outside acceptance criteria, low biased, for Trichlorofluoromethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported. The associated samples are impacted: UNLOAD-01-02132024 (480-217087-1) and UNLOAD-02-02132024 (480-217087-2).

Method 8260C: The following sample was analyzed using medium level soil analysis and diluted to bring the concentration of target analytes within the calibration range: UNLOAD-02-02132024 (480-217087-2). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample was analyzed using medium level soil analysis due to the nature of the sample matrix: UNLOAD-01-02132024 (480-217087-1). Elevated reporting limits (RLs) are provided.

Method 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 480-701023 and analytical batch 480-700987 recovered outside control limits for the following analytes: Carbon tetrachloride, Chlorodibromomethane, Bromoform, and 1,2-Dibromo-3-Chloropropane. The associated samples are impacted: UNLOAD-01-02132024 (480-217087-1) and UNLOAD-02-02132024 (480-217087-2).

Method 8260C - TCLP: The following samples were diluted due to the nature of the TCLP matrix: UNLOAD-01-02132024 (480-217087-1), UNLOAD-02-02132024 (480-217087-2) and (LB 480-701146/1-A). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-700987 recovered above the upper control limit for 1,3,5-Trimethylbenzene. The samples associated with this CCV were not detected above the reporting limit (RL) for the affected analytes; therefore, the data have been reported. The associated samples are impacted: UNLOAD-01-02132024 (480-217087-1) and UNLOAD-02-02132024 (480-217087-2).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-700987 recovered above the upper control limit for 1,2,4-Trimethylbenzene. The samples associated with this CCV were not detected above the reporting limit (RL) for the affected analytes; therefore, the data have been reported. The associated sample is impacted: UNLOAD-01-02132024 (480-217087-1).

Method 8260C: The continuing calibration verification (CCV) analyzed in 480-700987 was outside the method criteria for the following analyte(s): 1,2,4-Trimethylbenzene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Eurofins Buffalo

Case Narrative

Client: Inventum Engineering LLC
Project: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Job ID: 480-217087-1 (Continued)

Eurofins Buffalo

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

GC/MS Semi VOA

Method 8270D: The following samples were diluted due color, appearance and viscosity: UNLOAD-01-02132024 (480-217087-1) and UNLOAD-02-02132024 (480-217087-2). Elevated reporting limits (RL) are provided.

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

Herbicides

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

Pesticides

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

Metals

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

General Chemistry

Method 9045D: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: UNLOAD-01-02132024 (480-217087-1) and UNLOAD-02-02132024 (480-217087-2).

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

Eurofins Buffalo

Detection Summary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-01-02132024

Lab Sample ID: 480-217087-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.044		0.010	0.0041	mg/L	10		8260C	TCLP
1,2,4-Trimethylbenzene	26	J	92	26	ug/Kg	1	✱	8260C	Total/NA
Benzene	5500		92	17	ug/Kg	1	✱	8260C	Total/NA
Ethylbenzene	160		92	27	ug/Kg	1	✱	8260C	Total/NA
Isopropylbenzene	17	J	92	14	ug/Kg	1	✱	8260C	Total/NA
m,p-Xylene	60	J	180	51	ug/Kg	1	✱	8260C	Total/NA
Methyl acetate	320	J	460	44	ug/Kg	1	✱	8260C	Total/NA
o-Xylene	33	J	92	12	ug/Kg	1	✱	8260C	Total/NA
Toluene	450		92	25	ug/Kg	1	✱	8260C	Total/NA
Xylenes, Total	93	J	180	51	ug/Kg	1	✱	8260C	Total/NA
2-Methylphenol	300	J	1300	160	ug/Kg	5	✱	8270D	Total/NA
4-Methylphenol	580	J	2600	160	ug/Kg	5	✱	8270D	Total/NA
Acenaphthylene	710	J	1300	170	ug/Kg	5	✱	8270D	Total/NA
Anthracene	510	J	1300	330	ug/Kg	5	✱	8270D	Total/NA
Benzo[a]anthracene	970	J	1300	130	ug/Kg	5	✱	8270D	Total/NA
Benzo[a]pyrene	1100	J	1300	200	ug/Kg	5	✱	8270D	Total/NA
Benzo[b]fluoranthene	1500		1300	210	ug/Kg	5	✱	8270D	Total/NA
Benzo[g,h,i]perylene	560	J	1300	140	ug/Kg	5	✱	8270D	Total/NA
Benzo[k]fluoranthene	620	J	1300	170	ug/Kg	5	✱	8270D	Total/NA
Chrysene	1000	J	1300	300	ug/Kg	5	✱	8270D	Total/NA
Dibenzofuran	200	J	1300	160	ug/Kg	5	✱	8270D	Total/NA
Fluoranthene	2000		1300	140	ug/Kg	5	✱	8270D	Total/NA
Fluorene	320	J	1300	160	ug/Kg	5	✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	480	J	1300	170	ug/Kg	5	✱	8270D	Total/NA
Naphthalene	2100		1300	170	ug/Kg	5	✱	8270D	Total/NA
Phenanthrene	1000	J	1300	200	ug/Kg	5	✱	8270D	Total/NA
Phenol	330	J	1300	200	ug/Kg	5	✱	8270D	Total/NA
Pyrene	1700		1300	160	ug/Kg	5	✱	8270D	Total/NA
Arsenic	0.039		0.015	0.0056	mg/L	1		6010C	TCLP
Barium	0.29	J	1.0	0.10	mg/L	1		6010C	TCLP
Lead	0.0052	J	0.020	0.0030	mg/L	1		6010C	TCLP
Mercury	0.54		0.033	0.0075	mg/Kg	1	✱	7471B	Total/NA
Flashpoint	>180		50.0	50.0	Degrees F	1		1010A	Total/NA
pH	10.3	HF	0.1	0.1	SU	1		9045D	Total/NA
Temperature	19.1	HF	0.001	0.001	Degrees C	1		9045D	Total/NA
Ammonia	8.3		3.7	1.8	mg/Kg	1		350.1	ASTM Leach

Client Sample ID: UNLOAD-02-02132024

Lab Sample ID: 480-217087-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.042		0.010	0.0041	mg/L	10		8260C	TCLP
1,2,4-Trimethylbenzene	240		110	32	ug/Kg	2	✱	8260C	Total/NA
1,3,5-Trimethylbenzene	52	J	110	35	ug/Kg	2	✱	8260C	Total/NA
Benzene	5700		110	22	ug/Kg	2	✱	8260C	Total/NA
Ethylbenzene	120		110	33	ug/Kg	2	✱	8260C	Total/NA
Isopropylbenzene	54	J	110	17	ug/Kg	2	✱	8260C	Total/NA
m,p-Xylene	560		230	63	ug/Kg	2	✱	8260C	Total/NA
Methyl acetate	130	J	570	54	ug/Kg	2	✱	8260C	Total/NA
o-Xylene	150		110	15	ug/Kg	2	✱	8260C	Total/NA
Toluene	280		110	31	ug/Kg	2	✱	8260C	Total/NA
Xylenes, Total	710		230	63	ug/Kg	2	✱	8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Detection Summary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-02-02132024 (Continued)

Lab Sample ID: 480-217087-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2-Methylphenol	180	J	1100	130	ug/Kg	5	✱		8270D	Total/NA
4-Methylphenol	380	J	2100	130	ug/Kg	5	✱		8270D	Total/NA
Acenaphthylene	390	J	1100	140	ug/Kg	5	✱		8270D	Total/NA
Anthracene	270	J	1100	270	ug/Kg	5	✱		8270D	Total/NA
Benzo[a]anthracene	590	J	1100	110	ug/Kg	5	✱		8270D	Total/NA
Benzo[a]pyrene	620	J	1100	160	ug/Kg	5	✱		8270D	Total/NA
Benzo[b]fluoranthene	920	J	1100	170	ug/Kg	5	✱		8270D	Total/NA
Benzo[g,h,i]perylene	380	J	1100	120	ug/Kg	5	✱		8270D	Total/NA
Benzo[k]fluoranthene	320	J	1100	140	ug/Kg	5	✱		8270D	Total/NA
Chrysene	600	J	1100	240	ug/Kg	5	✱		8270D	Total/NA
Dibenzofuran	130	J	1100	130	ug/Kg	5	✱		8270D	Total/NA
Fluoranthene	1200		1100	120	ug/Kg	5	✱		8270D	Total/NA
Fluorene	200	J	1100	130	ug/Kg	5	✱		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	320	J	1100	130	ug/Kg	5	✱		8270D	Total/NA
Naphthalene	1500		1100	140	ug/Kg	5	✱		8270D	Total/NA
Phenanthrene	590	J	1100	160	ug/Kg	5	✱		8270D	Total/NA
Phenol	240	J	1100	170	ug/Kg	5	✱		8270D	Total/NA
Pyrene	990	J	1100	130	ug/Kg	5	✱		8270D	Total/NA
2-Methylphenol	0.0029	J	0.020	0.0016	mg/L	1			8270D	TCLP
3-Methylphenol	0.0043	J	0.040	0.0016	mg/L	1			8270D	TCLP
4-Methylphenol	0.0043	J	0.040	0.0014	mg/L	1			8270D	TCLP
gamma-BHC (Lindane)	0.000058	J	0.00020	0.0000060	mg/L	1			8081B	TCLP
Barium	0.61	J	1.0	0.10	mg/L	1			6010C	TCLP
Cadmium	0.00075	J	0.0020	0.00050	mg/L	1			6010C	TCLP
Lead	0.048		0.020	0.0030	mg/L	1			6010C	TCLP
Mercury	2.9		0.12	0.028	mg/Kg	5	✱		7471B	Total/NA
Flashpoint	>180		50.0	50.0	Degrees F	1			1010A	Total/NA
Sulfide, Reactive	155		9.7	9.7	mg/Kg	1			9034	Total/NA
pH	8.6	HF	0.1	0.1	SU	1			9045D	Total/NA
Temperature	19.8	HF	0.001	0.001	Degrees C	1			9045D	Total/NA
Ammonia	31.7		3.8	1.9	mg/Kg	1			350.1	ASTM Leach

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Client Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-01-02132024

Lab Sample ID: 480-217087-1

Date Collected: 02/13/24 13:15

Matrix: Solid

Date Received: 02/14/24 10:29

Percent Solids: 62.1

Method: SW846 8260C - TCLP Volatiles - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			02/20/24 16:37	10
1,2-Dichloroethane	ND		0.010	0.0021	mg/L			02/20/24 16:37	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			02/20/24 16:37	10
Benzene	0.044		0.010	0.0041	mg/L			02/20/24 16:37	10
Carbon tetrachloride	ND		0.010	0.0027	mg/L			02/20/24 16:37	10
Chlorobenzene	ND		0.010	0.0075	mg/L			02/20/24 16:37	10
Chloroform	ND		0.010	0.0034	mg/L			02/20/24 16:37	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			02/20/24 16:37	10
Trichloroethene	ND		0.010	0.0046	mg/L			02/20/24 16:37	10
Vinyl chloride	ND		0.010	0.0090	mg/L			02/20/24 16:37	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		77 - 120		02/20/24 16:37	10
4-Bromofluorobenzene (Surr)	103		73 - 120		02/20/24 16:37	10
Dibromofluoromethane (Surr)	104		75 - 123		02/20/24 16:37	10
Toluene-d8 (Surr)	100		80 - 120		02/20/24 16:37	10

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		92	25	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,1,2,2-Tetrachloroethane	ND		92	15	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		92	46	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,1,2-Trichloroethane	ND		92	19	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,1-Dichloroethane	ND		92	28	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,1-Dichloroethene	ND		92	32	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,2,4-Trichlorobenzene	ND		92	35	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,2,4-Trimethylbenzene	26 J		92	26	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,2-Dibromo-3-Chloropropane	ND	*1	92	46	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,2-Dibromoethane	ND		92	16	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,2-Dichlorobenzene	ND		92	23	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,2-Dichloroethane	ND		92	38	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,2-Dichloropropane	ND		92	15	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,3,5-Trimethylbenzene	ND		92	28	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,3-Dichlorobenzene	ND		92	25	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
1,4-Dichlorobenzene	ND		92	13	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
2-Butanone (MEK)	ND		460	270	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
2-Hexanone	ND		460	190	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
4-Methyl-2-pentanone (MIBK)	ND		460	29	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
Acetone	ND		460	380	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
Benzene	5500		92	17	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
Bromodichloromethane	ND		92	18	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
Bromoform	ND	*1	92	46	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
Bromomethane	ND		92	20	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
Carbon disulfide	ND		92	42	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
Carbon tetrachloride	ND	*1	92	23	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
Chlorobenzene	ND		92	12	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
Chloroethane	ND		92	19	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
Chloroform	ND		92	63	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
Chloromethane	ND		92	22	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1
cis-1,2-Dichloroethene	ND		92	25	ug/Kg	✱	02/16/24 10:04	02/16/24 16:08	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-01-02132024

Lab Sample ID: 480-217087-1

Date Collected: 02/13/24 13:15

Matrix: Solid

Date Received: 02/14/24 10:29

Percent Solids: 62.1

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		92	22	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Cyclohexane	ND		92	20	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Dibromochloromethane	ND	*1	92	44	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Dichlorodifluoromethane	ND		92	40	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Ethylbenzene	160		92	27	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Isopropylbenzene	17	J	92	14	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
m,p-Xylene	60	J	180	51	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Methyl acetate	320	J	460	44	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Methyl tert-butyl ether	ND		92	35	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Methylcyclohexane	ND		92	43	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Methylene Chloride	ND		92	18	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
o-Xylene	33	J	92	12	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Styrene	ND		92	22	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Tetrachloroethene	ND		92	12	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Toluene	450		92	25	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
trans-1,2-Dichloroethene	ND		92	22	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
trans-1,3-Dichloropropene	ND		92	9.0	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Trichloroethene	ND		92	26	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Trichlorofluoromethane	ND		92	43	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Vinyl chloride	ND		92	31	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1
Xylenes, Total	93	J	180	51	ug/Kg	☆	02/16/24 10:04	02/16/24 16:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		53 - 146	02/16/24 10:04	02/16/24 16:08	1
4-Bromofluorobenzene (Surr)	88		49 - 148	02/16/24 10:04	02/16/24 16:08	1
Dibromofluoromethane (Surr)	80		60 - 140	02/16/24 10:04	02/16/24 16:08	1
Toluene-d8 (Surr)	93		50 - 149	02/16/24 10:04	02/16/24 16:08	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		790	430	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
2,4,5-Trichlorophenol	ND		1300	360	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
2,4,6-Trichlorophenol	ND		1300	270	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
2,4-Dichlorophenol	ND		1300	140	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
2,4-Dimethylphenol	ND		1300	320	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
2,4-Dinitrophenol	ND		13000	6200	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
2,4-Dinitrotoluene	ND		1300	280	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
2,6-Dinitrotoluene	ND		1300	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
2-Chloronaphthalene	ND		1300	220	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
2-Chlorophenol	ND		2600	240	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
2-Methylnaphthalene	ND		1300	270	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
2-Methylphenol	300	J	1300	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
2-Nitroaniline	ND		2600	200	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
2-Nitrophenol	ND		1300	380	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
3,3'-Dichlorobenzidine	ND		2600	1600	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
3-Nitroaniline	ND		2600	370	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
4,6-Dinitro-2-methylphenol	ND		2600	1300	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
4-Bromophenyl phenyl ether	ND		1300	190	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
4-Chloro-3-methylphenol	ND		1300	330	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
4-Chloroaniline	ND		1300	330	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-01-02132024

Lab Sample ID: 480-217087-1

Date Collected: 02/13/24 13:15

Matrix: Solid

Date Received: 02/14/24 10:29

Percent Solids: 62.1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		1300	170	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
4-Methylphenol	580	J	2600	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
4-Nitroaniline	ND		2600	700	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
4-Nitrophenol	ND		2600	940	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Acenaphthene	ND		1300	200	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Acenaphthylene	710	J	1300	170	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Acetophenone	ND		1300	180	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Anthracene	510	J	1300	330	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Atrazine	ND		1300	460	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Benzaldehyde	ND		1300	1100	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Benzo[a]anthracene	970	J	1300	130	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Benzo[a]pyrene	1100	J	1300	200	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Benzo[b]fluoranthene	1500		1300	210	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Benzo[g,h,i]perylene	560	J	1300	140	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Benzo[k]fluoranthene	620	J	1300	170	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Biphenyl	ND		1300	200	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
bis (2-chloroisopropyl) ether	ND		1300	270	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Bis(2-chloroethoxy)methane	ND		1300	280	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Bis(2-chloroethyl)ether	ND		1300	170	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Bis(2-ethylhexyl) phthalate	ND		1300	460	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Butyl benzyl phthalate	ND		1300	220	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Caprolactam	ND		1300	400	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Carbazole	ND		1300	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Chrysene	1000	J	1300	300	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Dibenz(a,h)anthracene	ND		1300	240	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Dibenzofuran	200	J	1300	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Diethyl phthalate	ND		1300	170	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Dimethyl phthalate	ND		1300	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Di-n-butyl phthalate	ND		1300	230	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Di-n-octyl phthalate	ND		1300	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Fluoranthene	2000		1300	140	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Fluorene	320	J	1300	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Hexachlorobenzene	ND		1300	180	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Hexachlorobutadiene	ND		1300	200	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Hexachlorocyclopentadiene	ND		1300	180	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Hexachloroethane	ND		1300	170	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Indeno[1,2,3-cd]pyrene	480	J	1300	170	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Isophorone	ND		1300	280	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Naphthalene	2100		1300	170	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Nitrobenzene	ND		1300	150	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
N-Nitrosodi-n-propylamine	ND		1300	230	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
N-Nitrosodiphenylamine	ND		1300	1100	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Pentachlorophenol	ND		2600	1300	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Phenanthrene	1000	J	1300	200	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Phenol	330	J	1300	200	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5
Pyrene	1700		1300	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:07	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	89		54 - 120	02/16/24 17:12	02/19/24 23:07	5
2-Fluorobiphenyl (Surr)	85		60 - 120	02/16/24 17:12	02/19/24 23:07	5

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-01-02132024

Lab Sample ID: 480-217087-1

Date Collected: 02/13/24 13:15

Matrix: Solid

Date Received: 02/14/24 10:29

Percent Solids: 62.1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	66		52 - 120	02/16/24 17:12	02/19/24 23:07	5
Nitrobenzene-d5 (Surr)	72		53 - 120	02/16/24 17:12	02/19/24 23:07	5
Phenol-d5 (Surr)	75		54 - 120	02/16/24 17:12	02/19/24 23:07	5
p-Terphenyl-d14 (Surr)	90		79 - 130	02/16/24 17:12	02/19/24 23:07	5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.040	0.0018	mg/L		02/21/24 13:51	02/22/24 16:04	1
2,4,5-Trichlorophenol	ND		0.020	0.0019	mg/L		02/21/24 13:51	02/22/24 16:04	1
2,4,6-Trichlorophenol	ND		0.020	0.0024	mg/L		02/21/24 13:51	02/22/24 16:04	1
2,4-Dinitrotoluene	ND		0.020	0.0017	mg/L		02/21/24 13:51	02/22/24 16:04	1
2-Methylphenol	ND		0.020	0.0016	mg/L		02/21/24 13:51	02/22/24 16:04	1
3-Methylphenol	ND		0.040	0.0016	mg/L		02/21/24 13:51	02/22/24 16:04	1
4-Methylphenol	ND		0.040	0.0014	mg/L		02/21/24 13:51	02/22/24 16:04	1
Hexachlorobenzene	ND		0.020	0.0020	mg/L		02/21/24 13:51	02/22/24 16:04	1
Hexachlorobutadiene	ND		0.020	0.0027	mg/L		02/21/24 13:51	02/22/24 16:04	1
Hexachloroethane	ND		0.020	0.0023	mg/L		02/21/24 13:51	02/22/24 16:04	1
Nitrobenzene	ND		0.020	0.0011	mg/L		02/21/24 13:51	02/22/24 16:04	1
Pentachlorophenol	ND		0.040	0.0088	mg/L		02/21/24 13:51	02/22/24 16:04	1
Pyridine	ND		0.10	0.0016	mg/L		02/21/24 13:51	02/22/24 16:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	95		41 - 120	02/21/24 13:51	02/22/24 16:04	1
2-Fluorobiphenyl (Surr)	98		48 - 120	02/21/24 13:51	02/22/24 16:04	1
2-Fluorophenol (Surr)	56		35 - 120	02/21/24 13:51	02/22/24 16:04	1
Nitrobenzene-d5 (Surr)	105		46 - 120	02/21/24 13:51	02/22/24 16:04	1
Phenol-d5 (Surr)	41		22 - 120	02/21/24 13:51	02/22/24 16:04	1
p-Terphenyl-d14 (Surr)	108		60 - 148	02/21/24 13:51	02/22/24 16:04	1

Method: SW846 8081B - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.0020	0.000029	mg/L		02/21/24 13:44	02/22/24 10:30	1
Endrin	ND		0.00020	0.000014	mg/L		02/21/24 13:44	02/22/24 10:30	1
gamma-BHC (Lindane)	ND		0.00020	0.0000060	mg/L		02/21/24 13:44	02/22/24 10:30	1
Heptachlor	ND		0.00020	0.0000085	mg/L		02/21/24 13:44	02/22/24 10:30	1
Heptachlor epoxide	ND		0.00020	0.0000053	mg/L		02/21/24 13:44	02/22/24 10:30	1
Methoxychlor	ND		0.00020	0.000014	mg/L		02/21/24 13:44	02/22/24 10:30	1
Toxaphene	ND		0.0020	0.00012	mg/L		02/21/24 13:44	02/22/24 10:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	86		20 - 120	02/21/24 13:44	02/22/24 10:30	1
DCB Decachlorobiphenyl (Surr)	71		20 - 120	02/21/24 13:44	02/22/24 10:30	1
Tetrachloro-m-xylene (Surr)	78		44 - 120	02/21/24 13:44	02/22/24 10:30	1
Tetrachloro-m-xylene (Surr)	71		44 - 120	02/21/24 13:44	02/22/24 10:30	1

Method: SW846 8151 - TCLP Herbicides - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.0020	0.00040	mg/L		02/21/24 07:00	02/23/24 21:04	1
Silvex (2,4,5-TP)	ND		0.0020	0.00036	mg/L		02/21/24 07:00	02/23/24 21:04	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-01-02132024

Lab Sample ID: 480-217087-1

Date Collected: 02/13/24 13:15

Matrix: Solid

Date Received: 02/14/24 10:29

Percent Solids: 62.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	31		21 - 143	02/21/24 07:00	02/23/24 21:04	1
2,4-Dichlorophenylacetic acid (Surr)	28		21 - 143	02/21/24 07:00	02/23/24 21:04	1

Method: SW846 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.039		0.015	0.0056	mg/L		02/20/24 09:32	02/21/24 19:35	1
Barium	0.29	J	1.0	0.10	mg/L		02/20/24 09:32	02/21/24 19:35	1
Cadmium	ND		0.0020	0.00050	mg/L		02/20/24 09:32	02/21/24 19:35	1
Chromium	ND		0.020	0.010	mg/L		02/20/24 09:32	02/21/24 19:35	1
Lead	0.0052	J	0.020	0.0030	mg/L		02/20/24 09:32	02/21/24 19:35	1
Selenium	ND		0.025	0.0087	mg/L		02/20/24 09:32	02/21/24 19:35	1
Silver	ND		0.0060	0.0017	mg/L		02/20/24 09:32	02/21/24 19:35	1

Method: SW846 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000043	mg/L		02/20/24 11:28	02/20/24 15:46	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.54		0.033	0.0075	mg/Kg	✱	02/15/24 11:18	02/15/24 15:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive (SW846 9012)	ND		9.6	9.6	mg/Kg		02/16/24 10:30	02/17/24 12:56	1
Sulfide, Reactive (SW846 9034)	ND		9.6	9.6	mg/Kg		02/16/24 10:30	02/17/24 16:00	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010A)	>180		50.0	50.0	Degrees F			02/15/24 10:39	1
pH (SW846 9045D)	10.3	HF	0.1	0.1	SU			02/15/24 19:50	1
Temperature (SW846 9045D)	19..1	HF	0.001	0.001	Degrees C			02/15/24 19:50	1

General Chemistry - ASTM Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	8.3		3.7	1.8	mg/Kg			02/21/24 08:01	1

Client Sample ID: UNLOAD-02-02132024

Lab Sample ID: 480-217087-2

Date Collected: 02/13/24 13:00

Matrix: Solid

Date Received: 02/14/24 10:29

Percent Solids: 75.9

Method: SW846 8260C - TCLP Volatiles - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			02/20/24 17:00	10
1,2-Dichloroethane	ND		0.010	0.0021	mg/L			02/20/24 17:00	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			02/20/24 17:00	10
Benzene	0.042		0.010	0.0041	mg/L			02/20/24 17:00	10
Carbon tetrachloride	ND		0.010	0.0027	mg/L			02/20/24 17:00	10
Chlorobenzene	ND		0.010	0.0075	mg/L			02/20/24 17:00	10
Chloroform	ND		0.010	0.0034	mg/L			02/20/24 17:00	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			02/20/24 17:00	10
Trichloroethene	ND		0.010	0.0046	mg/L			02/20/24 17:00	10
Vinyl chloride	ND		0.010	0.0090	mg/L			02/20/24 17:00	10

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-02-02132024

Lab Sample ID: 480-217087-2

Date Collected: 02/13/24 13:00

Matrix: Solid

Date Received: 02/14/24 10:29

Percent Solids: 75.9

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		77 - 120		02/20/24 17:00	10
4-Bromofluorobenzene (Surr)	98		73 - 120		02/20/24 17:00	10
Dibromofluoromethane (Surr)	101		75 - 123		02/20/24 17:00	10
Toluene-d8 (Surr)	100		80 - 120		02/20/24 17:00	10

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		110	32	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,1,2,2-Tetrachloroethane	ND		110	19	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		110	57	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,1,2-Trichloroethane	ND		110	24	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,1-Dichloroethane	ND		110	35	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,1-Dichloroethene	ND		110	40	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,2,4-Trichlorobenzene	ND		110	43	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,2,4-Trimethylbenzene	240		110	32	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,2-Dibromo-3-Chloropropane	ND	*1	110	57	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,2-Dibromoethane	ND		110	20	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,2-Dichlorobenzene	ND		110	29	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,2-Dichloroethane	ND		110	47	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,2-Dichloropropane	ND		110	19	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,3,5-Trimethylbenzene	52	J	110	35	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,3-Dichlorobenzene	ND		110	31	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
1,4-Dichlorobenzene	ND		110	16	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
2-Butanone (MEK)	ND		570	340	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
2-Hexanone	ND		570	230	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
4-Methyl-2-pentanone (MIBK)	ND		570	37	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Acetone	ND		570	470	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Benzene	5700		110	22	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Bromodichloromethane	ND		110	23	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Bromoform	ND	*1	110	57	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Bromomethane	ND		110	25	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Carbon disulfide	ND		110	52	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Carbon tetrachloride	ND	*1	110	29	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Chlorobenzene	ND		110	15	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Chloroethane	ND		110	24	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Chloroform	ND		110	78	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Chloromethane	ND		110	27	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
cis-1,2-Dichloroethene	ND		110	32	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
cis-1,3-Dichloropropene	ND		110	27	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Cyclohexane	ND		110	25	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Dibromochloromethane	ND	*1	110	55	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Dichlorodifluoromethane	ND		110	50	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Ethylbenzene	120		110	33	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Isopropylbenzene	54	J	110	17	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
m,p-Xylene	560		230	63	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Methyl acetate	130	J	570	54	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Methyl tert-butyl ether	ND		110	43	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Methylcyclohexane	ND		110	54	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Methylene Chloride	ND		110	23	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
o-Xylene	150		110	15	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-02-02132024

Lab Sample ID: 480-217087-2

Date Collected: 02/13/24 13:00

Matrix: Solid

Date Received: 02/14/24 10:29

Percent Solids: 75.9

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		110	28	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Tetrachloroethene	ND		110	15	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Toluene	280		110	31	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
trans-1,2-Dichloroethene	ND		110	27	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
trans-1,3-Dichloropropene	ND		110	11	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Trichloroethene	ND		110	32	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Trichlorofluoromethane	ND		110	54	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Vinyl chloride	ND		110	38	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2
Xylenes, Total	710		230	63	ug/Kg	☆	02/16/24 10:04	02/16/24 16:31	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87		53 - 146	02/16/24 10:04	02/16/24 16:31	2
4-Bromofluorobenzene (Surr)	91		49 - 148	02/16/24 10:04	02/16/24 16:31	2
Dibromofluoromethane (Surr)	80		60 - 140	02/16/24 10:04	02/16/24 16:31	2
Toluene-d8 (Surr)	93		50 - 149	02/16/24 10:04	02/16/24 16:31	2

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		640	350	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
2,4,5-Trichlorophenol	ND		1100	300	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
2,4,6-Trichlorophenol	ND		1100	220	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
2,4-Dichlorophenol	ND		1100	120	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
2,4-Dimethylphenol	ND		1100	260	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
2,4-Dinitrophenol	ND		11000	5000	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
2,4-Dinitrotoluene	ND		1100	220	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
2,6-Dinitrotoluene	ND		1100	130	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
2-Chloronaphthalene	ND		1100	180	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
2-Chlorophenol	ND		2100	200	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
2-Methylnaphthalene	ND		1100	220	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
2-Methylphenol	180	J	1100	130	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
2-Nitroaniline	ND		2100	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
2-Nitrophenol	ND		1100	310	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
3,3'-Dichlorobenzidine	ND		2100	1300	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
3-Nitroaniline	ND		2100	300	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
4,6-Dinitro-2-methylphenol	ND		2100	1100	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
4-Bromophenyl phenyl ether	ND		1100	150	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
4-Chloro-3-methylphenol	ND		1100	270	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
4-Chloroaniline	ND		1100	270	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
4-Chlorophenyl phenyl ether	ND		1100	130	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
4-Methylphenol	380	J	2100	130	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
4-Nitroaniline	ND		2100	570	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
4-Nitrophenol	ND		2100	760	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Acenaphthene	ND		1100	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Acenaphthylene	390	J	1100	140	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Acetophenone	ND		1100	150	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Anthracene	270	J	1100	270	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Atrazine	ND		1100	380	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Benzaldehyde	ND		1100	870	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Benzo[a]anthracene	590	J	1100	110	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Benzo[a]pyrene	620	J	1100	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-02-02132024

Lab Sample ID: 480-217087-2

Date Collected: 02/13/24 13:00

Matrix: Solid

Date Received: 02/14/24 10:29

Percent Solids: 75.9

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	920	J	1100	170	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Benzo[g,h,i]perylene	380	J	1100	120	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Benzo[k]fluoranthene	320	J	1100	140	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Biphenyl	ND		1100	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
bis (2-chloroisopropyl) ether	ND		1100	220	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Bis(2-chloroethoxy)methane	ND		1100	230	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Bis(2-chloroethyl)ether	ND		1100	140	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Bis(2-ethylhexyl) phthalate	ND		1100	370	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Butyl benzyl phthalate	ND		1100	180	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Caprolactam	ND		1100	330	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Carbazole	ND		1100	130	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Chrysene	600	J	1100	240	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Dibenz(a,h)anthracene	ND		1100	190	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Dibenzofuran	130	J	1100	130	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Diethyl phthalate	ND		1100	140	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Dimethyl phthalate	ND		1100	130	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Di-n-butyl phthalate	ND		1100	190	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Di-n-octyl phthalate	ND		1100	130	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Fluoranthene	1200		1100	120	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Fluorene	200	J	1100	130	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Hexachlorobenzene	ND		1100	150	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Hexachlorobutadiene	ND		1100	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Hexachlorocyclopentadiene	ND		1100	150	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Hexachloroethane	ND		1100	140	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Indeno[1,2,3-cd]pyrene	320	J	1100	130	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Isophorone	ND		1100	230	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Naphthalene	1500		1100	140	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Nitrobenzene	ND		1100	120	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
N-Nitrosodi-n-propylamine	ND		1100	190	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
N-Nitrosodiphenylamine	ND		1100	890	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Pentachlorophenol	ND		2100	1100	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Phenanthrene	590	J	1100	160	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Phenol	240	J	1100	170	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5
Pyrene	990	J	1100	130	ug/Kg	☆	02/16/24 17:12	02/19/24 23:31	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		54 - 120	02/16/24 17:12	02/19/24 23:31	5
2-Fluorobiphenyl (Surr)	82		60 - 120	02/16/24 17:12	02/19/24 23:31	5
2-Fluorophenol (Surr)	76		52 - 120	02/16/24 17:12	02/19/24 23:31	5
Nitrobenzene-d5 (Surr)	81		53 - 120	02/16/24 17:12	02/19/24 23:31	5
Phenol-d5 (Surr)	81		54 - 120	02/16/24 17:12	02/19/24 23:31	5
p-Terphenyl-d14 (Surr)	79		79 - 130	02/16/24 17:12	02/19/24 23:31	5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.040	0.0018	mg/L		02/21/24 13:51	02/22/24 16:28	1
2,4,5-Trichlorophenol	ND		0.020	0.0019	mg/L		02/21/24 13:51	02/22/24 16:28	1
2,4,6-Trichlorophenol	ND		0.020	0.0024	mg/L		02/21/24 13:51	02/22/24 16:28	1
2,4-Dinitrotoluene	ND		0.020	0.0017	mg/L		02/21/24 13:51	02/22/24 16:28	1
2-Methylphenol	0.0029	J	0.020	0.0016	mg/L		02/21/24 13:51	02/22/24 16:28	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-02-02132024

Lab Sample ID: 480-217087-2

Date Collected: 02/13/24 13:00

Matrix: Solid

Date Received: 02/14/24 10:29

Percent Solids: 75.9

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Methylphenol	0.0043	J	0.040	0.0016	mg/L		02/21/24 13:51	02/22/24 16:28	1
4-Methylphenol	0.0043	J	0.040	0.0014	mg/L		02/21/24 13:51	02/22/24 16:28	1
Hexachlorobenzene	ND		0.020	0.0020	mg/L		02/21/24 13:51	02/22/24 16:28	1
Hexachlorobutadiene	ND		0.020	0.0027	mg/L		02/21/24 13:51	02/22/24 16:28	1
Hexachloroethane	ND		0.020	0.0023	mg/L		02/21/24 13:51	02/22/24 16:28	1
Nitrobenzene	ND		0.020	0.0011	mg/L		02/21/24 13:51	02/22/24 16:28	1
Pentachlorophenol	ND		0.040	0.0088	mg/L		02/21/24 13:51	02/22/24 16:28	1
Pyridine	ND		0.10	0.0016	mg/L		02/21/24 13:51	02/22/24 16:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	97		41 - 120	02/21/24 13:51	02/22/24 16:28	1
2-Fluorobiphenyl (Surr)	75		48 - 120	02/21/24 13:51	02/22/24 16:28	1
2-Fluorophenol (Surr)	41		35 - 120	02/21/24 13:51	02/22/24 16:28	1
Nitrobenzene-d5 (Surr)	74		46 - 120	02/21/24 13:51	02/22/24 16:28	1
Phenol-d5 (Surr)	30		22 - 120	02/21/24 13:51	02/22/24 16:28	1
p-Terphenyl-d14 (Surr)	103		60 - 148	02/21/24 13:51	02/22/24 16:28	1

Method: SW846 8081B - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.0020	0.000029	mg/L		02/21/24 13:44	02/22/24 10:50	1
Endrin	ND		0.00020	0.000014	mg/L		02/21/24 13:44	02/22/24 10:50	1
gamma-BHC (Lindane)	0.000058	J	0.00020	0.0000060	mg/L		02/21/24 13:44	02/22/24 10:50	1
Heptachlor	ND		0.00020	0.0000085	mg/L		02/21/24 13:44	02/22/24 10:50	1
Heptachlor epoxide	ND		0.00020	0.0000053	mg/L		02/21/24 13:44	02/22/24 10:50	1
Methoxychlor	ND		0.00020	0.000014	mg/L		02/21/24 13:44	02/22/24 10:50	1
Toxaphene	ND		0.0020	0.00012	mg/L		02/21/24 13:44	02/22/24 10:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	78		20 - 120	02/21/24 13:44	02/22/24 10:50	1
DCB Decachlorobiphenyl (Surr)	73		20 - 120	02/21/24 13:44	02/22/24 10:50	1
Tetrachloro-m-xylene (Surr)	65		44 - 120	02/21/24 13:44	02/22/24 10:50	1
Tetrachloro-m-xylene (Surr)	53		44 - 120	02/21/24 13:44	02/22/24 10:50	1

Method: SW846 8151 - TCLP Herbicides - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.0020	0.00040	mg/L		02/21/24 07:00	02/23/24 21:23	1
Silvex (2,4,5-TP)	ND		0.0020	0.00036	mg/L		02/21/24 07:00	02/23/24 21:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	35		21 - 143	02/21/24 07:00	02/23/24 21:23	1
2,4-Dichlorophenylacetic acid (Surr)	32		21 - 143	02/21/24 07:00	02/23/24 21:23	1

Method: SW846 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		02/20/24 09:32	02/21/24 19:39	1
Barium	0.61	J	1.0	0.10	mg/L		02/20/24 09:32	02/21/24 19:39	1
Cadmium	0.00075	J	0.0020	0.00050	mg/L		02/20/24 09:32	02/21/24 19:39	1
Chromium	ND		0.020	0.010	mg/L		02/20/24 09:32	02/21/24 19:39	1
Lead	0.048		0.020	0.0030	mg/L		02/20/24 09:32	02/21/24 19:39	1
Selenium	ND		0.025	0.0087	mg/L		02/20/24 09:32	02/21/24 19:39	1
Silver	ND		0.0060	0.0017	mg/L		02/20/24 09:32	02/21/24 19:39	1

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Client Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-02-02132024

Lab Sample ID: 480-217087-2

Date Collected: 02/13/24 13:00

Matrix: Solid

Date Received: 02/14/24 10:29

Percent Solids: 75.9

Method: SW846 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000043	mg/L		02/20/24 11:28	02/20/24 15:50	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.9		0.12	0.028	mg/Kg	☆	02/15/24 11:18	02/15/24 15:47	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive (SW846 9012)	ND		9.7	9.7	mg/Kg		02/16/24 10:30	02/17/24 12:58	1
Sulfide, Reactive (SW846 9034)	155		9.7	9.7	mg/Kg		02/16/24 10:30	02/17/24 16:00	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010A)	>180		50.0	50.0	Degrees F			02/15/24 10:39	1
pH (SW846 9045D)	8.6	HF	0.1	0.1	SU			02/15/24 19:50	1
Temperature (SW846 9045D)	19.8	HF	0.001	0.001	Degrees C			02/15/24 19:50	1

General Chemistry - ASTM Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	31.7		3.8	1.9	mg/Kg			02/21/24 08:02	1

Surrogate Summary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Method: 8260C - TCLP Volatiles

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)
LCS 480-701251/6	Lab Control Sample	94	96	98	102
MB 480-701251/8	Method Blank	91	102	99	101
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					
BFB = 4-Bromofluorobenzene (Surr)					
DBFM = Dibromofluoromethane (Surr)					
TOL = Toluene-d8 (Surr)					

Method: 8260C - TCLP Volatiles

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)
480-217087-1	UNLOAD-01-02132024	93	103	104	100
480-217087-2	UNLOAD-02-02132024	95	98	101	100
LB 480-701146/1-A	Method Blank	93	99	95	98
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					
BFB = 4-Bromofluorobenzene (Surr)					
DBFM = Dibromofluoromethane (Surr)					
TOL = Toluene-d8 (Surr)					

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (53-146)	BFB (49-148)	DBFM (60-140)	TOL (50-149)
480-217087-1	UNLOAD-01-02132024	86	88	80	93
480-217087-2	UNLOAD-02-02132024	87	91	80	93
LCS 480-701023/1-A	Lab Control Sample	85	91	81	94
LCSD 480-701023/2-A	Lab Control Sample Dup	84	92	79	94
MB 480-701023/3-A	Method Blank	85	89	80	94
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					
BFB = 4-Bromofluorobenzene (Surr)					
DBFM = Dibromofluoromethane (Surr)					
TOL = Toluene-d8 (Surr)					

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (54-120)	FBP (60-120)	2FP (52-120)	NBZ (53-120)	PHL (54-120)	TPHd14 (79-130)
480-217087-1	UNLOAD-01-02132024	89	85	66	72	75	90
480-217087-2	UNLOAD-02-02132024	75	82	76	81	81	79
LCS 480-701093/2-A	Lab Control Sample	103	100	83	97	95	111

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Surrogate Summary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (54-120)	FBP (60-120)	2FP (52-120)	NBZ (53-120)	PHL (54-120)	TPHd14 (79-130)
MB 480-701093/1-A	Method Blank	100	114	94	97	103	115

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (41-120)	FBP (48-120)	2FP (35-120)	NBZ (46-120)	PHL (22-120)	TPHd14 (60-148)
LCS 480-701466/2-A	Lab Control Sample	108	96	54	100	44	105
LCSD 480-701466/3-A	Lab Control Sample Dup	113	104	57	105	48	111
MB 480-701466/1-A	Method Blank	85	93	54	98	39	104

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

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

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (41-120)	FBP (48-120)	2FP (35-120)	NBZ (46-120)	PHL (22-120)	TPHd14 (60-148)
480-217087-1	UNLOAD-01-02132024	95	98	56	105	41	108
480-217087-2	UNLOAD-02-02132024	97	75	41	74	30	103
LB 480-701145/1-F	Method Blank	96	94	52	101	39	106

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1 (20-120)	DCBP2 (20-120)	TCX1 (44-120)	TCX2 (44-120)
LCS 480-701465/2-A	Lab Control Sample	62	53	70	62

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Surrogate Summary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	DCBP1 (20-120)	DCBP2 (20-120)	TCX1 (44-120)	TCX2 (44-120)			
LCSD 480-701465/3-A	Lab Control Sample Dup	65	54	84	74			
MB 480-701465/1-A	Method Blank	64	55	74	65			
Surrogate Legend								
DCBP = DCB Decachlorobiphenyl (Surr)								
TCX = Tetrachloro-m-xylene (Surr)								

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	DCBP1 (20-120)	DCBP2 (20-120)	TCX1 (44-120)	TCX2 (44-120)			
480-217087-1	UNLOAD-01-02132024	86	71	78	71			
480-217087-2	UNLOAD-02-02132024	78	73	65	53			
LB 480-701145/1-E	Method Blank	77	68	72	66			
Surrogate Legend								
DCBP = DCB Decachlorobiphenyl (Surr)								
TCX = Tetrachloro-m-xylene (Surr)								

Method: 8151 - TCLP Herbicides

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	DCPAA1 (21-143)	DCPAA2 (21-143)					
LCS 480-701368/2-A	Lab Control Sample	93	75					
LCSD 480-701368/3-A	Lab Control Sample Dup	83	65					
MB 480-701368/1-A	Method Blank	72	66					
Surrogate Legend								
DCPAA = 2,4-Dichlorophenylacetic acid (Surr)								

Method: 8151 - TCLP Herbicides

Matrix: Solid

Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	DCPAA1 (21-143)	DCPAA2 (21-143)					
480-217087-1	UNLOAD-01-02132024	31	28					
480-217087-2	UNLOAD-02-02132024	35	32					
LB 480-701145/1-D	Method Blank	36	30					
Surrogate Legend								
DCPAA = 2,4-Dichlorophenylacetic acid (Surr)								

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Method: 8260C - TCLP Volatiles

Lab Sample ID: MB 480-701251/8

Matrix: Solid

Analysis Batch: 701251

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.0010	0.00029	mg/L			02/20/24 12:46	1
1,2-Dichloroethane	ND		0.0010	0.00021	mg/L			02/20/24 12:46	1
2-Butanone (MEK)	ND		0.0050	0.0013	mg/L			02/20/24 12:46	1
Benzene	ND		0.0010	0.00041	mg/L			02/20/24 12:46	1
Carbon tetrachloride	ND		0.0010	0.00027	mg/L			02/20/24 12:46	1
Chlorobenzene	ND		0.0010	0.00075	mg/L			02/20/24 12:46	1
Chloroform	ND		0.0010	0.00034	mg/L			02/20/24 12:46	1
Tetrachloroethene	ND		0.0010	0.00036	mg/L			02/20/24 12:46	1
Trichloroethene	ND		0.0010	0.00046	mg/L			02/20/24 12:46	1
Vinyl chloride	ND		0.0010	0.00090	mg/L			02/20/24 12:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		77 - 120		02/20/24 12:46	1
4-Bromofluorobenzene (Surr)	102		73 - 120		02/20/24 12:46	1
Dibromofluoromethane (Surr)	99		75 - 123		02/20/24 12:46	1
Toluene-d8 (Surr)	101		80 - 120		02/20/24 12:46	1

Lab Sample ID: LCS 480-701251/6

Matrix: Solid

Analysis Batch: 701251

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	0.0250	0.0273		mg/L		109	66 - 127
1,2-Dichloroethane	0.0250	0.0262		mg/L		105	75 - 120
2-Butanone (MEK)	0.125	0.112		mg/L		90	57 - 140
Benzene	0.0250	0.0282		mg/L		113	71 - 124
Carbon tetrachloride	0.0250	0.0271		mg/L		108	72 - 134
Chlorobenzene	0.0250	0.0270		mg/L		108	80 - 120
Chloroform	0.0250	0.0267		mg/L		107	73 - 127
Tetrachloroethene	0.0250	0.0291		mg/L		116	74 - 122
Trichloroethene	0.0250	0.0285		mg/L		114	74 - 123
Vinyl chloride	0.0250	0.0271		mg/L		108	65 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		77 - 120
4-Bromofluorobenzene (Surr)	96		73 - 120
Dibromofluoromethane (Surr)	98		75 - 123
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: LB 480-701146/1-A

Matrix: Solid

Analysis Batch: 701251

Client Sample ID: Method Blank

Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			02/20/24 13:39	10
1,2-Dichloroethane	ND		0.010	0.0021	mg/L			02/20/24 13:39	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			02/20/24 13:39	10
Benzene	ND		0.010	0.0041	mg/L			02/20/24 13:39	10

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Method: 8260C - TCLP Volatiles (Continued)

Lab Sample ID: LB 480-701146/1-A

Matrix: Solid

Analysis Batch: 701251

Client Sample ID: Method Blank

Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.010	0.0027	mg/L			02/20/24 13:39	10
Chlorobenzene	ND		0.010	0.0075	mg/L			02/20/24 13:39	10
Chloroform	ND		0.010	0.0034	mg/L			02/20/24 13:39	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			02/20/24 13:39	10
Trichloroethene	ND		0.010	0.0046	mg/L			02/20/24 13:39	10
Vinyl chloride	ND		0.010	0.0090	mg/L			02/20/24 13:39	10

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		77 - 120		02/20/24 13:39	10
4-Bromofluorobenzene (Surr)	99		73 - 120		02/20/24 13:39	10
Dibromofluoromethane (Surr)	95		75 - 123		02/20/24 13:39	10
Toluene-d8 (Surr)	98		80 - 120		02/20/24 13:39	10

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-701023/3-A

Matrix: Solid

Analysis Batch: 700987

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 701023

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	28	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,1,2,2-Tetrachloroethane	ND		100	16	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		100	50	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,1,2-Trichloroethane	ND		100	21	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,1-Dichloroethane	ND		100	31	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,1-Dichloroethene	ND		100	35	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,2,4-Trichlorobenzene	ND		100	38	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,2,4-Trimethylbenzene	ND		100	28	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,2-Dibromo-3-Chloropropane	ND		100	50	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,2-Dibromoethane	ND		100	18	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,2-Dichlorobenzene	ND		100	26	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,2-Dichloroethane	ND		100	41	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,2-Dichloropropane	ND		100	16	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,3,5-Trimethylbenzene	ND		100	30	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,3-Dichlorobenzene	ND		100	27	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
1,4-Dichlorobenzene	ND		100	14	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
2-Butanone (MEK)	ND		500	300	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
2-Hexanone	ND		500	210	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
4-Methyl-2-pentanone (MIBK)	ND		500	32	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Acetone	ND		500	410	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Benzene	ND		100	19	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Bromodichloromethane	ND		100	20	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Bromoform	ND		100	50	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Bromomethane	ND		100	22	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Carbon disulfide	ND		100	46	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Carbon tetrachloride	ND		100	26	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Chlorobenzene	ND		100	13	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Chloroethane	ND		100	21	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Chloroform	ND		100	69	ug/Kg		02/16/24 10:04	02/16/24 14:20	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

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

Lab Sample ID: MB 480-701023/3-A

Matrix: Solid

Analysis Batch: 700987

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 701023

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		100	24	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
cis-1,2-Dichloroethene	ND		100	28	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
cis-1,3-Dichloropropene	ND		100	24	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Cyclohexane	ND		100	22	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Dibromochloromethane	ND		100	48	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Dichlorodifluoromethane	ND		100	44	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Ethylbenzene	ND		100	29	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Isopropylbenzene	ND		100	15	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
m,p-Xylene	ND		200	55	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Methyl acetate	ND		500	48	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Methyl tert-butyl ether	ND		100	38	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Methylcyclohexane	ND		100	47	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Methylene Chloride	ND		100	20	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
o-Xylene	ND		100	13	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Styrene	ND		100	24	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Tetrachloroethene	ND		100	13	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Toluene	ND		100	27	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
trans-1,2-Dichloroethene	ND		100	24	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
trans-1,3-Dichloropropene	ND		100	9.8	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Trichloroethene	ND		100	28	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Trichlorofluoromethane	ND		100	47	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Vinyl chloride	ND		100	34	ug/Kg		02/16/24 10:04	02/16/24 14:20	1
Xylenes, Total	ND		200	55	ug/Kg		02/16/24 10:04	02/16/24 14:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		53 - 146	02/16/24 10:04	02/16/24 14:20	1
4-Bromofluorobenzene (Surr)	89		49 - 148	02/16/24 10:04	02/16/24 14:20	1
Dibromofluoromethane (Surr)	80		60 - 140	02/16/24 10:04	02/16/24 14:20	1
Toluene-d8 (Surr)	94		50 - 149	02/16/24 10:04	02/16/24 14:20	1

Lab Sample ID: LCS 480-701023/1-A

Matrix: Solid

Analysis Batch: 700987

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 701023

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1,1-Trichloroethane	2500	2120		ug/Kg		85	68 - 130
1,1,2,2-Tetrachloroethane	2500	2600		ug/Kg		104	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	2500	1760		ug/Kg		71	10 - 179
1,1,2-Trichloroethane	2500	2350		ug/Kg		94	80 - 120
1,1-Dichloroethane	2500	2390		ug/Kg		96	78 - 121
1,1-Dichloroethene	2500	1830		ug/Kg		73	48 - 133
1,2,4-Trichlorobenzene	2500	2770		ug/Kg		111	70 - 140
1,2,4-Trimethylbenzene	2500	2870		ug/Kg		115	77 - 127
1,2-Dibromo-3-Chloropropane	2500	2030		ug/Kg		81	56 - 122
1,2-Dibromoethane	2500	2270		ug/Kg		91	80 - 120
1,2-Dichlorobenzene	2500	2570		ug/Kg		103	78 - 125
1,2-Dichloroethane	2500	1950		ug/Kg		78	74 - 127
1,2-Dichloropropane	2500	2440		ug/Kg		98	80 - 120

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

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

Lab Sample ID: LCS 480-701023/1-A

Matrix: Solid

Analysis Batch: 700987

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 701023

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3,5-Trimethylbenzene	2500	2890		ug/Kg		116	79 - 120
1,3-Dichlorobenzene	2500	2630		ug/Kg		105	80 - 120
1,4-Dichlorobenzene	2500	2590		ug/Kg		103	80 - 120
2-Butanone (MEK)	12500	12100		ug/Kg		97	54 - 149
2-Hexanone	12500	12100		ug/Kg		97	59 - 127
4-Methyl-2-pentanone (MIBK)	12500	11200		ug/Kg		89	74 - 120
Acetone	12500	10300		ug/Kg		82	47 - 141
Benzene	2500	2370		ug/Kg		95	77 - 125
Bromodichloromethane	2500	2150		ug/Kg		86	71 - 121
Bromoform	2500	2490		ug/Kg		100	48 - 125
Bromomethane	2500	1350		ug/Kg		54	39 - 149
Carbon disulfide	2500	1870		ug/Kg		75	40 - 136
Carbon tetrachloride	2500	2180		ug/Kg		87	54 - 135
Chlorobenzene	2500	2370		ug/Kg		95	76 - 126
Chloroethane	2500	1660		ug/Kg		66	23 - 150
Chloroform	2500	2090		ug/Kg		84	78 - 120
Chloromethane	2500	2470		ug/Kg		99	61 - 124
cis-1,2-Dichloroethene	2500	2240		ug/Kg		89	79 - 124
cis-1,3-Dichloropropene	2500	2330		ug/Kg		93	75 - 121
Cyclohexane	2500	2480		ug/Kg		99	49 - 129
Dibromochloromethane	2500	2250		ug/Kg		90	64 - 120
Dichlorodifluoromethane	2500	1750		ug/Kg		70	10 - 150
Ethylbenzene	2500	2490		ug/Kg		99	78 - 124
Isopropylbenzene	2500	2850		ug/Kg		114	76 - 120
m,p-Xylene	2500	2400		ug/Kg		96	77 - 125
Methyl acetate	5000	4760		ug/Kg		95	71 - 123
Methyl tert-butyl ether	2500	2090		ug/Kg		84	67 - 137
Methylcyclohexane	2500	2300		ug/Kg		92	50 - 130
Methylene Chloride	2500	2260		ug/Kg		90	75 - 118
o-Xylene	2500	2370		ug/Kg		95	80 - 124
Styrene	2500	2460		ug/Kg		98	80 - 120
Tetrachloroethene	2500	2350		ug/Kg		94	73 - 133
Toluene	2500	2490		ug/Kg		99	75 - 124
trans-1,2-Dichloroethene	2500	2300		ug/Kg		92	74 - 129
trans-1,3-Dichloropropene	2500	2200		ug/Kg		88	73 - 120
Trichloroethene	2500	2240		ug/Kg		89	75 - 131
Trichlorofluoromethane	2500	1410		ug/Kg		56	29 - 158
Vinyl chloride	2500	2300		ug/Kg		92	59 - 124
Xylenes, Total	5000	4770		ug/Kg		95	78 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	85		53 - 146
4-Bromofluorobenzene (Surr)	91		49 - 148
Dibromofluoromethane (Surr)	81		60 - 140
Toluene-d8 (Surr)	94		50 - 149

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

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

Lab Sample ID: LCSD 480-701023/2-A

Matrix: Solid

Analysis Batch: 700987

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 701023

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane	2500	1890		ug/Kg		75	68 - 130	12	20
1,1,2,2-Tetrachloroethane	2500	2440		ug/Kg		98	73 - 120	7	20
1,1,2-Trichloro-1,2,2-trifluoroethane	2500	1750		ug/Kg		70	10 - 179	1	20
1,1,2-Trichloroethane	2500	2370		ug/Kg		95	80 - 120	1	20
1,1-Dichloroethane	2500	2400		ug/Kg		96	78 - 121	0	20
1,1-Dichloroethene	2500	1780		ug/Kg		71	48 - 133	3	20
1,2,4-Trichlorobenzene	2500	2760		ug/Kg		111	70 - 140	0	20
1,2,4-Trimethylbenzene	2500	2880		ug/Kg		115	77 - 127	0	20
1,2-Dibromo-3-Chloropropane	2500	1500	*1	ug/Kg		60	56 - 122	30	20
1,2-Dibromoethane	2500	2140		ug/Kg		86	80 - 120	6	20
1,2-Dichlorobenzene	2500	2560		ug/Kg		102	78 - 125	1	20
1,2-Dichloroethane	2500	1950		ug/Kg		78	74 - 127	0	20
1,2-Dichloropropane	2500	2460		ug/Kg		98	80 - 120	1	20
1,3,5-Trimethylbenzene	2500	2890		ug/Kg		116	79 - 120	0	20
1,3-Dichlorobenzene	2500	2630		ug/Kg		105	80 - 120	0	20
1,4-Dichlorobenzene	2500	2570		ug/Kg		103	80 - 120	1	20
2-Butanone (MEK)	12500	12400		ug/Kg		99	54 - 149	3	20
2-Hexanone	12500	12000		ug/Kg		96	59 - 127	1	20
4-Methyl-2-pentanone (MIBK)	12500	11400		ug/Kg		91	74 - 120	2	20
Acetone	12500	9690		ug/Kg		78	47 - 141	6	20
Benzene	2500	2400		ug/Kg		96	77 - 125	2	20
Bromodichloromethane	2500	1840		ug/Kg		74	71 - 121	16	20
Bromoform	2500	1820	*1	ug/Kg		73	48 - 125	31	20
Bromomethane	2500	1360		ug/Kg		54	39 - 149	1	20
Carbon disulfide	2500	1860		ug/Kg		74	40 - 136	1	20
Carbon tetrachloride	2500	1710	*1	ug/Kg		68	54 - 135	25	20
Chlorobenzene	2500	2400		ug/Kg		96	76 - 126	1	20
Chloroethane	2500	1430		ug/Kg		57	23 - 150	15	20
Chloroform	2500	2070		ug/Kg		83	78 - 120	1	20
Chloromethane	2500	2500		ug/Kg		100	61 - 124	1	20
cis-1,2-Dichloroethene	2500	2290		ug/Kg		92	79 - 124	3	20
cis-1,3-Dichloropropene	2500	2070		ug/Kg		83	75 - 121	12	20
Cyclohexane	2500	2580		ug/Kg		103	49 - 129	4	20
Dibromochloromethane	2500	1750	*1	ug/Kg		70	64 - 120	25	20
Dichlorodifluoromethane	2500	1650		ug/Kg		66	10 - 150	6	20
Ethylbenzene	2500	2520		ug/Kg		101	78 - 124	1	20
Isopropylbenzene	2500	2860		ug/Kg		114	76 - 120	0	20
m,p-Xylene	2500	2460		ug/Kg		98	77 - 125	2	20
Methyl acetate	5000	4590		ug/Kg		92	71 - 123	4	20
Methyl tert-butyl ether	2500	2200		ug/Kg		88	67 - 137	5	20
Methylcyclohexane	2500	2350		ug/Kg		94	50 - 130	2	20
Methylene Chloride	2500	2300		ug/Kg		92	75 - 118	2	20
o-Xylene	2500	2470		ug/Kg		99	80 - 124	4	20
Styrene	2500	2410		ug/Kg		97	80 - 120	2	20
Tetrachloroethene	2500	2400		ug/Kg		96	73 - 133	2	20
Toluene	2500	2460		ug/Kg		98	75 - 124	1	20
trans-1,2-Dichloroethene	2500	2290		ug/Kg		92	74 - 129	1	20
trans-1,3-Dichloropropene	2500	1840		ug/Kg		74	73 - 120	18	20

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

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

Lab Sample ID: LCSD 480-701023/2-A

Matrix: Solid

Analysis Batch: 700987

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 701023

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Trichloroethene	2500	2290		ug/Kg		91	75 - 131	2	20
Trichlorofluoromethane	2500	1390		ug/Kg		56	29 - 158	1	20
Vinyl chloride	2500	2370		ug/Kg		95	59 - 124	3	20
Xylenes, Total	5000	4930		ug/Kg		99	78 - 125	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	84		53 - 146
4-Bromofluorobenzene (Surr)	92		49 - 148
Dibromofluoromethane (Surr)	79		60 - 140
Toluene-d8 (Surr)	94		50 - 149

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

Lab Sample ID: MB 480-701093/1-A

Matrix: Solid

Analysis Batch: 701192

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 701093

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		98	54	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
2,4,5-Trichlorophenol	ND		170	45	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
2,4,6-Trichlorophenol	ND		170	33	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
2,4-Dichlorophenol	ND		170	18	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
2,4-Dimethylphenol	ND		170	40	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
2,4-Dinitrophenol	ND		1600	770	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
2,4-Dinitrotoluene	ND		170	34	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
2,6-Dinitrotoluene	ND		170	20	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
2-Chloronaphthalene	ND		170	28	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
2-Chlorophenol	ND		330	31	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
2-Methylnaphthalene	ND		170	33	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
2-Methylphenol	ND		170	20	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
2-Nitroaniline	ND		330	25	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
2-Nitrophenol	ND		170	47	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
3,3'-Dichlorobenzidine	ND		330	200	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
3-Nitroaniline	ND		330	46	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
4,6-Dinitro-2-methylphenol	ND		330	170	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
4-Bromophenyl phenyl ether	ND		170	24	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
4-Chloro-3-methylphenol	ND		170	41	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
4-Chloroaniline	ND		170	41	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
4-Chlorophenyl phenyl ether	ND		170	21	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
4-Methylphenol	ND		330	20	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
4-Nitroaniline	ND		330	88	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
4-Nitrophenol	ND		330	120	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Acenaphthene	ND		170	25	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Acenaphthylene	ND		170	22	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Acetophenone	ND		170	23	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Anthracene	ND		170	41	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Atrazine	ND		170	58	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Benzaldehyde	ND		170	130	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Benzo[a]anthracene	ND		170	17	ug/Kg		02/16/24 17:12	02/19/24 14:55	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

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

Lab Sample ID: MB 480-701093/1-A

Matrix: Solid

Analysis Batch: 701192

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 701093

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		170	25	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Biphenyl	ND		170	25	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
bis (2-chloroisopropyl) ether	ND		170	33	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Bis(2-chloroethoxy)methane	ND		170	35	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Bis(2-chloroethyl)ether	ND		170	22	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Bis(2-ethylhexyl) phthalate	ND		170	57	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Butyl benzyl phthalate	ND		170	28	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Caprolactam	ND		170	50	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Carbazole	ND		170	20	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Chrysene	ND		170	37	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Dibenzofuran	ND		170	20	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Diethyl phthalate	ND		170	22	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Dimethyl phthalate	ND		170	20	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Di-n-butyl phthalate	ND		170	29	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Di-n-octyl phthalate	ND		170	20	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Fluoranthene	ND		170	18	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Fluorene	ND		170	20	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Hexachlorobenzene	ND		170	23	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Hexachlorobutadiene	ND		170	25	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Hexachlorocyclopentadiene	ND		170	23	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Hexachloroethane	ND		170	22	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Isophorone	ND		170	35	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Naphthalene	ND		170	22	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Nitrobenzene	ND		170	19	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
N-Nitrosodi-n-propylamine	ND		170	29	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
N-Nitrosodiphenylamine	ND		170	140	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Pentachlorophenol	ND		330	170	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Phenanthrene	ND		170	25	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Phenol	ND		170	26	ug/Kg		02/16/24 17:12	02/19/24 14:55	1
Pyrene	ND		170	20	ug/Kg		02/16/24 17:12	02/19/24 14:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	100		54 - 120	02/16/24 17:12	02/19/24 14:55	1
2-Fluorobiphenyl (Surr)	114		60 - 120	02/16/24 17:12	02/19/24 14:55	1
2-Fluorophenol (Surr)	94		52 - 120	02/16/24 17:12	02/19/24 14:55	1
Nitrobenzene-d5 (Surr)	97		53 - 120	02/16/24 17:12	02/19/24 14:55	1
Phenol-d5 (Surr)	103		54 - 120	02/16/24 17:12	02/19/24 14:55	1
p-Terphenyl-d14 (Surr)	115		79 - 130	02/16/24 17:12	02/19/24 14:55	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

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

Lab Sample ID: LCS 480-701093/2-A

Matrix: Solid

Analysis Batch: 701192

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 701093

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	1630	754		ug/Kg		46	23 - 120
2,4,5-Trichlorophenol	1630	1610		ug/Kg		99	59 - 126
2,4,6-Trichlorophenol	1630	1600		ug/Kg		98	59 - 123
2,4-Dichlorophenol	1630	1700		ug/Kg		104	61 - 120
2,4-Dimethylphenol	1630	1480		ug/Kg		91	59 - 120
2,4-Dinitrophenol	3260	2780		ug/Kg		85	41 - 146
2,4-Dinitrotoluene	1630	1550		ug/Kg		95	63 - 120
2,6-Dinitrotoluene	1630	1620		ug/Kg		99	66 - 120
2-Chloronaphthalene	1630	1590		ug/Kg		98	57 - 120
2-Chlorophenol	1630	1520		ug/Kg		93	53 - 120
2-Methylnaphthalene	1630	1580		ug/Kg		97	59 - 120
2-Methylphenol	1630	1510		ug/Kg		93	54 - 120
2-Nitroaniline	1630	1690		ug/Kg		104	61 - 120
2-Nitrophenol	1630	1550		ug/Kg		95	56 - 120
3,3'-Dichlorobenzidine	3260	2770		ug/Kg		85	54 - 120
3-Nitroaniline	1630	1320		ug/Kg		81	48 - 120
4,6-Dinitro-2-methylphenol	3260	3150		ug/Kg		97	49 - 122
4-Bromophenyl phenyl ether	1630	1650		ug/Kg		101	58 - 120
4-Chloro-3-methylphenol	1630	1670		ug/Kg		103	61 - 120
4-Chloroaniline	1630	1280		ug/Kg		78	38 - 120
4-Chlorophenyl phenyl ether	1630	1610		ug/Kg		99	63 - 124
4-Methylphenol	1630	1610		ug/Kg		99	55 - 120
4-Nitroaniline	1630	1490		ug/Kg		91	56 - 120
4-Nitrophenol	3260	3330		ug/Kg		102	43 - 147
Acenaphthene	1630	1610		ug/Kg		99	62 - 120
Acenaphthylene	1630	1580		ug/Kg		97	58 - 121
Acetophenone	1630	1580		ug/Kg		97	54 - 120
Anthracene	1630	1610		ug/Kg		99	62 - 120
Atrazine	3260	2910		ug/Kg		89	60 - 127
Benzaldehyde	3260	2250		ug/Kg		69	10 - 150
Benzo[a]anthracene	1630	1640		ug/Kg		100	65 - 120
Benzo[a]pyrene	1630	1650		ug/Kg		101	64 - 120
Benzo[b]fluoranthene	1630	1610		ug/Kg		99	64 - 120
Benzo[g,h,i]perylene	1630	1630		ug/Kg		100	45 - 145
Benzo[k]fluoranthene	1630	1720		ug/Kg		105	65 - 120
Biphenyl	1630	1640		ug/Kg		101	59 - 120
bis (2-chloroisopropyl) ether	1630	1490		ug/Kg		91	44 - 120
Bis(2-chloroethoxy)methane	1630	1640		ug/Kg		101	55 - 120
Bis(2-chloroethyl)ether	1630	1430		ug/Kg		88	45 - 120
Bis(2-ethylhexyl) phthalate	1630	1700		ug/Kg		105	61 - 133
Butyl benzyl phthalate	1630	1760		ug/Kg		108	61 - 129
Caprolactam	3260	2890		ug/Kg		89	47 - 120
Carbazole	1630	1490		ug/Kg		91	65 - 120
Chrysene	1630	1640		ug/Kg		101	64 - 120
Dibenz(a,h)anthracene	1630	1650		ug/Kg		101	54 - 132
Dibenzofuran	1630	1610		ug/Kg		99	63 - 120
Diethyl phthalate	1630	1610		ug/Kg		99	66 - 120
Dimethyl phthalate	1630	1640		ug/Kg		101	65 - 124

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

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

Lab Sample ID: LCS 480-701093/2-A

Matrix: Solid

Analysis Batch: 701192

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 701093

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Di-n-butyl phthalate	1630	1470		ug/Kg		90	58 - 130
Di-n-octyl phthalate	1630	1670		ug/Kg		103	57 - 133
Fluoranthene	1630	1410		ug/Kg		86	62 - 120
Fluorene	1630	1580		ug/Kg		97	63 - 120
Hexachlorobenzene	1630	1650		ug/Kg		101	60 - 120
Hexachlorobutadiene	1630	1480		ug/Kg		91	45 - 120
Hexachlorocyclopentadiene	1630	1210		ug/Kg		74	47 - 120
Hexachloroethane	1630	1380		ug/Kg		85	41 - 120
Indeno[1,2,3-cd]pyrene	1630	1630		ug/Kg		100	56 - 134
Isophorone	1630	1650		ug/Kg		101	56 - 120
Naphthalene	1630	1500		ug/Kg		92	55 - 120
Nitrobenzene	1630	1570		ug/Kg		96	54 - 120
N-Nitrosodi-n-propylamine	1630	1600		ug/Kg		98	52 - 120
N-Nitrosodiphenylamine	1630	1680		ug/Kg		103	51 - 128
Pentachlorophenol	3260	2960		ug/Kg		91	10 - 120
Phenanthrene	1630	1640		ug/Kg		101	60 - 120
Phenol	1630	1490		ug/Kg		92	53 - 120
Pyrene	1630	1770		ug/Kg		109	61 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	103		54 - 120
2-Fluorobiphenyl (Surr)	100		60 - 120
2-Fluorophenol (Surr)	83		52 - 120
Nitrobenzene-d5 (Surr)	97		53 - 120
Phenol-d5 (Surr)	95		54 - 120
p-Terphenyl-d14 (Surr)	111		79 - 130

Lab Sample ID: MB 480-701466/1-A

Matrix: Solid

Analysis Batch: 701521

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 701466

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.010	0.00045	mg/L		02/21/24 13:51	02/22/24 11:37	1
2,4,5-Trichlorophenol	ND		0.0050	0.00048	mg/L		02/21/24 13:51	02/22/24 11:37	1
2,4,6-Trichlorophenol	ND		0.0050	0.00060	mg/L		02/21/24 13:51	02/22/24 11:37	1
2,4-Dinitrotoluene	ND		0.0050	0.00043	mg/L		02/21/24 13:51	02/22/24 11:37	1
3-Methylphenol	ND		0.010	0.00040	mg/L		02/21/24 13:51	02/22/24 11:37	1
2-Methylphenol	ND		0.0050	0.00040	mg/L		02/21/24 13:51	02/22/24 11:37	1
Pyridine	ND		0.025	0.00040	mg/L		02/21/24 13:51	02/22/24 11:37	1
4-Methylphenol	ND		0.010	0.00035	mg/L		02/21/24 13:51	02/22/24 11:37	1
Hexachlorobenzene	ND		0.0050	0.00050	mg/L		02/21/24 13:51	02/22/24 11:37	1
Hexachlorobutadiene	ND		0.0050	0.00068	mg/L		02/21/24 13:51	02/22/24 11:37	1
Hexachloroethane	ND		0.0050	0.00058	mg/L		02/21/24 13:51	02/22/24 11:37	1
Nitrobenzene	ND		0.0050	0.00028	mg/L		02/21/24 13:51	02/22/24 11:37	1
Pentachlorophenol	ND		0.010	0.0022	mg/L		02/21/24 13:51	02/22/24 11:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	85		41 - 120	02/21/24 13:51	02/22/24 11:37	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

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

Lab Sample ID: MB 480-701466/1-A

Matrix: Solid

Analysis Batch: 701521

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 701466

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	93		48 - 120	02/21/24 13:51	02/22/24 11:37	1
2-Fluorophenol (Surr)	54		35 - 120	02/21/24 13:51	02/22/24 11:37	1
Nitrobenzene-d5 (Surr)	98		46 - 120	02/21/24 13:51	02/22/24 11:37	1
Phenol-d5 (Surr)	39		22 - 120	02/21/24 13:51	02/22/24 11:37	1
p-Terphenyl-d14 (Surr)	104		60 - 148	02/21/24 13:51	02/22/24 11:37	1

Lab Sample ID: LCS 480-701466/2-A

Matrix: Solid

Analysis Batch: 701521

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 701466

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dichlorobenzene	0.0500	0.0359		mg/L		72	42 - 120
2,4,5-Trichlorophenol	0.0500	0.0513		mg/L		103	65 - 126
2,4,6-Trichlorophenol	0.0500	0.0491		mg/L		98	64 - 120
2,4-Dinitrotoluene	0.0500	0.0530		mg/L		106	69 - 120
3-Methylphenol	0.0500	0.0415		mg/L		83	39 - 120
2-Methylphenol	0.0500	0.0424		mg/L		85	39 - 120
Pyridine	0.100	0.0310		mg/L		31	10 - 120
4-Methylphenol	0.0500	0.0415		mg/L		83	29 - 131
Hexachlorobenzene	0.0500	0.0495		mg/L		99	61 - 120
Hexachlorobutadiene	0.0500	0.0359		mg/L		72	35 - 120
Hexachloroethane	0.0500	0.0337		mg/L		67	33 - 120
Nitrobenzene	0.0500	0.0477		mg/L		95	53 - 123
Pentachlorophenol	0.100	0.0921		mg/L		92	10 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	108		41 - 120
2-Fluorobiphenyl (Surr)	96		48 - 120
2-Fluorophenol (Surr)	54		35 - 120
Nitrobenzene-d5 (Surr)	100		46 - 120
Phenol-d5 (Surr)	44		22 - 120
p-Terphenyl-d14 (Surr)	105		60 - 148

Lab Sample ID: LCSD 480-701466/3-A

Matrix: Solid

Analysis Batch: 701521

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 701466

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dichlorobenzene	0.0500	0.0377		mg/L		75	42 - 120	5	36
2,4,5-Trichlorophenol	0.0500	0.0543		mg/L		109	65 - 126	6	18
2,4,6-Trichlorophenol	0.0500	0.0538		mg/L		108	64 - 120	9	19
2,4-Dinitrotoluene	0.0500	0.0564		mg/L		113	69 - 120	6	20
3-Methylphenol	0.0500	0.0447		mg/L		89	39 - 120	7	30
2-Methylphenol	0.0500	0.0448		mg/L		90	39 - 120	6	27
Pyridine	0.100	0.0362		mg/L		36	10 - 120	15	49
4-Methylphenol	0.0500	0.0447		mg/L		89	29 - 131	7	24
Hexachlorobenzene	0.0500	0.0516		mg/L		103	61 - 120	4	15
Hexachlorobutadiene	0.0500	0.0384		mg/L		77	35 - 120	7	44

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

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

Lab Sample ID: LCSD 480-701466/3-A

Matrix: Solid

Analysis Batch: 701521

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 701466

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexachloroethane	0.0500	0.0350		mg/L		70	33 - 120	4	46
Nitrobenzene	0.0500	0.0505		mg/L		101	53 - 123	6	24
Pentachlorophenol	0.100	0.101		mg/L		101	10 - 136	9	37

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	113		41 - 120
2-Fluorobiphenyl (Surr)	104		48 - 120
2-Fluorophenol (Surr)	57		35 - 120
Nitrobenzene-d5 (Surr)	105		46 - 120
Phenol-d5 (Surr)	48		22 - 120
p-Terphenyl-d14 (Surr)	111		60 - 148

Lab Sample ID: LB 480-701145/1-F

Matrix: Solid

Analysis Batch: 701521

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 701466

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.040	0.0018	mg/L		02/21/24 13:51	02/22/24 12:50	1
2,4,5-Trichlorophenol	ND		0.020	0.0019	mg/L		02/21/24 13:51	02/22/24 12:50	1
2,4,6-Trichlorophenol	ND		0.020	0.0024	mg/L		02/21/24 13:51	02/22/24 12:50	1
2,4-Dinitrotoluene	ND		0.020	0.0017	mg/L		02/21/24 13:51	02/22/24 12:50	1
3-Methylphenol	ND		0.040	0.0016	mg/L		02/21/24 13:51	02/22/24 12:50	1
2-Methylphenol	ND		0.020	0.0016	mg/L		02/21/24 13:51	02/22/24 12:50	1
Pyridine	ND		0.10	0.0016	mg/L		02/21/24 13:51	02/22/24 12:50	1
4-Methylphenol	ND		0.040	0.0014	mg/L		02/21/24 13:51	02/22/24 12:50	1
Hexachlorobenzene	ND		0.020	0.0020	mg/L		02/21/24 13:51	02/22/24 12:50	1
Hexachlorobutadiene	ND		0.020	0.0027	mg/L		02/21/24 13:51	02/22/24 12:50	1
Hexachloroethane	ND		0.020	0.0023	mg/L		02/21/24 13:51	02/22/24 12:50	1
Nitrobenzene	ND		0.020	0.0011	mg/L		02/21/24 13:51	02/22/24 12:50	1
Pentachlorophenol	ND		0.040	0.0088	mg/L		02/21/24 13:51	02/22/24 12:50	1

Surrogate	LB %Recovery	LB Qualifier	LB Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	96		41 - 120	02/21/24 13:51	02/22/24 12:50	1
2-Fluorobiphenyl (Surr)	94		48 - 120	02/21/24 13:51	02/22/24 12:50	1
2-Fluorophenol (Surr)	52		35 - 120	02/21/24 13:51	02/22/24 12:50	1
Nitrobenzene-d5 (Surr)	101		46 - 120	02/21/24 13:51	02/22/24 12:50	1
Phenol-d5 (Surr)	39		22 - 120	02/21/24 13:51	02/22/24 12:50	1
p-Terphenyl-d14 (Surr)	106		60 - 148	02/21/24 13:51	02/22/24 12:50	1

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 480-701465/1-A

Matrix: Solid

Analysis Batch: 701512

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 701465

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.00050	0.0000073	mg/L		02/21/24 13:44	02/22/24 08:33	1
Endrin	ND		0.000050	0.0000035	mg/L		02/21/24 13:44	02/22/24 08:33	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 480-701465/1-A

Matrix: Solid

Analysis Batch: 701512

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 701465

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
gamma-BHC (Lindane)	ND		0.000050	0.0000015	mg/L		02/21/24 13:44	02/22/24 08:33	1
Heptachlor	ND		0.000050	0.0000021	mg/L		02/21/24 13:44	02/22/24 08:33	1
Heptachlor epoxide	ND		0.000050	0.0000013	mg/L		02/21/24 13:44	02/22/24 08:33	1
Methoxychlor	ND		0.000050	0.0000035	mg/L		02/21/24 13:44	02/22/24 08:33	1
Toxaphene	ND		0.00050	0.000030	mg/L		02/21/24 13:44	02/22/24 08:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	64		20 - 120	02/21/24 13:44	02/22/24 08:33	1
DCB Decachlorobiphenyl (Surr)	55		20 - 120	02/21/24 13:44	02/22/24 08:33	1
Tetrachloro-m-xylene (Surr)	74		44 - 120	02/21/24 13:44	02/22/24 08:33	1
Tetrachloro-m-xylene (Surr)	65		44 - 120	02/21/24 13:44	02/22/24 08:33	1

Lab Sample ID: LCS 480-701465/2-A

Matrix: Solid

Analysis Batch: 701512

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 701465

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Endrin	0.000500	0.000517		mg/L		103	65 - 135
gamma-BHC (Lindane)	0.000500	0.000438		mg/L		88	56 - 120
Heptachlor	0.000500	0.000403		mg/L		81	58 - 120
Heptachlor epoxide	0.000500	0.000502		mg/L		100	65 - 125
Methoxychlor	0.000500	0.000518		mg/L		104	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	62		20 - 120
DCB Decachlorobiphenyl (Surr)	53		20 - 120
Tetrachloro-m-xylene (Surr)	70		44 - 120
Tetrachloro-m-xylene (Surr)	62		44 - 120

Lab Sample ID: LCSD 480-701465/3-A

Matrix: Solid

Analysis Batch: 701512

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 701465

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Endrin	0.000500	0.000562		mg/L		112	65 - 135	8	24
gamma-BHC (Lindane)	0.000500	0.000484		mg/L		97	56 - 120	10	24
Heptachlor	0.000500	0.000472		mg/L		94	58 - 120	16	25
Heptachlor epoxide	0.000500	0.000550		mg/L		110	65 - 125	9	23
Methoxychlor	0.000500	0.000557		mg/L		111	50 - 150	7	26

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	65		20 - 120
DCB Decachlorobiphenyl (Surr)	54		20 - 120
Tetrachloro-m-xylene (Surr)	84		44 - 120
Tetrachloro-m-xylene (Surr)	74		44 - 120

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LB 480-701145/1-E

Matrix: Solid

Analysis Batch: 701512

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 701465

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.0020	0.000029	mg/L		02/21/24 13:44	02/22/24 09:31	1
Endrin	ND		0.00020	0.000014	mg/L		02/21/24 13:44	02/22/24 09:31	1
gamma-BHC (Lindane)	ND		0.00020	0.0000060	mg/L		02/21/24 13:44	02/22/24 09:31	1
Heptachlor	ND		0.00020	0.0000085	mg/L		02/21/24 13:44	02/22/24 09:31	1
Heptachlor epoxide	ND		0.00020	0.0000053	mg/L		02/21/24 13:44	02/22/24 09:31	1
Methoxychlor	ND		0.00020	0.000014	mg/L		02/21/24 13:44	02/22/24 09:31	1
Toxaphene	ND		0.0020	0.00012	mg/L		02/21/24 13:44	02/22/24 09:31	1
Surrogate	LB %Recovery	LB Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	77		20 - 120				02/21/24 13:44	02/22/24 09:31	1
DCB Decachlorobiphenyl (Surr)	68		20 - 120				02/21/24 13:44	02/22/24 09:31	1
Tetrachloro-m-xylene (Surr)	72		44 - 120				02/21/24 13:44	02/22/24 09:31	1
Tetrachloro-m-xylene (Surr)	66		44 - 120				02/21/24 13:44	02/22/24 09:31	1

Method: 8151 - TCLP Herbicides

Lab Sample ID: MB 480-701368/1-A

Matrix: Solid

Analysis Batch: 701735

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 701368

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.00050	0.00010	mg/L		02/21/24 07:00	02/23/24 18:17	1
Silvex (2,4,5-TP)	ND		0.00050	0.000090	mg/L		02/21/24 07:00	02/23/24 18:17	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	72		21 - 143				02/21/24 07:00	02/23/24 18:17	1
2,4-Dichlorophenylacetic acid (Surr)	66		21 - 143				02/21/24 07:00	02/23/24 18:17	1

Lab Sample ID: LCS 480-701368/2-A

Matrix: Solid

Analysis Batch: 701735

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 701368

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-D	0.00200	0.00191		mg/L		95	36 - 150
Silvex (2,4,5-TP)	0.00200	0.00174		mg/L		87	49 - 150
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
2,4-Dichlorophenylacetic acid (Surr)	93		21 - 143				
2,4-Dichlorophenylacetic acid (Surr)	75		21 - 143				

Lab Sample ID: LCSD 480-701368/3-A

Matrix: Solid

Analysis Batch: 701735

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 701368

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4-D	0.00200	0.00175		mg/L		88	36 - 150	8	50

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Method: 8151 - TCLP Herbicides (Continued)

Lab Sample ID: LCSD 480-701368/3-A

Matrix: Solid

Analysis Batch: 701735

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 701368

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Silvex (2,4,5-TP)	0.00200	0.00161		mg/L		80	49 - 150	8	50
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
2,4-Dichlorophenylacetic acid (Surr)	83		21 - 143						
2,4-Dichlorophenylacetic acid (Surr)	65		21 - 143						

Lab Sample ID: LB 480-701145/1-D

Matrix: Solid

Analysis Batch: 701735

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 701368

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.0020	0.00040	mg/L		02/21/24 07:00	02/23/24 20:09	1
Silvex (2,4,5-TP)	ND		0.0020	0.00036	mg/L		02/21/24 07:00	02/23/24 20:09	1
Surrogate	LB %Recovery	LB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	36		21 - 143				02/21/24 07:00	02/23/24 20:09	1
2,4-Dichlorophenylacetic acid (Surr)	30		21 - 143				02/21/24 07:00	02/23/24 20:09	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-701259/2-A

Matrix: Solid

Analysis Batch: 701550

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 701259

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		02/20/24 09:32	02/21/24 18:35	1
Barium	ND		1.0	0.10	mg/L		02/20/24 09:32	02/21/24 18:35	1
Cadmium	ND		0.0020	0.00050	mg/L		02/20/24 09:32	02/21/24 18:35	1
Chromium	ND		0.020	0.010	mg/L		02/20/24 09:32	02/21/24 18:35	1
Lead	ND		0.020	0.0030	mg/L		02/20/24 09:32	02/21/24 18:35	1
Selenium	ND		0.025	0.0087	mg/L		02/20/24 09:32	02/21/24 18:35	1
Silver	ND		0.0060	0.0017	mg/L		02/20/24 09:32	02/21/24 18:35	1

Lab Sample ID: LCS 480-701259/3-A

Matrix: Solid

Analysis Batch: 701550

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 701259

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.00	1.12		mg/L		112	80 - 120
Barium	1.00	1.05		mg/L		105	80 - 120
Cadmium	1.00	1.07		mg/L		107	80 - 120
Chromium	1.00	1.06		mg/L		106	80 - 120
Lead	1.00	1.06		mg/L		106	80 - 120
Selenium	1.00	1.09		mg/L		109	80 - 120
Silver	1.00	1.06		mg/L		106	80 - 120

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LB 480-701145/1-B
Matrix: Solid
Analysis Batch: 701550

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 701259

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		02/20/24 09:32	02/21/24 18:31	1
Barium	ND		1.0	0.10	mg/L		02/20/24 09:32	02/21/24 18:31	1
Cadmium	ND		0.0020	0.00050	mg/L		02/20/24 09:32	02/21/24 18:31	1
Chromium	ND		0.020	0.010	mg/L		02/20/24 09:32	02/21/24 18:31	1
Lead	ND		0.020	0.0030	mg/L		02/20/24 09:32	02/21/24 18:31	1
Selenium	ND		0.025	0.0087	mg/L		02/20/24 09:32	02/21/24 18:31	1
Silver	ND		0.0060	0.0017	mg/L		02/20/24 09:32	02/21/24 18:31	1

Method: 7470A - TCLP Mercury

Lab Sample ID: MB 480-701273/2-A
Matrix: Solid
Analysis Batch: 701337

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 701273

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000043	mg/L		02/20/24 11:28	02/20/24 15:26	1

Lab Sample ID: LCS 480-701273/3-A
Matrix: Solid
Analysis Batch: 701337

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 701273

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00680	0.00668		mg/L		98	80 - 120

Lab Sample ID: LB 480-701145/1-C
Matrix: Solid
Analysis Batch: 701337

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 701273

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000043	mg/L		02/20/24 11:28	02/20/24 15:25	1

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-700846/1-A
Matrix: Solid
Analysis Batch: 700949

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 700846

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.019	0.0045	mg/Kg		02/15/24 11:18	02/15/24 15:02	1

Lab Sample ID: LCSSRM 480-700846/2-A ^10
Matrix: Solid
Analysis Batch: 700949

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 700846

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	17.1	10.12		mg/Kg		59.2	36.0 - 109.9

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Method: 1010A - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 480-700898/1
Matrix: Solid
Analysis Batch: 700898

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Flashpoint	81.0	82.00		Degrees F		101	97.5 - 102.5

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-701418/3
Matrix: Solid
Analysis Batch: 701418

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20	0.10	mg/Kg			02/21/24 07:58	1

Lab Sample ID: LCS 480-701418/4
Matrix: Solid
Analysis Batch: 701418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	1.00	1.01		mg/Kg		101	90 - 110

Lab Sample ID: MB 480-701288/1-A
Matrix: Solid
Analysis Batch: 701418

Client Sample ID: Method Blank
Prep Type: ASTM Leach

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		4.0	2.0	mg/Kg			02/21/24 08:00	1

Method: 9012 - Cyanide, Reactive

Lab Sample ID: MB 480-701105/1-A
Matrix: Solid
Analysis Batch: 701112

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 701105

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive	ND		10.0	10.0	mg/Kg		02/16/24 10:30	02/17/24 12:45	1

Lab Sample ID: LCS 480-701105/2-A
Matrix: Solid
Analysis Batch: 701112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 701105

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Reactive	1000	ND		mg/Kg		48	10 - 100

Method: 9034 - Sulfide, Reactive

Lab Sample ID: MB 480-701106/1-A
Matrix: Solid
Analysis Batch: 701117

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 701106

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Reactive	ND		10.0	10.0	mg/Kg		02/16/24 10:30	02/17/24 16:00	1

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QC Sample Results

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Method: 9034 - Sulfide, Reactive (Continued)

Lab Sample ID: LCS 480-701106/2-A
Matrix: Solid
Analysis Batch: 701117

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 701106

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide, Reactive	740	541.0		mg/Kg		73	10 - 100

Method: 9045D - pH

Lab Sample ID: LCS 480-701032/1
Matrix: Solid
Analysis Batch: 701032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.1		SU		101	99 - 101

QC Association Summary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

GC/MS VOA

Analysis Batch: 700987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	Total/NA	Solid	8260C	701023
480-217087-2	UNLOAD-02-02132024	Total/NA	Solid	8260C	701023
MB 480-701023/3-A	Method Blank	Total/NA	Solid	8260C	701023
LCS 480-701023/1-A	Lab Control Sample	Total/NA	Solid	8260C	701023
LCSD 480-701023/2-A	Lab Control Sample Dup	Total/NA	Solid	8260C	701023

Prep Batch: 701023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	Total/NA	Solid	5035A_H	
480-217087-2	UNLOAD-02-02132024	Total/NA	Solid	5035A_H	
MB 480-701023/3-A	Method Blank	Total/NA	Solid	5035A_H	
LCS 480-701023/1-A	Lab Control Sample	Total/NA	Solid	5035A_H	
LCSD 480-701023/2-A	Lab Control Sample Dup	Total/NA	Solid	5035A_H	

Leach Batch: 701146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	1311	
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	1311	
LB 480-701146/1-A	Method Blank	TCLP	Solid	1311	

Analysis Batch: 701251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	8260C	701146
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	8260C	701146
LB 480-701146/1-A	Method Blank	TCLP	Solid	8260C	701146
MB 480-701251/8	Method Blank	Total/NA	Solid	8260C	
LCS 480-701251/6	Lab Control Sample	Total/NA	Solid	8260C	

GC/MS Semi VOA

Prep Batch: 701093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	Total/NA	Solid	3550C	
480-217087-2	UNLOAD-02-02132024	Total/NA	Solid	3550C	
MB 480-701093/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-701093/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Leach Batch: 701145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	1311	
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	1311	
LB 480-701145/1-F	Method Blank	TCLP	Solid	1311	

Analysis Batch: 701192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	Total/NA	Solid	8270D	701093
480-217087-2	UNLOAD-02-02132024	Total/NA	Solid	8270D	701093
MB 480-701093/1-A	Method Blank	Total/NA	Solid	8270D	701093
LCS 480-701093/2-A	Lab Control Sample	Total/NA	Solid	8270D	701093

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QC Association Summary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

GC/MS Semi VOA

Prep Batch: 701466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	3510C	701145
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	3510C	701145
LB 480-701145/1-F	Method Blank	TCLP	Solid	3510C	701145
MB 480-701466/1-A	Method Blank	Total/NA	Solid	3510C	
LCS 480-701466/2-A	Lab Control Sample	Total/NA	Solid	3510C	
LCSD 480-701466/3-A	Lab Control Sample Dup	Total/NA	Solid	3510C	

Analysis Batch: 701521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	8270D	701466
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	8270D	701466
LB 480-701145/1-F	Method Blank	TCLP	Solid	8270D	701466
MB 480-701466/1-A	Method Blank	Total/NA	Solid	8270D	701466
LCS 480-701466/2-A	Lab Control Sample	Total/NA	Solid	8270D	701466
LCSD 480-701466/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D	701466

GC Semi VOA

Leach Batch: 701145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	1311	
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	1311	
LB 480-701145/1-D	Method Blank	TCLP	Solid	1311	
LB 480-701145/1-E	Method Blank	TCLP	Solid	1311	

Prep Batch: 701368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	8151A	701145
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	8151A	701145
LB 480-701145/1-D	Method Blank	TCLP	Solid	8151A	701145
MB 480-701368/1-A	Method Blank	Total/NA	Solid	8151A	
LCS 480-701368/2-A	Lab Control Sample	Total/NA	Solid	8151A	
LCSD 480-701368/3-A	Lab Control Sample Dup	Total/NA	Solid	8151A	

Prep Batch: 701465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	3510C	701145
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	3510C	701145
LB 480-701145/1-E	Method Blank	TCLP	Solid	3510C	701145
MB 480-701465/1-A	Method Blank	Total/NA	Solid	3510C	
LCS 480-701465/2-A	Lab Control Sample	Total/NA	Solid	3510C	
LCSD 480-701465/3-A	Lab Control Sample Dup	Total/NA	Solid	3510C	

Analysis Batch: 701512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	8081B	701465
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	8081B	701465
LB 480-701145/1-E	Method Blank	TCLP	Solid	8081B	701465
MB 480-701465/1-A	Method Blank	Total/NA	Solid	8081B	701465
LCS 480-701465/2-A	Lab Control Sample	Total/NA	Solid	8081B	701465
LCSD 480-701465/3-A	Lab Control Sample Dup	Total/NA	Solid	8081B	701465

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QC Association Summary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

GC Semi VOA

Analysis Batch: 701735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	8151	701368
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	8151	701368
LB 480-701145/1-D	Method Blank	TCLP	Solid	8151	701368
MB 480-701368/1-A	Method Blank	Total/NA	Solid	8151	701368
LCS 480-701368/2-A	Lab Control Sample	Total/NA	Solid	8151	701368
LCSD 480-701368/3-A	Lab Control Sample Dup	Total/NA	Solid	8151	701368

Metals

Prep Batch: 700846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	Total/NA	Solid	7471B	
480-217087-2	UNLOAD-02-02132024	Total/NA	Solid	7471B	
MB 480-700846/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-700846/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 700949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	Total/NA	Solid	7471B	700846
480-217087-2	UNLOAD-02-02132024	Total/NA	Solid	7471B	700846
MB 480-700846/1-A	Method Blank	Total/NA	Solid	7471B	700846
LCSSRM 480-700846/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	700846

Leach Batch: 701145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	1311	
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	1311	
LB 480-701145/1-B	Method Blank	TCLP	Solid	1311	
LB 480-701145/1-C	Method Blank	TCLP	Solid	1311	

Prep Batch: 701259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	3010A	701145
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	3010A	701145
LB 480-701145/1-B	Method Blank	TCLP	Solid	3010A	701145
MB 480-701259/2-A	Method Blank	Total/NA	Solid	3010A	
LCS 480-701259/3-A	Lab Control Sample	Total/NA	Solid	3010A	

Prep Batch: 701273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	7470A	701145
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	7470A	701145
LB 480-701145/1-C	Method Blank	TCLP	Solid	7470A	701145
MB 480-701273/2-A	Method Blank	Total/NA	Solid	7470A	
LCS 480-701273/3-A	Lab Control Sample	Total/NA	Solid	7470A	

Analysis Batch: 701337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	7470A	701273
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	7470A	701273
LB 480-701145/1-C	Method Blank	TCLP	Solid	7470A	701273

Eurofins Buffalo

QC Association Summary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Metals (Continued)

Analysis Batch: 701337 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-701273/2-A	Method Blank	Total/NA	Solid	7470A	701273
LCS 480-701273/3-A	Lab Control Sample	Total/NA	Solid	7470A	701273

Analysis Batch: 701550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	TCLP	Solid	6010C	701259
480-217087-2	UNLOAD-02-02132024	TCLP	Solid	6010C	701259
LB 480-701145/1-B	Method Blank	TCLP	Solid	6010C	701259
MB 480-701259/2-A	Method Blank	Total/NA	Solid	6010C	701259
LCS 480-701259/3-A	Lab Control Sample	Total/NA	Solid	6010C	701259

General Chemistry

Analysis Batch: 700788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	Total/NA	Solid	Moisture	
480-217087-2	UNLOAD-02-02132024	Total/NA	Solid	Moisture	

Analysis Batch: 700898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	Total/NA	Solid	1010A	
480-217087-2	UNLOAD-02-02132024	Total/NA	Solid	1010A	
LCS 480-700898/1	Lab Control Sample	Total/NA	Solid	1010A	

Analysis Batch: 701032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	Total/NA	Solid	9045D	
480-217087-2	UNLOAD-02-02132024	Total/NA	Solid	9045D	
LCS 480-701032/1	Lab Control Sample	Total/NA	Solid	9045D	

Prep Batch: 701105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	Total/NA	Solid	7.3.3	
480-217087-2	UNLOAD-02-02132024	Total/NA	Solid	7.3.3	
MB 480-701105/1-A	Method Blank	Total/NA	Solid	7.3.3	
LCS 480-701105/2-A	Lab Control Sample	Total/NA	Solid	7.3.3	

Prep Batch: 701106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	Total/NA	Solid	7.3.4	
480-217087-2	UNLOAD-02-02132024	Total/NA	Solid	7.3.4	
MB 480-701106/1-A	Method Blank	Total/NA	Solid	7.3.4	
LCS 480-701106/2-A	Lab Control Sample	Total/NA	Solid	7.3.4	

Analysis Batch: 701112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	Total/NA	Solid	9012	701105
480-217087-2	UNLOAD-02-02132024	Total/NA	Solid	9012	701105
MB 480-701105/1-A	Method Blank	Total/NA	Solid	9012	701105
LCS 480-701105/2-A	Lab Control Sample	Total/NA	Solid	9012	701105

Eurofins Buffalo

QC Association Summary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

General Chemistry

Analysis Batch: 701117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	Total/NA	Solid	9034	701106
480-217087-2	UNLOAD-02-02132024	Total/NA	Solid	9034	701106
MB 480-701106/1-A	Method Blank	Total/NA	Solid	9034	701106
LCS 480-701106/2-A	Lab Control Sample	Total/NA	Solid	9034	701106

Leach Batch: 701288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	ASTM Leach	Solid	D3987-85	
480-217087-2	UNLOAD-02-02132024	ASTM Leach	Solid	D3987-85	
MB 480-701288/1-A	Method Blank	ASTM Leach	Solid	D3987-85	

Analysis Batch: 701418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-217087-1	UNLOAD-01-02132024	ASTM Leach	Solid	350.1	701288
480-217087-2	UNLOAD-02-02132024	ASTM Leach	Solid	350.1	701288
MB 480-701288/1-A	Method Blank	ASTM Leach	Solid	350.1	701288
MB 480-701418/3	Method Blank	Total/NA	Solid	350.1	
LCS 480-701418/4	Lab Control Sample	Total/NA	Solid	350.1	

Lab Chronicle

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-01-02132024

Lab Sample ID: 480-217087-1

Date Collected: 02/13/24 13:15

Matrix: Solid

Date Received: 02/14/24 10:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			701146	SMP	EET BUF	02/19/24 09:00 - 02/20/24 09:35 ¹
TCLP	Analysis	8260C		10	701251	AXK	EET BUF	02/20/24 16:37
TCLP	Leach	1311			701145	SMP	EET BUF	02/19/24 08:54 - 02/20/24 08:49 ¹
TCLP	Prep	3510C			701466	LSC	EET BUF	02/21/24 13:51
TCLP	Analysis	8270D		1	701521	JMM	EET BUF	02/22/24 16:04
TCLP	Leach	1311			701145	SMP	EET BUF	02/19/24 08:54 - 02/20/24 08:49 ¹
TCLP	Prep	3510C			701465	LSC	EET BUF	02/21/24 13:44
TCLP	Analysis	8081B		1	701512	JLS	EET BUF	02/22/24 10:30
TCLP	Leach	1311			701145	SMP	EET BUF	02/19/24 08:54 - 02/20/24 08:49 ¹
TCLP	Prep	8151A			701368	SMP	EET BUF	02/21/24 07:00
TCLP	Analysis	8151		1	701735	MAN	EET BUF	02/23/24 21:04
TCLP	Leach	1311			701145	SMP	EET BUF	02/19/24 08:54 - 02/20/24 08:49 ¹
TCLP	Prep	3010A			701259	ESB	EET BUF	02/20/24 09:32
TCLP	Analysis	6010C		1	701550	BMB	EET BUF	02/21/24 19:35
TCLP	Leach	1311			701145	SMP	EET BUF	02/19/24 08:54 - 02/20/24 08:49 ¹
TCLP	Prep	7470A			701273	NVK	EET BUF	02/20/24 11:28
TCLP	Analysis	7470A		1	701337	NVK	EET BUF	02/20/24 15:46
Total/NA	Analysis	1010A		1	700898	KM	EET BUF	02/15/24 10:39
ASTM Leach	Leach	D3987-85			701288	CLT	EET BUF	02/20/24 10:00 - 02/21/24 04:00 ¹
ASTM Leach	Analysis	350.1		1	701418	CLT	EET BUF	02/21/24 08:01
Total/NA	Prep	7.3.3			701105	AM	EET BUF	02/16/24 10:30
Total/NA	Analysis	9012		1	701112	AM	EET BUF	02/17/24 12:56
Total/NA	Prep	7.3.4			701106	AM	EET BUF	02/16/24 10:30
Total/NA	Analysis	9034		1	701117	AM	EET BUF	02/17/24 16:00
Total/NA	Analysis	9045D		1	701032	KB	EET BUF	02/15/24 19:50
Total/NA	Analysis	Moisture		1	700788	JMM	EET BUF	02/14/24 14:53

Client Sample ID: UNLOAD-01-02132024

Lab Sample ID: 480-217087-1

Date Collected: 02/13/24 13:15

Matrix: Solid

Date Received: 02/14/24 10:29

Percent Solids: 62.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035A_H			701023	ZN	EET BUF	02/16/24 10:04
Total/NA	Analysis	8260C		1	700987	ZN	EET BUF	02/16/24 16:08
Total/NA	Prep	3550C			701093	SJM	EET BUF	02/16/24 17:12
Total/NA	Analysis	8270D		5	701192	EMD	EET BUF	02/19/24 23:07
Total/NA	Prep	7471B			700846	NVK	EET BUF	02/15/24 11:18
Total/NA	Analysis	7471B		1	700949	NVK	EET BUF	02/15/24 15:33

Eurofins Buffalo

Lab Chronicle

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Client Sample ID: UNLOAD-02-02132024

Lab Sample ID: 480-217087-2

Date Collected: 02/13/24 13:00

Matrix: Solid

Date Received: 02/14/24 10:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			701146	SMP	EET BUF	02/19/24 09:00 - 02/20/24 09:35 ¹
TCLP	Analysis	8260C		10	701251	AXK	EET BUF	02/20/24 17:00
TCLP	Leach	1311			701145	SMP	EET BUF	02/19/24 08:54 - 02/20/24 08:49 ¹
TCLP	Prep	3510C			701466	LSC	EET BUF	02/21/24 13:51
TCLP	Analysis	8270D		1	701521	JMM	EET BUF	02/22/24 16:28
TCLP	Leach	1311			701145	SMP	EET BUF	02/19/24 08:54 - 02/20/24 08:49 ¹
TCLP	Prep	3510C			701465	LSC	EET BUF	02/21/24 13:44
TCLP	Analysis	8081B		1	701512	JLS	EET BUF	02/22/24 10:50
TCLP	Leach	1311			701145	SMP	EET BUF	02/19/24 08:54 - 02/20/24 08:49 ¹
TCLP	Prep	8151A			701368	SMP	EET BUF	02/21/24 07:00
TCLP	Analysis	8151		1	701735	MAN	EET BUF	02/23/24 21:23
TCLP	Leach	1311			701145	SMP	EET BUF	02/19/24 08:54 - 02/20/24 08:49 ¹
TCLP	Prep	3010A			701259	ESB	EET BUF	02/20/24 09:32
TCLP	Analysis	6010C		1	701550	BMB	EET BUF	02/21/24 19:39
TCLP	Leach	1311			701145	SMP	EET BUF	02/19/24 08:54 - 02/20/24 08:49 ¹
TCLP	Prep	7470A			701273	NVK	EET BUF	02/20/24 11:28
TCLP	Analysis	7470A		1	701337	NVK	EET BUF	02/20/24 15:50
Total/NA	Analysis	1010A		1	700898	KM	EET BUF	02/15/24 10:39
ASTM Leach	Leach	D3987-85			701288	CLT	EET BUF	02/20/24 10:00 - 02/21/24 04:00 ¹
ASTM Leach	Analysis	350.1		1	701418	CLT	EET BUF	02/21/24 08:02
Total/NA	Prep	7.3.3			701105	AM	EET BUF	02/16/24 10:30
Total/NA	Analysis	9012		1	701112	AM	EET BUF	02/17/24 12:58
Total/NA	Prep	7.3.4			701106	AM	EET BUF	02/16/24 10:30
Total/NA	Analysis	9034		1	701117	AM	EET BUF	02/17/24 16:00
Total/NA	Analysis	9045D		1	701032	KB	EET BUF	02/15/24 19:50
Total/NA	Analysis	Moisture		1	700788	JMM	EET BUF	02/14/24 14:53

Client Sample ID: UNLOAD-02-02132024

Lab Sample ID: 480-217087-2

Date Collected: 02/13/24 13:00

Matrix: Solid

Date Received: 02/14/24 10:29

Percent Solids: 75.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035A_H			701023	ZN	EET BUF	02/16/24 10:04
Total/NA	Analysis	8260C		2	700987	ZN	EET BUF	02/16/24 16:31
Total/NA	Prep	3550C			701093	SJM	EET BUF	02/16/24 17:12
Total/NA	Analysis	8270D		5	701192	EMD	EET BUF	02/19/24 23:31
Total/NA	Prep	7471B			700846	NVK	EET BUF	02/15/24 11:18
Total/NA	Analysis	7471B		5	700949	NVK	EET BUF	02/15/24 15:47

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Eurofins Buffalo

Accreditation/Certification Summary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Laboratory: Eurofins Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	03-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
350.1		Solid	Ammonia
6010C	3010A	Solid	Arsenic
6010C	3010A	Solid	Barium
6010C	3010A	Solid	Cadmium
6010C	3010A	Solid	Chromium
6010C	3010A	Solid	Lead
6010C	3010A	Solid	Selenium
6010C	3010A	Solid	Silver
7470A	7470A	Solid	Mercury
8081B	3510C	Solid	Chlordane (technical)
8081B	3510C	Solid	Endrin
8081B	3510C	Solid	gamma-BHC (Lindane)
8081B	3510C	Solid	Heptachlor
8081B	3510C	Solid	Heptachlor epoxide
8081B	3510C	Solid	Methoxychlor
8081B	3510C	Solid	Toxaphene
9012	7.3.3	Solid	Cyanide, Reactive
9034	7.3.4	Solid	Sulfide, Reactive
9045D		Solid	Temperature
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Method	Method Description	Protocol	Laboratory
8260C	TCLP Volatiles	SW846	EET BUF
8260C	Volatile Organic Compounds by GC/MS	SW846	EET BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET BUF
8081B	Organochlorine Pesticides (GC)	SW846	EET BUF
8151	TCLP Herbicides	SW846	EET BUF
6010C	Metals (ICP)	SW846	EET BUF
7470A	TCLP Mercury	SW846	EET BUF
7471B	Mercury (CVAA)	SW846	EET BUF
1010A	Ignitability, Pensky-Martens Closed-Cup Method	SW846	EET BUF
350.1	Nitrogen, Ammonia	EPA	EET BUF
9012	Cyanide, Reactive	SW846	EET BUF
9034	Sulfide, Reactive	SW846	EET BUF
9045D	pH	SW846	EET BUF
Moisture	Percent Moisture	EPA	EET BUF
1311	TCLP Extraction	SW846	EET BUF
3010A	Preparation, Total Metals	SW846	EET BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET BUF
3550C	Ultrasonic Extraction	SW846	EET BUF
5030C	Purge and Trap	SW846	EET BUF
5035A_H	Closed System Purge and Trap	SW846	EET BUF
7.3.3	Cyanide, Reactive	SW846	EET BUF
7.3.4	Sulfide, Reactive	SW846	EET BUF
7470A	Preparation, Mercury	SW846	EET BUF
7471B	Preparation, Mercury	SW846	EET BUF
8151A	Extraction (Herbicides)	SW846	EET BUF
D3987-85	ASTM Leaching Procedure	ASTM	EET BUF

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Eurofins Buffalo

Sample Summary

Client: Inventum Engineering LLC
Project/Site: 3875 River Road - Tonawanda, NY

Job ID: 480-217087-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-217087-1	UNLOAD-01-02132024	Solid	02/13/24 13:15	02/14/24 10:29
480-217087-2	UNLOAD-02-02132024	Solid	02/13/24 13:00	02/14/24 10:29

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

[illegible]

Login Sample Receipt Checklist

Client: Inventum Engineering LLC

Job Number: 480-217087-1

Login Number: 217087

List Source: Eurofins Buffalo

List Number: 1

Creator: Stopa, Erik S

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	TCORES FROZEN 2/14 @ 1500
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	IELLC
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	



ANALYTICAL REPORT

Lab Number:	L2406251
Client:	Inventum Engineering 441 Carlisle Drive Suite C Herndon, NY 20170
ATTN:	John Black
Phone:	(571) 752-6562
Project Name:	RITC
Project Number:	FLOA BUILDING
Report Date:	01/03/25

The original project report/data package is held by Pace Analytical Services. This report/data package is paginated and should be reproduced only in its entirety. Pace Analytical Services 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), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

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



Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Lab Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2406251-01	FLOA-SUBSLAB-02052024	SOIL	3875 RIVER RD, TONAWANDA	02/05/24 14:30	02/05/24



Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

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 Pace 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 and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet 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, Pace'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 Pace Project Manager and made arrangements for Pace 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: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Case Narrative (continued)

Report Revision

January 03, 2025: The Volatile Organics analyte list has been amended on L2406251-01.

Report Submission

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

Volatile Organics

L2406251-01: Any reported concentrations that are below 200 ug/kg may be biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Semivolatile Organics

The WG1883336-2/-3 LCS/LCSD recoveries, associated with L2406251-01D and -01, are below the acceptance criteria for benzoic acid (0%/0%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

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:

Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative

Date: 01/03/25

ORGANICS

VOLATILES

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

SAMPLE RESULTS

Lab ID: L2406251-01
 Client ID: FLOA-SUBSLAB-02052024
 Sample Location: 3875 RIVER RD, TONAWANDA

Date Collected: 02/05/24 14:30
 Date Received: 02/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 02/09/24 02:40
 Analyst: JIC
 Percent Solids: 71%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	380	180	1
1,1-Dichloroethane	ND		ug/kg	77	11.	1
Chloroform	ND		ug/kg	120	11.	1
Carbon tetrachloride	ND		ug/kg	77	18.	1
1,2-Dichloropropane	ND		ug/kg	77	9.6	1
Dibromochloromethane	ND		ug/kg	77	11.	1
1,1,2-Trichloroethane	ND		ug/kg	77	20.	1
Tetrachloroethene	ND		ug/kg	38	15.	1
Chlorobenzene	ND		ug/kg	38	9.8	1
Trichlorofluoromethane	ND		ug/kg	310	54.	1
1,2-Dichloroethane	ND		ug/kg	77	20.	1
1,1,1-Trichloroethane	ND		ug/kg	38	13.	1
Bromodichloromethane	ND		ug/kg	38	8.4	1
trans-1,3-Dichloropropene	ND		ug/kg	77	21.	1
cis-1,3-Dichloropropene	ND		ug/kg	38	12.	1
1,3-Dichloropropene, Total	ND		ug/kg	38	12.	1
1,1-Dichloropropene	ND		ug/kg	38	12.	1
Bromoform	ND		ug/kg	310	19.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	38	13.	1
Benzene	17000		ug/kg	38	13.	1
Toluene	2000		ug/kg	77	42.	1
Ethylbenzene	7700		ug/kg	77	11.	1
Chloromethane	ND		ug/kg	310	72.	1
Bromomethane	ND		ug/kg	150	45.	1
Vinyl chloride	ND		ug/kg	77	26.	1
Chloroethane	ND		ug/kg	150	35.	1
1,1-Dichloroethene	ND		ug/kg	77	18.	1
trans-1,2-Dichloroethene	ND		ug/kg	120	10.	1

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

SAMPLE RESULTS

Lab ID: L2406251-01
 Client ID: FLOA-SUBSLAB-02052024
 Sample Location: 3875 RIVER RD, TONAWANDA

Date Collected: 02/05/24 14:30
 Date Received: 02/05/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/kg	38	10.	1
1,2-Dichlorobenzene	ND		ug/kg	150	11.	1
1,3-Dichlorobenzene	ND		ug/kg	150	11.	1
1,4-Dichlorobenzene	ND		ug/kg	150	13.	1
Methyl tert butyl ether	ND		ug/kg	150	15.	1
p/m-Xylene	10000		ug/kg	150	43.	1
o-Xylene	2000		ug/kg	77	22.	1
Xylenes, Total	12000		ug/kg	77	22.	1
cis-1,2-Dichloroethene	ND		ug/kg	77	13.	1
1,2-Dichloroethene, Total	ND		ug/kg	77	10.	1
Dibromomethane	ND		ug/kg	150	18.	1
Styrene	250		ug/kg	77	15.	1
Dichlorodifluoromethane	ND		ug/kg	770	70.	1
Acetone	ND		ug/kg	770	370	1
Carbon disulfide	ND		ug/kg	770	350	1
2-Butanone	ND		ug/kg	770	170	1
Vinyl acetate	ND		ug/kg	770	160	1
4-Methyl-2-pentanone	ND		ug/kg	770	99.	1
1,2,3-Trichloropropane	ND		ug/kg	150	9.8	1
2-Hexanone	ND		ug/kg	770	91.	1
Bromochloromethane	ND		ug/kg	150	16.	1
2,2-Dichloropropane	ND		ug/kg	150	16.	1
1,2-Dibromoethane	ND		ug/kg	77	21.	1
1,3-Dichloropropane	ND		ug/kg	150	13.	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	38	10.	1
Bromobenzene	ND		ug/kg	150	11.	1
n-Butylbenzene	310		ug/kg	77	13.	1
sec-Butylbenzene	120		ug/kg	77	11.	1
tert-Butylbenzene	ND		ug/kg	150	9.1	1
o-Chlorotoluene	ND		ug/kg	150	15.	1
p-Chlorotoluene	ND		ug/kg	150	8.3	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	230	77.	1
Hexachlorobutadiene	ND		ug/kg	310	13.	1
Isopropylbenzene	3600		ug/kg	77	8.4	1
p-Isopropyltoluene	660		ug/kg	77	8.4	1
Naphthalene	69000	E	ug/kg	310	50.	1
Acrylonitrile	ND		ug/kg	310	88.	1



Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

SAMPLE RESULTS

Lab ID: L2406251-01
Client ID: FLOA-SUBSLAB-02052024
Sample Location: 3875 RIVER RD, TONAWANDA

Date Collected: 02/05/24 14:30
Date Received: 02/05/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	1000		ug/kg	77	13.	1
1,2,3-Trichlorobenzene	ND		ug/kg	150	25.	1
1,2,4-Trichlorobenzene	ND		ug/kg	150	21.	1
1,3,5-Trimethylbenzene	2000		ug/kg	150	15.	1
1,2,4-Trimethylbenzene	4900		ug/kg	150	26.	1
Methyl Acetate	93	J	ug/kg	310	73.	1
Cyclohexane	1600		ug/kg	770	42.	1
1,4-Dioxane	ND		ug/kg	6200	2700	1
Freon-113	ND		ug/kg	310	53.	1
p-Diethylbenzene	480		ug/kg	150	14.	1
p-Ethyltoluene	3300		ug/kg	150	30.	1
1,2,4,5-Tetramethylbenzene	1400		ug/kg	150	15.	1
Ethyl ether	ND		ug/kg	150	26.	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	380	110	1
Methyl cyclohexane	5700		ug/kg	310	46.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	98		70-130

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

SAMPLE RESULTS

Lab ID: L2406251-01 D
Client ID: FLOA-SUBSLAB-02052024
Sample Location: 3875 RIVER RD, TONAWANDA

Date Collected: 02/05/24 14:30
Date Received: 02/05/24
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 02/11/24 23:13
Analyst: AJK
Percent Solids: 71%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Naphthalene	88000		ug/kg	3100	500	10
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,2-Dichloroethane-d4	98			70-130		
Toluene-d8	102			70-130		
4-Bromofluorobenzene	99			70-130		
Dibromofluoromethane	104			70-130		

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 02/08/24 16:47
 Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01 Batch: WG1883550-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	16	J	ug/kg	75	7.0
Carbon tetrachloride	ND		ug/kg	50	12.
1,2-Dichloropropane	ND		ug/kg	50	6.2
Dibromochloromethane	ND		ug/kg	50	7.0
1,1,2-Trichloroethane	ND		ug/kg	50	13.
Tetrachloroethene	ND		ug/kg	25	9.8
Chlorobenzene	ND		ug/kg	25	6.4
Trichlorofluoromethane	ND		ug/kg	200	35.
1,2-Dichloroethane	ND		ug/kg	50	13.
1,1,1-Trichloroethane	ND		ug/kg	25	8.4
Bromodichloromethane	ND		ug/kg	25	5.4
trans-1,3-Dichloropropene	ND		ug/kg	50	14.
cis-1,3-Dichloropropene	ND		ug/kg	25	7.9
1,3-Dichloropropene, Total	ND		ug/kg	25	7.9
1,1-Dichloropropene	ND		ug/kg	25	8.0
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	8.3
Benzene	ND		ug/kg	25	8.3
Toluene	ND		ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
Chloromethane	ND		ug/kg	200	47.
Bromomethane	35	J	ug/kg	100	29.
Vinyl chloride	ND		ug/kg	50	17.
Chloroethane	ND		ug/kg	100	23.
1,1-Dichloroethene	ND		ug/kg	50	12.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8



Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 02/08/24 16:47
 Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01 Batch: WG1883550-5					
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
Xylenes, Total	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8
Dibromomethane	ND		ug/kg	100	12.
Styrene	ND		ug/kg	50	9.8
Dichlorodifluoromethane	ND		ug/kg	500	46.
Acetone	ND		ug/kg	500	240
Carbon disulfide	ND		ug/kg	500	230
2-Butanone	ND		ug/kg	500	110
Vinyl acetate	ND		ug/kg	500	110
4-Methyl-2-pentanone	ND		ug/kg	500	64.
1,2,3-Trichloropropane	ND		ug/kg	100	6.4
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
2,2-Dichloropropane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,3-Dichloropropane	ND		ug/kg	100	8.4
1,1,1,2-Tetrachloroethane	ND		ug/kg	25	6.6
Bromobenzene	ND		ug/kg	100	7.2
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
tert-Butylbenzene	ND		ug/kg	100	5.9
o-Chlorotoluene	ND		ug/kg	100	9.6



Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 02/08/24 16:47
 Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01 Batch: WG1883550-5					
p-Chlorotoluene	ND		ug/kg	100	5.4
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Hexachlorobutadiene	ND		ug/kg	200	8.4
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
Naphthalene	ND		ug/kg	200	32.
Acrylonitrile	ND		ug/kg	200	58.
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.
Methyl Acetate	ND		ug/kg	200	48.
Cyclohexane	ND		ug/kg	500	27.
1,4-Dioxane	ND		ug/kg	4000	1800
Freon-113	ND		ug/kg	200	35.
p-Diethylbenzene	ND		ug/kg	100	8.8
p-Ethyltoluene	ND		ug/kg	100	19.
1,2,4,5-Tetramethylbenzene	ND		ug/kg	100	9.6
Ethyl ether	ND		ug/kg	100	17.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	71.
Methyl cyclohexane	ND		ug/kg	200	30.

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 02/08/24 16:47
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01 Batch: WG1883550-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	101		70-130

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 02/11/24 15:52
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1884282-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	9.8	J	ug/kg	75	7.0
Carbon tetrachloride	ND		ug/kg	50	12.
1,2-Dichloropropane	ND		ug/kg	50	6.2
Dibromochloromethane	ND		ug/kg	50	7.0
1,1,2-Trichloroethane	ND		ug/kg	50	13.
Tetrachloroethene	ND		ug/kg	25	9.8
Chlorobenzene	ND		ug/kg	25	6.4
Trichlorofluoromethane	ND		ug/kg	200	35.
1,2-Dichloroethane	ND		ug/kg	50	13.
1,1,1-Trichloroethane	ND		ug/kg	25	8.4
Bromodichloromethane	ND		ug/kg	25	5.4
trans-1,3-Dichloropropene	ND		ug/kg	50	14.
cis-1,3-Dichloropropene	ND		ug/kg	25	7.9
1,3-Dichloropropene, Total	ND		ug/kg	25	7.9
1,1-Dichloropropene	ND		ug/kg	25	8.0
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	8.3
Benzene	ND		ug/kg	25	8.3
Toluene	ND		ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
Chloromethane	ND		ug/kg	200	47.
Bromomethane	29	J	ug/kg	100	29.
Vinyl chloride	ND		ug/kg	50	17.
Chloroethane	ND		ug/kg	100	23.
1,1-Dichloroethene	ND		ug/kg	50	12.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8



Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 02/11/24 15:52
 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1884282-5					
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
Xylenes, Total	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8
Dibromomethane	ND		ug/kg	100	12.
Styrene	ND		ug/kg	50	9.8
Dichlorodifluoromethane	ND		ug/kg	500	46.
Acetone	ND		ug/kg	500	240
Carbon disulfide	ND		ug/kg	500	230
2-Butanone	ND		ug/kg	500	110
Vinyl acetate	ND		ug/kg	500	110
4-Methyl-2-pentanone	ND		ug/kg	500	64.
1,2,3-Trichloropropane	ND		ug/kg	100	6.4
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
2,2-Dichloropropane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,3-Dichloropropane	ND		ug/kg	100	8.4
1,1,1,2-Tetrachloroethane	ND		ug/kg	25	6.6
Bromobenzene	ND		ug/kg	100	7.2
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
tert-Butylbenzene	ND		ug/kg	100	5.9
o-Chlorotoluene	ND		ug/kg	100	9.6



Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 02/11/24 15:52
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1884282-5					
p-Chlorotoluene	ND		ug/kg	100	5.4
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Hexachlorobutadiene	ND		ug/kg	200	8.4
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
Naphthalene	ND		ug/kg	200	32.
Acrylonitrile	ND		ug/kg	200	58.
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.
Methyl Acetate	ND		ug/kg	200	48.
Cyclohexane	ND		ug/kg	500	27.
1,4-Dioxane	ND		ug/kg	4000	1800
Freon-113	ND		ug/kg	200	35.
p-Diethylbenzene	ND		ug/kg	100	8.8
p-Ethyltoluene	ND		ug/kg	100	19.
1,2,4,5-Tetramethylbenzene	ND		ug/kg	100	9.6
Ethyl ether	ND		ug/kg	100	17.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	71.
Methyl cyclohexane	ND		ug/kg	200	30.

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 02/11/24 15:52
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1884282-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	104		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG1883550-3 WG1883550-4								
Methylene chloride	97		98		70-130	1		30
1,1-Dichloroethane	105		105		70-130	0		30
Chloroform	102		101		70-130	1		30
Carbon tetrachloride	110		110		70-130	0		30
1,2-Dichloropropane	96		96		70-130	0		30
Dibromochloromethane	103		103		70-130	0		30
1,1,2-Trichloroethane	96		96		70-130	0		30
Tetrachloroethene	113		112		70-130	1		30
Chlorobenzene	106		107		70-130	1		30
Trichlorofluoromethane	133		128		70-139	4		30
1,2-Dichloroethane	96		97		70-130	1		30
1,1,1-Trichloroethane	121		120		70-130	1		30
Bromodichloromethane	101		100		70-130	1		30
trans-1,3-Dichloropropene	102		102		70-130	0		30
cis-1,3-Dichloropropene	105		105		70-130	0		30
1,1-Dichloropropene	116		115		70-130	1		30
Bromoform	101		101		70-130	0		30
1,1,2,2-Tetrachloroethane	94		95		70-130	1		30
Benzene	107		107		70-130	0		30
Toluene	108		108		70-130	0		30
Ethylbenzene	111		110		70-130	1		30
Chloromethane	103		101		52-130	2		30
Bromomethane	118		117		57-147	1		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG1883550-3 WG1883550-4								
Vinyl chloride	108		106		67-130	2		30
Chloroethane	111		109		50-151	2		30
1,1-Dichloroethene	122		121		65-135	1		30
trans-1,2-Dichloroethene	113		112		70-130	1		30
Trichloroethene	114		113		70-130	1		30
1,2-Dichlorobenzene	104		104		70-130	0		30
1,3-Dichlorobenzene	108		108		70-130	0		30
1,4-Dichlorobenzene	107		107		70-130	0		30
Methyl tert butyl ether	97		98		66-130	1		30
p/m-Xylene	114		113		70-130	1		30
o-Xylene	109		108		70-130	1		30
cis-1,2-Dichloroethene	105		104		70-130	1		30
Dibromomethane	97		98		70-130	1		30
Styrene	107		107		70-130	0		30
Dichlorodifluoromethane	121		120		30-146	1		30
Acetone	91		87		54-140	4		30
Carbon disulfide	114		113		59-130	1		30
2-Butanone	86		89		70-130	3		30
Vinyl acetate	96		98		70-130	2		30
4-Methyl-2-pentanone	92		92		70-130	0		30
1,2,3-Trichloropropane	94		94		68-130	0		30
2-Hexanone	91		91		70-130	0		30
Bromochloromethane	98		99		70-130	1		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG1883550-3 WG1883550-4								
2,2-Dichloropropane	120		118		70-130	2		30
1,2-Dibromoethane	102		103		70-130	1		30
1,3-Dichloropropane	98		98		69-130	0		30
1,1,1,2-Tetrachloroethane	106		106		70-130	0		30
Bromobenzene	103		103		70-130	0		30
n-Butylbenzene	121		120		70-130	1		30
sec-Butylbenzene	120		119		70-130	1		30
tert-Butylbenzene	115		115		70-130	0		30
o-Chlorotoluene	106		106		70-130	0		30
p-Chlorotoluene	107		107		70-130	0		30
1,2-Dibromo-3-chloropropane	96		97		68-130	1		30
Hexachlorobutadiene	119		120		67-130	1		30
Isopropylbenzene	115		114		70-130	1		30
p-Isopropyltoluene	119		118		70-130	1		30
Naphthalene	101		102		70-130	1		30
Acrylonitrile	88		89		70-130	1		30
n-Propylbenzene	116		115		70-130	1		30
1,2,3-Trichlorobenzene	109		109		70-130	0		30
1,2,4-Trichlorobenzene	113		114		70-130	1		30
1,3,5-Trimethylbenzene	112		111		70-130	1		30
1,2,4-Trimethylbenzene	109		108		70-130	1		30
Methyl Acetate	87		88		51-146	1		30
Cyclohexane	123		121		59-142	2		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG1883550-3 WG1883550-4								
1,4-Dioxane	104		107		65-136	3		30
Freon-113	124		124		50-139	0		30
p-Diethylbenzene	119		118		70-130	1		30
p-Ethyltoluene	114		113		70-130	1		30
1,2,4,5-Tetramethylbenzene	109		109		70-130	0		30
Ethyl ether	97		98		67-130	1		30
trans-1,4-Dichloro-2-butene	95		97		70-130	2		30
Methyl cyclohexane	122		120		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	100		99		70-130
Toluene-d8	102		102		70-130
4-Bromofluorobenzene	101		100		70-130
Dibromofluoromethane	103		102		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1884282-3 WG1884282-4								
Methylene chloride	106		101		70-130	5		30
1,1-Dichloroethane	107		102		70-130	5		30
Chloroform	107		104		70-130	3		30
Carbon tetrachloride	112		106		70-130	6		30
1,2-Dichloropropane	99		96		70-130	3		30
Dibromochloromethane	107		105		70-130	2		30
1,1,2-Trichloroethane	98		96		70-130	2		30
Tetrachloroethene	117		112		70-130	4		30
Chlorobenzene	112		108		70-130	4		30
Trichlorofluoromethane	134		128		70-139	5		30
1,2-Dichloroethane	98		95		70-130	3		30
1,1,1-Trichloroethane	125		118		70-130	6		30
Bromodichloromethane	106		101		70-130	5		30
trans-1,3-Dichloropropene	104		101		70-130	3		30
cis-1,3-Dichloropropene	109		106		70-130	3		30
1,1-Dichloropropene	118		110		70-130	7		30
Bromoform	100		99		70-130	1		30
1,1,2,2-Tetrachloroethane	92		88		70-130	4		30
Benzene	113		107		70-130	5		30
Toluene	112		106		70-130	6		30
Ethylbenzene	113		109		70-130	4		30
Chloromethane	101		92		52-130	9		30
Bromomethane	148	Q	136		57-147	8		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1884282-3 WG1884282-4								
Vinyl chloride	108		100		67-130	8		30
Chloroethane	114		107		50-151	6		30
1,1-Dichloroethene	126		119		65-135	6		30
trans-1,2-Dichloroethene	117		112		70-130	4		30
Trichloroethene	118		112		70-130	5		30
1,2-Dichlorobenzene	108		105		70-130	3		30
1,3-Dichlorobenzene	113		108		70-130	5		30
1,4-Dichlorobenzene	112		107		70-130	5		30
Methyl tert butyl ether	100		97		66-130	3		30
p/m-Xylene	117		113		70-130	3		30
o-Xylene	112		109		70-130	3		30
cis-1,2-Dichloroethene	111		107		70-130	4		30
Dibromomethane	101		98		70-130	3		30
Styrene	112		108		70-130	4		30
Dichlorodifluoromethane	118		112		30-146	5		30
Acetone	87		77		54-140	12		30
Carbon disulfide	117		110		59-130	6		30
2-Butanone	79		74		70-130	7		30
Vinyl acetate	97		92		70-130	5		30
4-Methyl-2-pentanone	85		82		70-130	4		30
1,2,3-Trichloropropane	89		87		68-130	2		30
2-Hexanone	80		75		70-130	6		30
Bromochloromethane	106		103		70-130	3		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1884282-3 WG1884282-4								
2,2-Dichloropropane	122		115		70-130	6		30
1,2-Dibromoethane	104		102		70-130	2		30
1,3-Dichloropropane	100		97		69-130	3		30
1,1,1,2-Tetrachloroethane	112		109		70-130	3		30
Bromobenzene	108		105		70-130	3		30
n-Butylbenzene	118		112		70-130	5		30
sec-Butylbenzene	118		112		70-130	5		30
tert-Butylbenzene	116		111		70-130	4		30
o-Chlorotoluene	106		100		70-130	6		30
p-Chlorotoluene	108		103		70-130	5		30
1,2-Dibromo-3-chloropropane	92		90		68-130	2		30
Hexachlorobutadiene	124		118		67-130	5		30
Isopropylbenzene	112		108		70-130	4		30
p-Isopropyltoluene	118		112		70-130	5		30
Naphthalene	101		97		70-130	4		30
Acrylonitrile	82		80		70-130	2		30
n-Propylbenzene	114		108		70-130	5		30
1,2,3-Trichlorobenzene	112		109		70-130	3		30
1,2,4-Trichlorobenzene	119		115		70-130	3		30
1,3,5-Trimethylbenzene	112		106		70-130	6		30
1,2,4-Trimethylbenzene	109		104		70-130	5		30
Methyl Acetate	80		78		51-146	3		30
Cyclohexane	118		110		59-142	7		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1884282-3 WG1884282-4								
1,4-Dioxane	97		93		65-136	4		30
Freon-113	126		120		50-139	5		30
p-Diethylbenzene	118		112		70-130	5		30
p-Ethyltoluene	114		108		70-130	5		30
1,2,4,5-Tetramethylbenzene	112		107		70-130	5		30
Ethyl ether	103		98		67-130	5		30
trans-1,4-Dichloro-2-butene	86		82		70-130	5		30
Methyl cyclohexane	122		114		70-130	7		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	94		94		70-130
Toluene-d8	102		101		70-130
4-Bromofluorobenzene	100		97		70-130
Dibromofluoromethane	106		105		70-130

SEMIVOLATILES

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

SAMPLE RESULTS

Lab ID: L2406251-01
 Client ID: FLOA-SUBSLAB-02052024
 Sample Location: 3875 RIVER RD, TONAWANDA

Date Collected: 02/05/24 14:30
 Date Received: 02/05/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8270E
 Analytical Date: 02/10/24 12:33
 Analyst: CMM
 Percent Solids: 71%

Extraction Method: EPA 3546
 Extraction Date: 02/09/24 07:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	710		ug/kg	180	24.	1
1,2,4-Trichlorobenzene	ND		ug/kg	230	26.	1
Hexachlorobenzene	ND		ug/kg	140	26.	1
Bis(2-chloroethyl)ether	ND		ug/kg	210	31.	1
2-Chloronaphthalene	ND		ug/kg	230	23.	1
1,2-Dichlorobenzene	ND		ug/kg	230	42.	1
1,3-Dichlorobenzene	ND		ug/kg	230	40.	1
1,4-Dichlorobenzene	ND		ug/kg	230	40.	1
3,3'-Dichlorobenzidine	ND		ug/kg	230	62.	1
2,4-Dinitrotoluene	ND		ug/kg	230	46.	1
2,6-Dinitrotoluene	ND		ug/kg	230	40.	1
Fluoranthene	1900		ug/kg	140	27.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	230	25.	1
4-Bromophenyl phenyl ether	ND		ug/kg	230	35.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	280	40.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	250	23.	1
Hexachlorobutadiene	ND		ug/kg	230	34.	1
Hexachlorocyclopentadiene	ND		ug/kg	660	210	1
Hexachloroethane	ND		ug/kg	180	38.	1
Isophorone	ND		ug/kg	210	30.	1
Naphthalene	10000	E	ug/kg	230	28.	1
Nitrobenzene	ND		ug/kg	210	34.	1
NDPA/DPA	ND		ug/kg	180	26.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	230	36.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	230	80.	1
Butyl benzyl phthalate	ND		ug/kg	230	58.	1
Di-n-butylphthalate	ND		ug/kg	230	44.	1
Di-n-octylphthalate	ND		ug/kg	230	79.	1

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

SAMPLE RESULTS

Lab ID: L2406251-01
Client ID: FLOA-SUBSLAB-02052024
Sample Location: 3875 RIVER RD, TONAWANDA

Date Collected: 02/05/24 14:30
Date Received: 02/05/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	230	21.	1
Dimethyl phthalate	ND		ug/kg	230	49.	1
Benzo(a)anthracene	510		ug/kg	140	26.	1
Benzo(a)pyrene	340		ug/kg	180	56.	1
Benzo(b)fluoranthene	450		ug/kg	140	39.	1
Benzo(k)fluoranthene	170		ug/kg	140	37.	1
Chrysene	450		ug/kg	140	24.	1
Acenaphthylene	140	J	ug/kg	180	36.	1
Anthracene	600		ug/kg	140	45.	1
Benzo(ghi)perylene	190		ug/kg	180	27.	1
Fluorene	460		ug/kg	230	22.	1
Phenanthrene	1600		ug/kg	140	28.	1
Dibenzo(a,h)anthracene	51	J	ug/kg	140	27.	1
Indeno(1,2,3-cd)pyrene	220		ug/kg	180	32.	1
Pyrene	1600		ug/kg	140	23.	1
Biphenyl	61	J	ug/kg	530	30.	1
4-Chloroaniline	ND		ug/kg	230	42.	1
2-Nitroaniline	ND		ug/kg	230	45.	1
3-Nitroaniline	ND		ug/kg	230	44.	1
4-Nitroaniline	ND		ug/kg	230	96.	1
Dibenzofuran	300		ug/kg	230	22.	1
2-Methylnaphthalene	820		ug/kg	280	28.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	230	24.	1
Acetophenone	ND		ug/kg	230	29.	1
2,4,6-Trichlorophenol	ND		ug/kg	140	44.	1
p-Chloro-m-cresol	ND		ug/kg	230	34.	1
2-Chlorophenol	ND		ug/kg	230	27.	1
2,4-Dichlorophenol	ND		ug/kg	210	37.	1
2,4-Dimethylphenol	ND		ug/kg	230	76.	1
2-Nitrophenol	ND		ug/kg	500	87.	1
4-Nitrophenol	ND		ug/kg	320	95.	1
2,4-Dinitrophenol	ND		ug/kg	1100	110	1
4,6-Dinitro-o-cresol	ND		ug/kg	600	110	1
Pentachlorophenol	ND		ug/kg	180	51.	1
Phenol	90	J	ug/kg	230	35.	1
2-Methylphenol	ND		ug/kg	230	36.	1
3-Methylphenol/4-Methylphenol	68	J	ug/kg	330	36.	1



Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

SAMPLE RESULTS

Lab ID: L2406251-01
Client ID: FLOA-SUBSLAB-02052024
Sample Location: 3875 RIVER RD, TONAWANDA

Date Collected: 02/05/24 14:30
Date Received: 02/05/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	230	44.	1
Benzoic Acid	ND		ug/kg	750	230	1
Benzyl Alcohol	ND		ug/kg	230	71.	1
Carbazole	89	J	ug/kg	230	22.	1
1,4-Dioxane	ND		ug/kg	35	11.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		25-120
Phenol-d6	56		10-120
Nitrobenzene-d5	56		23-120
2-Fluorobiphenyl	53		30-120
2,4,6-Tribromophenol	58		10-136
4-Terphenyl-d14	56		18-120

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

SAMPLE RESULTS

Lab ID: L2406251-01 D
 Client ID: FLOA-SUBSLAB-02052024
 Sample Location: 3875 RIVER RD, TONAWANDA

Date Collected: 02/05/24 14:30
 Date Received: 02/05/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8270E
 Analytical Date: 02/11/24 15:56
 Analyst: CMM
 Percent Solids: 71%

Extraction Method: EPA 3546
 Extraction Date: 02/09/24 07:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Naphthalene	16000		ug/kg	1200	140	5

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 02/10/24 11:02
Analyst: EK

Extraction Method: EPA 3546
Extraction Date: 02/09/24 06:58

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1883336-1					
Acenaphthene	ND		ug/kg	130	17.
1,2,4-Trichlorobenzene	ND		ug/kg	160	19.
Hexachlorobenzene	ND		ug/kg	98	18.
Bis(2-chloroethyl)ether	ND		ug/kg	150	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
1,2-Dichlorobenzene	ND		ug/kg	160	30.
1,3-Dichlorobenzene	ND		ug/kg	160	28.
1,4-Dichlorobenzene	ND		ug/kg	160	29.
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	98	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	16.
Hexachlorobutadiene	ND		ug/kg	160	24.
Hexachlorocyclopentadiene	ND		ug/kg	470	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	19.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	25.
Bis(2-ethylhexyl)phthalate	66	J	ug/kg	160	57.
Butyl benzyl phthalate	ND		ug/kg	160	41.
Di-n-butylphthalate	ND		ug/kg	160	31.
Di-n-octylphthalate	ND		ug/kg	160	56.
Diethyl phthalate	ND		ug/kg	160	15.



Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 02/10/24 11:02
Analyst: EK

Extraction Method: EPA 3546
Extraction Date: 02/09/24 06:58

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1883336-1					
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	28.
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	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	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	62.



Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 02/10/24 11:02
Analyst: EK

Extraction Method: EPA 3546
Extraction Date: 02/09/24 06:58

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1883336-1					
4-Nitrophenol	ND		ug/kg	230	67.
2,4-Dinitrophenol	ND		ug/kg	790	76.
4,6-Dinitro-o-cresol	ND		ug/kg	430	79.
Pentachlorophenol	ND		ug/kg	130	36.
Phenol	ND		ug/kg	160	25.
2-Methylphenol	ND		ug/kg	160	25.
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	26.
2,4,5-Trichlorophenol	ND		ug/kg	160	31.
Benzoic Acid	ND		ug/kg	530	170
Benzyl Alcohol	ND		ug/kg	160	50.
Carbazole	ND		ug/kg	160	16.
1,4-Dioxane	ND		ug/kg	25	7.6

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		25-120
Phenol-d6	53		10-120
Nitrobenzene-d5	49		23-120
2-Fluorobiphenyl	52		30-120
2,4,6-Tribromophenol	66		10-136
4-Terphenyl-d14	59		18-120

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1883336-2 WG1883336-3								
Acenaphthene	53		52		31-137	2		50
1,2,4-Trichlorobenzene	56		56		38-107	0		50
Hexachlorobenzene	64		63		40-140	2		50
Bis(2-chloroethyl)ether	50		52		40-140	4		50
2-Chloronaphthalene	60		60		40-140	0		50
1,2-Dichlorobenzene	55		56		40-140	2		50
1,3-Dichlorobenzene	54		55		40-140	2		50
1,4-Dichlorobenzene	55		54		28-104	2		50
3,3'-Dichlorobenzidine	45		41		40-140	9		50
2,4-Dinitrotoluene	58		57		40-132	2		50
2,6-Dinitrotoluene	60		58		40-140	3		50
Fluoranthene	58		58		40-140	0		50
4-Chlorophenyl phenyl ether	59		58		40-140	2		50
4-Bromophenyl phenyl ether	62		60		40-140	3		50
Bis(2-chloroisopropyl)ether	32	Q	32	Q	40-140	0		50
Bis(2-chloroethoxy)methane	55		55		40-117	0		50
Hexachlorobutadiene	56		57		40-140	2		50
Hexachlorocyclopentadiene	64		64		40-140	0		50
Hexachloroethane	51		51		40-140	0		50
Isophorone	54		55		40-140	2		50
Naphthalene	56		54		40-140	4		50
Nitrobenzene	53		53		40-140	0		50
NDPA/DPA	61		59		36-157	3		50

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1883336-2 WG1883336-3								
n-Nitrosodi-n-propylamine	55		55		32-121	0		50
Bis(2-ethylhexyl)phthalate	58		57		40-140	2		50
Butyl benzyl phthalate	62		63		40-140	2		50
Di-n-butylphthalate	61		61		40-140	0		50
Di-n-octylphthalate	58		57		40-140	2		50
Diethyl phthalate	61		59		40-140	3		50
Dimethyl phthalate	60		60		40-140	0		50
Benzo(a)anthracene	53		52		40-140	2		50
Benzo(a)pyrene	60		58		40-140	3		50
Benzo(b)fluoranthene	58		56		40-140	4		50
Benzo(k)fluoranthene	51		50		40-140	2		50
Chrysene	54		53		40-140	2		50
Acenaphthylene	60		59		40-140	2		50
Anthracene	59		58		40-140	2		50
Benzo(ghi)perylene	51		50		40-140	2		50
Fluorene	59		58		40-140	2		50
Phenanthrene	56		56		40-140	0		50
Dibenzo(a,h)anthracene	53		52		40-140	2		50
Indeno(1,2,3-cd)pyrene	56		55		40-140	2		50
Pyrene	57		57		35-142	0		50
Biphenyl	61		61		37-127	0		50
4-Chloroaniline	47		46		40-140	2		50
2-Nitroaniline	65		65		47-134	0		50

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1883336-2 WG1883336-3								
3-Nitroaniline	54		51		26-129	6		50
4-Nitroaniline	60		60		41-125	0		50
Dibenzofuran	58		56		40-140	4		50
2-Methylnaphthalene	57		57		40-140	0		50
1,2,4,5-Tetrachlorobenzene	63		62		40-117	2		50
Acetophenone	58		59		14-144	2		50
2,4,6-Trichlorophenol	62		62		30-130	0		50
p-Chloro-m-cresol	58		56		26-103	4		50
2-Chlorophenol	56		57		25-102	2		50
2,4-Dichlorophenol	63		64		30-130	2		50
2,4-Dimethylphenol	59		58		30-130	2		50
2-Nitrophenol	63		61		30-130	3		50
4-Nitrophenol	53		54		11-114	2		50
2,4-Dinitrophenol	28		26		4-130	7		50
4,6-Dinitro-o-cresol	62		57		10-130	8		50
Pentachlorophenol	60		59		17-109	2		50
Phenol	58		57		26-90	2		50
2-Methylphenol	60		59		30-130.	2		50
3-Methylphenol/4-Methylphenol	66		66		30-130	0		50
2,4,5-Trichlorophenol	65		63		30-130	3		50
Benzoic Acid	0	Q	0	Q	10-110	NC		50
Benzyl Alcohol	55		54		40-140	2		50
Carbazole	58		59		54-128	2		50

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1883336-2 WG1883336-3								
1,4-Dioxane	38	Q	41		40-140	8		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	58		59		25-120
Phenol-d6	58		58		10-120
Nitrobenzene-d5	54		53		23-120
2-Fluorobiphenyl	57		56		30-120
2,4,6-Tribromophenol	72		69		10-136
4-Terphenyl-d14	59		59		18-120

INORGANICS & MISCELLANEOUS

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

SAMPLE RESULTS

Lab ID: L2406251-01
Client ID: FLOA-SUBSLAB-02052024
Sample Location: 3875 RIVER RD, TONAWANDA

Date Collected: 02/05/24 14:30
Date Received: 02/05/24
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	71.1		%	0.100	NA	1	-	02/06/24 12:54	121,2540G	ROI



Lab Duplicate Analysis
Batch Quality Control

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
Report Date: 01/03/25

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1882015-1 QC Sample: L2406249-01 Client ID: DUP Sample						
Solids, Total	93.6	94.6	%	1		20

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251

Report Date: 01/03/25

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2406251-01A	Plastic 2oz unpreserved for TS	A	NA		5.1	Y	Absent		TS(7)
L2406251-01B	Glass 120ml/4oz unpreserved	A	NA		5.1	Y	Absent		NYTCL-8270(14)
L2406251-01C	Glass 120ml/4oz unpreserved	A	NA		5.1	Y	Absent		NYTCL-8270(14)
L2406251-01D	Vial Large Septa unpreserved (4oz)	A	NA		5.1	Y	Absent		NYTCL-8260(14)
L2406251-01X	Vial MeOH preserved split	A	NA		5.1	Y	Absent		NYTCL-8260(14)
L2406251-01Y	Vial Water preserved split	A	NA		5.1	Y	Absent	07-FEB-24 04:44	NYTCL-8260(14)
L2406251-01Z	Vial Water preserved split	A	NA		5.1	Y	Absent	07-FEB-24 04:44	NYTCL-8260(14)

Project Name: RITC
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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



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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: RITC
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Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- 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.)

Project Name: RITC
Project Number: FLOA BUILDING

Lab Number: L2406251
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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.

LIMITATION OF LIABILITIES

Pace Analytical Services 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 Pace Analytical Services shall be to re-perform the work at it's own expense. In no event shall Pace Analytical Services 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 Pace Analytical Services.

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.



Pace Analytical Services LLCFacility: **Northeast**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**Revision **23**Published Date: **12/09/2024**Page **1** of **1****Certification Information**

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility – 8 Walkup Dr. Westborough, MA 01581**EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048****SM 2540D:** TSS.**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.

Nonpotable Water: **EPA RSK-175 Dissolved Gases****Biological Tissue Matrix:** EPA 3050B**Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048****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.

Nonpotable Water: **EPA RSK-175 Dissolved Gases**

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility – 8 Walkup Dr. Westborough, MA 01581**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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9223B; 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).**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048****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 Project Manager.

216124

L24 0625

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)



February 18, 2025

Service Request No:R2010276

Mr. Todd Waldrop
Inventum Engineering
481 Carlisle Drive
Herndon, VA 20170

Laboratory Results for: Riverview - BCP RI

Dear Mr.Waldrop,

Enclosed are the results of the sample(s) submitted to our laboratory October 31, 2020
For your reference, these analyses have been assigned our service request number **R2010276**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7475. You may also contact me via email at Meghan.Pedro@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Meghan Pedro
Project Manager

ADDRESS

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

PHONE +1 585 288 5380 | **FAX** +1 585 288 8475

ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com



Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil, Water

Service Request: R2010276
Date Received: 10/31/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Manual Integrations may have been used in the quantitation of the results in this report. Manual Integrations are readily identified in the raw data on the Quantitation Reports (Organics) by the automatic placement of an "m" next to the sample result. For Ion Chromatography, the manual integrations are identified by the automatic placement of "manipulated" or "manually integrated" in the upper left corner of the chromatogram (Hexavalent Chromium) or "M" by the result in the "Type" column (anions). The reason for the manual integration is noted on the "after" chromatogram, which is found with the original chromatogram and quantitation report. All integrations follow the lab SOP ADM-INT "Manual Integration."

Sample Receipt:

Sixteen soil, water samples were received for analysis at ALS Environmental on 10/31/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 11/06/2020: The lower control limit for the spike recovery of the Laboratory Control Sample Duplicate (LCSD) was exceeded for one or more analyte. Precision is also outside limits. The LCS was within limits for all. There was an obvious issue with the LCSD during prep that caused it to go out low. There was batch QC run that shows the issue is isolated to the LCSD. The analytes affected are flagged in the LCS Summary.

2,4-Dinitrophenol has been reported as zero percent recovery in the LCS due to a limitation in LIMs. 2,4-Dinitrophenol was detected at 10% recovery, respectively, within laboratory limits. The LCS is acceptable and should not be flagged on the summary form. The precision is also outside laboratory control limits.

Method 8270D, 11/06/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

2,4-Dinitrophenol has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. 2,4-Dinitrophenol was detected at 26% and 17% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form. The precision is also outside laboratory control limits.

Method 8270D, 11/06/2020: The RPD between the LCS and the LCSD was greater than the RPD limit. The percent recovery limit was met for both the LCS and the LCSD.

Method 8270D, 11/06/2020: The matrix spike recovery of one or more of the spiked analytes was outside of control limits because of sample heterogeneity. The sample contained a background concentration of the analyte such that sample heterogeneity significantly affected the spike recovery calculation. No further corrective action was required.

Method 8270D, R2010276-007: The control limits for one or more surrogates in the sample are not applicable. The analysis of the sample required a dilution, which resulted in a surrogate concentration below the Method Reporting Limit (MRL). No further corrective action was appropriate.

Method 8270D LL, 11/16/2020: The lower control limit for the spike recovery of the Laboratory Control Sample Duplicate (LCSD) was exceeded for one or more analyte. Precision is also outside limits. There were no detections of the analyte(s) in the associated field samples. The LCS/MS/MSD are within limits. The analytes affected are flagged in the LCS Summary.

Approved by _____

Date 02/18/2025



1,4-Dioxane has been reported as zero percent recovery in the MS/MSD due to a limitation in LIMs. 1,4-Dioxane was detected at 61% and 43% recovery, respectively, within laboratory limits. The MS/MSD is acceptable and should not be flagged on the summary form. The precision is also outside laboratory control limits.

Method 8270D, 11/21/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 11/30/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 11/30/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken. P-Phenylenediamine is >40%. Samples run are dilutions for the PAH compounds only.

Method 8270D, R2010276-007: The control limits for one or more surrogates in the sample are not applicable. The analysis of the sample required a dilution, which resulted in a surrogate concentration below the Method Reporting Limit (MRL). No further corrective action was appropriate.

Method 8270D, 11/10/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

2,4-Dinitrophenol has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. 2,4-Dinitrophenol was detected at 22% and 22% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.

The RPD between the LCS and the LCSD was greater than the RPD limit. The percent recovery limit was met for both the LCS and the LCSD.

Semivoa GC:

Method 8081B, 11/06/2020: The control limits for matrix spike recovery of one or more of the spiked analytes is not applicable. The analysis of this sample required a dilution such that the added spike concentration was diluted outside of a useable level. Matrix spikes which have been diluted have been flagged with a "D". No further corrective action was required.

Method 8081B: The upper control limit was exceeded for one or more surrogates in one or more samples in this report. The elevated recovery equates to a high bias. Since no target analytes were detected in the sample(s), the quality of the sample data is not significantly affected. No further corrective action was appropriate.

Method 8081B, 11/06/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8081B, 11/06/2020: The control limits were exceeded for analytes in the Continuing Calibration Verification (CCV). The QC failure was most likely due to the composition of the sample(s) immediately preceding the failing CCV. In order to protect the integrity of the instrument, no further corrective action was taken. Results should be considered estimated. Samples ran 2x with the same result to the closing ccv.

Method 8081B, r2010276-001,ms,msd,003,006: The control limits were exceeded for one or more surrogates due to matrix interferences. Due to the presence of non-target background components that prevented adequate resolution of the surrogate,

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accurate quantitation was not possible. No further corrective action was appropriate.

Method 8081B, 11/06/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8081B: The upper control limit was exceeded for one or more surrogates in one or more samples in this report. The elevated recovery equates to a high bias. Since no target analytes were detected in the sample(s), the quality of the sample data is not significantly affected. No further corrective action was appropriate.

Method 8081B, 705182: The Method Reporting Limit (MRL) was elevated due to color of sample.

Method 8081B, 11/18/2020: The control limits were exceeded for analytes in the Continuing Calibration Verification (CCV). The QC failure was most likely due to the composition of the sample(s) immediately preceding the failing CCV. In order to protect the integrity of the instrument, no further corrective action was taken. Results should be considered estimated. Sample r2010276-011 was re-ran after sulfur cleanup confirms original.

Method 8082A, 11/06/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8082A, 11/07/2020: The control limits were exceeded for analytes in the Continuing Calibration Verification (CCV). The QC failure was most likely due to the composition of the sample(s) immediately preceding the failing CCV. In order to protect the integrity of the instrument, no further corrective action was taken. Results should be considered estimated. Samples ran 2x with the same result to the closing ccv.

Method 8151A, 11/10/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8151A, 11/10/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8151A, 11/23/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Subcontracted Analytical Parameters:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Method 8260C, 11/06/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and

A handwritten signature in black ink, appearing to read "Meghan Pedco".

Approved by _____

Date 02/18/2025



no further corrective action was taken.

Method 8260C, 11/06/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 11/06/2020: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Method 8260C, 11/06/2020, R2010276-004,008,011,002(MS/MSD): The recovery of one or more internal standards was outside control limits because of suspected matrix interference. The sample was re-extracted and reanalyzed, but produced similar results. No further corrective action was appropriate. Sample R2010276-006 was reported with low IS as there was no sample left for reanalysis.

Method 8260C, 11/11/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 11/11/2020, R2010276-004,008,011: The recovery of one or more internal standards was outside control limits because of suspected matrix interference. The sample was re-extracted and reanalyzed, but produced similar results. No further corrective action was appropriate.

Method 8260C, 11/11/2020: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Method 8260C, 11/08/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8260C, R2010276-007: Sample(s) required dilution due high nontarget compounds. The reporting limits are adjusted to reflect the dilution.

Method 8260C, 11/08/2020: The lower control limit for the spike recovery of the Laboratory Control Sample (LCS) was exceeded for one or more analyte. There were no detections of the analyte(s) in the associated field samples. The discrepancy associated with reduced recovery equates to a potential low bias. The analytes affected are flagged in the LCS Summary.

Method 8260C, 11/10/2020: The lower control limit for the spike recovery of the Laboratory Control Sample (LCS) was exceeded for one or more analyte. There were no detections of the analyte(s) in the associated field samples. The discrepancy associated with reduced recovery equates to a potential low bias. The analytes affected are flagged in the LCS Summary.

Method 8260C, 11/10/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 11/10/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the

A handwritten signature in black ink, appearing to read "Meghan Pedicini".

Approved by _____

Date 02/18/2025



Environmental

quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Reports revised 2/18/25 to include 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene, this is the summary report and does not include any sub lab results.

Meghan Pedro

Approved by _____

Date 02/18/2025



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: MW-BCP-15-61		Lab ID: R2010276-011				
Analyte	Results	Flag	MDL	MRL	Units	Method
1,1,1-Trichloroethane (TCA)	0.76	J	0.26	6.4	ug/Kg	8260C
1,1,1-Trichloroethane (TCA)	0.56	J	0.36	8.8	ug/Kg	8260C
1,2,4-Trimethylbenzene	0.69	J	0.26	6.4	ug/Kg	8260C
1,2,4-Trimethylbenzene	0.68	J	0.36	8.8	ug/Kg	8260C
1,3,5-Trimethylbenzene	0.71	J	0.26	6.4	ug/Kg	8260C
1,3,5-Trimethylbenzene	0.39	J	0.36	8.8	ug/Kg	8260C
2-Methylnaphthalene	210	J	79	360	ug/Kg	8270D
Acenaphthylene	480		95	360	ug/Kg	8270D
Acetone	14		6.0	6.4	ug/Kg	8260C
Acetone	23		8.3	8.8	ug/Kg	8260C
Aluminum, Total	43300		13	20	mg/Kg	6010D
Anthracene	450		100	360	ug/Kg	8270D
Aroclor 1254	25	JP	19	36	ug/Kg	8082A
Aroclor 1260	65		19	36	ug/Kg	8082A
Arsenic, Total	0.9	J	0.8	1.0	mg/Kg	6010D
Barium, Total	1140		1.6	2.0	mg/Kg	6010D
Benz(a)anthracene	1200		110	360	ug/Kg	8270D
Benzene	0.57	J	0.36	8.8	ug/Kg	8260C
Benzo(a)pyrene	1500		140	360	ug/Kg	8270D
Benzo(b)fluoranthene	1700		120	360	ug/Kg	8270D
Benzo(g,h,i)perylene	750		95	360	ug/Kg	8270D
Benzo(k)fluoranthene	630		140	360	ug/Kg	8270D
Beryllium, Total	7.22		0.03	0.31	mg/Kg	6010D
Calcium, Total	250000		400	1000	mg/Kg	6010D
Carbazole	120	J	110	360	ug/Kg	8270D
Carbon Disulfide	3.2	J	0.37	6.4	ug/Kg	8260C
Carbon Disulfide	3.9	J	0.52	8.8	ug/Kg	8260C
Chromium, Total	1	J	0.4	1.0	mg/Kg	6010D
Chrysene	1300		140	360	ug/Kg	8270D
Copper, Total	1.3	J	0.7	2.0	mg/Kg	6010D
Cyanide, Total	0.26		0.17	0.25	mg/Kg	9012B
Cyclohexane	4.1	J	0.34	6.4	ug/Kg	8260C
Cyclohexane	2.9	J	0.46	8.8	ug/Kg	8260C
Dibenz(a,h)anthracene	220	J	110	360	ug/Kg	8270D
Dibenzofuran	120	J	71	360	ug/Kg	8270D
Fluoranthene	2100		140	360	ug/Kg	8270D
Fluorene	120	J	83	360	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	860		120	360	ug/Kg	8270D
Iron, Total	725		14	20	mg/Kg	6010D
m,p-Xylenes	0.53	J	0.48	13	ug/Kg	8260C



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: MW-BCP-15-61			Lab ID: R2010276-011			

Analyte	Results	Flag	MDL	MRL	Units	Method
m,p-Xylenes	0.91	J	0.66	18	ug/Kg	8260C
Magnesium, Total	27500		20	100	mg/Kg	6010D
Manganese, Total	11200		160	200	mg/Kg	6010D
Methyl Acetate	1.6	J	1.5	8.8	ug/Kg	8260C
Methylcyclohexane	7.7		0.40	6.4	ug/Kg	8260C
Methylcyclohexane	4.3	J	0.55	8.8	ug/Kg	8260C
Naphthalene	410		93	360	ug/Kg	8270D
o-Xylene	0.53	J	0.26	6.4	ug/Kg	8260C
o-Xylene	0.53	J	0.36	8.8	ug/Kg	8260C
Phenanthrene	1300		110	360	ug/Kg	8270D
Potassium, Total	5250		60	200	mg/Kg	6010D
Pyrene	1900		150	360	ug/Kg	8270D
Selenium, Total	8.4		0.6	1.0	mg/Kg	6010D
Sodium, Total	830		60	100	mg/Kg	6010D
Thallium, Total	3.5		0.7	1.0	mg/Kg	6010D
Toluene	0.44	J	0.26	6.4	ug/Kg	8260C
Toluene	1.3	J	0.36	8.8	ug/Kg	8260C
Total Solids	92.5				Percent	ALS SOP
Vanadium, Total	6.4		0.8	5.1	mg/Kg	6010D

CLIENT ID: MW-BCP-150-26			Lab ID: R2010276-004			

Analyte	Results	Flag	MDL	MRL	Units	Method
1,2,4-Trimethylbenzene	0.36	J	0.27	6.7	ug/Kg	8260C
2-Butanone (MEK)	3.8	J	2.7	6.7	ug/Kg	8260C
Acetone	8.8		5.9	6.2	ug/Kg	8260C
Acetone	130		6.3	6.7	ug/Kg	8260C
Methylcyclohexane	0.46	J	0.42	6.7	ug/Kg	8260C
Total Solids	86.2				Percent	ALS SOP

CLIENT ID: TP-BCP-31-01-10292020			Lab ID: R2010276-006			

Analyte	Results	Flag	MDL	MRL	Units	Method
1,2,4-Trimethylbenzene	2.2	J	0.35	8.7	ug/Kg	8260C
1,3,5-Trimethylbenzene	1.2	J	0.35	8.7	ug/Kg	8260C
2-Methylnaphthalene	1700		280	1200	ug/Kg	8270D
2-Methylnaphthalene	2000	DJ	460	2100	ug/Kg	8270D
Acenaphthene	1400		280	1200	ug/Kg	8270D
Acenaphthene	1500	DJ	470	2100	ug/Kg	8270D
Acenaphthylene	740	J	330	1200	ug/Kg	8270D
Acenaphthylene	830	DJ	550	2100	ug/Kg	8270D
Aluminum, Total	1260		16	25	mg/Kg	6010D
Anthracene	1600		350	1200	ug/Kg	8270D



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP-BCP-31-01-10292020			Lab ID: R2010276-006			
Analyte	Results	Flag	MDL	MRL	Units	Method
Anthracene	1700	DJ	580	2100	ug/Kg	8270D
Arsenic, Total	11.7		0.9	1.3	mg/Kg	6010D
Barium, Total	96.4		1.9	2.5	mg/Kg	6010D
Benz(a)anthracene	8300		370	1200	ug/Kg	8270D
Benz(a)anthracene	9200	D	610	2100	ug/Kg	8270D
Benzene	1.9	J	0.35	8.7	ug/Kg	8260C
Benzo(a)pyrene	15000	E	460	1200	ug/Kg	8270D
Benzo(a)pyrene	17000	D	760	2100	ug/Kg	8270D
Benzo(b)fluoranthene	16000	E	420	1200	ug/Kg	8270D
Benzo(b)fluoranthene	16000	D	700	2100	ug/Kg	8270D
Benzo(g,h,i)perylene	9200		330	1200	ug/Kg	8270D
Benzo(g,h,i)perylene	12000	D	550	2100	ug/Kg	8270D
Benzo(k)fluoranthene	6200		460	1200	ug/Kg	8270D
Benzo(k)fluoranthene	5900	D	760	2100	ug/Kg	8270D
Beryllium, Total	1.02		0.04	0.38	mg/Kg	6010D
Calcium, Total	800		50	130	mg/Kg	6010D
Carbazole	710	J	360	1200	ug/Kg	8270D
Carbazole	940	DJ	600	2100	ug/Kg	8270D
Chromium, Total	14.6		0.5	1.3	mg/Kg	6010D
Chrysene	9200		460	1200	ug/Kg	8270D
Chrysene	11000	D	760	2100	ug/Kg	8270D
Cobalt, Total	4.2	J	0.6	6.3	mg/Kg	6010D
Copper, Total	42.1		0.8	2.5	mg/Kg	6010D
Cyanide, Total	0.30	J	0.20	0.35	mg/Kg	9012B
Cyclohexane	1.7	J	0.46	8.7	ug/Kg	8260C
Dibenz(a,h)anthracene	2200		370	1200	ug/Kg	8270D
Dibenz(a,h)anthracene	2500	D	620	2100	ug/Kg	8270D
Dibenzofuran	850	J	250	1200	ug/Kg	8270D
Dibenzofuran	950	DJ	410	2100	ug/Kg	8270D
Ethylbenzene	0.54	J	0.35	8.7	ug/Kg	8260C
Fluoranthene	11000		460	1200	ug/Kg	8270D
Fluoranthene	14000	D	760	2100	ug/Kg	8270D
Fluorene	520	J	290	1200	ug/Kg	8270D
Fluorene	590	DJ	480	2100	ug/Kg	8270D
gamma-Chlordane	9.7	J	5.3	11	ug/Kg	8081B
Indeno(1,2,3-cd)pyrene	9800		420	1200	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	11000	D	700	2100	ug/Kg	8270D
Iron, Total	24300		170	250	mg/Kg	6010D
Lead, Total	19.6		0.6	6.3	mg/Kg	6010D
m,p-Xylenes	2.1	J	0.65	17	ug/Kg	8260C



SAMPLE DETECTION SUMMARY

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CLIENT ID: TP-BCP-31-01-10292020			Lab ID: R2010276-006			
Analyte	Results	Flag	MDL	MRL	Units	Method
Magnesium, Total	170		20	130	mg/Kg	6010D
Manganese, Total	54.4		1.9	2.5	mg/Kg	6010D
Mercury, Total	0.040		0.016	0.039	mg/Kg	7471B
Methylcyclohexane	2.8	J	0.54	8.7	ug/Kg	8260C
Naphthalene	1900		320	1200	ug/Kg	8270D
Naphthalene	2200	D	540	2100	ug/Kg	8270D
Nickel, Total	12.5		0.9	5.0	mg/Kg	6010D
o-Xylene	1.3	J	0.35	8.7	ug/Kg	8260C
Phenanthrene	6600		370	1200	ug/Kg	8270D
Phenanthrene	7500	D	610	2100	ug/Kg	8270D
Potassium, Total	330		70	250	mg/Kg	6010D
Pyrene	13000	E	490	1200	ug/Kg	8270D
Pyrene	13000	D	820	2100	ug/Kg	8270D
Selenium, Total	2.5		0.7	1.3	mg/Kg	6010D
Sodium, Total	230		70	130	mg/Kg	6010D
Toluene	1.3	J	0.35	8.7	ug/Kg	8260C
Total Solids	79.7				Percent	ALS SOP
Vanadium, Total	22.6		0.9	6.3	mg/Kg	6010D
Zinc, Total	21.4		1.8	2.5	mg/Kg	6010D

CLIENT ID: TP-BCP-31-CL-10292020			Lab ID: R2010276-007			
Analyte	Results	Flag	MDL	MRL	Units	Method
1,2,4-Trimethylbenzene	28000	J	1700	42000	ug/Kg	8260C
1,3,5-Trimethylbenzene	13000	J	1700	42000	ug/Kg	8260C
2,4-Dimethylphenol	23000		500	2300	ug/Kg	8270D
2,4-Dimethylphenol	14000	DJ	10000	45000	ug/Kg	8270D
2-Methylnaphthalene	220000	E	500	2300	ug/Kg	8270D
2-Methylnaphthalene	280000	D	10000	45000	ug/Kg	8270D
2-Methylnaphthalene	320000	D	50000	230000	ug/Kg	8270D
2-Methylphenol	4900		490	2300	ug/Kg	8270D
3- and 4-Methylphenol Coelution	9700		440	2300	ug/Kg	8270D
3- and 4-Methylphenol Coelution	9700	DJ	8700	45000	ug/Kg	8270D
Acenaphthene	24000	E	510	2300	ug/Kg	8270D
Acenaphthene	28000	DJ	11000	45000	ug/Kg	8270D
Acenaphthylene	110000	E	600	2300	ug/Kg	8270D
Acenaphthylene	350000	D	12000	45000	ug/Kg	8270D
Acenaphthylene	390000	D	60000	230000	ug/Kg	8270D
Aluminum, Total	23000		16	26	mg/Kg	6010D
Anthracene	130000	E	640	2300	ug/Kg	8270D
Anthracene	260000	D	13000	45000	ug/Kg	8270D
Anthracene	280000	D	64000	230000	ug/Kg	8270D



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP-BCP-31-CL-10292020			Lab ID: R2010276-007			
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Total	6.2		0.96	1.3	mg/Kg	6010D
Barium, Total	148		2.0	2.6	mg/Kg	6010D
Benz(a)anthracene	210000	E	670	2300	ug/Kg	8270D
Benz(a)anthracene	230000	D	14000	45000	ug/Kg	8270D
Benz(a)anthracene	250000	D	67000	230000	ug/Kg	8270D
Benzene	20000	J	1700	42000	ug/Kg	8260C
Benzo(a)pyrene	180000	E	830	2300	ug/Kg	8270D
Benzo(a)pyrene	240000	D	17000	45000	ug/Kg	8270D
Benzo(a)pyrene	250000	D	83000	230000	ug/Kg	8270D
Benzo(b)fluoranthene	210000	E	760	2300	ug/Kg	8270D
Benzo(b)fluoranthene	210000	D	16000	45000	ug/Kg	8270D
Benzo(b)fluoranthene	230000	D	76000	230000	ug/Kg	8270D
Benzo(g,h,i)perylene	92000	E	600	2300	ug/Kg	8270D
Benzo(g,h,i)perylene	140000	D	12000	45000	ug/Kg	8270D
Benzo(g,h,i)perylene	140000	DJ	60000	230000	ug/Kg	8270D
Benzo(k)fluoranthene	69000	E	830	2300	ug/Kg	8270D
Benzo(k)fluoranthene	83000	D	17000	45000	ug/Kg	8270D
Benzo(k)fluoranthene	91000	DJ	83000	230000	ug/Kg	8270D
Beryllium, Total	1.23		0.04	0.39	mg/Kg	6010D
Biphenyl	42000	E	560	2300	ug/Kg	8270D
Biphenyl	62000	D	12000	45000	ug/Kg	8270D
Biphenyl	65000	DJ	56000	230000	ug/Kg	8270D
Cadmium, Total	0.37	J	0.32	0.65	mg/Kg	6010D
Calcium, Total	2660		50	130	mg/Kg	6010D
Carbazole	110000	E	660	2300	ug/Kg	8270D
Carbazole	130000	D	14000	45000	ug/Kg	8270D
Carbazole	140000	DJ	66000	230000	ug/Kg	8270D
Chromium, Total	26.1		0.5	1.3	mg/Kg	6010D
Chrysene	150000	E	830	2300	ug/Kg	8270D
Chrysene	200000	D	17000	45000	ug/Kg	8270D
Chrysene	210000	DJ	83000	230000	ug/Kg	8270D
Cobalt, Total	6.4	J	0.6	6.5	mg/Kg	6010D
Copper, Total	18.0		0.9	2.6	mg/Kg	6010D
Cyanide, Total	0.32	J	0.22	0.37	mg/Kg	9012B
Dibenz(a,h)anthracene	27000	E	680	2300	ug/Kg	8270D
Dibenz(a,h)anthracene	31000	DJ	14000	45000	ug/Kg	8270D
Dibenzofuran	110000	E	450	2300	ug/Kg	8270D
Dibenzofuran	230000	D	9000	45000	ug/Kg	8270D
Dibenzofuran	270000	D	45000	230000	ug/Kg	8270D
Ethylbenzene	22000	J	1700	42000	ug/Kg	8260C



SAMPLE DETECTION SUMMARY

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CLIENT ID: TP-BCP-31-CL-10292020			Lab ID: R2010276-007			
Analyte	Results	Flag	MDL	MRL	Units	Method
Fluoranthene	280000	E	830	2300	ug/Kg	8270D
Fluoranthene	630000	E	17000	45000	ug/Kg	8270D
Fluoranthene	740000	D	83000	230000	ug/Kg	8270D
Fluorene	150000	E	530	2300	ug/Kg	8270D
Fluorene	350000	D	11000	45000	ug/Kg	8270D
Fluorene	400000	D	53000	230000	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	110000	E	760	2300	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	130000	D	16000	45000	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	130000	DJ	76000	230000	ug/Kg	8270D
Iron, Total	26900		170	260	mg/Kg	6010D
Lead, Total	17.7		0.6	6.5	mg/Kg	6010D
m,p-Xylenes	42000	J	3200	85000	ug/Kg	8260C
Magnesium, Total	3510		20	130	mg/Kg	6010D
Manganese, Total	330		2.0	2.6	mg/Kg	6010D
Mercury, Total	0.065		0.017	0.042	mg/Kg	7471B
Naphthalene	350000	E	590	2300	ug/Kg	8270D
Naphthalene	1200000	E	12000	45000	ug/Kg	8270D
Naphthalene	1700000	D	59000	230000	ug/Kg	8270D
Nickel, Total	17.5		0.9	5.2	mg/Kg	6010D
o-Xylene	16000	J	1700	42000	ug/Kg	8260C
Phenanthrene	340000	E	670	2300	ug/Kg	8270D
Phenanthrene	870000	E	14000	45000	ug/Kg	8270D
Phenanthrene	1100000	D	67000	230000	ug/Kg	8270D
Phenol	2800		540	2300	ug/Kg	8270D
Potassium, Total	2160		70	260	mg/Kg	6010D
Pyrene	270000	E	900	2300	ug/Kg	8270D
Pyrene	490000	E	18000	45000	ug/Kg	8270D
Pyrene	510000	D	90000	230000	ug/Kg	8270D
Selenium, Total	1.6		0.7	1.3	mg/Kg	6010D
Sodium, Total	100	J	70	130	mg/Kg	6010D
Styrene	1700	J	1700	42000	ug/Kg	8260C
Toluene	25000	J	1700	42000	ug/Kg	8260C
Total Solids	73.0				Percent	ALS SOP
Vanadium, Total	33.3		0.98	6.5	mg/Kg	6010D
Zinc, Total	83.8		1.9	2.6	mg/Kg	6010D

CLIENT ID: TP-BCP-25-01-10292020			Lab ID: R2010276-008			
Analyte	Results	Flag	MDL	MRL	Units	Method
1,2,4-Trimethylbenzene	6.6	J	0.34	8.4	ug/Kg	8260C
1,2,4-Trimethylbenzene	0.67	J	0.38	9.5	ug/Kg	8260C
1,3,5-Trimethylbenzene	4.5	J	0.34	8.4	ug/Kg	8260C



SAMPLE DETECTION SUMMARY

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CLIENT ID: TP-BCP-25-01-10292020			Lab ID: R2010276-008			
Analyte	Results	Flag	MDL	MRL	Units	Method
1,3,5-Trimethylbenzene	0.47	J	0.38	9.5	ug/Kg	8260C
2-Methylnaphthalene	950		96	440	ug/Kg	8270D
2-Methylnaphthalene	910	DJ	290	1300	ug/Kg	8270D
3- and 4-Methylphenol Coelution	130	J	84	440	ug/Kg	8270D
Acenaphthene	540		99	440	ug/Kg	8270D
Acenaphthene	520	DJ	300	1300	ug/Kg	8270D
Acenaphthylene	1700		120	440	ug/Kg	8270D
Acenaphthylene	1800	D	350	1300	ug/Kg	8270D
Aluminum, Total	2220		16	25	mg/Kg	6010D
Anthracene	3700		130	440	ug/Kg	8270D
Anthracene	3900	D	370	1300	ug/Kg	8270D
Arsenic, Total	5.6		0.9	1.3	mg/Kg	6010D
Barium, Total	80.3		1.9	2.5	mg/Kg	6010D
Benz(a)anthracene	7600	E	130	440	ug/Kg	8270D
Benz(a)anthracene	7800	D	390	1300	ug/Kg	8270D
Benzene	1.1	J	0.34	8.4	ug/Kg	8260C
Benzo(a)pyrene	7800	E	160	440	ug/Kg	8270D
Benzo(a)pyrene	8100	D	480	1300	ug/Kg	8270D
Benzo(b)fluoranthene	9700	E	150	440	ug/Kg	8270D
Benzo(b)fluoranthene	10000	D	440	1300	ug/Kg	8270D
Benzo(g,h,i)perylene	4400	E	120	440	ug/Kg	8270D
Benzo(g,h,i)perylene	4700	D	350	1300	ug/Kg	8270D
Benzo(k)fluoranthene	3200		160	440	ug/Kg	8270D
Benzo(k)fluoranthene	3300	D	480	1300	ug/Kg	8270D
Beryllium, Total	0.54		0.04	0.38	mg/Kg	6010D
Biphenyl	210	J	110	440	ug/Kg	8270D
Cadmium, Total	0.51	J	0.31	0.63	mg/Kg	6010D
Calcium, Total	9130		50	130	mg/Kg	6010D
Carbazole	1400		130	440	ug/Kg	8270D
Carbazole	1700	D	380	1300	ug/Kg	8270D
Carbon Disulfide	1.0	J	0.49	8.4	ug/Kg	8260C
Chromium, Total	35.7		0.5	1.3	mg/Kg	6010D
Chrysene	8400	E	160	440	ug/Kg	8270D
Chrysene	8600	D	480	1300	ug/Kg	8270D
Cobalt, Total	4.8	J	0.6	6.3	mg/Kg	6010D
Copper, Total	81.7		0.8	2.5	mg/Kg	6010D
Cyanide, Total	1.38		0.21	0.36	mg/Kg	9012B
Dibenz(a,h)anthracene	1400		130	440	ug/Kg	8270D
Dibenz(a,h)anthracene	1500	D	390	1300	ug/Kg	8270D
Dibenzofuran	1400		87	440	ug/Kg	8270D



SAMPLE DETECTION SUMMARY

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CLIENT ID: TP-BCP-25-01-10292020			Lab ID: R2010276-008			

Analyte	Results	Flag	MDL	MRL	Units	Method
Dibenzofuran	1400	D	260	1300	ug/Kg	8270D
Ethylbenzene	1.5	J	0.34	8.4	ug/Kg	8260C
Fluoranthene	9900	E	160	440	ug/Kg	8270D
Fluoranthene	12000	D	480	1300	ug/Kg	8270D
Fluorene	2400		110	440	ug/Kg	8270D
Fluorene	2400	D	310	1300	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	5300	E	150	440	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	5400	D	440	1300	ug/Kg	8270D
Iron, Total	30300		170	250	mg/Kg	6010D
Lead, Total	51.5		0.6	6.3	mg/Kg	6010D
m,p-Xylenes	3.4	J	0.63	17	ug/Kg	8260C
m,p-Xylenes	0.82	J	0.71	19	ug/Kg	8260C
Magnesium, Total	1390		20	130	mg/Kg	6010D
Manganese, Total	235		1.9	2.5	mg/Kg	6010D
Mercury, Total	0.140		0.018	0.043	mg/Kg	7471B
Methylcyclohexane	1.0	J	0.53	8.4	ug/Kg	8260C
Methylcyclohexane	0.69	J	0.59	9.5	ug/Kg	8260C
Naphthalene	3300		120	440	ug/Kg	8270D
Naphthalene	3500	D	340	1300	ug/Kg	8270D
Nickel, Total	25.6		0.9	5.1	mg/Kg	6010D
o-Xylene	13		0.34	8.4	ug/Kg	8260C
Phenanthrene	8300	E	130	440	ug/Kg	8270D
Phenanthrene	10000	D	390	1300	ug/Kg	8270D
Phenol	120	J	110	440	ug/Kg	8270D
Potassium, Total	390		70	250	mg/Kg	6010D
Pyrene	9300	E	180	440	ug/Kg	8270D
Pyrene	11000	D	520	1300	ug/Kg	8270D
Sodium, Total	70	J	70	130	mg/Kg	6010D
Styrene	0.39	J	0.34	8.4	ug/Kg	8260C
Toluene	0.83	J	0.34	8.4	ug/Kg	8260C
Total Solids	76.0				Percent	ALS SOP
Trichloroethene (TCE)	0.50	BJ	0.42	9.5	ug/Kg	8260C
Vanadium, Total	12.5		0.9	6.3	mg/Kg	6010D
Zinc, Total	66.4		1.8	2.5	mg/Kg	6010D

CLIENT ID: TP-BCP-CL-10292020			Lab ID: R2010276-010			

Analyte	Results	Flag	MDL	MRL	Units	Method
1,2,4-Trimethylbenzene	0.21	J	0.19	4.7	ug/Kg	8260C
2-Butanone (MEK)	8.4		1.9	4.7	ug/Kg	8260C
Acetone	130		4.5	4.7	ug/Kg	8260C
Aluminum, Total	13300		15	24	mg/Kg	6010D



SAMPLE DETECTION SUMMARY

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CLIENT ID: TP-BCP-CL-10292020			Lab ID: R2010276-010			

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Total	3.9		0.9	1.2	mg/Kg	6010D
Barium, Total	96.2		1.9	2.4	mg/Kg	6010D
Benzene	0.76	J	0.19	4.7	ug/Kg	8260C
Beryllium, Total	0.64		0.04	0.36	mg/Kg	6010D
Cadmium, Total	0.56	J	0.30	0.61	mg/Kg	6010D
Calcium, Total	38600		400	1200	mg/Kg	6010D
Chromium, Total	18.3		0.5	1.2	mg/Kg	6010D
Cobalt, Total	11.3		0.6	6.1	mg/Kg	6010D
Copper, Total	21.5		0.8	2.4	mg/Kg	6010D
Cyanide, Total	9.77		0.20	0.35	mg/Kg	9012B
Cyclohexane	0.65	J	0.25	4.7	ug/Kg	8260C
Iron, Total	51300		160	240	mg/Kg	6010D
Lead, Total	11.1		0.5	6.1	mg/Kg	6010D
Magnesium, Total	16100		20	120	mg/Kg	6010D
Manganese, Total	2040		19	24	mg/Kg	6010D
Methylcyclohexane	0.57	J	0.30	4.7	ug/Kg	8260C
Nickel, Total	23.2		0.9	4.9	mg/Kg	6010D
Potassium, Total	2210		70	240	mg/Kg	6010D
Sodium, Total	290		70	120	mg/Kg	6010D
Toluene	0.24	J	0.19	4.7	ug/Kg	8260C
Total Solids	80.7				Percent	ALS SOP
Vanadium, Total	28.3		0.9	6.1	mg/Kg	6010D
Zinc, Total	71.4		1.8	2.4	mg/Kg	6010D

CLIENT ID: TP-BCP-SE56-10292020			Lab ID: R2010276-009			

Analyte	Results	Flag	MDL	MRL	Units	Method
2,4-Dimethylphenol	170	J	110	490	ug/Kg	8270D
2-Methylnaphthalene	440	J	110	490	ug/Kg	8270D
2-Methylnaphthalene	350	DJ	220	990	ug/Kg	8270D
2-Methylphenol	140	J	110	490	ug/Kg	8270D
3- and 4-Methylphenol Coelution	230	J	95	490	ug/Kg	8270D
3- and 4-Methylphenol Coelution	210	DJ	190	990	ug/Kg	8270D
Acenaphthylene	350	J	140	490	ug/Kg	8270D
Acenaphthylene	290	DJ	270	990	ug/Kg	8270D
Aluminum, Total	999		17	27	mg/Kg	6010D
Anthracene	240	J	140	490	ug/Kg	8270D
Antimony, Total	4.9	J	0.8	8.1	mg/Kg	6010D
Arsenic, Total	32.7		1.0	1.4	mg/Kg	6010D
Barium, Total	49.9		2.1	2.7	mg/Kg	6010D
Benz(a)anthracene	2100		150	490	ug/Kg	8270D
Benz(a)anthracene	1800	D	300	990	ug/Kg	8270D



SAMPLE DETECTION SUMMARY

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CLIENT ID: TP-BCP-SE56-10292020			Lab ID: R2010276-009			
Analyte	Results	Flag	MDL	MRL	Units	Method
Benzo(a)pyrene	2300		180	490	ug/Kg	8270D
Benzo(a)pyrene	1900	D	360	990	ug/Kg	8270D
Benzo(b)fluoranthene	3200		170	490	ug/Kg	8270D
Benzo(b)fluoranthene	2600	D	330	990	ug/Kg	8270D
Benzo(g,h,i)perylene	1400		140	490	ug/Kg	8270D
Benzo(g,h,i)perylene	1200	D	270	990	ug/Kg	8270D
Benzo(k)fluoranthene	1100		180	490	ug/Kg	8270D
Benzo(k)fluoranthene	920	DJ	360	990	ug/Kg	8270D
Cadmium, Total	0.42	J	0.33	0.68	mg/Kg	6010D
Calcium, Total	690		50	140	mg/Kg	6010D
Carbazole	310	J	150	490	ug/Kg	8270D
Carbazole	290	DJ	290	990	ug/Kg	8270D
Chromium, Total	48.9		0.5	1.4	mg/Kg	6010D
Chrysene	2200		180	490	ug/Kg	8270D
Chrysene	1800	D	360	990	ug/Kg	8270D
Cobalt, Total	2.4	J	0.7	6.8	mg/Kg	6010D
Copper, Total	499		0.9	2.7	mg/Kg	6010D
Cyanide, Total	1160		12	21	mg/Kg	9012B
Dibenz(a,h)anthracene	460	J	150	490	ug/Kg	8270D
Dibenz(a,h)anthracene	350	DJ	300	990	ug/Kg	8270D
Dibenzofuran	150	J	98	490	ug/Kg	8270D
Fluoranthene	2700		180	490	ug/Kg	8270D
Fluoranthene	2300	D	360	990	ug/Kg	8270D
Fluorene	210	J	120	490	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	1800		170	490	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	1500	D	330	990	ug/Kg	8270D
Iron, Total	35000		180	270	mg/Kg	6010D
Lead, Total	143		0.6	6.8	mg/Kg	6010D
Magnesium, Total	60	J	20	140	mg/Kg	6010D
Manganese, Total	44.3		2.1	2.7	mg/Kg	6010D
Mercury, Total	5.05		0.1	0.25	mg/Kg	7471B
Naphthalene	5300	E	130	490	ug/Kg	8270D
Naphthalene	4700	D	260	990	ug/Kg	8270D
Nickel, Total	15.2		0.9	5.4	mg/Kg	6010D
Phenanthrene	980		150	490	ug/Kg	8270D
Phenanthrene	820	DJ	290	990	ug/Kg	8270D
Phenol	290	J	120	490	ug/Kg	8270D
Potassium, Total	650		70	270	mg/Kg	6010D
Pyrene	1900		200	490	ug/Kg	8270D
Pyrene	1700	D	390	990	ug/Kg	8270D



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP-BCP-SE56-10292020			Lab ID: R2010276-009			

Analyte	Results	Flag	MDL	MRL	Units	Method
Selenium, Total	1.7		0.8	1.4	mg/Kg	6010D
Silver, Total	0.5	J	0.2	1.4	mg/Kg	6010D
Sodium, Total	90	J	80	140	mg/Kg	6010D
Thallium, Total	14.4		0.9	1.4	mg/Kg	6010D
Total Solids	67.1				Percent	ALS SOP
Vanadium, Total	65.8		1	6.8	mg/Kg	6010D
Zinc, Total	26.9		1.9	2.7	mg/Kg	6010D

CLIENT ID: MW-BCP-15-02			Lab ID: R2010276-001			

Analyte	Results	Flag	MDL	MRL	Units	Method
2-Methylnaphthalene	260	J	250	1100	ug/Kg	8270D
4,4'-DDT	5.8	J	4.8	9.7	ug/Kg	8081B
Acenaphthylene	460	J	300	1100	ug/Kg	8270D
Aluminum, Total	9640		13	21	mg/Kg	6010D
Anthracene	660	J	320	1100	ug/Kg	8270D
Aroclor 1260	94		20	38	ug/Kg	8082A
Arsenic, Total	9.6		0.8	1.1	mg/Kg	6010D
Barium, Total	147		1.7	2.1	mg/Kg	6010D
Benz(a)anthracene	2500		340	1100	ug/Kg	8270D
Benzo(a)pyrene	3600		420	1100	ug/Kg	8270D
Benzo(b)fluoranthene	4400		380	1100	ug/Kg	8270D
Benzo(g,h,i)perylene	1900		300	1100	ug/Kg	8270D
Benzo(k)fluoranthene	1500		420	1100	ug/Kg	8270D
Beryllium, Total	1.26		0.04	0.32	mg/Kg	6010D
Cadmium, Total	0.77		0.26	0.54	mg/Kg	6010D
Calcium, Total	83300		400	1100	mg/Kg	6010D
Chromium, Total	17.6		0.4	1.1	mg/Kg	6010D
Chrysene	2800		420	1100	ug/Kg	8270D
Cobalt, Total	3.9	J	0.5	5.4	mg/Kg	6010D
Copper, Total	32.2		0.7	2.1	mg/Kg	6010D
Cyanide, Total	1.94		0.17	0.26	mg/Kg	9012B
Dibenz(a,h)anthracene	490	J	340	1100	ug/Kg	8270D
Fluoranthene	4800		420	1100	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	2200		380	1100	ug/Kg	8270D
Iron, Total	25000		140	210	mg/Kg	6010D
Lead, Total	74.2		0.5	5.4	mg/Kg	6010D
Magnesium, Total	17700		20	110	mg/Kg	6010D
Manganese, Total	1300		17	21	mg/Kg	6010D
Mercury, Total	0.126		0.014	0.035	mg/Kg	7471B
Naphthalene	390	J	300	1100	ug/Kg	8270D
Nickel, Total	16.0		0.8	4.3	mg/Kg	6010D



SAMPLE DETECTION SUMMARY

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CLIENT ID: MW-BCP-15-02			Lab ID: R2010276-001			

Analyte	Results	Flag	MDL	MRL	Units	Method
Phenanthrene	2700		330	1100	ug/Kg	8270D
Potassium, Total	1440		60	210	mg/Kg	6010D
Pyrene	5000		450	1100	ug/Kg	8270D
Silver, Total	0.2	J	0.1	1.1	mg/Kg	6010D
Sodium, Total	240		60	110	mg/Kg	6010D
Thallium, Total	1.1	J	0.7	1.1	mg/Kg	6010D
Total Solids	87.8				Percent	ALS SOP
Vanadium, Total	21.9		0.8	5.4	mg/Kg	6010D
Zinc, Total	256		1.6	2.1	mg/Kg	6010D

CLIENT ID: MW-BCP-150-02			Lab ID: R2010276-003			

Analyte	Results	Flag	MDL	MRL	Units	Method
4,4'-DDT	6.3	J	4.8	9.6	ug/Kg	8081B
Acenaphthylene	300	J	290	1100	ug/Kg	8270D
Aluminum, Total	10100		13	21	mg/Kg	6010D
Anthracene	320	J	310	1100	ug/Kg	8270D
Aroclor 1248	30	J	20	37	ug/Kg	8082A
Aroclor 1254	31	J	20	37	ug/Kg	8082A
Aroclor 1260	120		20	37	ug/Kg	8082A
Arsenic, Total	8.1		0.8	1.1	mg/Kg	6010D
Barium, Total	158		1.7	2.1	mg/Kg	6010D
Benz(a)anthracene	1300		330	1100	ug/Kg	8270D
Benzo(a)pyrene	2100		400	1100	ug/Kg	8270D
Benzo(b)fluoranthene	2600		370	1100	ug/Kg	8270D
Benzo(g,h,i)perylene	1500		290	1100	ug/Kg	8270D
Benzo(k)fluoranthene	880	J	400	1100	ug/Kg	8270D
Beryllium, Total	1.24		0.04	0.32	mg/Kg	6010D
Cadmium, Total	1.26		0.26	0.53	mg/Kg	6010D
Calcium, Total	103000		400	1100	mg/Kg	6010D
Chromium, Total	15.0		0.4	1.1	mg/Kg	6010D
Chrysene	1500		400	1100	ug/Kg	8270D
Cobalt, Total	3.6	J	0.5	5.3	mg/Kg	6010D
Copper, Total	22.7		0.7	2.1	mg/Kg	6010D
Cyanide, Total	0.90		0.18	0.31	mg/Kg	9012B
Fluoranthene	2300		400	1100	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	1500		370	1100	ug/Kg	8270D
Iron, Total	28500		140	210	mg/Kg	6010D
Lead, Total	68.2		0.5	5.3	mg/Kg	6010D
Magnesium, Total	23800		20	110	mg/Kg	6010D
Manganese, Total	1460		17	21	mg/Kg	6010D
Mercury, Total	0.067		0.015	0.037	mg/Kg	7471B



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: MW-BCP-150-02			Lab ID: R2010276-003			

Analyte	Results	Flag	MDL	MRL	Units	Method
Naphthalene	350	J	290	1100	ug/Kg	8270D
Nickel, Total	14.0		0.8	4.3	mg/Kg	6010D
Phenanthrene	1200		320	1100	ug/Kg	8270D
Potassium, Total	1500		60	210	mg/Kg	6010D
Pyrene	2600		440	1100	ug/Kg	8270D
Selenium, Total	1	J	0.6	1.1	mg/Kg	6010D
Sodium, Total	260		60	110	mg/Kg	6010D
Total Solids	88.3				Percent	ALS SOP
Vanadium, Total	18.0		0.8	5.3	mg/Kg	6010D
Zinc, Total	479		15	21	mg/Kg	6010D

CLIENT ID: MW-BCP-15-26			Lab ID: R2010276-002			

Analyte	Results	Flag	MDL	MRL	Units	Method
Acetone	6.3		5.7	6.0	ug/Kg	8260C
Total Solids	83.7				Percent	ALS SOP

CLIENT ID: MW-BCP-15-46			Lab ID: R2010276-012			

Analyte	Results	Flag	MDL	MRL	Units	Method
Acetone	6.3		4.4	4.7	ug/Kg	8260C
Aluminum, Total	15400		14	23	mg/Kg	6010D
Arsenic, Total	2.9		0.8	1.1	mg/Kg	6010D
Barium, Total	143		1.8	2.3	mg/Kg	6010D
Beryllium, Total	0.71		0.04	0.34	mg/Kg	6010D
Calcium, Total	62000		400	1100	mg/Kg	6010D
Chromium, Total	22.1		0.4	1.1	mg/Kg	6010D
Cobalt, Total	9.3		0.6	5.7	mg/Kg	6010D
Copper, Total	19.4		0.8	2.3	mg/Kg	6010D
Cyanide, Total	0.18	J	0.17	0.25	mg/Kg	9012B
Iron, Total	26400		150	230	mg/Kg	6010D
Lead, Total	9.8		0.5	5.7	mg/Kg	6010D
Magnesium, Total	17200		20	110	mg/Kg	6010D
Manganese, Total	471		1.8	2.3	mg/Kg	6010D
Methyl Acetate	5.1		0.79	4.7	ug/Kg	8260C
Nickel, Total	24.2		0.8	4.6	mg/Kg	6010D
Potassium, Total	2710		60	230	mg/Kg	6010D
Sodium, Total	340		60	110	mg/Kg	6010D
Total Solids	85.8				Percent	ALS SOP
Vanadium, Total	29.5		0.9	5.7	mg/Kg	6010D
Zinc, Total	67.6		1.6	2.3	mg/Kg	6010D



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: MW-BCP-15-810			Lab ID: R2010276-013			
Analyte	Results	Flag	MDL	MRL	Units	Method
Acetone	5.4		4.3	4.5	ug/Kg	8260C
Aluminum, Total	13100		14	22	mg/Kg	6010D
Arsenic, Total	2.6		0.8	1.1	mg/Kg	6010D
Barium, Total	258		1.7	2.2	mg/Kg	6010D
Beryllium, Total	0.59		0.04	0.33	mg/Kg	6010D
Calcium, Total	66600		400	1100	mg/Kg	6010D
Chromium, Total	21.3		0.4	1.1	mg/Kg	6010D
Cobalt, Total	7.3		0.6	5.6	mg/Kg	6010D
Copper, Total	14.8		0.8	2.2	mg/Kg	6010D
Iron, Total	24200		150	220	mg/Kg	6010D
Lead, Total	8.7		0.5	5.6	mg/Kg	6010D
Magnesium, Total	18900		20	110	mg/Kg	6010D
Manganese, Total	445		1.7	2.2	mg/Kg	6010D
Nickel, Total	20.6		0.8	4.4	mg/Kg	6010D
Potassium, Total	3010		60	220	mg/Kg	6010D
Sodium, Total	230		60	110	mg/Kg	6010D
Total Solids	86.5				Percent	ALS SOP
Vanadium, Total	25.9		0.8	5.6	mg/Kg	6010D
Zinc, Total	68.5		1.6	2.2	mg/Kg	6010D

CLIENT ID: MW-BCP-15-1314			Lab ID: R2010276-014			
Analyte	Results	Flag	MDL	MRL	Units	Method
Acetone	6.3		4.1	4.3	ug/Kg	8260C
Aluminum, Total	12800		13	21	mg/Kg	6010D
Arsenic, Total	4.6		0.8	1.1	mg/Kg	6010D
Barium, Total	114		1.7	2.1	mg/Kg	6010D
Beryllium, Total	0.63		0.04	0.32	mg/Kg	6010D
Cadmium, Total	0.33	J	0.26	0.53	mg/Kg	6010D
Calcium, Total	60600		400	1100	mg/Kg	6010D
Chromium, Total	19.2		0.4	1.1	mg/Kg	6010D
Cobalt, Total	10.8		0.5	5.3	mg/Kg	6010D
Copper, Total	22.0		0.7	2.1	mg/Kg	6010D
Iron, Total	27200		140	210	mg/Kg	6010D
Lead, Total	10.7		0.5	5.3	mg/Kg	6010D
Magnesium, Total	18100		20	110	mg/Kg	6010D
Manganese, Total	589		1.7	2.1	mg/Kg	6010D
Nickel, Total	25.0		0.8	4.3	mg/Kg	6010D
Potassium, Total	2880		60	210	mg/Kg	6010D
Sodium, Total	220		60	110	mg/Kg	6010D
Total Solids	85.1				Percent	ALS SOP
Vanadium, Total	28.3		0.8	5.3	mg/Kg	6010D



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: MW-BCP-15-1314			Lab ID: R2010276-014			

Analyte	Results	Flag	MDL	MRL	Units	Method
Zinc, Total	69.7		1.5	2.1	mg/Kg	6010D

CLIENT ID: MW-BCP-15-3638			Lab ID: R2010276-015			

Analyte	Results	Flag	MDL	MRL	Units	Method
Acetone	25		5.6	5.9	ug/Kg	8260C
Aluminum, Total	15200		15	24	mg/Kg	6010D
Arsenic, Total	5.5		0.9	1.2	mg/Kg	6010D
Barium, Total	126		1.9	2.4	mg/Kg	6010D
Beryllium, Total	0.71		0.04	0.37	mg/Kg	6010D
Cadmium, Total	0.35	J	0.30	0.61	mg/Kg	6010D
Calcium, Total	57200		400	1200	mg/Kg	6010D
Carbon Disulfide	0.68	J	0.35	5.9	ug/Kg	8260C
Chromium, Total	23.5		0.5	1.2	mg/Kg	6010D
Cobalt, Total	12.2		0.6	6.1	mg/Kg	6010D
Copper, Total	27.8		0.8	2.4	mg/Kg	6010D
Iron, Total	30200		160	240	mg/Kg	6010D
Lead, Total	13.5		0.5	6.1	mg/Kg	6010D
Magnesium, Total	21800		20	120	mg/Kg	6010D
Manganese, Total	504		1.9	2.4	mg/Kg	6010D
Mercury, Total	0.022	J	0.017	0.042	mg/Kg	7471B
Methyl Acetate	1.2	J	1.0	5.9	ug/Kg	8260C
Nickel, Total	30.6		0.9	4.9	mg/Kg	6010D
Potassium, Total	3300		70	240	mg/Kg	6010D
Sodium, Total	310		70	120	mg/Kg	6010D
Total Solids	74.4				Percent	ALS SOP
Vanadium, Total	31.6		0.9	6.1	mg/Kg	6010D
Zinc, Total	75.5		1.8	2.4	mg/Kg	6010D

CLIENT ID: EQB-103020			Lab ID: R2010276-016			

Analyte	Results	Flag	MDL	MRL	Units	Method
Aluminum, Total	50	J	30	100	ug/L	6010D
Magnesium, Total	60	J	30	1000	ug/L	6010D



Sample Receipt Information

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com

Client: Inventum Engineering
Project: Riverview - BCP RI

Service Request:R2010276

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2010276-001	MW-BCP-15-02	10/29/2020	1000
R2010276-002	MW-BCP-15-26	10/29/2020	1000
R2010276-003	MW-BCP-150-02	10/29/2020	1005
R2010276-004	MW-BCP-150-26	10/29/2020	1005
R2010276-006	TP-BCP-31-01-10292020	10/29/2020	1200
R2010276-007	TP-BCP-31-CL-10292020	10/29/2020	1218
R2010276-008	TP-BCP-25-01-10292020	10/29/2020	1504
R2010276-009	TP-BCP-SE56-10292020	10/29/2020	1520
R2010276-010	TP-BCP-CL-10292020	10/29/2020	1518
R2010276-011	MW-BCP-15-61	10/29/2020	1245
R2010276-012	MW-BCP-15-46	10/29/2020	1315
R2010276-013	MW-BCP-15-810	10/29/2020	1320
R2010276-014	MW-BCP-15-1314	10/29/2020	1335
R2010276-015	MW-BCP-15-3638	10/29/2020	1525
R2010276-016	EQB-103020	10/30/2020	0700
R2010276-017	TRIP BLANK	10/30/2020	0700

[illegible]



CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

004407

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 2 OF 2

Project Name		Project Number		ANALYSIS REQUESTED (Include Method Number and Container Preservative)																							
Project Manager		Report CC		PRESERVATIVE		NUMBER OF CONTAINERS		SAMPLING		DATE		MATRIX															
Company/Address																											
Phone #		Email																									
Sampler's Signature		Sampler's Printed Name																									
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	DATE	TIME	MATRIX																							
MW-20P-15-46		10/29/20	1315	S																							
MW-20P-15-810		"	1320	S																							
MW-20P-15-1314		"	1335	S																							
MW-20P-15-3638		"	1525	S																							
EQB-10302		10/30/20	0700	AQ																							
Signature: [Signature] 10/30/2020																											
SPECIAL INSTRUCTIONS/COMMENTS Metals																											
See QAPP ☐																											
STATE WHERE SAMPLES WERE COLLECTED																											
RELINQUISHED BY		SIGNATURE		PRINTED NAME		FIRM		DATE/TIME		RECEIVED BY		SIGNATURE															
		[Signature]		Daniel Ward		ALS		10/31/2020/0825																			
Signature		Printed Name		Firm		Date/Time		RELINQUISHED BY		Signature		Printed Name															
Firm		Date/Time		RELINQUISHED BY		Signature		Printed Name		Firm		Date/Time															
INVOICE INFORMATION																											
REPORT REQUIREMENTS																											
I. Results Only																											
II. Results + OC Summaries (LOS, DUP, MSMSD as required)																											
III. Results + OC and Calibration Summaries																											
IV. Data Validation Report with Raw Data																											
Requested Report Date																											
Edit: Yes No																											
RELINQUISHED BY																											
Signature																											
Printed Name																											
Firm																											
Date/Time																											
RECEIVED BY																											
Signature																											
Printed Name																											
Firm																											
Date/Time																											
R2010276																											
Inventory Engineering																											
Review - BCP R																											
5																											



Miscellaneous Forms

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com



REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.	+	Correlation coefficient for MSA is <0.995.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).	N	Inorganics- Matrix spike recovery was outside laboratory limits.
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.	N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.	S	Concentration has been determined using Method of Standard Additions (MSA).
E	Organics- Concentration has exceeded the calibration range for that specific analysis.	W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.	P	Concentration >40% difference between the two GC columns.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.	C	Confirmed by GC/MS
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.	Q	DoD reports: indicates a pesticide/Aroclor is not confirmed ($\geq 100\%$ Difference between two GC columns).
#	Spike was diluted out.	X	See Case Narrative for discussion.
		MRL	Method Reporting Limit. Also known as:
		LOQ	Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
		MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
		LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
		ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Accreditations¹



NELAP States
Florida ID # E87674
New Hampshire ID # 2941
New York ID # 10145
Pennsylvania ID# 68-786
Texas ID#T104704581
Virginia #460167

Non-NELAP States
Connecticut ID #PH0556
Delaware Approved
Maine ID #NY01587
North Carolina #36701
North Carolina #676
Rhode Island LAO00333

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory. To verify NH accredited analytes, go to <https://www4.des.state.nh.us/CertifiedLabs/Certified-Method.aspx>.

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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Client: Inventum Engineering
Project: Riverview - BCP RI

Service Request: R2010276

Non-Certified Analytes

Certifying Agency: New York Department of Health

Method	Matrix	Analyte
ALS SOP	Soil	Total Solids

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Analyst Summary report

Client: Inventum Engineering
Project: Riverview - BCP RI/

Service Request: R2010276

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method	Extracted/Digested By	Analyzed By
6010D	AKONZEL	KMCLAEN
7471B	AKONZEL	KMCLAEN
8081B	KSERCU	BALLGEIER
8082A	KSERCU	BALLGEIER
8151A	KSERCU	BALLGEIER
8270D	KSERCU	JMISIUREWICZ
9012B	GNITAJOUPPI	GNITAJOUPPI
ALS SOP		KAWONG
PFC/537M	MSESSIONS	CCONOVER

Sample Name: MW-BCP-15-26
Lab Code: R2010276-002
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method	Extracted/Digested By	Analyzed By
8260C		FNAEGLER
ALS SOP		KAWONG

Sample Name: MW-BCP-150-02
Lab Code: R2010276-003
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method	Extracted/Digested By	Analyzed By
6010D	AKONZEL	KMCLAEN
7471B	AKONZEL	KMCLAEN
8081B	KSERCU	BALLGEIER
8082A	KSERCU	BALLGEIER
8151A	KSERCU	MPEDRO
8270D	KSERCU	JMISIUREWICZ
9012B	GNITAJOUPPI	GNITAJOUPPI
ALS SOP		KAWONG
PFC/537M	MSESSIONS	CCONOVER

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Analyst Summary report

Client: Inventum Engineering
Project: Riverview - BCP RI/

Service Request: R2010276

Sample Name: MW-BCP-150-02
Lab Code: R2010276-003.R01
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
8151A

Extracted/Digested By
KSERCU

Analyzed By
BALLGEIER

Sample Name: MW-BCP-150-26
Lab Code: R2010276-004
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
8260C
ALS SOP

Extracted/Digested By

Analyzed By
FNAEGLER
KAWONG

Sample Name: MW-BCP-150-26
Lab Code: R2010276-004.R01
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
8260C

Extracted/Digested By

Analyzed By
FNAEGLER

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
6010D
7471B
8081B
8082A
8151A
8260C
8270D
9012B
ALS SOP

Extracted/Digested By
AKONZEL
AKONZEL
KSERCU
KSERCU
KSERCU

KSERCU
GNITAJOUPPI

Analyzed By
KMCLAEN
KMCLAEN
BALLGEIER
BALLGEIER
BALLGEIER

FNAEGLER
JMISIUREWICZ
GNITAJOUPPI
KAWONG

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dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: Riverview - BCP RI/

Service Request: R2010276

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
PFC/537M

Extracted/Digested By
MSESSIONS

Analyzed By
CCONOVER

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006.R01
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
8270D

Extracted/Digested By
KSERCU

Analyzed By
JMISIUREWICZ

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
6010D
7471B
8260C
8270D
9012B
ALS SOP

Extracted/Digested By
AKONZEL
AKONZEL

KSERCU
GNITAJOUPPI

Analyzed By
KMCLAEN
KMCLAEN
FNAEGLER
JMISIUREWICZ
GNITAJOUPPI
KAWONG

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007.R01
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
8270D

Extracted/Digested By
KSERCU

Analyzed By
JMISIUREWICZ

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Analyst Summary report

Client: Inventum Engineering
Project: Riverview - BCP RI/

Service Request: R2010276

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007.R02
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
8270D

Extracted/Digested By
KSERCU

Analyzed By
JMISIUREWICZ

Sample Name: TP-BCP-25-01-10292020
Lab Code: R2010276-008
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
6010D
7471B
8260C
8270D
9012B
ALS SOP

Extracted/Digested By
AKONZEL
AKONZEL

KSERCU
GNITAJOUPPI

Analyzed By
KMCLAEN
KMCLAEN
FNAEGLER
JMISIUREWICZ
GNITAJOUPPI
KAWONG

Sample Name: TP-BCP-25-01-10292020
Lab Code: R2010276-008.R01
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
8260C
8270D

Extracted/Digested By

KSERCU

Analyzed By
FNAEGLER
JMISIUREWICZ

Sample Name: TP-BCP-SE56-10292020
Lab Code: R2010276-009
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
6010D
7471B
8270D
9012B

Extracted/Digested By
AKONZEL
AKONZEL
KSERCU
GNITAJOUPPI

Analyzed By
KMCLAEN
KMCLAEN
JMISIUREWICZ
GNITAJOUPPI

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Analyst Summary report

Client: Inventum Engineering
Project: Riverview - BCP RI/

Service Request: R2010276

Sample Name: TP-BCP-SE56-10292020
Lab Code: R2010276-009
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
ALS SOP

Extracted/Digested By

Analyzed By
KAWONG

Sample Name: TP-BCP-SE56-10292020
Lab Code: R2010276-009.R01
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
8270D

Extracted/Digested By
KSERCU

Analyzed By
JMISIUREWICZ

Sample Name: TP-BCP-CL-10292020
Lab Code: R2010276-010
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
6010D
7471B
8260C
8270D
9012B
ALS SOP

Extracted/Digested By
AKONZEL
AKONZEL

KSERCU
GNITAJOUPPI

Analyzed By
KMCLAEN
KMCLAEN
FNAEGLER
JMISIUREWICZ
GNITAJOUPPI
KAWONG

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method
6010D
6010D
7471B
8081B
8082A

Extracted/Digested By
AKONZEL
AKONZEL
AKONZEL
KSERCU
KSERCU

Analyzed By
KMCLAEN
NMANSEN
KMCLAEN
BALLGEIER
BALLGEIER

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Analyst Summary report

Client: Inventum Engineering
Project: Riverview - BCP RI/

Service Request: R2010276

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method

8151A

8260C

8270D

9012B

ALS SOP

PFC/537M

Extracted/Digested By

KSERCU

KSERCU

GNITAJOUPPI

MSESSIONS

Analyzed By

BALLGEIER

FNAEGLER

JMISIUREWICZ

GNITAJOUPPI

KAWONG

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011.R01
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method

8081B

8260C

Extracted/Digested By

KSERCU

Analyzed By

BALLGEIER

FNAEGLER

Sample Name: MW-BCP-15-46
Lab Code: R2010276-012
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method

6010D

7471B

8260C

8270D

9012B

ALS SOP

Extracted/Digested By

AKONZEL

AKONZEL

KSERCU

GNITAJOUPPI

Analyzed By

KMCLAEN

KMCLAEN

FNAEGLER

JMISIUREWICZ

GNITAJOUPPI

KAWONG

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Analyst Summary report

Client: Inventum Engineering
Project: Riverview - BCP RI/

Service Request: R2010276

Sample Name: MW-BCP-15-810
Lab Code: R2010276-013
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method	Extracted/Digested By	Analyzed By
6010D	AKONZEL	KMCLAEN
7471B	AKONZEL	KMCLAEN
8260C		FNAEGLER
8270D	KSERCU	JMISIUREWICZ
9012B	GNITAJOUPPI	GNITAJOUPPI
ALS SOP		KAWONG

Sample Name: MW-BCP-15-1314
Lab Code: R2010276-014
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method	Extracted/Digested By	Analyzed By
6010D	AKONZEL	KMCLAEN
7471B	AKONZEL	KMCLAEN
8260C		FNAEGLER
8270D	KSERCU	JMISIUREWICZ
9012B	GNITAJOUPPI	GNITAJOUPPI
ALS SOP		KAWONG

Sample Name: MW-BCP-15-3638
Lab Code: R2010276-015
Sample Matrix: Soil

Date Collected: 10/29/20
Date Received: 10/31/20

Analysis Method	Extracted/Digested By	Analyzed By
6010D	AKONZEL	KMCLAEN
7471B	AKONZEL	KMCLAEN
8260C		FNAEGLER
8270D	KSERCU	JMISIUREWICZ
9012B	GNITAJOUPPI	GNITAJOUPPI
ALS SOP		KAWONG

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Analyst Summary report

Client: Inventum Engineering
Project: Riverview - BCP RI/

Service Request: R2010276

Sample Name: EQB-103020
Lab Code: R2010276-016
Sample Matrix: Water

Date Collected: 10/30/20
Date Received: 10/31/20

Analysis Method

6010D
7470A
8260C
8270D
9012B

Extracted/Digested By

AKONZEL
AKONZEL

KSERCU
MROGERSON

Analyzed By

NMANSEN
KMCLAEN
FNAEGLER
JMISIUREWICZ
MROGERSON

Sample Name: TRIP BLANK
Lab Code: R2010276-017
Sample Matrix: Water

Date Collected: 10/30/20
Date Received: 10/31/20

Analysis Method

8260C

Extracted/Digested By

Analyzed By

FNAEGLER



PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

INORGANIC

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C or 6010D	3005A/3010A
6020A or 6020B	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-N-2016 Amenable and Residual Cyanide	SM 4500-CN-G and SM 4500-CN-B,C-2016
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C or 6010D	3050B
6020A or 6020B	3050B
6010C or 6010D TCLP (1311) extract	3005A/3010A
6010C or 6010D SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

ORGANIC

Preparation Methods for Organic methods are listed in the header of the Results pages.

Regarding "Bulk/5035A":

For soil/solid samples submitted in soil jars for Volatiles analysis, the prep method is listed as "Bulk/5035A". The lab follows the closed-system EPA 5035A protocols once the sample is transferred to a sealed vial, but collection in bulk in soil jars does not follow the collection protocols listed in EPA 5035A. In accordance with the NYSDOH technical notice of October 2012, all results or reporting limits <200 ug/kg are to be considered estimated due to potential low bias.



Sample Results

ALS Environmental—Rochester Laboratory

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Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-26
Lab Code: R2010276-002

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	6.0 U	6.0	0.24	1	11/06/20 20:06	
1,1,2,2-Tetrachloroethane	6.0 U	6.0	0.53	1	11/06/20 20:06	
1,1,2-Trichloroethane	6.0 U	6.0	0.24	1	11/06/20 20:06	
1,1,2-Trichloro-1,2,2-trifluoroethane	6.0 U	6.0	0.24	1	11/06/20 20:06	
1,1-Dichloroethane (1,1-DCA)	6.0 U	6.0	0.24	1	11/06/20 20:06	
1,1-Dichloroethene (1,1-DCE)	6.0 U	6.0	0.35	1	11/06/20 20:06	
1,2,3-Trichlorobenzene	6.0 U	6.0	0.63	1	11/06/20 20:06	
1,2,4-Trichlorobenzene	6.0 U	6.0	0.51	1	11/06/20 20:06	
1,2,4-Trimethylbenzene	6.0 U	6.0	0.24	1	11/06/20 20:06	
1,2-Dibromo-3-chloropropane (DBCP)	6.0 U	6.0	0.90	1	11/06/20 20:06	
1,2-Dibromoethane	6.0 U	6.0	0.24	1	11/06/20 20:06	
1,2-Dichlorobenzene	6.0 U	6.0	0.24	1	11/06/20 20:06	
1,2-Dichloroethane	6.0 U	6.0	0.24	1	11/06/20 20:06	
1,2-Dichloropropane	6.0 U	6.0	0.24	1	11/06/20 20:06	
1,3,5-Trimethylbenzene	6.0 U	6.0	0.24	1	11/06/20 20:06	
1,3-Dichlorobenzene	6.0 U	6.0	0.24	1	11/06/20 20:06	
1,4-Dichlorobenzene	6.0 U	6.0	0.27	1	11/06/20 20:06	
1,4-Dioxane	120 U	120	24	1	11/06/20 20:06	
2-Butanone (MEK)	6.0 U	6.0	2.4	1	11/06/20 20:06	
2-Hexanone	6.0 U	6.0	0.44	1	11/06/20 20:06	
4-Methyl-2-pentanone	6.0 U	6.0	0.28	1	11/06/20 20:06	
Acetone	6.3	6.0	5.7	1	11/06/20 20:06	
Benzene	6.0 U	6.0	0.24	1	11/06/20 20:06	
Bromochloromethane	6.0 U	6.0	0.24	1	11/06/20 20:06	
Bromodichloromethane	6.0 U	6.0	0.24	1	11/06/20 20:06	
Bromoform	6.0 U	6.0	0.60	1	11/06/20 20:06	
Bromomethane	6.0 U	6.0	2.6	1	11/06/20 20:06	
Carbon Disulfide	6.0 U	6.0	0.35	1	11/06/20 20:06	
Carbon Tetrachloride	6.0 U	6.0	0.32	1	11/06/20 20:06	
Chlorobenzene	6.0 U	6.0	0.24	1	11/06/20 20:06	
Chloroethane	6.0 U	6.0	0.49	1	11/06/20 20:06	
Chloroform	6.0 U	6.0	0.24	1	11/06/20 20:06	
Chloromethane	6.0 U	6.0	1.7	1	11/06/20 20:06	
Cyclohexane	6.0 U	6.0	0.32	1	11/06/20 20:06	
Dibromochloromethane	6.0 U	6.0	0.24	1	11/06/20 20:06	
Dichlorodifluoromethane (CFC 12)	6.0 U	6.0	0.40	1	11/06/20 20:06	
Dichloromethane	6.0 U	6.0	3.4	1	11/06/20 20:06	
Ethylbenzene	6.0 U	6.0	0.24	1	11/06/20 20:06	
Isopropylbenzene (Cumene)	6.0 U	6.0	0.24	1	11/06/20 20:06	
Methyl Acetate	6.0 U	6.0	1.1	1	11/06/20 20:06	
Methyl tert-Butyl Ether	6.0 U	6.0	0.24	1	11/06/20 20:06	
Methylcyclohexane	6.0 U	6.0	0.38	1	11/06/20 20:06	
Styrene	6.0 U	6.0	0.24	1	11/06/20 20:06	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-26
Lab Code: R2010276-002

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	6.0 U	6.0	0.28	1	11/06/20 20:06	
Toluene	6.0 U	6.0	0.24	1	11/06/20 20:06	
Trichloroethene (TCE)	6.0 U	6.0	0.27	1	11/06/20 20:06	
Trichlorofluoromethane (CFC 11)	6.0 U	6.0	0.32	1	11/06/20 20:06	
Vinyl Chloride	6.0 U	6.0	0.55	1	11/06/20 20:06	
cis-1,2-Dichloroethene	6.0 U	6.0	0.24	1	11/06/20 20:06	
cis-1,3-Dichloropropene	6.0 U	6.0	0.24	1	11/06/20 20:06	
m,p-Xylenes	12 U	12	0.45	1	11/06/20 20:06	
o-Xylene	6.0 U	6.0	0.24	1	11/06/20 20:06	
trans-1,2-Dichloroethene	6.0 U	6.0	0.24	1	11/06/20 20:06	
trans-1,3-Dichloropropene	6.0 U	6.0	0.24	1	11/06/20 20:06	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	46	31 - 154	11/06/20 20:06	
Dibromofluoromethane	118	63 - 138	11/06/20 20:06	
Toluene-d8	107	66 - 138	11/06/20 20:06	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-150-26
Lab Code: R2010276-004

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
1,1,2,2-Tetrachloroethane	6.2 U	6.2	0.55	1.07	11/06/20 20:29	
1,1,2-Trichloroethane	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
1,1,2-Trichloro-1,2,2-trifluoroethane	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
1,1-Dichloroethane (1,1-DCA)	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
1,1-Dichloroethene (1,1-DCE)	6.2 U	6.2	0.36	1.07	11/06/20 20:29	
1,2,3-Trichlorobenzene	6.2 U	6.2	0.65	1.07	11/06/20 20:29	
1,2,4-Trichlorobenzene	6.2 U	6.2	0.53	1.07	11/06/20 20:29	
1,2,4-Trimethylbenzene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
1,2-Dibromo-3-chloropropane (DBCP)	6.2 U	6.2	0.94	1.07	11/06/20 20:29	
1,2-Dibromoethane	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
1,2-Dichlorobenzene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
1,2-Dichloroethane	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
1,2-Dichloropropane	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
1,3,5-Trimethylbenzene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
1,3-Dichlorobenzene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
1,4-Dichlorobenzene	6.2 U	6.2	0.28	1.07	11/06/20 20:29	
1,4-Dioxane	120 U	120	25	1.07	11/06/20 20:29	
2-Butanone (MEK)	6.2 U	6.2	2.5	1.07	11/06/20 20:29	
2-Hexanone	6.2 U	6.2	0.45	1.07	11/06/20 20:29	
4-Methyl-2-pentanone	6.2 U	6.2	0.29	1.07	11/06/20 20:29	
Acetone	8.8	6.2	5.9	1.07	11/06/20 20:29	
Benzene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
Bromochloromethane	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
Bromodichloromethane	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
Bromoform	6.2 U	6.2	0.63	1.07	11/06/20 20:29	
Bromomethane	6.2 U	6.2	2.7	1.07	11/06/20 20:29	
Carbon Disulfide	6.2 U	6.2	0.36	1.07	11/06/20 20:29	
Carbon Tetrachloride	6.2 U	6.2	0.33	1.07	11/06/20 20:29	
Chlorobenzene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
Chloroethane	6.2 U	6.2	0.51	1.07	11/06/20 20:29	
Chloroform	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
Chloromethane	6.2 U	6.2	1.8	1.07	11/06/20 20:29	
Cyclohexane	6.2 U	6.2	0.33	1.07	11/06/20 20:29	
Dibromochloromethane	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
Dichlorodifluoromethane (CFC 12)	6.2 U	6.2	0.41	1.07	11/06/20 20:29	
Dichloromethane	6.2 U	6.2	3.5	1.07	11/06/20 20:29	
Ethylbenzene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
Isopropylbenzene (Cumene)	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
Methyl Acetate	6.2 U	6.2	1.1	1.07	11/06/20 20:29	
Methyl tert-Butyl Ether	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
Methylcyclohexane	6.2 U	6.2	0.39	1.07	11/06/20 20:29	
Styrene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-150-26
Lab Code: R2010276-004

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	6.2 U	6.2	0.29	1.07	11/06/20 20:29	
Toluene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
Trichloroethene (TCE)	6.2 U	6.2	0.28	1.07	11/06/20 20:29	
Trichlorofluoromethane (CFC 11)	6.2 U	6.2	0.33	1.07	11/06/20 20:29	
Vinyl Chloride	6.2 U	6.2	0.58	1.07	11/06/20 20:29	
cis-1,2-Dichloroethene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
cis-1,3-Dichloropropene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
m,p-Xylenes	12 U	12	0.46	1.07	11/06/20 20:29	
o-Xylene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
trans-1,2-Dichloroethene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	
trans-1,3-Dichloropropene	6.2 U	6.2	0.25	1.07	11/06/20 20:29	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	49	31 - 154	11/06/20 20:29	
Dibromofluoromethane	119	63 - 138	11/06/20 20:29	
Toluene-d8	108	66 - 138	11/06/20 20:29	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-150-26
Lab Code: R2010276-004

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
1,1,2,2-Tetrachloroethane	6.7 U	6.7	0.59	1.15	11/11/20 12:09	
1,1,2-Trichloroethane	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
1,1,2-Trichloro-1,2,2-trifluoroethane	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
1,1-Dichloroethane (1,1-DCA)	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
1,1-Dichloroethene (1,1-DCE)	6.7 U	6.7	0.39	1.15	11/11/20 12:09	
1,2,3-Trichlorobenzene	6.7 U	6.7	0.70	1.15	11/11/20 12:09	
1,2,4-Trichlorobenzene	6.7 U	6.7	0.57	1.15	11/11/20 12:09	
1,2,4-Trimethylbenzene	0.36 J	6.7	0.27	1.15	11/11/20 12:09	
1,2-Dibromo-3-chloropropane (DBCP)	6.7 U	6.7	1.1	1.15	11/11/20 12:09	
1,2-Dibromoethane	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
1,2-Dichlorobenzene	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
1,2-Dichloroethane	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
1,2-Dichloropropane	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
1,3,5-Trimethylbenzene	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
1,3-Dichlorobenzene	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
1,4-Dichlorobenzene	6.7 U	6.7	0.30	1.15	11/11/20 12:09	
1,4-Dioxane	130 U	130	27	1.15	11/11/20 12:09	
2-Butanone (MEK)	3.8 J	6.7	2.7	1.15	11/11/20 12:09	
2-Hexanone	6.7 U	6.7	0.49	1.15	11/11/20 12:09	
4-Methyl-2-pentanone	6.7 U	6.7	0.31	1.15	11/11/20 12:09	
Acetone	130	6.7	6.3	1.15	11/11/20 12:09	
Benzene	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
Bromochloromethane	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
Bromodichloromethane	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
Bromoform	6.7 U	6.7	0.67	1.15	11/11/20 12:09	
Bromomethane	6.7 U	6.7	2.9	1.15	11/11/20 12:09	
Carbon Disulfide	6.7 U	6.7	0.39	1.15	11/11/20 12:09	
Carbon Tetrachloride	6.7 U	6.7	0.35	1.15	11/11/20 12:09	
Chlorobenzene	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
Chloroethane	6.7 U	6.7	0.55	1.15	11/11/20 12:09	
Chloroform	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
Chloromethane	6.7 U	6.7	1.9	1.15	11/11/20 12:09	
Cyclohexane	6.7 U	6.7	0.35	1.15	11/11/20 12:09	
Dibromochloromethane	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
Dichlorodifluoromethane (CFC 12)	6.7 U	6.7	0.45	1.15	11/11/20 12:09	
Dichloromethane	6.7 U	6.7	3.8	1.15	11/11/20 12:09	
Ethylbenzene	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
Isopropylbenzene (Cumene)	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
Methyl Acetate	6.7 U	6.7	1.2	1.15	11/11/20 12:09	
Methyl tert-Butyl Ether	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
Methylcyclohexane	0.46 J	6.7	0.42	1.15	11/11/20 12:09	
Styrene	6.7 U	6.7	0.27	1.15	11/11/20 12:09	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-150-26
Lab Code: R2010276-004

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	6.7 U	6.7	0.31	1.15	11/11/20 12:09	
Toluene	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
Trichloroethene (TCE)	6.7 U	6.7	0.30	1.15	11/11/20 12:09	
Trichlorofluoromethane (CFC 11)	6.7 U	6.7	0.35	1.15	11/11/20 12:09	
Vinyl Chloride	6.7 U	6.7	0.62	1.15	11/11/20 12:09	
cis-1,2-Dichloroethene	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
cis-1,3-Dichloropropene	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
m,p-Xylenes	13 U	13	0.50	1.15	11/11/20 12:09	
o-Xylene	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
trans-1,2-Dichloroethene	6.7 U	6.7	0.27	1.15	11/11/20 12:09	
trans-1,3-Dichloropropene	6.7 U	6.7	0.27	1.15	11/11/20 12:09	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	57	31 - 154	11/11/20 12:09	
Dibromofluoromethane	117	63 - 138	11/11/20 12:09	
Toluene-d8	105	66 - 138	11/11/20 12:09	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
1,1,2,2-Tetrachloroethane	8.7 U	8.7	0.77	1.38	11/06/20 20:53	
1,1,2-Trichloroethane	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
1,1,2-Trichloro-1,2,2-trifluoroethane	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
1,1-Dichloroethane (1,1-DCA)	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
1,1-Dichloroethene (1,1-DCE)	8.7 U	8.7	0.51	1.38	11/06/20 20:53	
1,2,3-Trichlorobenzene	8.7 U	8.7	0.91	1.38	11/06/20 20:53	
1,2,4-Trichlorobenzene	8.7 U	8.7	0.73	1.38	11/06/20 20:53	
1,2,4-Trimethylbenzene	2.2 J	8.7	0.35	1.38	11/06/20 20:53	
1,2-Dibromo-3-chloropropane (DBCP)	8.7 U	8.7	1.3	1.38	11/06/20 20:53	
1,2-Dibromoethane	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
1,2-Dichlorobenzene	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
1,2-Dichloroethane	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
1,2-Dichloropropane	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
1,3,5-Trimethylbenzene	1.2 J	8.7	0.35	1.38	11/06/20 20:53	
1,3-Dichlorobenzene	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
1,4-Dichlorobenzene	8.7 U	8.7	0.39	1.38	11/06/20 20:53	
1,4-Dioxane	170 U	170	35	1.38	11/06/20 20:53	
2-Butanone (MEK)	8.7 U	8.7	3.5	1.38	11/06/20 20:53	
2-Hexanone	8.7 U	8.7	0.63	1.38	11/06/20 20:53	
4-Methyl-2-pentanone	8.7 U	8.7	0.40	1.38	11/06/20 20:53	
Acetone	8.7 U	8.7	8.2	1.38	11/06/20 20:53	
Benzene	1.9 J	8.7	0.35	1.38	11/06/20 20:53	
Bromochloromethane	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
Bromodichloromethane	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
Bromoform	8.7 U	8.7	0.87	1.38	11/06/20 20:53	
Bromomethane	8.7 U	8.7	3.7	1.38	11/06/20 20:53	
Carbon Disulfide	8.7 U	8.7	0.51	1.38	11/06/20 20:53	
Carbon Tetrachloride	8.7 U	8.7	0.46	1.38	11/06/20 20:53	
Chlorobenzene	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
Chloroethane	8.7 U	8.7	0.71	1.38	11/06/20 20:53	
Chloroform	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
Chloromethane	8.7 U	8.7	2.5	1.38	11/06/20 20:53	
Cyclohexane	1.7 J	8.7	0.46	1.38	11/06/20 20:53	
Dibromochloromethane	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
Dichlorodifluoromethane (CFC 12)	8.7 U	8.7	0.58	1.38	11/06/20 20:53	
Dichloromethane	8.7 U	8.7	4.9	1.38	11/06/20 20:53	
Ethylbenzene	0.54 J	8.7	0.35	1.38	11/06/20 20:53	
Isopropylbenzene (Cumene)	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
Methyl Acetate	8.7 U	8.7	1.5	1.38	11/06/20 20:53	
Methyl tert-Butyl Ether	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
Methylcyclohexane	2.8 J	8.7	0.54	1.38	11/06/20 20:53	
Styrene	8.7 U	8.7	0.35	1.38	11/06/20 20:53	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	8.7 U	8.7	0.40	1.38	11/06/20 20:53	
Toluene	1.3 J	8.7	0.35	1.38	11/06/20 20:53	
Trichloroethene (TCE)	8.7 U	8.7	0.39	1.38	11/06/20 20:53	
Trichlorofluoromethane (CFC 11)	8.7 U	8.7	0.46	1.38	11/06/20 20:53	
Vinyl Chloride	8.7 U	8.7	0.80	1.38	11/06/20 20:53	
cis-1,2-Dichloroethene	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
cis-1,3-Dichloropropene	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
m,p-Xylenes	2.1 J	17	0.65	1.38	11/06/20 20:53	
o-Xylene	1.3 J	8.7	0.35	1.38	11/06/20 20:53	
trans-1,2-Dichloroethene	8.7 U	8.7	0.35	1.38	11/06/20 20:53	
trans-1,3-Dichloropropene	8.7 U	8.7	0.35	1.38	11/06/20 20:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	37	31 - 154	11/06/20 20:53	
Dibromofluoromethane	124	63 - 138	11/06/20 20:53	
Toluene-d8	103	66 - 138	11/06/20 20:53	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	42000 U	42000	1700	6200	11/08/20 14:04	
1,1,2,2-Tetrachloroethane	42000 U	42000	3800	6200	11/08/20 14:04	
1,1,2-Trichloroethane	42000 U	42000	1700	6200	11/08/20 14:04	
1,1,2-Trichloro-1,2,2-trifluoroethane	42000 U	42000	1700	6200	11/08/20 14:04	
1,1-Dichloroethane (1,1-DCA)	42000 U	42000	1700	6200	11/08/20 14:04	
1,1-Dichloroethene (1,1-DCE)	42000 U	42000	2500	6200	11/08/20 14:04	
1,2,3-Trichlorobenzene	42000 U	42000	4500	6200	11/08/20 14:04	
1,2,4-Trichlorobenzene	42000 U	42000	3600	6200	11/08/20 14:04	
1,2,4-Trimethylbenzene	28000 J	42000	1700	6200	11/08/20 14:04	
1,2-Dibromo-3-chloropropane (DBCP)	42000 U	42000	6400	6200	11/08/20 14:04	
1,2-Dibromoethane	42000 U	42000	1700	6200	11/08/20 14:04	
1,2-Dichlorobenzene	42000 U	42000	1700	6200	11/08/20 14:04	
1,2-Dichloroethane	42000 U	42000	1700	6200	11/08/20 14:04	
1,2-Dichloropropane	42000 U	42000	1700	6200	11/08/20 14:04	
1,3,5-Trimethylbenzene	13000 J	42000	1700	6200	11/08/20 14:04	
1,3-Dichlorobenzene	42000 U	42000	1700	6200	11/08/20 14:04	
1,4-Dichlorobenzene	42000 U	42000	1900	6200	11/08/20 14:04	
1,4-Dioxane	850000 U	850000	170000	6200	11/08/20 14:04	
2-Butanone (MEK)	42000 U	42000	17000	6200	11/08/20 14:04	
2-Hexanone	42000 U	42000	3100	6200	11/08/20 14:04	
4-Methyl-2-pentanone	42000 U	42000	2000	6200	11/08/20 14:04	
Acetone	42000 U	42000	40000	6200	11/08/20 14:04	
Benzene	20000 J	42000	1700	6200	11/08/20 14:04	
Bromochloromethane	42000 U	42000	1700	6200	11/08/20 14:04	
Bromodichloromethane	42000 U	42000	1700	6200	11/08/20 14:04	
Bromoform	42000 U	42000	4300	6200	11/08/20 14:04	
Bromomethane	42000 U	42000	18000	6200	11/08/20 14:04	
Carbon Disulfide	42000 U	42000	2500	6200	11/08/20 14:04	
Carbon Tetrachloride	42000 U	42000	2300	6200	11/08/20 14:04	
Chlorobenzene	42000 U	42000	1700	6200	11/08/20 14:04	
Chloroethane	42000 U	42000	3500	6200	11/08/20 14:04	
Chloroform	42000 U	42000	1700	6200	11/08/20 14:04	
Chloromethane	42000 U	42000	12000	6200	11/08/20 14:04	
Cyclohexane	42000 U	42000	2300	6200	11/08/20 14:04	
Dibromochloromethane	42000 U	42000	1700	6200	11/08/20 14:04	
Dichlorodifluoromethane (CFC 12)	42000 U	42000	2900	6200	11/08/20 14:04	
Dichloromethane	42000 U	42000	24000	6200	11/08/20 14:04	
Ethylbenzene	22000 J	42000	1700	6200	11/08/20 14:04	
Isopropylbenzene (Cumene)	42000 U	42000	1700	6200	11/08/20 14:04	
Methyl Acetate	42000 U	42000	7200	6200	11/08/20 14:04	
Methyl tert-Butyl Ether	42000 U	42000	1700	6200	11/08/20 14:04	
Methylcyclohexane	42000 U	42000	2700	6200	11/08/20 14:04	
Styrene	1700 J	42000	1700	6200	11/08/20 14:04	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	42000 U	42000	2000	6200	11/08/20 14:04	
Toluene	25000 J	42000	1700	6200	11/08/20 14:04	
Trichloroethene (TCE)	42000 U	42000	1900	6200	11/08/20 14:04	
Trichlorofluoromethane (CFC 11)	42000 U	42000	2300	6200	11/08/20 14:04	
Vinyl Chloride	42000 U	42000	4000	6200	11/08/20 14:04	
cis-1,2-Dichloroethene	42000 U	42000	1700	6200	11/08/20 14:04	
cis-1,3-Dichloropropene	42000 U	42000	1700	6200	11/08/20 14:04	
m,p-Xylenes	42000 J	85000	3200	6200	11/08/20 14:04	
o-Xylene	16000 J	42000	1700	6200	11/08/20 14:04	
trans-1,2-Dichloroethene	42000 U	42000	1700	6200	11/08/20 14:04	
trans-1,3-Dichloropropene	42000 U	42000	1700	6200	11/08/20 14:04	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	31 - 154	11/08/20 14:04	
Dibromofluoromethane	103	63 - 138	11/08/20 14:04	
Toluene-d8	108	66 - 138	11/08/20 14:04	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:04
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-25-01-10292020
Lab Code: R2010276-008

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
1,1,2,2-Tetrachloroethane	8.4 U	8.4	0.75	1.28	11/06/20 21:16	
1,1,2-Trichloroethane	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
1,1,2-Trichloro-1,2,2-trifluoroethane	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
1,1-Dichloroethane (1,1-DCA)	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
1,1-Dichloroethene (1,1-DCE)	8.4 U	8.4	0.49	1.28	11/06/20 21:16	
1,2,3-Trichlorobenzene	8.4 U	8.4	0.88	1.28	11/06/20 21:16	
1,2,4-Trichlorobenzene	8.4 U	8.4	0.71	1.28	11/06/20 21:16	
1,2,4-Trimethylbenzene	6.6 J	8.4	0.34	1.28	11/06/20 21:16	
1,2-Dibromo-3-chloropropane (DBCP)	8.4 U	8.4	1.3	1.28	11/06/20 21:16	
1,2-Dibromoethane	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
1,2-Dichlorobenzene	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
1,2-Dichloroethane	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
1,2-Dichloropropane	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
1,3,5-Trimethylbenzene	4.5 J	8.4	0.34	1.28	11/06/20 21:16	
1,3-Dichlorobenzene	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
1,4-Dichlorobenzene	8.4 U	8.4	0.38	1.28	11/06/20 21:16	
1,4-Dioxane	170 U	170	34	1.28	11/06/20 21:16	
2-Butanone (MEK)	8.4 U	8.4	3.4	1.28	11/06/20 21:16	
2-Hexanone	8.4 U	8.4	0.61	1.28	11/06/20 21:16	
4-Methyl-2-pentanone	8.4 U	8.4	0.39	1.28	11/06/20 21:16	
Acetone	8.4 U	8.4	8.0	1.28	11/06/20 21:16	
Benzene	1.1 J	8.4	0.34	1.28	11/06/20 21:16	
Bromochloromethane	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
Bromodichloromethane	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
Bromoform	8.4 U	8.4	0.85	1.28	11/06/20 21:16	
Bromomethane	8.4 U	8.4	3.6	1.28	11/06/20 21:16	
Carbon Disulfide	1.0 J	8.4	0.49	1.28	11/06/20 21:16	
Carbon Tetrachloride	8.4 U	8.4	0.44	1.28	11/06/20 21:16	
Chlorobenzene	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
Chloroethane	8.4 U	8.4	0.70	1.28	11/06/20 21:16	
Chloroform	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
Chloromethane	8.4 U	8.4	2.4	1.28	11/06/20 21:16	
Cyclohexane	8.4 U	8.4	0.44	1.28	11/06/20 21:16	
Dibromochloromethane	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
Dichlorodifluoromethane (CFC 12)	8.4 U	8.4	0.56	1.28	11/06/20 21:16	
Dichloromethane	8.4 U	8.4	4.8	1.28	11/06/20 21:16	
Ethylbenzene	1.5 J	8.4	0.34	1.28	11/06/20 21:16	
Isopropylbenzene (Cumene)	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
Methyl Acetate	8.4 U	8.4	1.5	1.28	11/06/20 21:16	
Methyl tert-Butyl Ether	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
Methylcyclohexane	1.0 J	8.4	0.53	1.28	11/06/20 21:16	
Styrene	0.39 J	8.4	0.34	1.28	11/06/20 21:16	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-25-01-10292020
Lab Code: R2010276-008

Service Request: R2010276
Date Collected: 10/29/20 15:04
Date Received: 10/31/20 08:25

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	8.4 U	8.4	0.39	1.28	11/06/20 21:16	
Toluene	0.83 J	8.4	0.34	1.28	11/06/20 21:16	
Trichloroethene (TCE)	8.4 U	8.4	0.38	1.28	11/06/20 21:16	
Trichlorofluoromethane (CFC 11)	8.4 U	8.4	0.44	1.28	11/06/20 21:16	
Vinyl Chloride	8.4 U	8.4	0.78	1.28	11/06/20 21:16	
cis-1,2-Dichloroethene	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
cis-1,3-Dichloropropene	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
m,p-Xylenes	3.4 J	17	0.63	1.28	11/06/20 21:16	
o-Xylene	13	8.4	0.34	1.28	11/06/20 21:16	
trans-1,2-Dichloroethene	8.4 U	8.4	0.34	1.28	11/06/20 21:16	
trans-1,3-Dichloropropene	8.4 U	8.4	0.34	1.28	11/06/20 21:16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	37	31 - 154	11/06/20 21:16	
Dibromofluoromethane	122	63 - 138	11/06/20 21:16	
Toluene-d8	110	66 - 138	11/06/20 21:16	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:04
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-25-01-10292020
Lab Code: R2010276-008

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
1,1,2,2-Tetrachloroethane	9.5 U	9.5	0.84	1.44	11/11/20 12:32	
1,1,2-Trichloroethane	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
1,1-Dichloroethane (1,1-DCA)	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
1,1-Dichloroethene (1,1-DCE)	9.5 U	9.5	0.55	1.44	11/11/20 12:32	
1,2,3-Trichlorobenzene	9.5 U	9.5	0.99	1.44	11/11/20 12:32	
1,2,4-Trichlorobenzene	9.5 U	9.5	0.80	1.44	11/11/20 12:32	
1,2,4-Trimethylbenzene	0.67 J	9.5	0.38	1.44	11/11/20 12:32	
1,2-Dibromo-3-chloropropane (DBCP)	9.5 U	9.5	1.5	1.44	11/11/20 12:32	
1,2-Dibromoethane	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
1,2-Dichlorobenzene	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
1,2-Dichloroethane	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
1,2-Dichloropropane	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
1,3,5-Trimethylbenzene	0.47 J	9.5	0.38	1.44	11/11/20 12:32	
1,3-Dichlorobenzene	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
1,4-Dichlorobenzene	9.5 U	9.5	0.42	1.44	11/11/20 12:32	
1,4-Dioxane	190 U	190	38	1.44	11/11/20 12:32	
2-Butanone (MEK)	9.5 U	9.5	3.8	1.44	11/11/20 12:32	
2-Hexanone	9.5 U	9.5	0.69	1.44	11/11/20 12:32	
4-Methyl-2-pentanone	9.5 U	9.5	0.44	1.44	11/11/20 12:32	
Acetone	9.5 U	9.5	9.0	1.44	11/11/20 12:32	
Benzene	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
Bromochloromethane	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
Bromodichloromethane	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
Bromoform	9.5 U	9.5	0.95	1.44	11/11/20 12:32	
Bromomethane	9.5 U	9.5	4.0	1.44	11/11/20 12:32	
Carbon Disulfide	9.5 U	9.5	0.55	1.44	11/11/20 12:32	
Carbon Tetrachloride	9.5 U	9.5	0.50	1.44	11/11/20 12:32	
Chlorobenzene	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
Chloroethane	9.5 U	9.5	0.78	1.44	11/11/20 12:32	
Chloroform	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
Chloromethane	9.5 U	9.5	2.7	1.44	11/11/20 12:32	
Cyclohexane	9.5 U	9.5	0.50	1.44	11/11/20 12:32	
Dibromochloromethane	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
Dichlorodifluoromethane (CFC 12)	9.5 U	9.5	0.63	1.44	11/11/20 12:32	
Dichloromethane	9.5 U	9.5	5.4	1.44	11/11/20 12:32	
Ethylbenzene	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
Isopropylbenzene (Cumene)	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
Methyl Acetate	9.5 U	9.5	1.6	1.44	11/11/20 12:32	
Methyl tert-Butyl Ether	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
Methylcyclohexane	0.69 J	9.5	0.59	1.44	11/11/20 12:32	
Styrene	9.5 U	9.5	0.38	1.44	11/11/20 12:32	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-25-01-10292020
Lab Code: R2010276-008

Service Request: R2010276
Date Collected: 10/29/20 15:04
Date Received: 10/31/20 08:25

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	9.5 U	9.5	0.44	1.44	11/11/20 12:32	
Toluene	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
Trichloroethene (TCE)	0.50 BJ	9.5	0.42	1.44	11/11/20 12:32	
Trichlorofluoromethane (CFC 11)	9.5 U	9.5	0.50	1.44	11/11/20 12:32	
Vinyl Chloride	9.5 U	9.5	0.88	1.44	11/11/20 12:32	
cis-1,2-Dichloroethene	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
cis-1,3-Dichloropropene	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
m,p-Xylenes	0.82 J	19	0.71	1.44	11/11/20 12:32	
o-Xylene	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
trans-1,2-Dichloroethene	9.5 U	9.5	0.38	1.44	11/11/20 12:32	
trans-1,3-Dichloropropene	9.5 U	9.5	0.38	1.44	11/11/20 12:32	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	41	31 - 154	11/11/20 12:32	
Dibromofluoromethane	127	63 - 138	11/11/20 12:32	
Toluene-d8	101	66 - 138	11/11/20 12:32	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-CL-10292020
Lab Code: R2010276-010

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	4.7 U	4.7	0.19	.76	11/06/20 21:39	
1,1,2,2-Tetrachloroethane	4.7 U	4.7	0.42	.76	11/06/20 21:39	
1,1,2-Trichloroethane	4.7 U	4.7	0.19	.76	11/06/20 21:39	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.7 U	4.7	0.19	.76	11/06/20 21:39	
1,1-Dichloroethane (1,1-DCA)	4.7 U	4.7	0.19	.76	11/06/20 21:39	
1,1-Dichloroethene (1,1-DCE)	4.7 U	4.7	0.28	.76	11/06/20 21:39	
1,2,3-Trichlorobenzene	4.7 U	4.7	0.49	.76	11/06/20 21:39	
1,2,4-Trichlorobenzene	4.7 U	4.7	0.40	.76	11/06/20 21:39	
1,2,4-Trimethylbenzene	0.21 J	4.7	0.19	.76	11/06/20 21:39	
1,2-Dibromo-3-chloropropane (DBCP)	4.7 U	4.7	0.71	.76	11/06/20 21:39	
1,2-Dibromoethane	4.7 U	4.7	0.19	.76	11/06/20 21:39	
1,2-Dichlorobenzene	4.7 U	4.7	0.19	.76	11/06/20 21:39	
1,2-Dichloroethane	4.7 U	4.7	0.19	.76	11/06/20 21:39	
1,2-Dichloropropane	4.7 U	4.7	0.19	.76	11/06/20 21:39	
1,3,5-Trimethylbenzene	4.7 U	4.7	0.19	.76	11/06/20 21:39	
1,3-Dichlorobenzene	4.7 U	4.7	0.19	.76	11/06/20 21:39	
1,4-Dichlorobenzene	4.7 U	4.7	0.21	.76	11/06/20 21:39	
1,4-Dioxane	94 U	94	19	.76	11/06/20 21:39	
2-Butanone (MEK)	8.4	4.7	1.9	.76	11/06/20 21:39	
2-Hexanone	4.7 U	4.7	0.34	.76	11/06/20 21:39	
4-Methyl-2-pentanone	4.7 U	4.7	0.22	.76	11/06/20 21:39	
Acetone	130	4.7	4.5	.76	11/06/20 21:39	
Benzene	0.76 J	4.7	0.19	.76	11/06/20 21:39	
Bromochloromethane	4.7 U	4.7	0.19	.76	11/06/20 21:39	
Bromodichloromethane	4.7 U	4.7	0.19	.76	11/06/20 21:39	
Bromoform	4.7 U	4.7	0.48	.76	11/06/20 21:39	
Bromomethane	4.7 U	4.7	2.0	.76	11/06/20 21:39	
Carbon Disulfide	4.7 U	4.7	0.28	.76	11/06/20 21:39	
Carbon Tetrachloride	4.7 U	4.7	0.25	.76	11/06/20 21:39	
Chlorobenzene	4.7 U	4.7	0.19	.76	11/06/20 21:39	
Chloroethane	4.7 U	4.7	0.39	.76	11/06/20 21:39	
Chloroform	4.7 U	4.7	0.19	.76	11/06/20 21:39	
Chloromethane	4.7 U	4.7	1.4	.76	11/06/20 21:39	
Cyclohexane	0.65 J	4.7	0.25	.76	11/06/20 21:39	
Dibromochloromethane	4.7 U	4.7	0.19	.76	11/06/20 21:39	
Dichlorodifluoromethane (CFC 12)	4.7 U	4.7	0.32	.76	11/06/20 21:39	
Dichloromethane	4.7 U	4.7	2.7	.76	11/06/20 21:39	
Ethylbenzene	4.7 U	4.7	0.19	.76	11/06/20 21:39	
Isopropylbenzene (Cumene)	4.7 U	4.7	0.19	.76	11/06/20 21:39	
Methyl Acetate	4.7 U	4.7	0.80	.76	11/06/20 21:39	
Methyl tert-Butyl Ether	4.7 U	4.7	0.19	.76	11/06/20 21:39	
Methylcyclohexane	0.57 J	4.7	0.30	.76	11/06/20 21:39	
Styrene	4.7 U	4.7	0.19	.76	11/06/20 21:39	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-CL-10292020
Lab Code: R2010276-010

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	4.7 U	4.7	0.22	.76	11/06/20 21:39	
Toluene	0.24 J	4.7	0.19	.76	11/06/20 21:39	
Trichloroethene (TCE)	4.7 U	4.7	0.21	.76	11/06/20 21:39	
Trichlorofluoromethane (CFC 11)	4.7 U	4.7	0.25	.76	11/06/20 21:39	
Vinyl Chloride	4.7 U	4.7	0.44	.76	11/06/20 21:39	
cis-1,2-Dichloroethene	4.7 U	4.7	0.19	.76	11/06/20 21:39	
cis-1,3-Dichloropropene	4.7 U	4.7	0.19	.76	11/06/20 21:39	
m,p-Xylenes	9.4 U	9.4	0.35	.76	11/06/20 21:39	
o-Xylene	4.7 U	4.7	0.19	.76	11/06/20 21:39	
trans-1,2-Dichloroethene	4.7 U	4.7	0.19	.76	11/06/20 21:39	
trans-1,3-Dichloropropene	4.7 U	4.7	0.19	.76	11/06/20 21:39	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	31 - 154	11/06/20 21:39	
Dibromofluoromethane	113	63 - 138	11/06/20 21:39	
Toluene-d8	110	66 - 138	11/06/20 21:39	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	0.56 J	8.8	0.36	1.63	11/11/20 12:55	
1,1,2,2-Tetrachloroethane	8.8 U	8.8	0.78	1.63	11/11/20 12:55	
1,1,2-Trichloroethane	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
1,1,2-Trichloro-1,2,2-trifluoroethane	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
1,1-Dichloroethane (1,1-DCA)	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
1,1-Dichloroethene (1,1-DCE)	8.8 U	8.8	0.52	1.63	11/11/20 12:55	
1,2,3-Trichlorobenzene	8.8 U	8.8	0.92	1.63	11/11/20 12:55	
1,2,4-Trichlorobenzene	8.8 U	8.8	0.75	1.63	11/11/20 12:55	
1,2,4-Trimethylbenzene	0.68 J	8.8	0.36	1.63	11/11/20 12:55	
1,2-Dibromo-3-chloropropane (DBCP)	8.8 U	8.8	1.4	1.63	11/11/20 12:55	
1,2-Dibromoethane	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
1,2-Dichlorobenzene	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
1,2-Dichloroethane	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
1,2-Dichloropropane	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
1,3,5-Trimethylbenzene	0.39 J	8.8	0.36	1.63	11/11/20 12:55	
1,3-Dichlorobenzene	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
1,4-Dichlorobenzene	8.8 U	8.8	0.39	1.63	11/11/20 12:55	
1,4-Dioxane	180 U	180	36	1.63	11/11/20 12:55	
2-Butanone (MEK)	8.8 U	8.8	3.6	1.63	11/11/20 12:55	
2-Hexanone	8.8 U	8.8	0.64	1.63	11/11/20 12:55	
4-Methyl-2-pentanone	8.8 U	8.8	0.41	1.63	11/11/20 12:55	
Acetone	23	8.8	8.3	1.63	11/11/20 12:55	
Benzene	0.57 J	8.8	0.36	1.63	11/11/20 12:55	
Bromochloromethane	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
Bromodichloromethane	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
Bromoform	8.8 U	8.8	0.89	1.63	11/11/20 12:55	
Bromomethane	8.8 U	8.8	3.8	1.63	11/11/20 12:55	
Carbon Disulfide	3.9 J	8.8	0.52	1.63	11/11/20 12:55	
Carbon Tetrachloride	8.8 U	8.8	0.46	1.63	11/11/20 12:55	
Chlorobenzene	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
Chloroethane	8.8 U	8.8	0.73	1.63	11/11/20 12:55	
Chloroform	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
Chloromethane	8.8 U	8.8	2.5	1.63	11/11/20 12:55	
Cyclohexane	2.9 J	8.8	0.46	1.63	11/11/20 12:55	
Dibromochloromethane	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
Dichlorodifluoromethane (CFC 12)	8.8 U	8.8	0.59	1.63	11/11/20 12:55	
Dichloromethane	8.8 U	8.8	5.0	1.63	11/11/20 12:55	
Ethylbenzene	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
Isopropylbenzene (Cumene)	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
Methyl Acetate	1.6 J	8.8	1.5	1.63	11/11/20 12:55	
Methyl tert-Butyl Ether	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
Methylcyclohexane	4.3 J	8.8	0.55	1.63	11/11/20 12:55	
Styrene	8.8 U	8.8	0.36	1.63	11/11/20 12:55	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	8.8 U	8.8	0.41	1.63	11/11/20 12:55	
Toluene	1.3 J	8.8	0.36	1.63	11/11/20 12:55	
Trichloroethene (TCE)	8.8 U	8.8	0.39	1.63	11/11/20 12:55	
Trichlorofluoromethane (CFC 11)	8.8 U	8.8	0.46	1.63	11/11/20 12:55	
Vinyl Chloride	8.8 U	8.8	0.82	1.63	11/11/20 12:55	
cis-1,2-Dichloroethene	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
cis-1,3-Dichloropropene	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
m,p-Xylenes	0.91 J	18	0.66	1.63	11/11/20 12:55	
o-Xylene	0.53 J	8.8	0.36	1.63	11/11/20 12:55	
trans-1,2-Dichloroethene	8.8 U	8.8	0.36	1.63	11/11/20 12:55	
trans-1,3-Dichloropropene	8.8 U	8.8	0.36	1.63	11/11/20 12:55	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	59	31 - 154	11/11/20 12:55	
Dibromofluoromethane	124	63 - 138	11/11/20 12:55	
Toluene-d8	106	66 - 138	11/11/20 12:55	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	0.76 J	6.4	0.26	1.18	11/06/20 22:02	
1,1,2,2-Tetrachloroethane	6.4 U	6.4	0.57	1.18	11/06/20 22:02	
1,1,2-Trichloroethane	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
1,1,2-Trichloro-1,2,2-trifluoroethane	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
1,1-Dichloroethane (1,1-DCA)	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
1,1-Dichloroethene (1,1-DCE)	6.4 U	6.4	0.37	1.18	11/06/20 22:02	
1,2,3-Trichlorobenzene	6.4 U	6.4	0.67	1.18	11/06/20 22:02	
1,2,4-Trichlorobenzene	6.4 U	6.4	0.54	1.18	11/06/20 22:02	
1,2,4-Trimethylbenzene	0.69 J	6.4	0.26	1.18	11/06/20 22:02	
1,2-Dibromo-3-chloropropane (DBCP)	6.4 U	6.4	0.96	1.18	11/06/20 22:02	
1,2-Dibromoethane	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
1,2-Dichlorobenzene	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
1,2-Dichloroethane	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
1,2-Dichloropropane	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
1,3,5-Trimethylbenzene	0.71 J	6.4	0.26	1.18	11/06/20 22:02	
1,3-Dichlorobenzene	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
1,4-Dichlorobenzene	6.4 U	6.4	0.29	1.18	11/06/20 22:02	
1,4-Dioxane	130 U	130	26	1.18	11/06/20 22:02	
2-Butanone (MEK)	6.4 U	6.4	2.6	1.18	11/06/20 22:02	
2-Hexanone	6.4 U	6.4	0.46	1.18	11/06/20 22:02	
4-Methyl-2-pentanone	6.4 U	6.4	0.30	1.18	11/06/20 22:02	
Acetone	14	6.4	6.0	1.18	11/06/20 22:02	
Benzene	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
Bromochloromethane	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
Bromodichloromethane	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
Bromoform	6.4 U	6.4	0.64	1.18	11/06/20 22:02	
Bromomethane	6.4 U	6.4	2.7	1.18	11/06/20 22:02	
Carbon Disulfide	3.2 J	6.4	0.37	1.18	11/06/20 22:02	
Carbon Tetrachloride	6.4 U	6.4	0.34	1.18	11/06/20 22:02	
Chlorobenzene	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
Chloroethane	6.4 U	6.4	0.53	1.18	11/06/20 22:02	
Chloroform	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
Chloromethane	6.4 U	6.4	1.8	1.18	11/06/20 22:02	
Cyclohexane	4.1 J	6.4	0.34	1.18	11/06/20 22:02	
Dibromochloromethane	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
Dichlorodifluoromethane (CFC 12)	6.4 U	6.4	0.43	1.18	11/06/20 22:02	
Dichloromethane	6.4 U	6.4	3.6	1.18	11/06/20 22:02	
Ethylbenzene	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
Isopropylbenzene (Cumene)	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
Methyl Acetate	6.4 U	6.4	1.1	1.18	11/06/20 22:02	
Methyl tert-Butyl Ether	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
Methylcyclohexane	7.7	6.4	0.40	1.18	11/06/20 22:02	
Styrene	6.4 U	6.4	0.26	1.18	11/06/20 22:02	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	6.4 U	6.4	0.30	1.18	11/06/20 22:02	
Toluene	0.44 J	6.4	0.26	1.18	11/06/20 22:02	
Trichloroethene (TCE)	6.4 U	6.4	0.29	1.18	11/06/20 22:02	
Trichlorofluoromethane (CFC 11)	6.4 U	6.4	0.34	1.18	11/06/20 22:02	
Vinyl Chloride	6.4 U	6.4	0.59	1.18	11/06/20 22:02	
cis-1,2-Dichloroethene	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
cis-1,3-Dichloropropene	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
m,p-Xylenes	0.53 J	13	0.48	1.18	11/06/20 22:02	
o-Xylene	0.53 J	6.4	0.26	1.18	11/06/20 22:02	
trans-1,2-Dichloroethene	6.4 U	6.4	0.26	1.18	11/06/20 22:02	
trans-1,3-Dichloropropene	6.4 U	6.4	0.26	1.18	11/06/20 22:02	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	47	31 - 154	11/06/20 22:02	
Dibromofluoromethane	131	63 - 138	11/06/20 22:02	
Toluene-d8	112	66 - 138	11/06/20 22:02	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:15
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-46
Lab Code: R2010276-012

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	4.7 U	4.7	0.19	.8	11/06/20 22:26	
1,1,2,2-Tetrachloroethane	4.7 U	4.7	0.42	.8	11/06/20 22:26	
1,1,2-Trichloroethane	4.7 U	4.7	0.19	.8	11/06/20 22:26	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.7 U	4.7	0.19	.8	11/06/20 22:26	
1,1-Dichloroethane (1,1-DCA)	4.7 U	4.7	0.19	.8	11/06/20 22:26	
1,1-Dichloroethene (1,1-DCE)	4.7 U	4.7	0.28	.8	11/06/20 22:26	
1,2,3-Trichlorobenzene	4.7 U	4.7	0.49	.8	11/06/20 22:26	
1,2,4-Trichlorobenzene	4.7 U	4.7	0.40	.8	11/06/20 22:26	
1,2,4-Trimethylbenzene	4.7 U	4.7	0.19	.8	11/06/20 22:26	
1,2-Dibromo-3-chloropropane (DBCP)	4.7 U	4.7	0.70	.8	11/06/20 22:26	
1,2-Dibromoethane	4.7 U	4.7	0.19	.8	11/06/20 22:26	
1,2-Dichlorobenzene	4.7 U	4.7	0.19	.8	11/06/20 22:26	
1,2-Dichloroethane	4.7 U	4.7	0.19	.8	11/06/20 22:26	
1,2-Dichloropropane	4.7 U	4.7	0.19	.8	11/06/20 22:26	
1,3,5-Trimethylbenzene	4.7 U	4.7	0.19	.8	11/06/20 22:26	
1,3-Dichlorobenzene	4.7 U	4.7	0.19	.8	11/06/20 22:26	
1,4-Dichlorobenzene	4.7 U	4.7	0.21	.8	11/06/20 22:26	
1,4-Dioxane	93 U	93	19	.8	11/06/20 22:26	
2-Butanone (MEK)	4.7 U	4.7	1.9	.8	11/06/20 22:26	
2-Hexanone	4.7 U	4.7	0.34	.8	11/06/20 22:26	
4-Methyl-2-pentanone	4.7 U	4.7	0.22	.8	11/06/20 22:26	
Acetone	6.3	4.7	4.4	.8	11/06/20 22:26	
Benzene	4.7 U	4.7	0.19	.8	11/06/20 22:26	
Bromochloromethane	4.7 U	4.7	0.19	.8	11/06/20 22:26	
Bromodichloromethane	4.7 U	4.7	0.19	.8	11/06/20 22:26	
Bromoform	4.7 U	4.7	0.47	.8	11/06/20 22:26	
Bromomethane	4.7 U	4.7	2.0	.8	11/06/20 22:26	
Carbon Disulfide	4.7 U	4.7	0.28	.8	11/06/20 22:26	
Carbon Tetrachloride	4.7 U	4.7	0.25	.8	11/06/20 22:26	
Chlorobenzene	4.7 U	4.7	0.19	.8	11/06/20 22:26	
Chloroethane	4.7 U	4.7	0.39	.8	11/06/20 22:26	
Chloroform	4.7 U	4.7	0.19	.8	11/06/20 22:26	
Chloromethane	4.7 U	4.7	1.4	.8	11/06/20 22:26	
Cyclohexane	4.7 U	4.7	0.25	.8	11/06/20 22:26	
Dibromochloromethane	4.7 U	4.7	0.19	.8	11/06/20 22:26	
Dichlorodifluoromethane (CFC 12)	4.7 U	4.7	0.31	.8	11/06/20 22:26	
Dichloromethane	4.7 U	4.7	2.7	.8	11/06/20 22:26	
Ethylbenzene	4.7 U	4.7	0.19	.8	11/06/20 22:26	
Isopropylbenzene (Cumene)	4.7 U	4.7	0.19	.8	11/06/20 22:26	
Methyl Acetate	5.1	4.7	0.79	.8	11/06/20 22:26	
Methyl tert-Butyl Ether	4.7 U	4.7	0.19	.8	11/06/20 22:26	
Methylcyclohexane	4.7 U	4.7	0.29	.8	11/06/20 22:26	
Styrene	4.7 U	4.7	0.19	.8	11/06/20 22:26	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:15
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-46
Lab Code: R2010276-012

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	4.7 U	4.7	0.22	.8	11/06/20 22:26	
Toluene	4.7 U	4.7	0.19	.8	11/06/20 22:26	
Trichloroethene (TCE)	4.7 U	4.7	0.21	.8	11/06/20 22:26	
Trichlorofluoromethane (CFC 11)	4.7 U	4.7	0.25	.8	11/06/20 22:26	
Vinyl Chloride	4.7 U	4.7	0.43	.8	11/06/20 22:26	
cis-1,2-Dichloroethene	4.7 U	4.7	0.19	.8	11/06/20 22:26	
cis-1,3-Dichloropropene	4.7 U	4.7	0.19	.8	11/06/20 22:26	
m,p-Xylenes	9.3 U	9.3	0.35	.8	11/06/20 22:26	
o-Xylene	4.7 U	4.7	0.19	.8	11/06/20 22:26	
trans-1,2-Dichloroethene	4.7 U	4.7	0.19	.8	11/06/20 22:26	
trans-1,3-Dichloropropene	4.7 U	4.7	0.19	.8	11/06/20 22:26	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	31 - 154	11/06/20 22:26	
Dibromofluoromethane	105	63 - 138	11/06/20 22:26	
Toluene-d8	108	66 - 138	11/06/20 22:26	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:20
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-810
Lab Code: R2010276-013

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	4.5 U	4.5	0.19	.78	11/06/20 22:49	
1,1,2,2-Tetrachloroethane	4.5 U	4.5	0.40	.78	11/06/20 22:49	
1,1,2-Trichloroethane	4.5 U	4.5	0.19	.78	11/06/20 22:49	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.5 U	4.5	0.19	.78	11/06/20 22:49	
1,1-Dichloroethane (1,1-DCA)	4.5 U	4.5	0.19	.78	11/06/20 22:49	
1,1-Dichloroethene (1,1-DCE)	4.5 U	4.5	0.27	.78	11/06/20 22:49	
1,2,3-Trichlorobenzene	4.5 U	4.5	0.47	.78	11/06/20 22:49	
1,2,4-Trichlorobenzene	4.5 U	4.5	0.38	.78	11/06/20 22:49	
1,2,4-Trimethylbenzene	4.5 U	4.5	0.19	.78	11/06/20 22:49	
1,2-Dibromo-3-chloropropane (DBCP)	4.5 U	4.5	0.68	.78	11/06/20 22:49	
1,2-Dibromoethane	4.5 U	4.5	0.19	.78	11/06/20 22:49	
1,2-Dichlorobenzene	4.5 U	4.5	0.19	.78	11/06/20 22:49	
1,2-Dichloroethane	4.5 U	4.5	0.19	.78	11/06/20 22:49	
1,2-Dichloropropane	4.5 U	4.5	0.19	.78	11/06/20 22:49	
1,3,5-Trimethylbenzene	4.5 U	4.5	0.19	.78	11/06/20 22:49	
1,3-Dichlorobenzene	4.5 U	4.5	0.19	.78	11/06/20 22:49	
1,4-Dichlorobenzene	4.5 U	4.5	0.20	.78	11/06/20 22:49	
1,4-Dioxane	90 U	90	19	.78	11/06/20 22:49	
2-Butanone (MEK)	4.5 U	4.5	1.9	.78	11/06/20 22:49	
2-Hexanone	4.5 U	4.5	0.33	.78	11/06/20 22:49	
4-Methyl-2-pentanone	4.5 U	4.5	0.21	.78	11/06/20 22:49	
Acetone	5.4	4.5	4.3	.78	11/06/20 22:49	
Benzene	4.5 U	4.5	0.19	.78	11/06/20 22:49	
Bromochloromethane	4.5 U	4.5	0.19	.78	11/06/20 22:49	
Bromodichloromethane	4.5 U	4.5	0.19	.78	11/06/20 22:49	
Bromoform	4.5 U	4.5	0.46	.78	11/06/20 22:49	
Bromomethane	4.5 U	4.5	1.9	.78	11/06/20 22:49	
Carbon Disulfide	4.5 U	4.5	0.27	.78	11/06/20 22:49	
Carbon Tetrachloride	4.5 U	4.5	0.24	.78	11/06/20 22:49	
Chlorobenzene	4.5 U	4.5	0.19	.78	11/06/20 22:49	
Chloroethane	4.5 U	4.5	0.37	.78	11/06/20 22:49	
Chloroform	4.5 U	4.5	0.19	.78	11/06/20 22:49	
Chloromethane	4.5 U	4.5	1.3	.78	11/06/20 22:49	
Cyclohexane	4.5 U	4.5	0.24	.78	11/06/20 22:49	
Dibromochloromethane	4.5 U	4.5	0.19	.78	11/06/20 22:49	
Dichlorodifluoromethane (CFC 12)	4.5 U	4.5	0.30	.78	11/06/20 22:49	
Dichloromethane	4.5 U	4.5	2.6	.78	11/06/20 22:49	
Ethylbenzene	4.5 U	4.5	0.19	.78	11/06/20 22:49	
Isopropylbenzene (Cumene)	4.5 U	4.5	0.19	.78	11/06/20 22:49	
Methyl Acetate	4.5 U	4.5	0.76	.78	11/06/20 22:49	
Methyl tert-Butyl Ether	4.5 U	4.5	0.19	.78	11/06/20 22:49	
Methylcyclohexane	4.5 U	4.5	0.28	.78	11/06/20 22:49	
Styrene	4.5 U	4.5	0.19	.78	11/06/20 22:49	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:20
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-810
Lab Code: R2010276-013

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	4.5 U	4.5	0.21	.78	11/06/20 22:49	
Toluene	4.5 U	4.5	0.19	.78	11/06/20 22:49	
Trichloroethene (TCE)	4.5 U	4.5	0.20	.78	11/06/20 22:49	
Trichlorofluoromethane (CFC 11)	4.5 U	4.5	0.24	.78	11/06/20 22:49	
Vinyl Chloride	4.5 U	4.5	0.42	.78	11/06/20 22:49	
cis-1,2-Dichloroethene	4.5 U	4.5	0.19	.78	11/06/20 22:49	
cis-1,3-Dichloropropene	4.5 U	4.5	0.19	.78	11/06/20 22:49	
m,p-Xylenes	9.0 U	9.0	0.34	.78	11/06/20 22:49	
o-Xylene	4.5 U	4.5	0.19	.78	11/06/20 22:49	
trans-1,2-Dichloroethene	4.5 U	4.5	0.19	.78	11/06/20 22:49	
trans-1,3-Dichloropropene	4.5 U	4.5	0.19	.78	11/06/20 22:49	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	31 - 154	11/06/20 22:49	
Dibromofluoromethane	110	63 - 138	11/06/20 22:49	
Toluene-d8	110	66 - 138	11/06/20 22:49	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:35
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-1314
Lab Code: R2010276-014

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	4.3 U	4.3	0.18	.73	11/06/20 23:12	
1,1,2,2-Tetrachloroethane	4.3 U	4.3	0.38	.73	11/06/20 23:12	
1,1,2-Trichloroethane	4.3 U	4.3	0.18	.73	11/06/20 23:12	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.3 U	4.3	0.18	.73	11/06/20 23:12	
1,1-Dichloroethane (1,1-DCA)	4.3 U	4.3	0.18	.73	11/06/20 23:12	
1,1-Dichloroethene (1,1-DCE)	4.3 U	4.3	0.25	.73	11/06/20 23:12	
1,2,3-Trichlorobenzene	4.3 U	4.3	0.45	.73	11/06/20 23:12	
1,2,4-Trichlorobenzene	4.3 U	4.3	0.37	.73	11/06/20 23:12	
1,2,4-Trimethylbenzene	4.3 U	4.3	0.18	.73	11/06/20 23:12	
1,2-Dibromo-3-chloropropane (DBCP)	4.3 U	4.3	0.65	.73	11/06/20 23:12	
1,2-Dibromoethane	4.3 U	4.3	0.18	.73	11/06/20 23:12	
1,2-Dichlorobenzene	4.3 U	4.3	0.18	.73	11/06/20 23:12	
1,2-Dichloroethane	4.3 U	4.3	0.18	.73	11/06/20 23:12	
1,2-Dichloropropane	4.3 U	4.3	0.18	.73	11/06/20 23:12	
1,3,5-Trimethylbenzene	4.3 U	4.3	0.18	.73	11/06/20 23:12	
1,3-Dichlorobenzene	4.3 U	4.3	0.18	.73	11/06/20 23:12	
1,4-Dichlorobenzene	4.3 U	4.3	0.19	.73	11/06/20 23:12	
1,4-Dioxane	86 U	86	18	.73	11/06/20 23:12	
2-Butanone (MEK)	4.3 U	4.3	1.8	.73	11/06/20 23:12	
2-Hexanone	4.3 U	4.3	0.31	.73	11/06/20 23:12	
4-Methyl-2-pentanone	4.3 U	4.3	0.20	.73	11/06/20 23:12	
Acetone	6.3	4.3	4.1	.73	11/06/20 23:12	
Benzene	4.3 U	4.3	0.18	.73	11/06/20 23:12	
Bromochloromethane	4.3 U	4.3	0.18	.73	11/06/20 23:12	
Bromodichloromethane	4.3 U	4.3	0.18	.73	11/06/20 23:12	
Bromoform	4.3 U	4.3	0.43	.73	11/06/20 23:12	
Bromomethane	4.3 U	4.3	1.9	.73	11/06/20 23:12	
Carbon Disulfide	4.3 U	4.3	0.25	.73	11/06/20 23:12	
Carbon Tetrachloride	4.3 U	4.3	0.23	.73	11/06/20 23:12	
Chlorobenzene	4.3 U	4.3	0.18	.73	11/06/20 23:12	
Chloroethane	4.3 U	4.3	0.36	.73	11/06/20 23:12	
Chloroform	4.3 U	4.3	0.18	.73	11/06/20 23:12	
Chloromethane	4.3 U	4.3	1.3	.73	11/06/20 23:12	
Cyclohexane	4.3 U	4.3	0.23	.73	11/06/20 23:12	
Dibromochloromethane	4.3 U	4.3	0.18	.73	11/06/20 23:12	
Dichlorodifluoromethane (CFC 12)	4.3 U	4.3	0.29	.73	11/06/20 23:12	
Dichloromethane	4.3 U	4.3	2.5	.73	11/06/20 23:12	
Ethylbenzene	4.3 U	4.3	0.18	.73	11/06/20 23:12	
Isopropylbenzene (Cumene)	4.3 U	4.3	0.18	.73	11/06/20 23:12	
Methyl Acetate	4.3 U	4.3	0.73	.73	11/06/20 23:12	
Methyl tert-Butyl Ether	4.3 U	4.3	0.18	.73	11/06/20 23:12	
Methylcyclohexane	4.3 U	4.3	0.27	.73	11/06/20 23:12	
Styrene	4.3 U	4.3	0.18	.73	11/06/20 23:12	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:35
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-1314
Lab Code: R2010276-014

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	4.3 U	4.3	0.20	.73	11/06/20 23:12	
Toluene	4.3 U	4.3	0.18	.73	11/06/20 23:12	
Trichloroethene (TCE)	4.3 U	4.3	0.19	.73	11/06/20 23:12	
Trichlorofluoromethane (CFC 11)	4.3 U	4.3	0.23	.73	11/06/20 23:12	
Vinyl Chloride	4.3 U	4.3	0.40	.73	11/06/20 23:12	
cis-1,2-Dichloroethene	4.3 U	4.3	0.18	.73	11/06/20 23:12	
cis-1,3-Dichloropropene	4.3 U	4.3	0.18	.73	11/06/20 23:12	
m,p-Xylenes	8.6 U	8.6	0.32	.73	11/06/20 23:12	
o-Xylene	4.3 U	4.3	0.18	.73	11/06/20 23:12	
trans-1,2-Dichloroethene	4.3 U	4.3	0.18	.73	11/06/20 23:12	
trans-1,3-Dichloropropene	4.3 U	4.3	0.18	.73	11/06/20 23:12	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	31 - 154	11/06/20 23:12	
Dibromofluoromethane	111	63 - 138	11/06/20 23:12	
Toluene-d8	108	66 - 138	11/06/20 23:12	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:25
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-3638
Lab Code: R2010276-015

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.9 U	5.9	0.24	.88	11/06/20 23:35	
1,1,2,2-Tetrachloroethane	5.9 U	5.9	0.53	.88	11/06/20 23:35	
1,1,2-Trichloroethane	5.9 U	5.9	0.24	.88	11/06/20 23:35	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.9 U	5.9	0.24	.88	11/06/20 23:35	
1,1-Dichloroethane (1,1-DCA)	5.9 U	5.9	0.24	.88	11/06/20 23:35	
1,1-Dichloroethene (1,1-DCE)	5.9 U	5.9	0.35	.88	11/06/20 23:35	
1,2,3-Trichlorobenzene	5.9 U	5.9	0.62	.88	11/06/20 23:35	
1,2,4-Trichlorobenzene	5.9 U	5.9	0.50	.88	11/06/20 23:35	
1,2,4-Trimethylbenzene	5.9 U	5.9	0.24	.88	11/06/20 23:35	
1,2-Dibromo-3-chloropropane (DBCP)	5.9 U	5.9	0.89	.88	11/06/20 23:35	
1,2-Dibromoethane	5.9 U	5.9	0.24	.88	11/06/20 23:35	
1,2-Dichlorobenzene	5.9 U	5.9	0.24	.88	11/06/20 23:35	
1,2-Dichloroethane	5.9 U	5.9	0.24	.88	11/06/20 23:35	
1,2-Dichloropropane	5.9 U	5.9	0.24	.88	11/06/20 23:35	
1,3,5-Trimethylbenzene	5.9 U	5.9	0.24	.88	11/06/20 23:35	
1,3-Dichlorobenzene	5.9 U	5.9	0.24	.88	11/06/20 23:35	
1,4-Dichlorobenzene	5.9 U	5.9	0.27	.88	11/06/20 23:35	
1,4-Dioxane	120 U	120	24	.88	11/06/20 23:35	
2-Butanone (MEK)	5.9 U	5.9	2.4	.88	11/06/20 23:35	
2-Hexanone	5.9 U	5.9	0.43	.88	11/06/20 23:35	
4-Methyl-2-pentanone	5.9 U	5.9	0.28	.88	11/06/20 23:35	
Acetone	25	5.9	5.6	.88	11/06/20 23:35	
Benzene	5.9 U	5.9	0.24	.88	11/06/20 23:35	
Bromochloromethane	5.9 U	5.9	0.24	.88	11/06/20 23:35	
Bromodichloromethane	5.9 U	5.9	0.24	.88	11/06/20 23:35	
Bromoform	5.9 U	5.9	0.60	.88	11/06/20 23:35	
Bromomethane	5.9 U	5.9	2.5	.88	11/06/20 23:35	
Carbon Disulfide	0.68 J	5.9	0.35	.88	11/06/20 23:35	
Carbon Tetrachloride	5.9 U	5.9	0.31	.88	11/06/20 23:35	
Chlorobenzene	5.9 U	5.9	0.24	.88	11/06/20 23:35	
Chloroethane	5.9 U	5.9	0.49	.88	11/06/20 23:35	
Chloroform	5.9 U	5.9	0.24	.88	11/06/20 23:35	
Chloromethane	5.9 U	5.9	1.7	.88	11/06/20 23:35	
Cyclohexane	5.9 U	5.9	0.31	.88	11/06/20 23:35	
Dibromochloromethane	5.9 U	5.9	0.24	.88	11/06/20 23:35	
Dichlorodifluoromethane (CFC 12)	5.9 U	5.9	0.40	.88	11/06/20 23:35	
Dichloromethane	5.9 U	5.9	3.4	.88	11/06/20 23:35	
Ethylbenzene	5.9 U	5.9	0.24	.88	11/06/20 23:35	
Isopropylbenzene (Cumene)	5.9 U	5.9	0.24	.88	11/06/20 23:35	
Methyl Acetate	1.2 J	5.9	1.0	.88	11/06/20 23:35	
Methyl tert-Butyl Ether	5.9 U	5.9	0.24	.88	11/06/20 23:35	
Methylcyclohexane	5.9 U	5.9	0.37	.88	11/06/20 23:35	
Styrene	5.9 U	5.9	0.24	.88	11/06/20 23:35	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:25
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-3638
Lab Code: R2010276-015

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.9 U	5.9	0.28	.88	11/06/20 23:35	
Toluene	5.9 U	5.9	0.24	.88	11/06/20 23:35	
Trichloroethene (TCE)	5.9 U	5.9	0.27	.88	11/06/20 23:35	
Trichlorofluoromethane (CFC 11)	5.9 U	5.9	0.31	.88	11/06/20 23:35	
Vinyl Chloride	5.9 U	5.9	0.55	.88	11/06/20 23:35	
cis-1,2-Dichloroethene	5.9 U	5.9	0.24	.88	11/06/20 23:35	
cis-1,3-Dichloropropene	5.9 U	5.9	0.24	.88	11/06/20 23:35	
m,p-Xylenes	12 U	12	0.44	.88	11/06/20 23:35	
o-Xylene	5.9 U	5.9	0.24	.88	11/06/20 23:35	
trans-1,2-Dichloroethene	5.9 U	5.9	0.24	.88	11/06/20 23:35	
trans-1,3-Dichloropropene	5.9 U	5.9	0.24	.88	11/06/20 23:35	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	31 - 154	11/06/20 23:35	
Dibromofluoromethane	113	63 - 138	11/06/20 23:35	
Toluene-d8	112	66 - 138	11/06/20 23:35	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Collected: 10/30/20 07:00
Date Received: 10/31/20 08:25

Sample Name: EQB-103020
Lab Code: R2010276-016

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.25	1	11/10/20 15:17	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.34	1	11/10/20 15:17	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.45	1	11/10/20 15:17	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,4-Dichlorobenzene	5.0 U	5.0	0.20	1	11/10/20 15:17	
1,4-Dioxane	100 U	100	13	1	11/10/20 15:17	
2-Butanone (MEK)	10 U	10	0.78	1	11/10/20 15:17	
2-Hexanone	10 U	10	0.20	1	11/10/20 15:17	
4-Methyl-2-pentanone	10 U	10	0.20	1	11/10/20 15:17	
Acetone	10 U	10	5.0	1	11/10/20 15:17	
Benzene	5.0 U	5.0	0.20	1	11/10/20 15:17	
Bromochloromethane	5.0 U	5.0	0.20	1	11/10/20 15:17	
Bromodichloromethane	5.0 U	5.0	0.20	1	11/10/20 15:17	
Bromoform	5.0 U	5.0	0.25	1	11/10/20 15:17	
Bromomethane	5.0 U	5.0	0.70	1	11/10/20 15:17	
Carbon Disulfide	10 U	10	0.42	1	11/10/20 15:17	
Carbon Tetrachloride	5.0 U	5.0	0.34	1	11/10/20 15:17	
Chlorobenzene	5.0 U	5.0	0.20	1	11/10/20 15:17	
Chloroethane	5.0 U	5.0	0.23	1	11/10/20 15:17	
Chloroform	5.0 U	5.0	0.24	1	11/10/20 15:17	
Chloromethane	5.0 U	5.0	0.28	1	11/10/20 15:17	
Cyclohexane	10 U	10	0.26	1	11/10/20 15:17	
Dibromochloromethane	5.0 U	5.0	0.20	1	11/10/20 15:17	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.21	1	11/10/20 15:17	
Dichloromethane	5.0 U	5.0	0.65	1	11/10/20 15:17	
Ethylbenzene	5.0 U	5.0	0.20	1	11/10/20 15:17	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	11/10/20 15:17	
Methyl Acetate	10 U	10	0.33	1	11/10/20 15:17	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	11/10/20 15:17	
Methylcyclohexane	10 U	10	0.20	1	11/10/20 15:17	
Styrene	5.0 U	5.0	0.20	1	11/10/20 15:17	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Collected: 10/30/20 07:00
Date Received: 10/31/20 08:25

Sample Name: EQB-103020
Lab Code: R2010276-016

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.21	1	11/10/20 15:17	
Toluene	5.0 U	5.0	0.20	1	11/10/20 15:17	
Trichloroethene (TCE)	5.0 U	5.0	0.20	1	11/10/20 15:17	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.24	1	11/10/20 15:17	
Vinyl Chloride	5.0 U	5.0	0.20	1	11/10/20 15:17	
cis-1,2-Dichloroethene	5.0 U	5.0	0.23	1	11/10/20 15:17	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/10/20 15:17	
m,p-Xylenes	5.0 U	5.0	0.20	1	11/10/20 15:17	
o-Xylene	5.0 U	5.0	0.20	1	11/10/20 15:17	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/10/20 15:17	
trans-1,3-Dichloropropene	5.0 U	5.0	0.23	1	11/10/20 15:17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	11/10/20 15:17	
Dibromofluoromethane	108	80 - 116	11/10/20 15:17	
Toluene-d8	108	87 - 121	11/10/20 15:17	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Collected: 10/30/20 07:00
Date Received: 10/31/20 08:25

Sample Name: TRIP BLANK
Lab Code: R2010276-017

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.25	1	11/10/20 15:39	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.34	1	11/10/20 15:39	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.45	1	11/10/20 15:39	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,4-Dichlorobenzene	5.0 U	5.0	0.20	1	11/10/20 15:39	
1,4-Dioxane	100 U	100	13	1	11/10/20 15:39	
2-Butanone (MEK)	10 U	10	0.78	1	11/10/20 15:39	
2-Hexanone	10 U	10	0.20	1	11/10/20 15:39	
4-Methyl-2-pentanone	10 U	10	0.20	1	11/10/20 15:39	
Acetone	10 U	10	5.0	1	11/10/20 15:39	
Benzene	5.0 U	5.0	0.20	1	11/10/20 15:39	
Bromochloromethane	5.0 U	5.0	0.20	1	11/10/20 15:39	
Bromodichloromethane	5.0 U	5.0	0.20	1	11/10/20 15:39	
Bromoform	5.0 U	5.0	0.25	1	11/10/20 15:39	
Bromomethane	5.0 U	5.0	0.70	1	11/10/20 15:39	
Carbon Disulfide	10 U	10	0.42	1	11/10/20 15:39	
Carbon Tetrachloride	5.0 U	5.0	0.34	1	11/10/20 15:39	
Chlorobenzene	5.0 U	5.0	0.20	1	11/10/20 15:39	
Chloroethane	5.0 U	5.0	0.23	1	11/10/20 15:39	
Chloroform	5.0 U	5.0	0.24	1	11/10/20 15:39	
Chloromethane	5.0 U	5.0	0.28	1	11/10/20 15:39	
Cyclohexane	10 U	10	0.26	1	11/10/20 15:39	
Dibromochloromethane	5.0 U	5.0	0.20	1	11/10/20 15:39	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.21	1	11/10/20 15:39	
Dichloromethane	5.0 U	5.0	0.65	1	11/10/20 15:39	
Ethylbenzene	5.0 U	5.0	0.20	1	11/10/20 15:39	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	11/10/20 15:39	
Methyl Acetate	10 U	10	0.33	1	11/10/20 15:39	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	11/10/20 15:39	
Methylcyclohexane	10 U	10	0.20	1	11/10/20 15:39	
Styrene	5.0 U	5.0	0.20	1	11/10/20 15:39	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Collected: 10/30/20 07:00
Date Received: 10/31/20 08:25

Sample Name: TRIP BLANK
Lab Code: R2010276-017

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.21	1	11/10/20 15:39	
Toluene	5.0 U	5.0	0.20	1	11/10/20 15:39	
Trichloroethene (TCE)	5.0 U	5.0	0.20	1	11/10/20 15:39	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.24	1	11/10/20 15:39	
Vinyl Chloride	5.0 U	5.0	0.20	1	11/10/20 15:39	
cis-1,2-Dichloroethene	5.0 U	5.0	0.23	1	11/10/20 15:39	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/10/20 15:39	
m,p-Xylenes	5.0 U	5.0	0.20	1	11/10/20 15:39	
o-Xylene	5.0 U	5.0	0.20	1	11/10/20 15:39	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/10/20 15:39	
trans-1,3-Dichloropropene	5.0 U	5.0	0.23	1	11/10/20 15:39	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	11/10/20 15:39	
Dibromofluoromethane	107	80 - 116	11/10/20 15:39	
Toluene-d8	110	87 - 121	11/10/20 15:39	



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	1100 U	1100	270	3	11/06/20 16:51	11/4/20	
2,3,4,6-Tetrachlorophenol	1100 U	1100	240	3	11/06/20 16:51	11/4/20	
2,4,5-Trichlorophenol	1100 U	1100	970	3	11/06/20 16:51	11/4/20	
2,4,6-Trichlorophenol	1100 U	1100	200	3	11/06/20 16:51	11/4/20	
2,4-Dichlorophenol	1100 U	1100	250	3	11/06/20 16:51	11/4/20	
2,4-Dimethylphenol	1100 U	1100	250	3	11/06/20 16:51	11/4/20	
2,4-Dinitrophenol	5800 U	5800	2300	3	11/06/20 16:51	11/4/20	
2,4-Dinitrotoluene	1100 U	1100	450	3	11/06/20 16:51	11/4/20	
2,6-Dinitrotoluene	1100 U	1100	330	3	11/06/20 16:51	11/4/20	
2-Chloronaphthalene	1100 U	1100	280	3	11/06/20 16:51	11/4/20	
2-Chlorophenol	1100 U	1100	280	3	11/06/20 16:51	11/4/20	
2-Methylnaphthalene	260 J	1100	250	3	11/06/20 16:51	11/4/20	
2-Methylphenol	1100 U	1100	250	3	11/06/20 16:51	11/4/20	
2-Nitroaniline	1100 U	1100	340	3	11/06/20 16:51	11/4/20	
2-Nitrophenol	1100 U	1100	330	3	11/06/20 16:51	11/4/20	
3,3'-Dichlorobenzidine	1100 U	1100	240	3	11/06/20 16:51	11/4/20	
3- and 4-Methylphenol Coelution	1100 U	1100	220	3	11/06/20 16:51	11/4/20	
3-Nitroaniline	1100 U	1100	250	3	11/06/20 16:51	11/4/20	
4,6-Dinitro-2-methylphenol	5800 U	5800	490	3	11/06/20 16:51	11/4/20	
4-Bromophenyl Phenyl Ether	1100 U	1100	420	3	11/06/20 16:51	11/4/20	
4-Chloro-3-methylphenol	1100 U	1100	250	3	11/06/20 16:51	11/4/20	
4-Chloroaniline	1100 U	1100	270	3	11/06/20 16:51	11/4/20	
4-Chlorophenyl Phenyl Ether	1100 U	1100	280	3	11/06/20 16:51	11/4/20	
4-Nitroaniline	1100 U	1100	250	3	11/06/20 16:51	11/4/20	
4-Nitrophenol	5800 U	5800	380	3	11/06/20 16:51	11/4/20	
Acenaphthene	1100 U	1100	260	3	11/06/20 16:51	11/4/20	
Acenaphthylene	460 J	1100	300	3	11/06/20 16:51	11/4/20	
Acetophenone	1100 U	1100	260	3	11/06/20 16:51	11/4/20	
Anthracene	660 J	1100	320	3	11/06/20 16:51	11/4/20	
Atrazine	1100 U	1100	450	3	11/06/20 16:51	11/4/20	
Benz(a)anthracene	2500	1100	340	3	11/06/20 16:51	11/4/20	
Benzaldehyde	1100 U	1100	230	3	11/06/20 16:51	11/4/20	
Benzo(a)pyrene	3600	1100	420	3	11/06/20 16:51	11/4/20	
Benzo(b)fluoranthene	4400	1100	380	3	11/06/20 16:51	11/4/20	
Benzo(g,h,i)perylene	1900	1100	300	3	11/06/20 16:51	11/4/20	
Benzo(k)fluoranthene	1500	1100	420	3	11/06/20 16:51	11/4/20	
Biphenyl	1100 U	1100	280	3	11/06/20 16:51	11/4/20	
2,2'-Oxybis(1-chloropropane)	1100 U	1100	450	3	11/06/20 16:51	11/4/20	
Bis(2-chloroethoxy)methane	1100 U	1100	310	3	11/06/20 16:51	11/4/20	
Bis(2-chloroethyl) Ether	1100 U	1100	300	3	11/06/20 16:51	11/4/20	
Bis(2-ethylhexyl) Phthalate	1700 U	1700	310	3	11/06/20 16:51	11/4/20	
Butyl Benzyl Phthalate	1100 U	1100	290	3	11/06/20 16:51	11/4/20	
Caprolactam	1100 U	1100	300	3	11/06/20 16:51	11/4/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	1100 U	1100	330	3	11/06/20 16:51	11/4/20	
Chrysene	2800	1100	420	3	11/06/20 16:51	11/4/20	
Di-n-butyl Phthalate	1100 U	1100	350	3	11/06/20 16:51	11/4/20	
Di-n-octyl Phthalate	1100 U	1100	340	3	11/06/20 16:51	11/4/20	
Dibenz(a,h)anthracene	490 J	1100	340	3	11/06/20 16:51	11/4/20	
Dibenzofuran	1100 U	1100	230	3	11/06/20 16:51	11/4/20	
Diethyl Phthalate	1100 U	1100	250	3	11/06/20 16:51	11/4/20	
Dimethyl Phthalate	1100 U	1100	260	3	11/06/20 16:51	11/4/20	
Fluoranthene	4800	1100	420	3	11/06/20 16:51	11/4/20	
Fluorene	1100 U	1100	270	3	11/06/20 16:51	11/4/20	
Hexachlorobenzene	1100 U	1100	350	3	11/06/20 16:51	11/4/20	
Hexachlorobutadiene	1100 U	1100	280	3	11/06/20 16:51	11/4/20	
Hexachlorocyclopentadiene	1100 U	1100	250	3	11/06/20 16:51	11/4/20	
Hexachloroethane	1100 U	1100	300	3	11/06/20 16:51	11/4/20	
Indeno(1,2,3-cd)pyrene	2200	1100	380	3	11/06/20 16:51	11/4/20	
Isophorone	1100 U	1100	310	3	11/06/20 16:51	11/4/20	
N-Nitrosodi-n-propylamine	1100 U	1100	310	3	11/06/20 16:51	11/4/20	
N-Nitrosodiphenylamine	1100 U	1100	760	3	11/06/20 16:51	11/4/20	
Naphthalene	390 J	1100	300	3	11/06/20 16:51	11/4/20	
Nitrobenzene	1100 U	1100	300	3	11/06/20 16:51	11/4/20	
Pentachlorophenol (PCP)	5800 U	5800	380	3	11/06/20 16:51	11/4/20	
Phenanthrene	2700	1100	330	3	11/06/20 16:51	11/4/20	
Phenol	1100 U	1100	270	3	11/06/20 16:51	11/4/20	
Pyrene	5000	1100	450	3	11/06/20 16:51	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	66	10 - 109	11/06/20 16:51	
2-Fluorobiphenyl	49	10 - 102	11/06/20 16:51	
2-Fluorophenol	48	10 - 88	11/06/20 16:51	
Nitrobenzene-d5	55	10 - 95	11/06/20 16:51	
Phenol-d6	54	10 - 145	11/06/20 16:51	
Terphenyl-d14	65	10 - 106	11/06/20 16:51	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-150-02
Lab Code: R2010276-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	1100 U	1100	260	3	11/06/20 18:18	11/4/20	
2,3,4,6-Tetrachlorophenol	1100 U	1100	230	3	11/06/20 18:18	11/4/20	
2,4,5-Trichlorophenol	1100 U	1100	930	3	11/06/20 18:18	11/4/20	
2,4,6-Trichlorophenol	1100 U	1100	200	3	11/06/20 18:18	11/4/20	
2,4-Dichlorophenol	1100 U	1100	240	3	11/06/20 18:18	11/4/20	
2,4-Dimethylphenol	1100 U	1100	240	3	11/06/20 18:18	11/4/20	
2,4-Dinitrophenol	5600 U	5600	2200	3	11/06/20 18:18	11/4/20	
2,4-Dinitrotoluene	1100 U	1100	440	3	11/06/20 18:18	11/4/20	
2,6-Dinitrotoluene	1100 U	1100	320	3	11/06/20 18:18	11/4/20	
2-Chloronaphthalene	1100 U	1100	270	3	11/06/20 18:18	11/4/20	
2-Chlorophenol	1100 U	1100	270	3	11/06/20 18:18	11/4/20	
2-Methylnaphthalene	1100 U	1100	240	3	11/06/20 18:18	11/4/20	
2-Methylphenol	1100 U	1100	240	3	11/06/20 18:18	11/4/20	
2-Nitroaniline	1100 U	1100	330	3	11/06/20 18:18	11/4/20	
2-Nitrophenol	1100 U	1100	320	3	11/06/20 18:18	11/4/20	
3,3'-Dichlorobenzidine	1100 U	1100	230	3	11/06/20 18:18	11/4/20	
3- and 4-Methylphenol Coelution	1100 U	1100	210	3	11/06/20 18:18	11/4/20	
3-Nitroaniline	1100 U	1100	240	3	11/06/20 18:18	11/4/20	
4,6-Dinitro-2-methylphenol	5600 U	5600	470	3	11/06/20 18:18	11/4/20	
4-Bromophenyl Phenyl Ether	1100 U	1100	400	3	11/06/20 18:18	11/4/20	
4-Chloro-3-methylphenol	1100 U	1100	240	3	11/06/20 18:18	11/4/20	
4-Chloroaniline	1100 U	1100	260	3	11/06/20 18:18	11/4/20	
4-Chlorophenyl Phenyl Ether	1100 U	1100	270	3	11/06/20 18:18	11/4/20	
4-Nitroaniline	1100 U	1100	240	3	11/06/20 18:18	11/4/20	
4-Nitrophenol	5600 U	5600	370	3	11/06/20 18:18	11/4/20	
Acenaphthene	1100 U	1100	250	3	11/06/20 18:18	11/4/20	
Acenaphthylene	300 J	1100	290	3	11/06/20 18:18	11/4/20	
Acetophenone	1100 U	1100	250	3	11/06/20 18:18	11/4/20	
Anthracene	320 J	1100	310	3	11/06/20 18:18	11/4/20	
Atrazine	1100 U	1100	440	3	11/06/20 18:18	11/4/20	
Benz(a)anthracene	1300	1100	330	3	11/06/20 18:18	11/4/20	
Benzaldehyde	1100 U	1100	220	3	11/06/20 18:18	11/4/20	
Benzo(a)pyrene	2100	1100	400	3	11/06/20 18:18	11/4/20	
Benzo(b)fluoranthene	2600	1100	370	3	11/06/20 18:18	11/4/20	
Benzo(g,h,i)perylene	1500	1100	290	3	11/06/20 18:18	11/4/20	
Benzo(k)fluoranthene	880 J	1100	400	3	11/06/20 18:18	11/4/20	
Biphenyl	1100 U	1100	270	3	11/06/20 18:18	11/4/20	
2,2'-Oxybis(1-chloropropane)	1100 U	1100	440	3	11/06/20 18:18	11/4/20	
Bis(2-chloroethoxy)methane	1100 U	1100	300	3	11/06/20 18:18	11/4/20	
Bis(2-chloroethyl) Ether	1100 U	1100	290	3	11/06/20 18:18	11/4/20	
Bis(2-ethylhexyl) Phthalate	1700 U	1700	300	3	11/06/20 18:18	11/4/20	
Butyl Benzyl Phthalate	1100 U	1100	280	3	11/06/20 18:18	11/4/20	
Caprolactam	1100 U	1100	290	3	11/06/20 18:18	11/4/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-150-02
Lab Code: R2010276-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	1100 U	1100	320	3	11/06/20 18:18	11/4/20	
Chrysene	1500	1100	400	3	11/06/20 18:18	11/4/20	
Di-n-butyl Phthalate	1100 U	1100	340	3	11/06/20 18:18	11/4/20	
Di-n-octyl Phthalate	1100 U	1100	330	3	11/06/20 18:18	11/4/20	
Dibenz(a,h)anthracene	1100 U	1100	330	3	11/06/20 18:18	11/4/20	
Dibenzofuran	1100 U	1100	220	3	11/06/20 18:18	11/4/20	
Diethyl Phthalate	1100 U	1100	240	3	11/06/20 18:18	11/4/20	
Dimethyl Phthalate	1100 U	1100	250	3	11/06/20 18:18	11/4/20	
Fluoranthene	2300	1100	400	3	11/06/20 18:18	11/4/20	
Fluorene	1100 U	1100	260	3	11/06/20 18:18	11/4/20	
Hexachlorobenzene	1100 U	1100	340	3	11/06/20 18:18	11/4/20	
Hexachlorobutadiene	1100 U	1100	270	3	11/06/20 18:18	11/4/20	
Hexachlorocyclopentadiene	1100 U	1100	240	3	11/06/20 18:18	11/4/20	
Hexachloroethane	1100 U	1100	290	3	11/06/20 18:18	11/4/20	
Indeno(1,2,3-cd)pyrene	1500	1100	370	3	11/06/20 18:18	11/4/20	
Isophorone	1100 U	1100	300	3	11/06/20 18:18	11/4/20	
N-Nitrosodi-n-propylamine	1100 U	1100	300	3	11/06/20 18:18	11/4/20	
N-Nitrosodiphenylamine	1100 U	1100	730	3	11/06/20 18:18	11/4/20	
Naphthalene	350 J	1100	290	3	11/06/20 18:18	11/4/20	
Nitrobenzene	1100 U	1100	290	3	11/06/20 18:18	11/4/20	
Pentachlorophenol (PCP)	5600 U	5600	370	3	11/06/20 18:18	11/4/20	
Phenanthrene	1200	1100	320	3	11/06/20 18:18	11/4/20	
Phenol	1100 U	1100	260	3	11/06/20 18:18	11/4/20	
Pyrene	2600	1100	440	3	11/06/20 18:18	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	59	10 - 109	11/06/20 18:18	
2-Fluorobiphenyl	42	10 - 102	11/06/20 18:18	
2-Fluorophenol	38	10 - 88	11/06/20 18:18	
Nitrobenzene-d5	41	10 - 95	11/06/20 18:18	
Phenol-d6	44	10 - 145	11/06/20 18:18	
Terphenyl-d14	59	10 - 106	11/06/20 18:18	

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dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	1200 U	1200	300	3	11/06/20 18:47	11/4/20	
2,3,4,6-Tetrachlorophenol	1200 U	1200	260	3	11/06/20 18:47	11/4/20	
2,4,5-Trichlorophenol	1200 U	1200	1100	3	11/06/20 18:47	11/4/20	
2,4,6-Trichlorophenol	1200 U	1200	220	3	11/06/20 18:47	11/4/20	
2,4-Dichlorophenol	1200 U	1200	270	3	11/06/20 18:47	11/4/20	
2,4-Dimethylphenol	1200 U	1200	280	3	11/06/20 18:47	11/4/20	
2,4-Dinitrophenol	6400 U	6400	2500	3	11/06/20 18:47	11/4/20	
2,4-Dinitrotoluene	1200 U	1200	490	3	11/06/20 18:47	11/4/20	
2,6-Dinitrotoluene	1200 U	1200	370	3	11/06/20 18:47	11/4/20	
2-Chloronaphthalene	1200 U	1200	300	3	11/06/20 18:47	11/4/20	
2-Chlorophenol	1200 U	1200	310	3	11/06/20 18:47	11/4/20	
2-Methylnaphthalene	1700	1200	280	3	11/06/20 18:47	11/4/20	
2-Methylphenol	1200 U	1200	270	3	11/06/20 18:47	11/4/20	
2-Nitroaniline	1200 U	1200	370	3	11/06/20 18:47	11/4/20	
2-Nitrophenol	1200 U	1200	360	3	11/06/20 18:47	11/4/20	
3,3'-Dichlorobenzidine	1200 U	1200	260	3	11/06/20 18:47	11/4/20	
3- and 4-Methylphenol Coelution	1200 U	1200	240	3	11/06/20 18:47	11/4/20	
3-Nitroaniline	1200 U	1200	270	3	11/06/20 18:47	11/4/20	
4,6-Dinitro-2-methylphenol	6400 U	6400	530	3	11/06/20 18:47	11/4/20	
4-Bromophenyl Phenyl Ether	1200 U	1200	460	3	11/06/20 18:47	11/4/20	
4-Chloro-3-methylphenol	1200 U	1200	280	3	11/06/20 18:47	11/4/20	
4-Chloroaniline	1200 U	1200	300	3	11/06/20 18:47	11/4/20	
4-Chlorophenyl Phenyl Ether	1200 U	1200	300	3	11/06/20 18:47	11/4/20	
4-Nitroaniline	1200 U	1200	270	3	11/06/20 18:47	11/4/20	
4-Nitrophenol	6400 U	6400	420	3	11/06/20 18:47	11/4/20	
Acenaphthene	1400	1200	280	3	11/06/20 18:47	11/4/20	
Acenaphthylene	740 J	1200	330	3	11/06/20 18:47	11/4/20	
Acetophenone	1200 U	1200	290	3	11/06/20 18:47	11/4/20	
Anthracene	1600	1200	350	3	11/06/20 18:47	11/4/20	
Atrazine	1200 U	1200	490	3	11/06/20 18:47	11/4/20	
Benz(a)anthracene	8300	1200	370	3	11/06/20 18:47	11/4/20	
Benzaldehyde	1200 U	1200	250	3	11/06/20 18:47	11/4/20	
Benzo(a)pyrene	15000 E	1200	460	3	11/06/20 18:47	11/4/20	
Benzo(b)fluoranthene	16000 E	1200	420	3	11/06/20 18:47	11/4/20	
Benzo(g,h,i)perylene	9200	1200	330	3	11/06/20 18:47	11/4/20	
Benzo(k)fluoranthene	6200	1200	460	3	11/06/20 18:47	11/4/20	
Biphenyl	1200 U	1200	310	3	11/06/20 18:47	11/4/20	
2,2'-Oxybis(1-chloropropane)	1200 U	1200	490	3	11/06/20 18:47	11/4/20	
Bis(2-chloroethoxy)methane	1200 U	1200	340	3	11/06/20 18:47	11/4/20	
Bis(2-chloroethyl) Ether	1200 U	1200	330	3	11/06/20 18:47	11/4/20	
Bis(2-ethylhexyl) Phthalate	1900 U	1900	340	3	11/06/20 18:47	11/4/20	
Butyl Benzyl Phthalate	1200 U	1200	310	3	11/06/20 18:47	11/4/20	
Caprolactam	1200 U	1200	330	3	11/06/20 18:47	11/4/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	710 J	1200	360	3	11/06/20 18:47	11/4/20	
Chrysene	9200	1200	460	3	11/06/20 18:47	11/4/20	
Di-n-butyl Phthalate	1200 U	1200	380	3	11/06/20 18:47	11/4/20	
Di-n-octyl Phthalate	1200 U	1200	370	3	11/06/20 18:47	11/4/20	
Dibenz(a,h)anthracene	2200	1200	370	3	11/06/20 18:47	11/4/20	
Dibenzofuran	850 J	1200	250	3	11/06/20 18:47	11/4/20	
Diethyl Phthalate	1200 U	1200	270	3	11/06/20 18:47	11/4/20	
Dimethyl Phthalate	1200 U	1200	280	3	11/06/20 18:47	11/4/20	
Fluoranthene	11000	1200	460	3	11/06/20 18:47	11/4/20	
Fluorene	520 J	1200	290	3	11/06/20 18:47	11/4/20	
Hexachlorobenzene	1200 U	1200	380	3	11/06/20 18:47	11/4/20	
Hexachlorobutadiene	1200 U	1200	310	3	11/06/20 18:47	11/4/20	
Hexachlorocyclopentadiene	1200 U	1200	280	3	11/06/20 18:47	11/4/20	
Hexachloroethane	1200 U	1200	320	3	11/06/20 18:47	11/4/20	
Indeno(1,2,3-cd)pyrene	9800	1200	420	3	11/06/20 18:47	11/4/20	
Isophorone	1200 U	1200	340	3	11/06/20 18:47	11/4/20	
N-Nitrosodi-n-propylamine	1200 U	1200	340	3	11/06/20 18:47	11/4/20	
N-Nitrosodiphenylamine	1200 U	1200	830	3	11/06/20 18:47	11/4/20	
Naphthalene	1900	1200	320	3	11/06/20 18:47	11/4/20	
Nitrobenzene	1200 U	1200	320	3	11/06/20 18:47	11/4/20	
Pentachlorophenol (PCP)	6400 U	6400	420	3	11/06/20 18:47	11/4/20	
Phenanthrene	6600	1200	370	3	11/06/20 18:47	11/4/20	
Phenol	1200 U	1200	300	3	11/06/20 18:47	11/4/20	
Pyrene	13000 E	1200	490	3	11/06/20 18:47	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	63	10 - 109	11/06/20 18:47	
2-Fluorobiphenyl	31	10 - 102	11/06/20 18:47	
2-Fluorophenol	31	10 - 88	11/06/20 18:47	
Nitrobenzene-d5	34	10 - 95	11/06/20 18:47	
Phenol-d6	34	10 - 145	11/06/20 18:47	
Terphenyl-d14	54	10 - 106	11/06/20 18:47	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	2100 U	2100	490	5	11/24/20 21:39	11/4/20	
2,3,4,6-Tetrachlorophenol	2100 U	2100	440	5	11/24/20 21:39	11/4/20	
2,4,5-Trichlorophenol	2100 U	2100	1800	5	11/24/20 21:39	11/4/20	
2,4,6-Trichlorophenol	2100 U	2100	370	5	11/24/20 21:39	11/4/20	
2,4-Dichlorophenol	2100 U	2100	440	5	11/24/20 21:39	11/4/20	
2,4-Dimethylphenol	2100 U	2100	460	5	11/24/20 21:39	11/4/20	
2,4-Dinitrophenol	11000 U	11000	4100	5	11/24/20 21:39	11/4/20	
2,4-Dinitrotoluene	2100 U	2100	820	5	11/24/20 21:39	11/4/20	
2,6-Dinitrotoluene	2100 U	2100	610	5	11/24/20 21:39	11/4/20	
2-Chloronaphthalene	2100 U	2100	500	5	11/24/20 21:39	11/4/20	
2-Chlorophenol	2100 U	2100	510	5	11/24/20 21:39	11/4/20	
2-Methylnaphthalene	2000 DJ	2100	460	5	11/24/20 21:39	11/4/20	
2-Methylphenol	2100 U	2100	450	5	11/24/20 21:39	11/4/20	
2-Nitroaniline	2100 U	2100	620	5	11/24/20 21:39	11/4/20	
2-Nitrophenol	2100 U	2100	600	5	11/24/20 21:39	11/4/20	
3,3'-Dichlorobenzidine	2100 U	2100	440	5	11/24/20 21:39	11/4/20	
3- and 4-Methylphenol Coelution	2100 U	2100	400	5	11/24/20 21:39	11/4/20	
3-Nitroaniline	2100 U	2100	440	5	11/24/20 21:39	11/4/20	
4,6-Dinitro-2-methylphenol	11000 U	11000	880	5	11/24/20 21:39	11/4/20	
4-Bromophenyl Phenyl Ether	2100 U	2100	760	5	11/24/20 21:39	11/4/20	
4-Chloro-3-methylphenol	2100 U	2100	460	5	11/24/20 21:39	11/4/20	
4-Chloroaniline	2100 U	2100	490	5	11/24/20 21:39	11/4/20	
4-Chlorophenyl Phenyl Ether	2100 U	2100	500	5	11/24/20 21:39	11/4/20	
4-Nitroaniline	2100 U	2100	440	5	11/24/20 21:39	11/4/20	
4-Nitrophenol	11000 U	11000	700	5	11/24/20 21:39	11/4/20	
Acenaphthene	1500 DJ	2100	470	5	11/24/20 21:39	11/4/20	
Acenaphthylene	830 DJ	2100	550	5	11/24/20 21:39	11/4/20	
Acetophenone	2100 U	2100	480	5	11/24/20 21:39	11/4/20	
Anthracene	1700 DJ	2100	580	5	11/24/20 21:39	11/4/20	
Atrazine	2100 U	2100	820	5	11/24/20 21:39	11/4/20	
Benz(a)anthracene	9200 D	2100	610	5	11/24/20 21:39	11/4/20	
Benzaldehyde	2100 U	2100	410	5	11/24/20 21:39	11/4/20	
Benzo(a)pyrene	17000 D	2100	760	5	11/24/20 21:39	11/4/20	
Benzo(b)fluoranthene	16000 D	2100	700	5	11/24/20 21:39	11/4/20	
Benzo(g,h,i)perylene	12000 D	2100	550	5	11/24/20 21:39	11/4/20	
Benzo(k)fluoranthene	5900 D	2100	760	5	11/24/20 21:39	11/4/20	
Biphenyl	2100 U	2100	510	5	11/24/20 21:39	11/4/20	
2,2'-Oxybis(1-chloropropane)	2100 U	2100	820	5	11/24/20 21:39	11/4/20	
Bis(2-chloroethoxy)methane	2100 U	2100	560	5	11/24/20 21:39	11/4/20	
Bis(2-chloroethyl) Ether	2100 U	2100	540	5	11/24/20 21:39	11/4/20	
Bis(2-ethylhexyl) Phthalate	3100 U	3100	560	5	11/24/20 21:39	11/4/20	
Butyl Benzyl Phthalate	2100 U	2100	520	5	11/24/20 21:39	11/4/20	
Caprolactam	2100 U	2100	540	5	11/24/20 21:39	11/4/20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	940 DJ	2100	600	5	11/24/20 21:39	11/4/20	
Chrysene	11000 D	2100	760	5	11/24/20 21:39	11/4/20	
Di-n-butyl Phthalate	2100 U	2100	630	5	11/24/20 21:39	11/4/20	
Di-n-octyl Phthalate	2100 U	2100	610	5	11/24/20 21:39	11/4/20	
Dibenz(a,h)anthracene	2500 D	2100	620	5	11/24/20 21:39	11/4/20	
Dibenzofuran	950 DJ	2100	410	5	11/24/20 21:39	11/4/20	
Diethyl Phthalate	2100 U	2100	440	5	11/24/20 21:39	11/4/20	
Dimethyl Phthalate	2100 U	2100	470	5	11/24/20 21:39	11/4/20	
Fluoranthene	14000 D	2100	760	5	11/24/20 21:39	11/4/20	
Fluorene	590 DJ	2100	480	5	11/24/20 21:39	11/4/20	
Hexachlorobenzene	2100 U	2100	630	5	11/24/20 21:39	11/4/20	
Hexachlorobutadiene	2100 U	2100	510	5	11/24/20 21:39	11/4/20	
Hexachlorocyclopentadiene	2100 U	2100	460	5	11/24/20 21:39	11/4/20	
Hexachloroethane	2100 U	2100	540	5	11/24/20 21:39	11/4/20	
Indeno(1,2,3-cd)pyrene	11000 D	2100	700	5	11/24/20 21:39	11/4/20	
Isophorone	2100 U	2100	570	5	11/24/20 21:39	11/4/20	
N-Nitrosodi-n-propylamine	2100 U	2100	560	5	11/24/20 21:39	11/4/20	
N-Nitrosodiphenylamine	2100 U	2100	1400	5	11/24/20 21:39	11/4/20	
Naphthalene	2200 D	2100	540	5	11/24/20 21:39	11/4/20	
Nitrobenzene	2100 U	2100	540	5	11/24/20 21:39	11/4/20	
Pentachlorophenol (PCP)	11000 U	11000	700	5	11/24/20 21:39	11/4/20	
Phenanthrene	7500 D	2100	610	5	11/24/20 21:39	11/4/20	
Phenol	2100 U	2100	490	5	11/24/20 21:39	11/4/20	
Pyrene	13000 D	2100	820	5	11/24/20 21:39	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	70	10 - 109	11/24/20 21:39	
2-Fluorobiphenyl	34	10 - 102	11/24/20 21:39	
2-Fluorophenol	33	10 - 88	11/24/20 21:39	
Nitrobenzene-d5	33	10 - 95	11/24/20 21:39	
Phenol-d6	36	10 - 145	11/24/20 21:39	
Terphenyl-d14	59	10 - 106	11/24/20 21:39	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	2300 U	2300	540	5	11/06/20 19:17	11/4/20	
2,3,4,6-Tetrachlorophenol	2300 U	2300	480	5	11/06/20 19:17	11/4/20	
2,4,5-Trichlorophenol	2300 U	2300	2000	5	11/06/20 19:17	11/4/20	
2,4,6-Trichlorophenol	2300 U	2300	400	5	11/06/20 19:17	11/4/20	
2,4-Dichlorophenol	2300 U	2300	490	5	11/06/20 19:17	11/4/20	
2,4-Dimethylphenol	23000	2300	500	5	11/06/20 19:17	11/4/20	
2,4-Dinitrophenol	12000 U	12000	4500	5	11/06/20 19:17	11/4/20	
2,4-Dinitrotoluene	2300 U	2300	900	5	11/06/20 19:17	11/4/20	
2,6-Dinitrotoluene	2300 U	2300	670	5	11/06/20 19:17	11/4/20	
2-Chloronaphthalene	2300 U	2300	550	5	11/06/20 19:17	11/4/20	
2-Chlorophenol	2300 U	2300	560	5	11/06/20 19:17	11/4/20	
2-Methylnaphthalene	220000 E	2300	500	5	11/06/20 19:17	11/4/20	
2-Methylphenol	4900	2300	490	5	11/06/20 19:17	11/4/20	
2-Nitroaniline	2300 U	2300	680	5	11/06/20 19:17	11/4/20	
2-Nitrophenol	2300 U	2300	660	5	11/06/20 19:17	11/4/20	
3,3'-Dichlorobenzidine	2300 U	2300	480	5	11/06/20 19:17	11/4/20	
3- and 4-Methylphenol Coelution	9700	2300	440	5	11/06/20 19:17	11/4/20	
3-Nitroaniline	2300 U	2300	490	5	11/06/20 19:17	11/4/20	
4,6-Dinitro-2-methylphenol	12000 U	12000	970	5	11/06/20 19:17	11/4/20	
4-Bromophenyl Phenyl Ether	2300 U	2300	830	5	11/06/20 19:17	11/4/20	
4-Chloro-3-methylphenol	2300 U	2300	500	5	11/06/20 19:17	11/4/20	
4-Chloroaniline	2300 U	2300	540	5	11/06/20 19:17	11/4/20	
4-Chlorophenyl Phenyl Ether	2300 U	2300	550	5	11/06/20 19:17	11/4/20	
4-Nitroaniline	2300 U	2300	490	5	11/06/20 19:17	11/4/20	
4-Nitrophenol	12000 U	12000	760	5	11/06/20 19:17	11/4/20	
Acenaphthene	24000 E	2300	510	5	11/06/20 19:17	11/4/20	
Acenaphthylene	110000 E	2300	600	5	11/06/20 19:17	11/4/20	
Acetophenone	2300 U	2300	520	5	11/06/20 19:17	11/4/20	
Anthracene	130000 E	2300	640	5	11/06/20 19:17	11/4/20	
Atrazine	2300 U	2300	900	5	11/06/20 19:17	11/4/20	
Benz(a)anthracene	210000 E	2300	670	5	11/06/20 19:17	11/4/20	
Benzaldehyde	2300 U	2300	450	5	11/06/20 19:17	11/4/20	
Benzo(a)pyrene	180000 E	2300	830	5	11/06/20 19:17	11/4/20	
Benzo(b)fluoranthene	210000 E	2300	760	5	11/06/20 19:17	11/4/20	
Benzo(g,h,i)perylene	92000 E	2300	600	5	11/06/20 19:17	11/4/20	
Benzo(k)fluoranthene	69000 E	2300	830	5	11/06/20 19:17	11/4/20	
Biphenyl	42000 E	2300	560	5	11/06/20 19:17	11/4/20	
2,2'-Oxybis(1-chloropropane)	2300 U	2300	900	5	11/06/20 19:17	11/4/20	
Bis(2-chloroethoxy)methane	2300 U	2300	610	5	11/06/20 19:17	11/4/20	
Bis(2-chloroethyl) Ether	2300 U	2300	600	5	11/06/20 19:17	11/4/20	
Bis(2-ethylhexyl) Phthalate	3400 U	3400	610	5	11/06/20 19:17	11/4/20	
Butyl Benzyl Phthalate	2300 U	2300	570	5	11/06/20 19:17	11/4/20	
Caprolactam	2300 U	2300	600	5	11/06/20 19:17	11/4/20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	110000 E	2300	660	5	11/06/20 19:17	11/4/20	
Chrysene	150000 E	2300	830	5	11/06/20 19:17	11/4/20	
Di-n-butyl Phthalate	2300 U	2300	690	5	11/06/20 19:17	11/4/20	
Di-n-octyl Phthalate	2300 U	2300	670	5	11/06/20 19:17	11/4/20	
Dibenz(a,h)anthracene	27000 E	2300	680	5	11/06/20 19:17	11/4/20	
Dibenzofuran	110000 E	2300	450	5	11/06/20 19:17	11/4/20	
Diethyl Phthalate	2300 U	2300	490	5	11/06/20 19:17	11/4/20	
Dimethyl Phthalate	2300 U	2300	510	5	11/06/20 19:17	11/4/20	
Fluoranthene	280000 E	2300	830	5	11/06/20 19:17	11/4/20	
Fluorene	150000 E	2300	530	5	11/06/20 19:17	11/4/20	
Hexachlorobenzene	2300 U	2300	690	5	11/06/20 19:17	11/4/20	
Hexachlorobutadiene	2300 U	2300	560	5	11/06/20 19:17	11/4/20	
Hexachlorocyclopentadiene	2300 U	2300	500	5	11/06/20 19:17	11/4/20	
Hexachloroethane	2300 U	2300	590	5	11/06/20 19:17	11/4/20	
Indeno(1,2,3-cd)pyrene	110000 E	2300	760	5	11/06/20 19:17	11/4/20	
Isophorone	2300 U	2300	620	5	11/06/20 19:17	11/4/20	
N-Nitrosodi-n-propylamine	2300 U	2300	610	5	11/06/20 19:17	11/4/20	
N-Nitrosodiphenylamine	2300 U	2300	1600	5	11/06/20 19:17	11/4/20	
Naphthalene	350000 E	2300	590	5	11/06/20 19:17	11/4/20	
Nitrobenzene	2300 U	2300	590	5	11/06/20 19:17	11/4/20	
Pentachlorophenol (PCP)	12000 U	12000	760	5	11/06/20 19:17	11/4/20	
Phenanthrene	340000 E	2300	670	5	11/06/20 19:17	11/4/20	
Phenol	2800	2300	540	5	11/06/20 19:17	11/4/20	
Pyrene	270000 E	2300	900	5	11/06/20 19:17	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	46	10 - 109	11/06/20 19:17	
2-Fluorobiphenyl	32	10 - 102	11/06/20 19:17	
2-Fluorophenol	25	10 - 88	11/06/20 19:17	
Nitrobenzene-d5	53	10 - 95	11/06/20 19:17	
Phenol-d6	28	10 - 145	11/06/20 19:17	
Terphenyl-d14	71	10 - 106	11/06/20 19:17	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	45000 U	45000	11000	100	11/30/20 10:17	11/4/20	
2,3,4,6-Tetrachlorophenol	45000 U	45000	9500	100	11/30/20 10:17	11/4/20	
2,4,5-Trichlorophenol	45000 U	45000	39000	100	11/30/20 10:17	11/4/20	
2,4,6-Trichlorophenol	45000 U	45000	8000	100	11/30/20 10:17	11/4/20	
2,4-Dichlorophenol	45000 U	45000	9700	100	11/30/20 10:17	11/4/20	
2,4-Dimethylphenol	14000 DJ	45000	10000	100	11/30/20 10:17	11/4/20	
2,4-Dinitrophenol	230000 U	230000	90000	100	11/30/20 10:17	11/4/20	
2,4-Dinitrotoluene	45000 U	45000	18000	100	11/30/20 10:17	11/4/20	
2,6-Dinitrotoluene	45000 U	45000	14000	100	11/30/20 10:17	11/4/20	
2-Chloronaphthalene	45000 U	45000	11000	100	11/30/20 10:17	11/4/20	
2-Chlorophenol	45000 U	45000	12000	100	11/30/20 10:17	11/4/20	
2-Methylnaphthalene	280000 D	45000	10000	100	11/30/20 10:17	11/4/20	
2-Methylphenol	45000 U	45000	9800	100	11/30/20 10:17	11/4/20	
2-Nitroaniline	45000 U	45000	14000	100	11/30/20 10:17	11/4/20	
2-Nitrophenol	45000 U	45000	14000	100	11/30/20 10:17	11/4/20	
3,3'-Dichlorobenzidine	45000 U	45000	9500	100	11/30/20 10:17	11/4/20	
3- and 4-Methylphenol Coelution	9700 DJ	45000	8700	100	11/30/20 10:17	11/4/20	
3-Nitroaniline	45000 U	45000	9700	100	11/30/20 10:17	11/4/20	
4,6-Dinitro-2-methylphenol	230000 U	230000	20000	100	11/30/20 10:17	11/4/20	
4-Bromophenyl Phenyl Ether	45000 U	45000	17000	100	11/30/20 10:17	11/4/20	
4-Chloro-3-methylphenol	45000 U	45000	10000	100	11/30/20 10:17	11/4/20	
4-Chloroaniline	45000 U	45000	11000	100	11/30/20 10:17	11/4/20	
4-Chlorophenyl Phenyl Ether	45000 U	45000	11000	100	11/30/20 10:17	11/4/20	
4-Nitroaniline	45000 U	45000	9700	100	11/30/20 10:17	11/4/20	
4-Nitrophenol	230000 U	230000	16000	100	11/30/20 10:17	11/4/20	
Acenaphthene	28000 DJ	45000	11000	100	11/30/20 10:17	11/4/20	
Acenaphthylene	350000 D	45000	12000	100	11/30/20 10:17	11/4/20	
Acetophenone	45000 U	45000	11000	100	11/30/20 10:17	11/4/20	
Anthracene	260000 D	45000	13000	100	11/30/20 10:17	11/4/20	
Atrazine	45000 U	45000	18000	100	11/30/20 10:17	11/4/20	
Benz(a)anthracene	230000 D	45000	14000	100	11/30/20 10:17	11/4/20	
Benzaldehyde	45000 U	45000	9000	100	11/30/20 10:17	11/4/20	
Benzo(a)pyrene	240000 D	45000	17000	100	11/30/20 10:17	11/4/20	
Benzo(b)fluoranthene	210000 D	45000	16000	100	11/30/20 10:17	11/4/20	
Benzo(g,h,i)perylene	140000 D	45000	12000	100	11/30/20 10:17	11/4/20	
Benzo(k)fluoranthene	83000 D	45000	17000	100	11/30/20 10:17	11/4/20	
Biphenyl	62000 D	45000	12000	100	11/30/20 10:17	11/4/20	
2,2'-Oxybis(1-chloropropane)	45000 U	45000	18000	100	11/30/20 10:17	11/4/20	
Bis(2-chloroethoxy)methane	45000 U	45000	13000	100	11/30/20 10:17	11/4/20	
Bis(2-chloroethyl) Ether	45000 U	45000	12000	100	11/30/20 10:17	11/4/20	
Bis(2-ethylhexyl) Phthalate	69000 U	69000	13000	100	11/30/20 10:17	11/4/20	
Butyl Benzyl Phthalate	45000 U	45000	12000	100	11/30/20 10:17	11/4/20	
Caprolactam	45000 U	45000	12000	100	11/30/20 10:17	11/4/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	130000 D	45000	14000	100	11/30/20 10:17	11/4/20	
Chrysene	200000 D	45000	17000	100	11/30/20 10:17	11/4/20	
Di-n-butyl Phthalate	45000 U	45000	14000	100	11/30/20 10:17	11/4/20	
Di-n-octyl Phthalate	45000 U	45000	14000	100	11/30/20 10:17	11/4/20	
Dibenz(a,h)anthracene	31000 DJ	45000	14000	100	11/30/20 10:17	11/4/20	
Dibenzofuran	230000 D	45000	9000	100	11/30/20 10:17	11/4/20	
Diethyl Phthalate	45000 U	45000	9700	100	11/30/20 10:17	11/4/20	
Dimethyl Phthalate	45000 U	45000	11000	100	11/30/20 10:17	11/4/20	
Fluoranthene	630000 E	45000	17000	100	11/30/20 10:17	11/4/20	
Fluorene	350000 D	45000	11000	100	11/30/20 10:17	11/4/20	
Hexachlorobenzene	45000 U	45000	14000	100	11/30/20 10:17	11/4/20	
Hexachlorobutadiene	45000 U	45000	12000	100	11/30/20 10:17	11/4/20	
Hexachlorocyclopentadiene	45000 U	45000	10000	100	11/30/20 10:17	11/4/20	
Hexachloroethane	45000 U	45000	12000	100	11/30/20 10:17	11/4/20	
Indeno(1,2,3-cd)pyrene	130000 D	45000	16000	100	11/30/20 10:17	11/4/20	
Isophorone	45000 U	45000	13000	100	11/30/20 10:17	11/4/20	
N-Nitrosodi-n-propylamine	45000 U	45000	13000	100	11/30/20 10:17	11/4/20	
N-Nitrosodiphenylamine	45000 U	45000	31000	100	11/30/20 10:17	11/4/20	
Naphthalene	1200000 E	45000	12000	100	11/30/20 10:17	11/4/20	
Nitrobenzene	45000 U	45000	12000	100	11/30/20 10:17	11/4/20	
Pentachlorophenol (PCP)	230000 U	230000	16000	100	11/30/20 10:17	11/4/20	
Phenanthrene	870000 E	45000	14000	100	11/30/20 10:17	11/4/20	
Phenol	45000 U	45000	11000	100	11/30/20 10:17	11/4/20	
Pyrene	490000 E	45000	18000	100	11/30/20 10:17	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	0 *	10 - 109	11/30/20 10:17	D
2-Fluorobiphenyl	0 *	10 - 102	11/30/20 10:17	D
2-Fluorophenol	0 *	10 - 88	11/30/20 10:17	D
Nitrobenzene-d5	0 *	10 - 95	11/30/20 10:17	D
Phenol-d6	0 *	10 - 145	11/30/20 10:17	D
Terphenyl-d14	0 *	10 - 106	11/30/20 10:17	D

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	230000 U	230000	54000	500	11/24/20 22:08	11/4/20	
2,3,4,6-Tetrachlorophenol	230000 U	230000	48000	500	11/24/20 22:08	11/4/20	
2,4,5-Trichlorophenol	230000 U	230000	200000	500	11/24/20 22:08	11/4/20	
2,4,6-Trichlorophenol	230000 U	230000	40000	500	11/24/20 22:08	11/4/20	
2,4-Dichlorophenol	230000 U	230000	49000	500	11/24/20 22:08	11/4/20	
2,4-Dimethylphenol	230000 U	230000	50000	500	11/24/20 22:08	11/4/20	
2,4-Dinitrophenol	1200000 U	1200000	450000	500	11/24/20 22:08	11/4/20	
2,4-Dinitrotoluene	230000 U	230000	90000	500	11/24/20 22:08	11/4/20	
2,6-Dinitrotoluene	230000 U	230000	67000	500	11/24/20 22:08	11/4/20	
2-Chloronaphthalene	230000 U	230000	55000	500	11/24/20 22:08	11/4/20	
2-Chlorophenol	230000 U	230000	56000	500	11/24/20 22:08	11/4/20	
2-Methylnaphthalene	320000 D	230000	50000	500	11/24/20 22:08	11/4/20	
2-Methylphenol	230000 U	230000	49000	500	11/24/20 22:08	11/4/20	
2-Nitroaniline	230000 U	230000	68000	500	11/24/20 22:08	11/4/20	
2-Nitrophenol	230000 U	230000	66000	500	11/24/20 22:08	11/4/20	
3,3'-Dichlorobenzidine	230000 U	230000	48000	500	11/24/20 22:08	11/4/20	
3- and 4-Methylphenol Coelution	230000 U	230000	44000	500	11/24/20 22:08	11/4/20	
3-Nitroaniline	230000 U	230000	49000	500	11/24/20 22:08	11/4/20	
4,6-Dinitro-2-methylphenol	1200000 U	1200000	97000	500	11/24/20 22:08	11/4/20	
4-Bromophenyl Phenyl Ether	230000 U	230000	83000	500	11/24/20 22:08	11/4/20	
4-Chloro-3-methylphenol	230000 U	230000	50000	500	11/24/20 22:08	11/4/20	
4-Chloroaniline	230000 U	230000	54000	500	11/24/20 22:08	11/4/20	
4-Chlorophenyl Phenyl Ether	230000 U	230000	55000	500	11/24/20 22:08	11/4/20	
4-Nitroaniline	230000 U	230000	49000	500	11/24/20 22:08	11/4/20	
4-Nitrophenol	1200000 U	1200000	76000	500	11/24/20 22:08	11/4/20	
Acenaphthene	230000 U	230000	51000	500	11/24/20 22:08	11/4/20	
Acenaphthylene	390000 D	230000	60000	500	11/24/20 22:08	11/4/20	
Acetophenone	230000 U	230000	52000	500	11/24/20 22:08	11/4/20	
Anthracene	280000 D	230000	64000	500	11/24/20 22:08	11/4/20	
Atrazine	230000 U	230000	90000	500	11/24/20 22:08	11/4/20	
Benz(a)anthracene	250000 D	230000	67000	500	11/24/20 22:08	11/4/20	
Benzaldehyde	230000 U	230000	45000	500	11/24/20 22:08	11/4/20	
Benzo(a)pyrene	250000 D	230000	83000	500	11/24/20 22:08	11/4/20	
Benzo(b)fluoranthene	230000 D	230000	76000	500	11/24/20 22:08	11/4/20	
Benzo(g,h,i)perylene	140000 DJ	230000	60000	500	11/24/20 22:08	11/4/20	
Benzo(k)fluoranthene	91000 DJ	230000	83000	500	11/24/20 22:08	11/4/20	
Biphenyl	65000 DJ	230000	56000	500	11/24/20 22:08	11/4/20	
2,2'-Oxybis(1-chloropropane)	230000 U	230000	90000	500	11/24/20 22:08	11/4/20	
Bis(2-chloroethoxy)methane	230000 U	230000	61000	500	11/24/20 22:08	11/4/20	
Bis(2-chloroethyl) Ether	230000 U	230000	60000	500	11/24/20 22:08	11/4/20	
Bis(2-ethylhexyl) Phthalate	340000 U	340000	61000	500	11/24/20 22:08	11/4/20	
Butyl Benzyl Phthalate	230000 U	230000	57000	500	11/24/20 22:08	11/4/20	
Caprolactam	230000 U	230000	60000	500	11/24/20 22:08	11/4/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	140000 DJ	230000	66000	500	11/24/20 22:08	11/4/20	
Chrysene	210000 DJ	230000	83000	500	11/24/20 22:08	11/4/20	
Di-n-butyl Phthalate	230000 U	230000	69000	500	11/24/20 22:08	11/4/20	
Di-n-octyl Phthalate	230000 U	230000	67000	500	11/24/20 22:08	11/4/20	
Dibenz(a,h)anthracene	230000 U	230000	68000	500	11/24/20 22:08	11/4/20	
Dibenzofuran	270000 D	230000	45000	500	11/24/20 22:08	11/4/20	
Diethyl Phthalate	230000 U	230000	49000	500	11/24/20 22:08	11/4/20	
Dimethyl Phthalate	230000 U	230000	51000	500	11/24/20 22:08	11/4/20	
Fluoranthene	740000 D	230000	83000	500	11/24/20 22:08	11/4/20	
Fluorene	400000 D	230000	53000	500	11/24/20 22:08	11/4/20	
Hexachlorobenzene	230000 U	230000	69000	500	11/24/20 22:08	11/4/20	
Hexachlorobutadiene	230000 U	230000	56000	500	11/24/20 22:08	11/4/20	
Hexachlorocyclopentadiene	230000 U	230000	50000	500	11/24/20 22:08	11/4/20	
Hexachloroethane	230000 U	230000	59000	500	11/24/20 22:08	11/4/20	
Indeno(1,2,3-cd)pyrene	130000 DJ	230000	76000	500	11/24/20 22:08	11/4/20	
Isophorone	230000 U	230000	62000	500	11/24/20 22:08	11/4/20	
N-Nitrosodi-n-propylamine	230000 U	230000	61000	500	11/24/20 22:08	11/4/20	
N-Nitrosodiphenylamine	230000 U	230000	160000	500	11/24/20 22:08	11/4/20	
Naphthalene	1700000 D	230000	59000	500	11/24/20 22:08	11/4/20	
Nitrobenzene	230000 U	230000	59000	500	11/24/20 22:08	11/4/20	
Pentachlorophenol (PCP)	1200000 U	1200000	76000	500	11/24/20 22:08	11/4/20	
Phenanthrene	1100000 D	230000	67000	500	11/24/20 22:08	11/4/20	
Phenol	230000 U	230000	54000	500	11/24/20 22:08	11/4/20	
Pyrene	510000 D	230000	90000	500	11/24/20 22:08	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	0 *	10 - 109	11/24/20 22:08	D
2-Fluorobiphenyl	0 *	10 - 102	11/24/20 22:08	D
2-Fluorophenol	0 *	10 - 88	11/24/20 22:08	D
Nitrobenzene-d5	0 *	10 - 95	11/24/20 22:08	D
Phenol-d6	0 *	10 - 145	11/24/20 22:08	D
Terphenyl-d14	0 *	10 - 106	11/24/20 22:08	D

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:04
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-25-01-10292020
Lab Code: R2010276-008

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	440 U	440	110	1	11/06/20 22:43	11/5/20	
2,3,4,6-Tetrachlorophenol	440 U	440	92	1	11/06/20 22:43	11/5/20	
2,4,5-Trichlorophenol	440 U	440	380	1	11/06/20 22:43	11/5/20	
2,4,6-Trichlorophenol	440 U	440	77	1	11/06/20 22:43	11/5/20	
2,4-Dichlorophenol	440 U	440	93	1	11/06/20 22:43	11/5/20	
2,4-Dimethylphenol	440 U	440	96	1	11/06/20 22:43	11/5/20	
2,4-Dinitrophenol	2300 U	2300	870	1	11/06/20 22:43	11/5/20	
2,4-Dinitrotoluene	440 U	440	180	1	11/06/20 22:43	11/5/20	
2,6-Dinitrotoluene	440 U	440	130	1	11/06/20 22:43	11/5/20	
2-Chloronaphthalene	440 U	440	110	1	11/06/20 22:43	11/5/20	
2-Chlorophenol	440 U	440	110	1	11/06/20 22:43	11/5/20	
2-Methylnaphthalene	950	440	96	1	11/06/20 22:43	11/5/20	
2-Methylphenol	440 U	440	95	1	11/06/20 22:43	11/5/20	
2-Nitroaniline	440 U	440	130	1	11/06/20 22:43	11/5/20	
2-Nitrophenol	440 U	440	130	1	11/06/20 22:43	11/5/20	
3,3'-Dichlorobenzidine	440 U	440	92	1	11/06/20 22:43	11/5/20	
3- and 4-Methylphenol Coelution	130 J	440	84	1	11/06/20 22:43	11/5/20	
3-Nitroaniline	440 U	440	93	1	11/06/20 22:43	11/5/20	
4,6-Dinitro-2-methylphenol	2300 U	2300	190	1	11/06/20 22:43	11/5/20	
4-Bromophenyl Phenyl Ether	440 U	440	160	1	11/06/20 22:43	11/5/20	
4-Chloro-3-methylphenol	440 U	440	96	1	11/06/20 22:43	11/5/20	
4-Chloroaniline	440 U	440	110	1	11/06/20 22:43	11/5/20	
4-Chlorophenyl Phenyl Ether	440 U	440	110	1	11/06/20 22:43	11/5/20	
4-Nitroaniline	440 U	440	93	1	11/06/20 22:43	11/5/20	
4-Nitrophenol	2300 U	2300	150	1	11/06/20 22:43	11/5/20	
Acenaphthene	540	440	99	1	11/06/20 22:43	11/5/20	
Acenaphthylene	1700	440	120	1	11/06/20 22:43	11/5/20	
Acetophenone	440 U	440	100	1	11/06/20 22:43	11/5/20	
Anthracene	3700	440	130	1	11/06/20 22:43	11/5/20	
Atrazine	440 U	440	180	1	11/06/20 22:43	11/5/20	
Benz(a)anthracene	7600 E	440	130	1	11/06/20 22:43	11/5/20	
Benzaldehyde	440 U	440	87	1	11/06/20 22:43	11/5/20	
Benzo(a)pyrene	7800 E	440	160	1	11/06/20 22:43	11/5/20	
Benzo(b)fluoranthene	9700 E	440	150	1	11/06/20 22:43	11/5/20	
Benzo(g,h,i)perylene	4400 E	440	120	1	11/06/20 22:43	11/5/20	
Benzo(k)fluoranthene	3200	440	160	1	11/06/20 22:43	11/5/20	
Biphenyl	210 J	440	110	1	11/06/20 22:43	11/5/20	
2,2'-Oxybis(1-chloropropane)	440 U	440	180	1	11/06/20 22:43	11/5/20	
Bis(2-chloroethoxy)methane	440 U	440	120	1	11/06/20 22:43	11/5/20	
Bis(2-chloroethyl) Ether	440 U	440	120	1	11/06/20 22:43	11/5/20	
Bis(2-ethylhexyl) Phthalate	660 U	660	120	1	11/06/20 22:43	11/5/20	
Butyl Benzyl Phthalate	440 U	440	110	1	11/06/20 22:43	11/5/20	
Caprolactam	440 U	440	120	1	11/06/20 22:43	11/5/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:04
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-25-01-10292020
Lab Code: R2010276-008

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	1400	440	130	1	11/06/20 22:43	11/5/20	
Chrysene	8400 E	440	160	1	11/06/20 22:43	11/5/20	
Di-n-butyl Phthalate	440 U	440	140	1	11/06/20 22:43	11/5/20	
Di-n-octyl Phthalate	440 U	440	130	1	11/06/20 22:43	11/5/20	
Dibenz(a,h)anthracene	1400	440	130	1	11/06/20 22:43	11/5/20	
Dibenzofuran	1400	440	87	1	11/06/20 22:43	11/5/20	
Diethyl Phthalate	440 U	440	93	1	11/06/20 22:43	11/5/20	
Dimethyl Phthalate	440 U	440	99	1	11/06/20 22:43	11/5/20	
Fluoranthene	9900 E	440	160	1	11/06/20 22:43	11/5/20	
Fluorene	2400	440	110	1	11/06/20 22:43	11/5/20	
Hexachlorobenzene	440 U	440	140	1	11/06/20 22:43	11/5/20	
Hexachlorobutadiene	440 U	440	110	1	11/06/20 22:43	11/5/20	
Hexachlorocyclopentadiene	440 U	440	96	1	11/06/20 22:43	11/5/20	
Hexachloroethane	440 U	440	120	1	11/06/20 22:43	11/5/20	
Indeno(1,2,3-cd)pyrene	5300 E	440	150	1	11/06/20 22:43	11/5/20	
Isophorone	440 U	440	120	1	11/06/20 22:43	11/5/20	
N-Nitrosodi-n-propylamine	440 U	440	120	1	11/06/20 22:43	11/5/20	
N-Nitrosodiphenylamine	440 U	440	300	1	11/06/20 22:43	11/5/20	
Naphthalene	3300	440	120	1	11/06/20 22:43	11/5/20	
Nitrobenzene	440 U	440	120	1	11/06/20 22:43	11/5/20	
Pentachlorophenol (PCP)	2300 U	2300	150	1	11/06/20 22:43	11/5/20	
Phenanthrene	8300 E	440	130	1	11/06/20 22:43	11/5/20	
Phenol	120 J	440	110	1	11/06/20 22:43	11/5/20	
Pyrene	9300 E	440	180	1	11/06/20 22:43	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	28	10 - 109	11/06/20 22:43	
2-Fluorobiphenyl	21	10 - 102	11/06/20 22:43	
2-Fluorophenol	16	10 - 88	11/06/20 22:43	
Nitrobenzene-d5	19	10 - 95	11/06/20 22:43	
Phenol-d6	19	10 - 145	11/06/20 22:43	
Terphenyl-d14	32	10 - 106	11/06/20 22:43	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:04
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-25-01-10292020
Lab Code: R2010276-008

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	1300 U	1300	320	3	11/21/20 11:56	11/5/20	
2,3,4,6-Tetrachlorophenol	1300 U	1300	280	3	11/21/20 11:56	11/5/20	
2,4,5-Trichlorophenol	1300 U	1300	1200	3	11/21/20 11:56	11/5/20	
2,4,6-Trichlorophenol	1300 U	1300	240	3	11/21/20 11:56	11/5/20	
2,4-Dichlorophenol	1300 U	1300	280	3	11/21/20 11:56	11/5/20	
2,4-Dimethylphenol	1300 U	1300	290	3	11/21/20 11:56	11/5/20	
2,4-Dinitrophenol	6800 U	6800	2600	3	11/21/20 11:56	11/5/20	
2,4-Dinitrotoluene	1300 U	1300	520	3	11/21/20 11:56	11/5/20	
2,6-Dinitrotoluene	1300 U	1300	390	3	11/21/20 11:56	11/5/20	
2-Chloronaphthalene	1300 U	1300	320	3	11/21/20 11:56	11/5/20	
2-Chlorophenol	1300 U	1300	330	3	11/21/20 11:56	11/5/20	
2-Methylnaphthalene	910 DJ	1300	290	3	11/21/20 11:56	11/5/20	
2-Methylphenol	1300 U	1300	290	3	11/21/20 11:56	11/5/20	
2-Nitroaniline	1300 U	1300	390	3	11/21/20 11:56	11/5/20	
2-Nitrophenol	1300 U	1300	380	3	11/21/20 11:56	11/5/20	
3,3'-Dichlorobenzidine	1300 U	1300	280	3	11/21/20 11:56	11/5/20	
3- and 4-Methylphenol Coelution	1300 U	1300	260	3	11/21/20 11:56	11/5/20	
3-Nitroaniline	1300 U	1300	280	3	11/21/20 11:56	11/5/20	
4,6-Dinitro-2-methylphenol	6800 U	6800	560	3	11/21/20 11:56	11/5/20	
4-Bromophenyl Phenyl Ether	1300 U	1300	480	3	11/21/20 11:56	11/5/20	
4-Chloro-3-methylphenol	1300 U	1300	290	3	11/21/20 11:56	11/5/20	
4-Chloroaniline	1300 U	1300	320	3	11/21/20 11:56	11/5/20	
4-Chlorophenyl Phenyl Ether	1300 U	1300	320	3	11/21/20 11:56	11/5/20	
4-Nitroaniline	1300 U	1300	280	3	11/21/20 11:56	11/5/20	
4-Nitrophenol	6800 U	6800	440	3	11/21/20 11:56	11/5/20	
Acenaphthene	520 DJ	1300	300	3	11/21/20 11:56	11/5/20	
Acenaphthylene	1800 D	1300	350	3	11/21/20 11:56	11/5/20	
Acetophenone	1300 U	1300	300	3	11/21/20 11:56	11/5/20	
Anthracene	3900 D	1300	370	3	11/21/20 11:56	11/5/20	
Atrazine	1300 U	1300	520	3	11/21/20 11:56	11/5/20	
Benz(a)anthracene	7800 D	1300	390	3	11/21/20 11:56	11/5/20	
Benzaldehyde	1300 U	1300	260	3	11/21/20 11:56	11/5/20	
Benzo(a)pyrene	8100 D	1300	480	3	11/21/20 11:56	11/5/20	
Benzo(b)fluoranthene	10000 D	1300	440	3	11/21/20 11:56	11/5/20	
Benzo(g,h,i)perylene	4700 D	1300	350	3	11/21/20 11:56	11/5/20	
Benzo(k)fluoranthene	3300 D	1300	480	3	11/21/20 11:56	11/5/20	
Biphenyl	1300 U	1300	330	3	11/21/20 11:56	11/5/20	
2,2'-Oxybis(1-chloropropane)	1300 U	1300	520	3	11/21/20 11:56	11/5/20	
Bis(2-chloroethoxy)methane	1300 U	1300	360	3	11/21/20 11:56	11/5/20	
Bis(2-chloroethyl) Ether	1300 U	1300	350	3	11/21/20 11:56	11/5/20	
Bis(2-ethylhexyl) Phthalate	2000 U	2000	360	3	11/21/20 11:56	11/5/20	
Butyl Benzyl Phthalate	1300 U	1300	330	3	11/21/20 11:56	11/5/20	
Caprolactam	1300 U	1300	350	3	11/21/20 11:56	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:04
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-25-01-10292020
Lab Code: R2010276-008

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	1700 D	1300	380	3	11/21/20 11:56	11/5/20	
Chrysene	8600 D	1300	480	3	11/21/20 11:56	11/5/20	
Di-n-butyl Phthalate	1300 U	1300	400	3	11/21/20 11:56	11/5/20	
Di-n-octyl Phthalate	1300 U	1300	390	3	11/21/20 11:56	11/5/20	
Dibenz(a,h)anthracene	1500 D	1300	390	3	11/21/20 11:56	11/5/20	
Dibenzofuran	1400 D	1300	260	3	11/21/20 11:56	11/5/20	
Diethyl Phthalate	1300 U	1300	280	3	11/21/20 11:56	11/5/20	
Dimethyl Phthalate	1300 U	1300	300	3	11/21/20 11:56	11/5/20	
Fluoranthene	12000 D	1300	480	3	11/21/20 11:56	11/5/20	
Fluorene	2400 D	1300	310	3	11/21/20 11:56	11/5/20	
Hexachlorobenzene	1300 U	1300	400	3	11/21/20 11:56	11/5/20	
Hexachlorobutadiene	1300 U	1300	320	3	11/21/20 11:56	11/5/20	
Hexachlorocyclopentadiene	1300 U	1300	290	3	11/21/20 11:56	11/5/20	
Hexachloroethane	1300 U	1300	340	3	11/21/20 11:56	11/5/20	
Indeno(1,2,3-cd)pyrene	5400 D	1300	440	3	11/21/20 11:56	11/5/20	
Isophorone	1300 U	1300	360	3	11/21/20 11:56	11/5/20	
N-Nitrosodi-n-propylamine	1300 U	1300	360	3	11/21/20 11:56	11/5/20	
N-Nitrosodiphenylamine	1300 U	1300	880	3	11/21/20 11:56	11/5/20	
Naphthalene	3500 D	1300	340	3	11/21/20 11:56	11/5/20	
Nitrobenzene	1300 U	1300	340	3	11/21/20 11:56	11/5/20	
Pentachlorophenol (PCP)	6800 U	6800	440	3	11/21/20 11:56	11/5/20	
Phenanthrene	10000 D	1300	390	3	11/21/20 11:56	11/5/20	
Phenol	1300 U	1300	320	3	11/21/20 11:56	11/5/20	
Pyrene	11000 D	1300	520	3	11/21/20 11:56	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	29	10 - 109	11/21/20 11:56	
2-Fluorobiphenyl	23	10 - 102	11/21/20 11:56	
2-Fluorophenol	16	10 - 88	11/21/20 11:56	
Nitrobenzene-d5	20	10 - 95	11/21/20 11:56	
Phenol-d6	20	10 - 145	11/21/20 11:56	
Terphenyl-d14	37	10 - 106	11/21/20 11:56	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:20
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-SE56-10292020
Lab Code: R2010276-009

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	490 U	490	120	1	11/06/20 23:13	11/5/20	
2,3,4,6-Tetrachlorophenol	490 U	490	110	1	11/06/20 23:13	11/5/20	
2,4,5-Trichlorophenol	490 U	490	420	1	11/06/20 23:13	11/5/20	
2,4,6-Trichlorophenol	490 U	490	87	1	11/06/20 23:13	11/5/20	
2,4-Dichlorophenol	490 U	490	110	1	11/06/20 23:13	11/5/20	
2,4-Dimethylphenol	170 J	490	110	1	11/06/20 23:13	11/5/20	
2,4-Dinitrophenol	2500 U	2500	980	1	11/06/20 23:13	11/5/20	
2,4-Dinitrotoluene	490 U	490	200	1	11/06/20 23:13	11/5/20	
2,6-Dinitrotoluene	490 U	490	150	1	11/06/20 23:13	11/5/20	
2-Chloronaphthalene	490 U	490	120	1	11/06/20 23:13	11/5/20	
2-Chlorophenol	490 U	490	130	1	11/06/20 23:13	11/5/20	
2-Methylnaphthalene	440 J	490	110	1	11/06/20 23:13	11/5/20	
2-Methylphenol	140 J	490	110	1	11/06/20 23:13	11/5/20	
2-Nitroaniline	490 U	490	150	1	11/06/20 23:13	11/5/20	
2-Nitrophenol	490 U	490	150	1	11/06/20 23:13	11/5/20	
3,3'-Dichlorobenzidine	490 U	490	110	1	11/06/20 23:13	11/5/20	
3- and 4-Methylphenol Coelution	230 J	490	95	1	11/06/20 23:13	11/5/20	
3-Nitroaniline	490 U	490	110	1	11/06/20 23:13	11/5/20	
4,6-Dinitro-2-methylphenol	2500 U	2500	210	1	11/06/20 23:13	11/5/20	
4-Bromophenyl Phenyl Ether	490 U	490	180	1	11/06/20 23:13	11/5/20	
4-Chloro-3-methylphenol	490 U	490	110	1	11/06/20 23:13	11/5/20	
4-Chloroaniline	490 U	490	120	1	11/06/20 23:13	11/5/20	
4-Chlorophenyl Phenyl Ether	490 U	490	120	1	11/06/20 23:13	11/5/20	
4-Nitroaniline	490 U	490	110	1	11/06/20 23:13	11/5/20	
4-Nitrophenol	2500 U	2500	170	1	11/06/20 23:13	11/5/20	
Acenaphthene	490 U	490	120	1	11/06/20 23:13	11/5/20	
Acenaphthylene	350 J	490	140	1	11/06/20 23:13	11/5/20	
Acetophenone	490 U	490	120	1	11/06/20 23:13	11/5/20	
Anthracene	240 J	490	140	1	11/06/20 23:13	11/5/20	
Atrazine	490 U	490	200	1	11/06/20 23:13	11/5/20	
Benz(a)anthracene	2100	490	150	1	11/06/20 23:13	11/5/20	
Benzaldehyde	490 U	490	98	1	11/06/20 23:13	11/5/20	
Benzo(a)pyrene	2300	490	180	1	11/06/20 23:13	11/5/20	
Benzo(b)fluoranthene	3200	490	170	1	11/06/20 23:13	11/5/20	
Benzo(g,h,i)perylene	1400	490	140	1	11/06/20 23:13	11/5/20	
Benzo(k)fluoranthene	1100	490	180	1	11/06/20 23:13	11/5/20	
Biphenyl	490 U	490	130	1	11/06/20 23:13	11/5/20	
2,2'-Oxybis(1-chloropropane)	490 U	490	200	1	11/06/20 23:13	11/5/20	
Bis(2-chloroethoxy)methane	490 U	490	140	1	11/06/20 23:13	11/5/20	
Bis(2-chloroethyl) Ether	490 U	490	130	1	11/06/20 23:13	11/5/20	
Bis(2-ethylhexyl) Phthalate	750 U	750	140	1	11/06/20 23:13	11/5/20	
Butyl Benzyl Phthalate	490 U	490	130	1	11/06/20 23:13	11/5/20	
Caprolactam	490 U	490	130	1	11/06/20 23:13	11/5/20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:20
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-SE56-10292020
Lab Code: R2010276-009

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	310 J	490	150	1	11/06/20 23:13	11/5/20	
Chrysene	2200	490	180	1	11/06/20 23:13	11/5/20	
Di-n-butyl Phthalate	490 U	490	150	1	11/06/20 23:13	11/5/20	
Di-n-octyl Phthalate	490 U	490	150	1	11/06/20 23:13	11/5/20	
Dibenz(a,h)anthracene	460 J	490	150	1	11/06/20 23:13	11/5/20	
Dibenzofuran	150 J	490	98	1	11/06/20 23:13	11/5/20	
Diethyl Phthalate	490 U	490	110	1	11/06/20 23:13	11/5/20	
Dimethyl Phthalate	490 U	490	120	1	11/06/20 23:13	11/5/20	
Fluoranthene	2700	490	180	1	11/06/20 23:13	11/5/20	
Fluorene	210 J	490	120	1	11/06/20 23:13	11/5/20	
Hexachlorobenzene	490 U	490	150	1	11/06/20 23:13	11/5/20	
Hexachlorobutadiene	490 U	490	120	1	11/06/20 23:13	11/5/20	
Hexachlorocyclopentadiene	490 U	490	110	1	11/06/20 23:13	11/5/20	
Hexachloroethane	490 U	490	130	1	11/06/20 23:13	11/5/20	
Indeno(1,2,3-cd)pyrene	1800	490	170	1	11/06/20 23:13	11/5/20	
Isophorone	490 U	490	140	1	11/06/20 23:13	11/5/20	
N-Nitrosodi-n-propylamine	490 U	490	140	1	11/06/20 23:13	11/5/20	
N-Nitrosodiphenylamine	490 U	490	330	1	11/06/20 23:13	11/5/20	
Naphthalene	5300 E	490	130	1	11/06/20 23:13	11/5/20	
Nitrobenzene	490 U	490	130	1	11/06/20 23:13	11/5/20	
Pentachlorophenol (PCP)	2500 U	2500	170	1	11/06/20 23:13	11/5/20	
Phenanthrene	980	490	150	1	11/06/20 23:13	11/5/20	
Phenol	290 J	490	120	1	11/06/20 23:13	11/5/20	
Pyrene	1900	490	200	1	11/06/20 23:13	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	26	10 - 109	11/06/20 23:13	
2-Fluorobiphenyl	17	10 - 102	11/06/20 23:13	
2-Fluorophenol	22	10 - 88	11/06/20 23:13	
Nitrobenzene-d5	21	10 - 95	11/06/20 23:13	
Phenol-d6	22	10 - 145	11/06/20 23:13	
Terphenyl-d14	26	10 - 106	11/06/20 23:13	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:20
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-SE56-10292020
Lab Code: R2010276-009

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	990 U	990	240	2	11/21/20 12:25	11/5/20	
2,3,4,6-Tetrachlorophenol	990 U	990	210	2	11/21/20 12:25	11/5/20	
2,4,5-Trichlorophenol	990 U	990	840	2	11/21/20 12:25	11/5/20	
2,4,6-Trichlorophenol	990 U	990	180	2	11/21/20 12:25	11/5/20	
2,4-Dichlorophenol	990 U	990	210	2	11/21/20 12:25	11/5/20	
2,4-Dimethylphenol	990 U	990	220	2	11/21/20 12:25	11/5/20	
2,4-Dinitrophenol	5100 U	5100	2000	2	11/21/20 12:25	11/5/20	
2,4-Dinitrotoluene	990 U	990	390	2	11/21/20 12:25	11/5/20	
2,6-Dinitrotoluene	990 U	990	290	2	11/21/20 12:25	11/5/20	
2-Chloronaphthalene	990 U	990	240	2	11/21/20 12:25	11/5/20	
2-Chlorophenol	990 U	990	250	2	11/21/20 12:25	11/5/20	
2-Methylnaphthalene	350 DJ	990	220	2	11/21/20 12:25	11/5/20	
2-Methylphenol	990 U	990	220	2	11/21/20 12:25	11/5/20	
2-Nitroaniline	990 U	990	300	2	11/21/20 12:25	11/5/20	
2-Nitrophenol	990 U	990	290	2	11/21/20 12:25	11/5/20	
3,3'-Dichlorobenzidine	990 U	990	210	2	11/21/20 12:25	11/5/20	
3- and 4-Methylphenol Coelution	210 DJ	990	190	2	11/21/20 12:25	11/5/20	
3-Nitroaniline	990 U	990	210	2	11/21/20 12:25	11/5/20	
4,6-Dinitro-2-methylphenol	5100 U	5100	420	2	11/21/20 12:25	11/5/20	
4-Bromophenyl Phenyl Ether	990 U	990	360	2	11/21/20 12:25	11/5/20	
4-Chloro-3-methylphenol	990 U	990	220	2	11/21/20 12:25	11/5/20	
4-Chloroaniline	990 U	990	240	2	11/21/20 12:25	11/5/20	
4-Chlorophenyl Phenyl Ether	990 U	990	240	2	11/21/20 12:25	11/5/20	
4-Nitroaniline	990 U	990	210	2	11/21/20 12:25	11/5/20	
4-Nitrophenol	5100 U	5100	330	2	11/21/20 12:25	11/5/20	
Acenaphthene	990 U	990	230	2	11/21/20 12:25	11/5/20	
Acenaphthylene	290 DJ	990	270	2	11/21/20 12:25	11/5/20	
Acetophenone	990 U	990	230	2	11/21/20 12:25	11/5/20	
Anthracene	990 U	990	280	2	11/21/20 12:25	11/5/20	
Atrazine	990 U	990	390	2	11/21/20 12:25	11/5/20	
Benz(a)anthracene	1800 D	990	300	2	11/21/20 12:25	11/5/20	
Benzaldehyde	990 U	990	200	2	11/21/20 12:25	11/5/20	
Benzo(a)pyrene	1900 D	990	360	2	11/21/20 12:25	11/5/20	
Benzo(b)fluoranthene	2600 D	990	330	2	11/21/20 12:25	11/5/20	
Benzo(g,h,i)perylene	1200 D	990	270	2	11/21/20 12:25	11/5/20	
Benzo(k)fluoranthene	920 DJ	990	360	2	11/21/20 12:25	11/5/20	
Biphenyl	990 U	990	250	2	11/21/20 12:25	11/5/20	
2,2'-Oxybis(1-chloropropane)	990 U	990	390	2	11/21/20 12:25	11/5/20	
Bis(2-chloroethoxy)methane	990 U	990	270	2	11/21/20 12:25	11/5/20	
Bis(2-chloroethyl) Ether	990 U	990	260	2	11/21/20 12:25	11/5/20	
Bis(2-ethylhexyl) Phthalate	1500 U	1500	270	2	11/21/20 12:25	11/5/20	
Butyl Benzyl Phthalate	990 U	990	250	2	11/21/20 12:25	11/5/20	
Caprolactam	990 U	990	260	2	11/21/20 12:25	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:20
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-SE56-10292020
Lab Code: R2010276-009

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	290 DJ	990	290	2	11/21/20 12:25	11/5/20	
Chrysene	1800 D	990	360	2	11/21/20 12:25	11/5/20	
Di-n-butyl Phthalate	990 U	990	300	2	11/21/20 12:25	11/5/20	
Di-n-octyl Phthalate	990 U	990	300	2	11/21/20 12:25	11/5/20	
Dibenz(a,h)anthracene	350 DJ	990	300	2	11/21/20 12:25	11/5/20	
Dibenzofuran	990 U	990	200	2	11/21/20 12:25	11/5/20	
Diethyl Phthalate	990 U	990	210	2	11/21/20 12:25	11/5/20	
Dimethyl Phthalate	990 U	990	230	2	11/21/20 12:25	11/5/20	
Fluoranthene	2300 D	990	360	2	11/21/20 12:25	11/5/20	
Fluorene	990 U	990	230	2	11/21/20 12:25	11/5/20	
Hexachlorobenzene	990 U	990	300	2	11/21/20 12:25	11/5/20	
Hexachlorobutadiene	990 U	990	240	2	11/21/20 12:25	11/5/20	
Hexachlorocyclopentadiene	990 U	990	220	2	11/21/20 12:25	11/5/20	
Hexachloroethane	990 U	990	260	2	11/21/20 12:25	11/5/20	
Indeno(1,2,3-cd)pyrene	1500 D	990	330	2	11/21/20 12:25	11/5/20	
Isophorone	990 U	990	270	2	11/21/20 12:25	11/5/20	
N-Nitrosodi-n-propylamine	990 U	990	270	2	11/21/20 12:25	11/5/20	
N-Nitrosodiphenylamine	990 U	990	660	2	11/21/20 12:25	11/5/20	
Naphthalene	4700 D	990	260	2	11/21/20 12:25	11/5/20	
Nitrobenzene	990 U	990	260	2	11/21/20 12:25	11/5/20	
Pentachlorophenol (PCP)	5100 U	5100	330	2	11/21/20 12:25	11/5/20	
Phenanthrene	820 DJ	990	290	2	11/21/20 12:25	11/5/20	
Phenol	990 U	990	240	2	11/21/20 12:25	11/5/20	
Pyrene	1700 D	990	390	2	11/21/20 12:25	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	23	10 - 109	11/21/20 12:25	
2-Fluorobiphenyl	15	10 - 102	11/21/20 12:25	
2-Fluorophenol	19	10 - 88	11/21/20 12:25	
Nitrobenzene-d5	17	10 - 95	11/21/20 12:25	
Phenol-d6	21	10 - 145	11/21/20 12:25	
Terphenyl-d14	25	10 - 106	11/21/20 12:25	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-CL-10292020
Lab Code: R2010276-010

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	410 U	410	98	1	11/06/20 16:49	11/5/20	
2,3,4,6-Tetrachlorophenol	410 U	410	86	1	11/06/20 16:49	11/5/20	
2,4,5-Trichlorophenol	410 U	410	350	1	11/06/20 16:49	11/5/20	
2,4,6-Trichlorophenol	410 U	410	73	1	11/06/20 16:49	11/5/20	
2,4-Dichlorophenol	410 U	410	88	1	11/06/20 16:49	11/5/20	
2,4-Dimethylphenol	410 U	410	90	1	11/06/20 16:49	11/5/20	
2,4-Dinitrophenol	2100 U	2100	810	1	11/06/20 16:49	11/5/20	
2,4-Dinitrotoluene	410 U	410	170	1	11/06/20 16:49	11/5/20	
2,6-Dinitrotoluene	410 U	410	120	1	11/06/20 16:49	11/5/20	
2-Chloronaphthalene	410 U	410	99	1	11/06/20 16:49	11/5/20	
2-Chlorophenol	410 U	410	110	1	11/06/20 16:49	11/5/20	
2-Methylnaphthalene	410 U	410	90	1	11/06/20 16:49	11/5/20	
2-Methylphenol	410 U	410	89	1	11/06/20 16:49	11/5/20	
2-Nitroaniline	410 U	410	130	1	11/06/20 16:49	11/5/20	
2-Nitrophenol	410 U	410	120	1	11/06/20 16:49	11/5/20	
3,3'-Dichlorobenzidine	410 U	410	86	1	11/06/20 16:49	11/5/20	
3- and 4-Methylphenol Coelution	410 U	410	79	1	11/06/20 16:49	11/5/20	
3-Nitroaniline	410 U	410	88	1	11/06/20 16:49	11/5/20	
4,6-Dinitro-2-methylphenol	2100 U	2100	180	1	11/06/20 16:49	11/5/20	
4-Bromophenyl Phenyl Ether	410 U	410	150	1	11/06/20 16:49	11/5/20	
4-Chloro-3-methylphenol	410 U	410	90	1	11/06/20 16:49	11/5/20	
4-Chloroaniline	410 U	410	98	1	11/06/20 16:49	11/5/20	
4-Chlorophenyl Phenyl Ether	410 U	410	99	1	11/06/20 16:49	11/5/20	
4-Nitroaniline	410 U	410	88	1	11/06/20 16:49	11/5/20	
4-Nitrophenol	2100 U	2100	140	1	11/06/20 16:49	11/5/20	
Acenaphthene	410 U	410	93	1	11/06/20 16:49	11/5/20	
Acenaphthylene	410 U	410	110	1	11/06/20 16:49	11/5/20	
Acetophenone	410 U	410	94	1	11/06/20 16:49	11/5/20	
Anthracene	410 U	410	120	1	11/06/20 16:49	11/5/20	
Atrazine	410 U	410	170	1	11/06/20 16:49	11/5/20	
Benz(a)anthracene	410 U	410	130	1	11/06/20 16:49	11/5/20	
Benzaldehyde	410 U	410	81	1	11/06/20 16:49	11/5/20	
Benzo(a)pyrene	410 U	410	150	1	11/06/20 16:49	11/5/20	
Benzo(b)fluoranthene	410 U	410	140	1	11/06/20 16:49	11/5/20	
Benzo(g,h,i)perylene	410 U	410	110	1	11/06/20 16:49	11/5/20	
Benzo(k)fluoranthene	410 U	410	150	1	11/06/20 16:49	11/5/20	
Biphenyl	410 U	410	110	1	11/06/20 16:49	11/5/20	
2,2'-Oxybis(1-chloropropane)	410 U	410	170	1	11/06/20 16:49	11/5/20	
Bis(2-chloroethoxy)methane	410 U	410	110	1	11/06/20 16:49	11/5/20	
Bis(2-chloroethyl) Ether	410 U	410	110	1	11/06/20 16:49	11/5/20	
Bis(2-ethylhexyl) Phthalate	620 U	620	110	1	11/06/20 16:49	11/5/20	
Butyl Benzyl Phthalate	410 U	410	110	1	11/06/20 16:49	11/5/20	
Caprolactam	410 U	410	110	1	11/06/20 16:49	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-CL-10292020
Lab Code: R2010276-010

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	410 U	410	120	1	11/06/20 16:49	11/5/20	
Chrysene	410 U	410	150	1	11/06/20 16:49	11/5/20	
Di-n-butyl Phthalate	410 U	410	130	1	11/06/20 16:49	11/5/20	
Di-n-octyl Phthalate	410 U	410	130	1	11/06/20 16:49	11/5/20	
Dibenz(a,h)anthracene	410 U	410	130	1	11/06/20 16:49	11/5/20	
Dibenzofuran	410 U	410	81	1	11/06/20 16:49	11/5/20	
Diethyl Phthalate	410 U	410	88	1	11/06/20 16:49	11/5/20	
Dimethyl Phthalate	410 U	410	93	1	11/06/20 16:49	11/5/20	
Fluoranthene	410 U	410	150	1	11/06/20 16:49	11/5/20	
Fluorene	410 U	410	95	1	11/06/20 16:49	11/5/20	
Hexachlorobenzene	410 U	410	130	1	11/06/20 16:49	11/5/20	
Hexachlorobutadiene	410 U	410	100	1	11/06/20 16:49	11/5/20	
Hexachlorocyclopentadiene	410 U	410	90	1	11/06/20 16:49	11/5/20	
Hexachloroethane	410 U	410	110	1	11/06/20 16:49	11/5/20	
Indeno(1,2,3-cd)pyrene	410 U	410	140	1	11/06/20 16:49	11/5/20	
Isophorone	410 U	410	120	1	11/06/20 16:49	11/5/20	
N-Nitrosodi-n-propylamine	410 U	410	110	1	11/06/20 16:49	11/5/20	
N-Nitrosodiphenylamine	410 U	410	280	1	11/06/20 16:49	11/5/20	
Naphthalene	410 U	410	110	1	11/06/20 16:49	11/5/20	
Nitrobenzene	410 U	410	110	1	11/06/20 16:49	11/5/20	
Pentachlorophenol (PCP)	2100 U	2100	140	1	11/06/20 16:49	11/5/20	
Phenanthrene	410 U	410	120	1	11/06/20 16:49	11/5/20	
Phenol	410 U	410	98	1	11/06/20 16:49	11/5/20	
Pyrene	410 U	410	170	1	11/06/20 16:49	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	40	10 - 109	11/06/20 16:49	
2-Fluorobiphenyl	35	10 - 102	11/06/20 16:49	
2-Fluorophenol	41	10 - 88	11/06/20 16:49	
Nitrobenzene-d5	39	10 - 95	11/06/20 16:49	
Phenol-d6	41	10 - 145	11/06/20 16:49	
Terphenyl-d14	51	10 - 106	11/06/20 16:49	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	360 U	360	85	1	11/21/20 12:54	11/5/20	
2,3,4,6-Tetrachlorophenol	360 U	360	75	1	11/21/20 12:54	11/5/20	
2,4,5-Trichlorophenol	360 U	360	310	1	11/21/20 12:54	11/5/20	
2,4,6-Trichlorophenol	360 U	360	63	1	11/21/20 12:54	11/5/20	
2,4-Dichlorophenol	360 U	360	76	1	11/21/20 12:54	11/5/20	
2,4-Dimethylphenol	360 U	360	79	1	11/21/20 12:54	11/5/20	
2,4-Dinitrophenol	1800 U	1800	710	1	11/21/20 12:54	11/5/20	
2,4-Dinitrotoluene	360 U	360	150	1	11/21/20 12:54	11/5/20	
2,6-Dinitrotoluene	360 U	360	110	1	11/21/20 12:54	11/5/20	
2-Chloronaphthalene	360 U	360	86	1	11/21/20 12:54	11/5/20	
2-Chlorophenol	360 U	360	88	1	11/21/20 12:54	11/5/20	
2-Methylnaphthalene	210 J	360	79	1	11/21/20 12:54	11/5/20	
2-Methylphenol	360 U	360	77	1	11/21/20 12:54	11/5/20	
2-Nitroaniline	360 U	360	110	1	11/21/20 12:54	11/5/20	
2-Nitrophenol	360 U	360	110	1	11/21/20 12:54	11/5/20	
3,3'-Dichlorobenzidine	360 U	360	75	1	11/21/20 12:54	11/5/20	
3- and 4-Methylphenol Coelution	360 U	360	69	1	11/21/20 12:54	11/5/20	
3-Nitroaniline	360 U	360	76	1	11/21/20 12:54	11/5/20	
4,6-Dinitro-2-methylphenol	1800 U	1800	160	1	11/21/20 12:54	11/5/20	
4-Bromophenyl Phenyl Ether	360 U	360	140	1	11/21/20 12:54	11/5/20	
4-Chloro-3-methylphenol	360 U	360	79	1	11/21/20 12:54	11/5/20	
4-Chloroaniline	360 U	360	85	1	11/21/20 12:54	11/5/20	
4-Chlorophenyl Phenyl Ether	360 U	360	86	1	11/21/20 12:54	11/5/20	
4-Nitroaniline	360 U	360	76	1	11/21/20 12:54	11/5/20	
4-Nitrophenol	1800 U	1800	120	1	11/21/20 12:54	11/5/20	
Acenaphthene	360 U	360	81	1	11/21/20 12:54	11/5/20	
Acenaphthylene	480	360	95	1	11/21/20 12:54	11/5/20	
Acetophenone	360 U	360	82	1	11/21/20 12:54	11/5/20	
Anthracene	450	360	100	1	11/21/20 12:54	11/5/20	
Atrazine	360 U	360	150	1	11/21/20 12:54	11/5/20	
Benz(a)anthracene	1200	360	110	1	11/21/20 12:54	11/5/20	
Benzaldehyde	360 U	360	71	1	11/21/20 12:54	11/5/20	
Benzo(a)pyrene	1500	360	140	1	11/21/20 12:54	11/5/20	
Benzo(b)fluoranthene	1700	360	120	1	11/21/20 12:54	11/5/20	
Benzo(g,h,i)perylene	750	360	95	1	11/21/20 12:54	11/5/20	
Benzo(k)fluoranthene	630	360	140	1	11/21/20 12:54	11/5/20	
Biphenyl	360 U	360	88	1	11/21/20 12:54	11/5/20	
2,2'-Oxybis(1-chloropropane)	360 U	360	150	1	11/21/20 12:54	11/5/20	
Bis(2-chloroethoxy)methane	360 U	360	96	1	11/21/20 12:54	11/5/20	
Bis(2-chloroethyl) Ether	360 U	360	94	1	11/21/20 12:54	11/5/20	
Bis(2-ethylhexyl) Phthalate	540 U	540	96	1	11/21/20 12:54	11/5/20	
Butyl Benzyl Phthalate	360 U	360	89	1	11/21/20 12:54	11/5/20	
Caprolactam	360 U	360	94	1	11/21/20 12:54	11/5/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	120 J	360	110	1	11/21/20 12:54	11/5/20	
Chrysene	1300	360	140	1	11/21/20 12:54	11/5/20	
Di-n-butyl Phthalate	360 U	360	110	1	11/21/20 12:54	11/5/20	
Di-n-octyl Phthalate	360 U	360	110	1	11/21/20 12:54	11/5/20	
Dibenz(a,h)anthracene	220 J	360	110	1	11/21/20 12:54	11/5/20	
Dibenzofuran	120 J	360	71	1	11/21/20 12:54	11/5/20	
Diethyl Phthalate	360 U	360	76	1	11/21/20 12:54	11/5/20	
Dimethyl Phthalate	360 U	360	81	1	11/21/20 12:54	11/5/20	
Fluoranthene	2100	360	140	1	11/21/20 12:54	11/5/20	
Fluorene	120 J	360	83	1	11/21/20 12:54	11/5/20	
Hexachlorobenzene	360 U	360	110	1	11/21/20 12:54	11/5/20	
Hexachlorobutadiene	360 U	360	87	1	11/21/20 12:54	11/5/20	
Hexachlorocyclopentadiene	360 U	360	79	1	11/21/20 12:54	11/5/20	
Hexachloroethane	360 U	360	93	1	11/21/20 12:54	11/5/20	
Indeno(1,2,3-cd)pyrene	860	360	120	1	11/21/20 12:54	11/5/20	
Isophorone	360 U	360	98	1	11/21/20 12:54	11/5/20	
N-Nitrosodi-n-propylamine	360 U	360	96	1	11/21/20 12:54	11/5/20	
N-Nitrosodiphenylamine	360 U	360	240	1	11/21/20 12:54	11/5/20	
Naphthalene	410	360	93	1	11/21/20 12:54	11/5/20	
Nitrobenzene	360 U	360	93	1	11/21/20 12:54	11/5/20	
Pentachlorophenol (PCP)	1800 U	1800	120	1	11/21/20 12:54	11/5/20	
Phenanthrene	1300	360	110	1	11/21/20 12:54	11/5/20	
Phenol	360 U	360	85	1	11/21/20 12:54	11/5/20	
Pyrene	1900	360	150	1	11/21/20 12:54	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	32	10 - 109	11/21/20 12:54	
2-Fluorobiphenyl	27	10 - 102	11/21/20 12:54	
2-Fluorophenol	23	10 - 88	11/21/20 12:54	
Nitrobenzene-d5	25	10 - 95	11/21/20 12:54	
Phenol-d6	26	10 - 145	11/21/20 12:54	
Terphenyl-d14	31	10 - 106	11/21/20 12:54	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:15
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-46
Lab Code: R2010276-012

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	410 U	410	98	1	11/06/20 17:18	11/5/20	
2,3,4,6-Tetrachlorophenol	410 U	410	87	1	11/06/20 17:18	11/5/20	
2,4,5-Trichlorophenol	410 U	410	350	1	11/06/20 17:18	11/5/20	
2,4,6-Trichlorophenol	410 U	410	73	1	11/06/20 17:18	11/5/20	
2,4-Dichlorophenol	410 U	410	88	1	11/06/20 17:18	11/5/20	
2,4-Dimethylphenol	410 U	410	90	1	11/06/20 17:18	11/5/20	
2,4-Dinitrophenol	2100 U	2100	820	1	11/06/20 17:18	11/5/20	
2,4-Dinitrotoluene	410 U	410	170	1	11/06/20 17:18	11/5/20	
2,6-Dinitrotoluene	410 U	410	120	1	11/06/20 17:18	11/5/20	
2-Chloronaphthalene	410 U	410	99	1	11/06/20 17:18	11/5/20	
2-Chlorophenol	410 U	410	110	1	11/06/20 17:18	11/5/20	
2-Methylnaphthalene	410 U	410	90	1	11/06/20 17:18	11/5/20	
2-Methylphenol	410 U	410	89	1	11/06/20 17:18	11/5/20	
2-Nitroaniline	410 U	410	130	1	11/06/20 17:18	11/5/20	
2-Nitrophenol	410 U	410	120	1	11/06/20 17:18	11/5/20	
3,3'-Dichlorobenzidine	410 U	410	87	1	11/06/20 17:18	11/5/20	
3- and 4-Methylphenol Coelution	410 U	410	79	1	11/06/20 17:18	11/5/20	
3-Nitroaniline	410 U	410	88	1	11/06/20 17:18	11/5/20	
4,6-Dinitro-2-methylphenol	2100 U	2100	180	1	11/06/20 17:18	11/5/20	
4-Bromophenyl Phenyl Ether	410 U	410	150	1	11/06/20 17:18	11/5/20	
4-Chloro-3-methylphenol	410 U	410	90	1	11/06/20 17:18	11/5/20	
4-Chloroaniline	410 U	410	98	1	11/06/20 17:18	11/5/20	
4-Chlorophenyl Phenyl Ether	410 U	410	99	1	11/06/20 17:18	11/5/20	
4-Nitroaniline	410 U	410	88	1	11/06/20 17:18	11/5/20	
4-Nitrophenol	2100 U	2100	140	1	11/06/20 17:18	11/5/20	
Acenaphthene	410 U	410	93	1	11/06/20 17:18	11/5/20	
Acenaphthylene	410 U	410	110	1	11/06/20 17:18	11/5/20	
Acetophenone	410 U	410	94	1	11/06/20 17:18	11/5/20	
Anthracene	410 U	410	120	1	11/06/20 17:18	11/5/20	
Atrazine	410 U	410	170	1	11/06/20 17:18	11/5/20	
Benz(a)anthracene	410 U	410	130	1	11/06/20 17:18	11/5/20	
Benzaldehyde	410 U	410	82	1	11/06/20 17:18	11/5/20	
Benzo(a)pyrene	410 U	410	150	1	11/06/20 17:18	11/5/20	
Benzo(b)fluoranthene	410 U	410	140	1	11/06/20 17:18	11/5/20	
Benzo(g,h,i)perylene	410 U	410	110	1	11/06/20 17:18	11/5/20	
Benzo(k)fluoranthene	410 U	410	150	1	11/06/20 17:18	11/5/20	
Biphenyl	410 U	410	110	1	11/06/20 17:18	11/5/20	
2,2'-Oxybis(1-chloropropane)	410 U	410	170	1	11/06/20 17:18	11/5/20	
Bis(2-chloroethoxy)methane	410 U	410	110	1	11/06/20 17:18	11/5/20	
Bis(2-chloroethyl) Ether	410 U	410	110	1	11/06/20 17:18	11/5/20	
Bis(2-ethylhexyl) Phthalate	620 U	620	110	1	11/06/20 17:18	11/5/20	
Butyl Benzyl Phthalate	410 U	410	110	1	11/06/20 17:18	11/5/20	
Caprolactam	410 U	410	110	1	11/06/20 17:18	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:15
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-46
Lab Code: R2010276-012

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	410 U	410	120	1	11/06/20 17:18	11/5/20	
Chrysene	410 U	410	150	1	11/06/20 17:18	11/5/20	
Di-n-butyl Phthalate	410 U	410	130	1	11/06/20 17:18	11/5/20	
Di-n-octyl Phthalate	410 U	410	130	1	11/06/20 17:18	11/5/20	
Dibenz(a,h)anthracene	410 U	410	130	1	11/06/20 17:18	11/5/20	
Dibenzofuran	410 U	410	82	1	11/06/20 17:18	11/5/20	
Diethyl Phthalate	410 U	410	88	1	11/06/20 17:18	11/5/20	
Dimethyl Phthalate	410 U	410	93	1	11/06/20 17:18	11/5/20	
Fluoranthene	410 U	410	150	1	11/06/20 17:18	11/5/20	
Fluorene	410 U	410	95	1	11/06/20 17:18	11/5/20	
Hexachlorobenzene	410 U	410	130	1	11/06/20 17:18	11/5/20	
Hexachlorobutadiene	410 U	410	100	1	11/06/20 17:18	11/5/20	
Hexachlorocyclopentadiene	410 U	410	90	1	11/06/20 17:18	11/5/20	
Hexachloroethane	410 U	410	110	1	11/06/20 17:18	11/5/20	
Indeno(1,2,3-cd)pyrene	410 U	410	140	1	11/06/20 17:18	11/5/20	
Isophorone	410 U	410	120	1	11/06/20 17:18	11/5/20	
N-Nitrosodi-n-propylamine	410 U	410	110	1	11/06/20 17:18	11/5/20	
N-Nitrosodiphenylamine	410 U	410	280	1	11/06/20 17:18	11/5/20	
Naphthalene	410 U	410	110	1	11/06/20 17:18	11/5/20	
Nitrobenzene	410 U	410	110	1	11/06/20 17:18	11/5/20	
Pentachlorophenol (PCP)	2100 U	2100	140	1	11/06/20 17:18	11/5/20	
Phenanthrene	410 U	410	120	1	11/06/20 17:18	11/5/20	
Phenol	410 U	410	98	1	11/06/20 17:18	11/5/20	
Pyrene	410 U	410	170	1	11/06/20 17:18	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	41	10 - 109	11/06/20 17:18	
2-Fluorobiphenyl	36	10 - 102	11/06/20 17:18	
2-Fluorophenol	38	10 - 88	11/06/20 17:18	
Nitrobenzene-d5	37	10 - 95	11/06/20 17:18	
Phenol-d6	39	10 - 145	11/06/20 17:18	
Terphenyl-d14	48	10 - 106	11/06/20 17:18	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:20
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-810
Lab Code: R2010276-013

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	440 U	440	110	1	11/06/20 17:48	11/5/20	
2,3,4,6-Tetrachlorophenol	440 U	440	93	1	11/06/20 17:48	11/5/20	
2,4,5-Trichlorophenol	440 U	440	380	1	11/06/20 17:48	11/5/20	
2,4,6-Trichlorophenol	440 U	440	78	1	11/06/20 17:48	11/5/20	
2,4-Dichlorophenol	440 U	440	94	1	11/06/20 17:48	11/5/20	
2,4-Dimethylphenol	440 U	440	97	1	11/06/20 17:48	11/5/20	
2,4-Dinitrophenol	2300 U	2300	880	1	11/06/20 17:48	11/5/20	
2,4-Dinitrotoluene	440 U	440	180	1	11/06/20 17:48	11/5/20	
2,6-Dinitrotoluene	440 U	440	130	1	11/06/20 17:48	11/5/20	
2-Chloronaphthalene	440 U	440	110	1	11/06/20 17:48	11/5/20	
2-Chlorophenol	440 U	440	110	1	11/06/20 17:48	11/5/20	
2-Methylnaphthalene	440 U	440	97	1	11/06/20 17:48	11/5/20	
2-Methylphenol	440 U	440	96	1	11/06/20 17:48	11/5/20	
2-Nitroaniline	440 U	440	140	1	11/06/20 17:48	11/5/20	
2-Nitrophenol	440 U	440	130	1	11/06/20 17:48	11/5/20	
3,3'-Dichlorobenzidine	440 U	440	93	1	11/06/20 17:48	11/5/20	
3- and 4-Methylphenol Coelution	440 U	440	85	1	11/06/20 17:48	11/5/20	
3-Nitroaniline	440 U	440	94	1	11/06/20 17:48	11/5/20	
4,6-Dinitro-2-methylphenol	2300 U	2300	190	1	11/06/20 17:48	11/5/20	
4-Bromophenyl Phenyl Ether	440 U	440	170	1	11/06/20 17:48	11/5/20	
4-Chloro-3-methylphenol	440 U	440	97	1	11/06/20 17:48	11/5/20	
4-Chloroaniline	440 U	440	110	1	11/06/20 17:48	11/5/20	
4-Chlorophenyl Phenyl Ether	440 U	440	110	1	11/06/20 17:48	11/5/20	
4-Nitroaniline	440 U	440	94	1	11/06/20 17:48	11/5/20	
4-Nitrophenol	2300 U	2300	150	1	11/06/20 17:48	11/5/20	
Acenaphthene	440 U	440	100	1	11/06/20 17:48	11/5/20	
Acenaphthylene	440 U	440	120	1	11/06/20 17:48	11/5/20	
Acetophenone	440 U	440	110	1	11/06/20 17:48	11/5/20	
Anthracene	440 U	440	130	1	11/06/20 17:48	11/5/20	
Atrazine	440 U	440	180	1	11/06/20 17:48	11/5/20	
Benz(a)anthracene	440 U	440	140	1	11/06/20 17:48	11/5/20	
Benzaldehyde	440 U	440	88	1	11/06/20 17:48	11/5/20	
Benzo(a)pyrene	440 U	440	170	1	11/06/20 17:48	11/5/20	
Benzo(b)fluoranthene	440 U	440	150	1	11/06/20 17:48	11/5/20	
Benzo(g,h,i)perylene	440 U	440	120	1	11/06/20 17:48	11/5/20	
Benzo(k)fluoranthene	440 U	440	170	1	11/06/20 17:48	11/5/20	
Biphenyl	440 U	440	110	1	11/06/20 17:48	11/5/20	
2,2'-Oxybis(1-chloropropane)	440 U	440	180	1	11/06/20 17:48	11/5/20	
Bis(2-chloroethoxy)methane	440 U	440	120	1	11/06/20 17:48	11/5/20	
Bis(2-chloroethyl) Ether	440 U	440	120	1	11/06/20 17:48	11/5/20	
Bis(2-ethylhexyl) Phthalate	670 U	670	120	1	11/06/20 17:48	11/5/20	
Butyl Benzyl Phthalate	440 U	440	120	1	11/06/20 17:48	11/5/20	
Caprolactam	440 U	440	120	1	11/06/20 17:48	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:20
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-810
Lab Code: R2010276-013

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	440 U	440	130	1	11/06/20 17:48	11/5/20	
Chrysene	440 U	440	170	1	11/06/20 17:48	11/5/20	
Di-n-butyl Phthalate	440 U	440	140	1	11/06/20 17:48	11/5/20	
Di-n-octyl Phthalate	440 U	440	140	1	11/06/20 17:48	11/5/20	
Dibenz(a,h)anthracene	440 U	440	140	1	11/06/20 17:48	11/5/20	
Dibenzofuran	440 U	440	88	1	11/06/20 17:48	11/5/20	
Diethyl Phthalate	440 U	440	94	1	11/06/20 17:48	11/5/20	
Dimethyl Phthalate	440 U	440	100	1	11/06/20 17:48	11/5/20	
Fluoranthene	440 U	440	170	1	11/06/20 17:48	11/5/20	
Fluorene	440 U	440	110	1	11/06/20 17:48	11/5/20	
Hexachlorobenzene	440 U	440	140	1	11/06/20 17:48	11/5/20	
Hexachlorobutadiene	440 U	440	110	1	11/06/20 17:48	11/5/20	
Hexachlorocyclopentadiene	440 U	440	97	1	11/06/20 17:48	11/5/20	
Hexachloroethane	440 U	440	120	1	11/06/20 17:48	11/5/20	
Indeno(1,2,3-cd)pyrene	440 U	440	150	1	11/06/20 17:48	11/5/20	
Isophorone	440 U	440	130	1	11/06/20 17:48	11/5/20	
N-Nitrosodi-n-propylamine	440 U	440	120	1	11/06/20 17:48	11/5/20	
N-Nitrosodiphenylamine	440 U	440	300	1	11/06/20 17:48	11/5/20	
Naphthalene	440 U	440	120	1	11/06/20 17:48	11/5/20	
Nitrobenzene	440 U	440	120	1	11/06/20 17:48	11/5/20	
Pentachlorophenol (PCP)	2300 U	2300	150	1	11/06/20 17:48	11/5/20	
Phenanthrene	440 U	440	130	1	11/06/20 17:48	11/5/20	
Phenol	440 U	440	110	1	11/06/20 17:48	11/5/20	
Pyrene	440 U	440	180	1	11/06/20 17:48	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	29	10 - 109	11/06/20 17:48	
2-Fluorobiphenyl	26	10 - 102	11/06/20 17:48	
2-Fluorophenol	29	10 - 88	11/06/20 17:48	
Nitrobenzene-d5	27	10 - 95	11/06/20 17:48	
Phenol-d6	29	10 - 145	11/06/20 17:48	
Terphenyl-d14	40	10 - 106	11/06/20 17:48	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:35
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-1314
Lab Code: R2010276-014

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	440 U	440	110	1	11/06/20 18:16	11/5/20	
2,3,4,6-Tetrachlorophenol	440 U	440	93	1	11/06/20 18:16	11/5/20	
2,4,5-Trichlorophenol	440 U	440	380	1	11/06/20 18:16	11/5/20	
2,4,6-Trichlorophenol	440 U	440	78	1	11/06/20 18:16	11/5/20	
2,4-Dichlorophenol	440 U	440	94	1	11/06/20 18:16	11/5/20	
2,4-Dimethylphenol	440 U	440	97	1	11/06/20 18:16	11/5/20	
2,4-Dinitrophenol	2300 U	2300	870	1	11/06/20 18:16	11/5/20	
2,4-Dinitrotoluene	440 U	440	180	1	11/06/20 18:16	11/5/20	
2,6-Dinitrotoluene	440 U	440	130	1	11/06/20 18:16	11/5/20	
2-Chloronaphthalene	440 U	440	110	1	11/06/20 18:16	11/5/20	
2-Chlorophenol	440 U	440	110	1	11/06/20 18:16	11/5/20	
2-Methylnaphthalene	440 U	440	97	1	11/06/20 18:16	11/5/20	
2-Methylphenol	440 U	440	96	1	11/06/20 18:16	11/5/20	
2-Nitroaniline	440 U	440	140	1	11/06/20 18:16	11/5/20	
2-Nitrophenol	440 U	440	130	1	11/06/20 18:16	11/5/20	
3,3'-Dichlorobenzidine	440 U	440	93	1	11/06/20 18:16	11/5/20	
3- and 4-Methylphenol Coelution	440 U	440	85	1	11/06/20 18:16	11/5/20	
3-Nitroaniline	440 U	440	94	1	11/06/20 18:16	11/5/20	
4,6-Dinitro-2-methylphenol	2300 U	2300	190	1	11/06/20 18:16	11/5/20	
4-Bromophenyl Phenyl Ether	440 U	440	170	1	11/06/20 18:16	11/5/20	
4-Chloro-3-methylphenol	440 U	440	97	1	11/06/20 18:16	11/5/20	
4-Chloroaniline	440 U	440	110	1	11/06/20 18:16	11/5/20	
4-Chlorophenyl Phenyl Ether	440 U	440	110	1	11/06/20 18:16	11/5/20	
4-Nitroaniline	440 U	440	94	1	11/06/20 18:16	11/5/20	
4-Nitrophenol	2300 U	2300	150	1	11/06/20 18:16	11/5/20	
Acenaphthene	440 U	440	100	1	11/06/20 18:16	11/5/20	
Acenaphthylene	440 U	440	120	1	11/06/20 18:16	11/5/20	
Acetophenone	440 U	440	110	1	11/06/20 18:16	11/5/20	
Anthracene	440 U	440	130	1	11/06/20 18:16	11/5/20	
Atrazine	440 U	440	180	1	11/06/20 18:16	11/5/20	
Benz(a)anthracene	440 U	440	130	1	11/06/20 18:16	11/5/20	
Benzaldehyde	440 U	440	87	1	11/06/20 18:16	11/5/20	
Benzo(a)pyrene	440 U	440	170	1	11/06/20 18:16	11/5/20	
Benzo(b)fluoranthene	440 U	440	150	1	11/06/20 18:16	11/5/20	
Benzo(g,h,i)perylene	440 U	440	120	1	11/06/20 18:16	11/5/20	
Benzo(k)fluoranthene	440 U	440	170	1	11/06/20 18:16	11/5/20	
Biphenyl	440 U	440	110	1	11/06/20 18:16	11/5/20	
2,2'-Oxybis(1-chloropropane)	440 U	440	180	1	11/06/20 18:16	11/5/20	
Bis(2-chloroethoxy)methane	440 U	440	120	1	11/06/20 18:16	11/5/20	
Bis(2-chloroethyl) Ether	440 U	440	120	1	11/06/20 18:16	11/5/20	
Bis(2-ethylhexyl) Phthalate	670 U	670	120	1	11/06/20 18:16	11/5/20	
Butyl Benzyl Phthalate	440 U	440	110	1	11/06/20 18:16	11/5/20	
Caprolactam	440 U	440	120	1	11/06/20 18:16	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:35
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-1314
Lab Code: R2010276-014

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	440 U	440	130	1	11/06/20 18:16	11/5/20	
Chrysene	440 U	440	170	1	11/06/20 18:16	11/5/20	
Di-n-butyl Phthalate	440 U	440	140	1	11/06/20 18:16	11/5/20	
Di-n-octyl Phthalate	440 U	440	130	1	11/06/20 18:16	11/5/20	
Dibenz(a,h)anthracene	440 U	440	140	1	11/06/20 18:16	11/5/20	
Dibenzofuran	440 U	440	87	1	11/06/20 18:16	11/5/20	
Diethyl Phthalate	440 U	440	94	1	11/06/20 18:16	11/5/20	
Dimethyl Phthalate	440 U	440	100	1	11/06/20 18:16	11/5/20	
Fluoranthene	440 U	440	170	1	11/06/20 18:16	11/5/20	
Fluorene	440 U	440	110	1	11/06/20 18:16	11/5/20	
Hexachlorobenzene	440 U	440	140	1	11/06/20 18:16	11/5/20	
Hexachlorobutadiene	440 U	440	110	1	11/06/20 18:16	11/5/20	
Hexachlorocyclopentadiene	440 U	440	97	1	11/06/20 18:16	11/5/20	
Hexachloroethane	440 U	440	120	1	11/06/20 18:16	11/5/20	
Indeno(1,2,3-cd)pyrene	440 U	440	150	1	11/06/20 18:16	11/5/20	
Isophorone	440 U	440	130	1	11/06/20 18:16	11/5/20	
N-Nitrosodi-n-propylamine	440 U	440	120	1	11/06/20 18:16	11/5/20	
N-Nitrosodiphenylamine	440 U	440	300	1	11/06/20 18:16	11/5/20	
Naphthalene	440 U	440	120	1	11/06/20 18:16	11/5/20	
Nitrobenzene	440 U	440	120	1	11/06/20 18:16	11/5/20	
Pentachlorophenol (PCP)	2300 U	2300	150	1	11/06/20 18:16	11/5/20	
Phenanthrene	440 U	440	130	1	11/06/20 18:16	11/5/20	
Phenol	440 U	440	110	1	11/06/20 18:16	11/5/20	
Pyrene	440 U	440	180	1	11/06/20 18:16	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	34	10 - 109	11/06/20 18:16	
2-Fluorobiphenyl	30	10 - 102	11/06/20 18:16	
2-Fluorophenol	33	10 - 88	11/06/20 18:16	
Nitrobenzene-d5	33	10 - 95	11/06/20 18:16	
Phenol-d6	34	10 - 145	11/06/20 18:16	
Terphenyl-d14	45	10 - 106	11/06/20 18:16	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:25
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-3638
Lab Code: R2010276-015

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	460 U	460	110	1	11/06/20 18:46	11/5/20	
2,3,4,6-Tetrachlorophenol	460 U	460	96	1	11/06/20 18:46	11/5/20	
2,4,5-Trichlorophenol	460 U	460	390	1	11/06/20 18:46	11/5/20	
2,4,6-Trichlorophenol	460 U	460	81	1	11/06/20 18:46	11/5/20	
2,4-Dichlorophenol	460 U	460	97	1	11/06/20 18:46	11/5/20	
2,4-Dimethylphenol	460 U	460	100	1	11/06/20 18:46	11/5/20	
2,4-Dinitrophenol	2300 U	2300	900	1	11/06/20 18:46	11/5/20	
2,4-Dinitrotoluene	460 U	460	180	1	11/06/20 18:46	11/5/20	
2,6-Dinitrotoluene	460 U	460	140	1	11/06/20 18:46	11/5/20	
2-Chloronaphthalene	460 U	460	110	1	11/06/20 18:46	11/5/20	
2-Chlorophenol	460 U	460	120	1	11/06/20 18:46	11/5/20	
2-Methylnaphthalene	460 U	460	100	1	11/06/20 18:46	11/5/20	
2-Methylphenol	460 U	460	98	1	11/06/20 18:46	11/5/20	
2-Nitroaniline	460 U	460	140	1	11/06/20 18:46	11/5/20	
2-Nitrophenol	460 U	460	140	1	11/06/20 18:46	11/5/20	
3,3'-Dichlorobenzidine	460 U	460	96	1	11/06/20 18:46	11/5/20	
3- and 4-Methylphenol Coelution	460 U	460	87	1	11/06/20 18:46	11/5/20	
3-Nitroaniline	460 U	460	97	1	11/06/20 18:46	11/5/20	
4,6-Dinitro-2-methylphenol	2300 U	2300	200	1	11/06/20 18:46	11/5/20	
4-Bromophenyl Phenyl Ether	460 U	460	170	1	11/06/20 18:46	11/5/20	
4-Chloro-3-methylphenol	460 U	460	100	1	11/06/20 18:46	11/5/20	
4-Chloroaniline	460 U	460	110	1	11/06/20 18:46	11/5/20	
4-Chlorophenyl Phenyl Ether	460 U	460	110	1	11/06/20 18:46	11/5/20	
4-Nitroaniline	460 U	460	97	1	11/06/20 18:46	11/5/20	
4-Nitrophenol	2300 U	2300	160	1	11/06/20 18:46	11/5/20	
Acenaphthene	460 U	460	110	1	11/06/20 18:46	11/5/20	
Acenaphthylene	460 U	460	130	1	11/06/20 18:46	11/5/20	
Acetophenone	460 U	460	110	1	11/06/20 18:46	11/5/20	
Anthracene	460 U	460	130	1	11/06/20 18:46	11/5/20	
Atrazine	460 U	460	180	1	11/06/20 18:46	11/5/20	
Benz(a)anthracene	460 U	460	140	1	11/06/20 18:46	11/5/20	
Benzaldehyde	460 U	460	90	1	11/06/20 18:46	11/5/20	
Benzo(a)pyrene	460 U	460	170	1	11/06/20 18:46	11/5/20	
Benzo(b)fluoranthene	460 U	460	160	1	11/06/20 18:46	11/5/20	
Benzo(g,h,i)perylene	460 U	460	130	1	11/06/20 18:46	11/5/20	
Benzo(k)fluoranthene	460 U	460	170	1	11/06/20 18:46	11/5/20	
Biphenyl	460 U	460	120	1	11/06/20 18:46	11/5/20	
2,2'-Oxybis(1-chloropropane)	460 U	460	180	1	11/06/20 18:46	11/5/20	
Bis(2-chloroethoxy)methane	460 U	460	130	1	11/06/20 18:46	11/5/20	
Bis(2-chloroethyl) Ether	460 U	460	120	1	11/06/20 18:46	11/5/20	
Bis(2-ethylhexyl) Phthalate	690 U	690	130	1	11/06/20 18:46	11/5/20	
Butyl Benzyl Phthalate	460 U	460	120	1	11/06/20 18:46	11/5/20	
Caprolactam	460 U	460	120	1	11/06/20 18:46	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:25
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-3638
Lab Code: R2010276-015

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	460 U	460	140	1	11/06/20 18:46	11/5/20	
Chrysene	460 U	460	170	1	11/06/20 18:46	11/5/20	
Di-n-butyl Phthalate	460 U	460	140	1	11/06/20 18:46	11/5/20	
Di-n-octyl Phthalate	460 U	460	140	1	11/06/20 18:46	11/5/20	
Dibenz(a,h)anthracene	460 U	460	140	1	11/06/20 18:46	11/5/20	
Dibenzofuran	460 U	460	90	1	11/06/20 18:46	11/5/20	
Diethyl Phthalate	460 U	460	97	1	11/06/20 18:46	11/5/20	
Dimethyl Phthalate	460 U	460	110	1	11/06/20 18:46	11/5/20	
Fluoranthene	460 U	460	170	1	11/06/20 18:46	11/5/20	
Fluorene	460 U	460	110	1	11/06/20 18:46	11/5/20	
Hexachlorobenzene	460 U	460	140	1	11/06/20 18:46	11/5/20	
Hexachlorobutadiene	460 U	460	120	1	11/06/20 18:46	11/5/20	
Hexachlorocyclopentadiene	460 U	460	100	1	11/06/20 18:46	11/5/20	
Hexachloroethane	460 U	460	120	1	11/06/20 18:46	11/5/20	
Indeno(1,2,3-cd)pyrene	460 U	460	160	1	11/06/20 18:46	11/5/20	
Isophorone	460 U	460	130	1	11/06/20 18:46	11/5/20	
N-Nitrosodi-n-propylamine	460 U	460	130	1	11/06/20 18:46	11/5/20	
N-Nitrosodiphenylamine	460 U	460	310	1	11/06/20 18:46	11/5/20	
Naphthalene	460 U	460	120	1	11/06/20 18:46	11/5/20	
Nitrobenzene	460 U	460	120	1	11/06/20 18:46	11/5/20	
Pentachlorophenol (PCP)	2300 U	2300	160	1	11/06/20 18:46	11/5/20	
Phenanthrene	460 U	460	140	1	11/06/20 18:46	11/5/20	
Phenol	460 U	460	110	1	11/06/20 18:46	11/5/20	
Pyrene	460 U	460	180	1	11/06/20 18:46	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	34	10 - 109	11/06/20 18:46	
2-Fluorobiphenyl	27	10 - 102	11/06/20 18:46	
2-Fluorophenol	33	10 - 88	11/06/20 18:46	
Nitrobenzene-d5	31	10 - 95	11/06/20 18:46	
Phenol-d6	34	10 - 145	11/06/20 18:46	
Terphenyl-d14	34	10 - 106	11/06/20 18:46	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Collected: 10/30/20 07:00
Date Received: 10/31/20 08:25

Sample Name: EQB-103020
Lab Code: R2010276-016

Units: ug/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	12 U	12	1.5	1	11/10/20 22:35	11/5/20	
2,3,4,6-Tetrachlorophenol	12 U	12	1.4	1	11/10/20 22:35	11/5/20	
2,4,5-Trichlorophenol	12 U	12	1.3	1	11/10/20 22:35	11/5/20	
2,4,6-Trichlorophenol	12 U	12	1.7	1	11/10/20 22:35	11/5/20	
2,4-Dichlorophenol	12 U	12	1.5	1	11/10/20 22:35	11/5/20	
2,4-Dimethylphenol	12 U	12	1.7	1	11/10/20 22:35	11/5/20	
2,4-Dinitrophenol	60 U	60	24	1	11/10/20 22:35	11/5/20	
2,4-Dinitrotoluene	12 U	12	2.8	1	11/10/20 22:35	11/5/20	
2,6-Dinitrotoluene	12 U	12	1.6	1	11/10/20 22:35	11/5/20	
2-Chloronaphthalene	12 U	12	1.7	1	11/10/20 22:35	11/5/20	
2-Chlorophenol	12 U	12	1.3	1	11/10/20 22:35	11/5/20	
2-Methylnaphthalene	12 U	12	1.6	1	11/10/20 22:35	11/5/20	
2-Methylphenol	12 U	12	1.2	1	11/10/20 22:35	11/5/20	
2-Nitroaniline	12 U	12	1.7	1	11/10/20 22:35	11/5/20	
2-Nitrophenol	12 U	12	1.8	1	11/10/20 22:35	11/5/20	
3,3'-Dichlorobenzidine	12 U	12	1.5	1	11/10/20 22:35	11/5/20	
3- and 4-Methylphenol Coelution	12 U	12	1.4	1	11/10/20 22:35	11/5/20	
3-Nitroaniline	12 U	12	3.0	1	11/10/20 22:35	11/5/20	
4,6-Dinitro-2-methylphenol	60 U	60	23	1	11/10/20 22:35	11/5/20	
4-Bromophenyl Phenyl Ether	12 U	12	2.0	1	11/10/20 22:35	11/5/20	
4-Chloro-3-methylphenol	12 U	12	1.3	1	11/10/20 22:35	11/5/20	
4-Chloroaniline	12 U	12	1.2	1	11/10/20 22:35	11/5/20	
4-Chlorophenyl Phenyl Ether	12 U	12	1.8	1	11/10/20 22:35	11/5/20	
4-Nitroaniline	12 U	12	3.3	1	11/10/20 22:35	11/5/20	
4-Nitrophenol	60 U	60	7.6	1	11/10/20 22:35	11/5/20	
Acenaphthene	12 U	12	1.6	1	11/10/20 22:35	11/5/20	
Acenaphthylene	12 U	12	1.6	1	11/10/20 22:35	11/5/20	
Acetophenone	12 U	12	1.5	1	11/10/20 22:35	11/5/20	
Anthracene	12 U	12	1.5	1	11/10/20 22:35	11/5/20	
Atrazine	12 U	12	2.5	1	11/10/20 22:35	11/5/20	
Benz(a)anthracene	12 U	12	1.9	1	11/10/20 22:35	11/5/20	
Benzaldehyde	12 U	12	4.4	1	11/10/20 22:35	11/5/20	
Benzo(a)pyrene	12 U	12	1.4	1	11/10/20 22:35	11/5/20	
Benzo(b)fluoranthene	12 U	12	1.4	1	11/10/20 22:35	11/5/20	
Benzo(g,h,i)perylene	12 U	12	1.2	1	11/10/20 22:35	11/5/20	
Benzo(k)fluoranthene	12 U	12	1.5	1	11/10/20 22:35	11/5/20	
Biphenyl	12 U	12	1.7	1	11/10/20 22:35	11/5/20	
2,2'-Oxybis(1-chloropropane)	12 U	12	1.7	1	11/10/20 22:35	11/5/20	
Bis(2-chloroethoxy)methane	12 U	12	2.3	1	11/10/20 22:35	11/5/20	
Bis(2-chloroethyl) Ether	12 U	12	1.5	1	11/10/20 22:35	11/5/20	
Bis(2-ethylhexyl) Phthalate	12 U	12	1.2	1	11/10/20 22:35	11/5/20	
Butyl Benzyl Phthalate	12 U	12	1.7	1	11/10/20 22:35	11/5/20	
Caprolactam	12 U	12	1.2	1	11/10/20 22:35	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Collected: 10/30/20 07:00
Date Received: 10/31/20 08:25

Sample Name: EQB-103020
Lab Code: R2010276-016

Units: ug/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	12 U	12	1.9	1	11/10/20 22:35	11/5/20	
Chrysene	12 U	12	1.4	1	11/10/20 22:35	11/5/20	
Di-n-butyl Phthalate	12 U	12	2.4	1	11/10/20 22:35	11/5/20	
Di-n-octyl Phthalate	12 U	12	3.9	1	11/10/20 22:35	11/5/20	
Dibenz(a,h)anthracene	12 U	12	1.3	1	11/10/20 22:35	11/5/20	
Dibenzofuran	12 U	12	1.7	1	11/10/20 22:35	11/5/20	
Diethyl Phthalate	12 U	12	1.3	1	11/10/20 22:35	11/5/20	
Dimethyl Phthalate	12 U	12	1.5	1	11/10/20 22:35	11/5/20	
Fluoranthene	12 U	12	1.8	1	11/10/20 22:35	11/5/20	
Fluorene	12 U	12	1.5	1	11/10/20 22:35	11/5/20	
Hexachlorobenzene	12 U	12	1.9	1	11/10/20 22:35	11/5/20	
Hexachlorobutadiene	12 U	12	1.2	1	11/10/20 22:35	11/5/20	
Hexachlorocyclopentadiene	12 U	12	2.6	1	11/10/20 22:35	11/5/20	
Hexachloroethane	12 U	12	1.3	1	11/10/20 22:35	11/5/20	
Indeno(1,2,3-cd)pyrene	12 U	12	2.1	1	11/10/20 22:35	11/5/20	
Isophorone	12 U	12	1.7	1	11/10/20 22:35	11/5/20	
N-Nitrosodi-n-propylamine	12 U	12	1.4	1	11/10/20 22:35	11/5/20	
N-Nitrosodiphenylamine	12 U	12	3.2	1	11/10/20 22:35	11/5/20	
Naphthalene	12 U	12	1.4	1	11/10/20 22:35	11/5/20	
Nitrobenzene	12 U	12	1.8	1	11/10/20 22:35	11/5/20	
Pentachlorophenol (PCP)	60 U	60	12	1	11/10/20 22:35	11/5/20	
Phenanthrene	12 U	12	1.6	1	11/10/20 22:35	11/5/20	
Phenol	12 U	12	1.2	1	11/10/20 22:35	11/5/20	
Pyrene	12 U	12	1.7	1	11/10/20 22:35	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	66	35 - 141	11/10/20 22:35	
2-Fluorobiphenyl	61	31 - 118	11/10/20 22:35	
2-Fluorophenol	37	10 - 105	11/10/20 22:35	
Nitrobenzene-d5	59	31 - 110	11/10/20 22:35	
Phenol-d6	31	10 - 107	11/10/20 22:35	
Terphenyl-d14	83	10 - 165	11/10/20 22:35	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	770 U	770	390	10	11/16/20 20:20	11/6/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	69	10 - 115	11/16/20 20:20	
Nitrobenzene-d5	73	10 - 130	11/16/20 20:20	
p-Terphenyl-d14	70	10 - 130	11/16/20 20:20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-150-02
Lab Code: R2010276-003

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	770 U	770	390	10	11/16/20 21:45	11/6/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	77	10 - 115	11/16/20 21:45	
Nitrobenzene-d5	87	10 - 130	11/16/20 21:45	
p-Terphenyl-d14	88	10 - 130	11/16/20 21:45	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	420 U	420	220	5	11/16/20 22:13	11/6/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	66	10 - 115	11/16/20 22:13	
Nitrobenzene-d5	97	10 - 130	11/16/20 22:13	
p-Terphenyl-d14	80	10 - 130	11/16/20 22:13	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	73 U	73	38	1	11/16/20 22:42	11/6/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	63	10 - 115	11/16/20 22:42	
Nitrobenzene-d5	66	10 - 130	11/16/20 22:42	
p-Terphenyl-d14	72	10 - 130	11/16/20 22:42	



Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
4,4'-DDE	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
4,4'-DDT	5.8 J	9.7	4.8	5	11/06/20 10:29	11/4/20	
Aldrin	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
Dieldrin	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
Endosulfan I	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
Endosulfan II	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
Endosulfan Sulfate	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
Endrin	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
Endrin Aldehyde	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
Endrin Ketone	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
Heptachlor	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
Heptachlor Epoxide	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
Methoxychlor	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
Toxaphene	190 U	190	110	5	11/06/20 10:29	11/4/20	
alpha-BHC	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
alpha-Chlordane	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
beta-BHC	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
delta-BHC	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
gamma-BHC (Lindane)	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	
gamma-Chlordane	9.7 U	9.7	4.8	5	11/06/20 10:29	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	77	10 - 145	11/06/20 10:29	
Tetrachloro-m-xylene	72	10 - 123	11/06/20 10:29	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-150-02
Lab Code: R2010276-003

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
4,4'-DDE	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
4,4'-DDT	6.3 J	9.6	4.8	5	11/06/20 11:26	11/4/20	
Aldrin	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
Dieldrin	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
Endosulfan I	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
Endosulfan II	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
Endosulfan Sulfate	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
Endrin	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
Endrin Aldehyde	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
Endrin Ketone	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
Heptachlor	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
Heptachlor Epoxide	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
Methoxychlor	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
Toxaphene	190 U	190	110	5	11/06/20 11:26	11/4/20	
alpha-BHC	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
alpha-Chlordane	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
beta-BHC	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
delta-BHC	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
gamma-BHC (Lindane)	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	
gamma-Chlordane	9.6 U	9.6	4.8	5	11/06/20 11:26	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	76	10 - 145	11/06/20 11:26	
Tetrachloro-m-xylene	60	10 - 123	11/06/20 11:26	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
4,4'-DDE	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
4,4'-DDT	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
Aldrin	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
Dieldrin	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
Endosulfan I	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
Endosulfan II	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
Endosulfan Sulfate	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
Endrin	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
Endrin Aldehyde	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
Endrin Ketone	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
Heptachlor	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
Heptachlor Epoxide	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
Methoxychlor	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
Toxaphene	210 U	210	120	5	11/06/20 11:46	11/4/20	
alpha-BHC	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
alpha-Chlordane	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
beta-BHC	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
delta-BHC	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
gamma-BHC (Lindane)	11 U	11	5.3	5	11/06/20 11:46	11/4/20	
gamma-Chlordane	9.7 J	11	5.3	5	11/06/20 11:46	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	81	10 - 145	11/06/20 11:46	
Tetrachloro-m-xylene	44	10 - 123	11/06/20 11:46	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
4,4'-DDE	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
4,4'-DDT	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
Aldrin	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
Dieldrin	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
Endosulfan I	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
Endosulfan II	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
Endosulfan Sulfate	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
Endrin	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
Endrin Aldehyde	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
Endrin Ketone	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
Heptachlor	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
Heptachlor Epoxide	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
Methoxychlor	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
Toxaphene	180 U	180	110	5	11/06/20 12:05	11/4/20	
alpha-BHC	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
alpha-Chlordane	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
beta-BHC	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
delta-BHC	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
gamma-BHC (Lindane)	9.2 U	9.2	4.6	5	11/06/20 12:05	11/4/20	
gamma-Chlordane	18 U	18	9.1	10	11/18/20 11:34	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	70	10 - 145	11/06/20 12:05	
Tetrachloro-m-xylene	69	10 - 123	11/06/20 12:05	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	38 U	38	20	1	11/07/20 07:23	11/4/20	
Aroclor 1221	76 U	76	20	1	11/07/20 07:23	11/4/20	
Aroclor 1232	38 U	38	20	1	11/07/20 07:23	11/4/20	
Aroclor 1242	38 U	38	20	1	11/07/20 07:23	11/4/20	
Aroclor 1248	38 U	38	20	1	11/07/20 07:23	11/4/20	
Aroclor 1254	38 U	38	20	1	11/07/20 07:23	11/4/20	
Aroclor 1260	94	38	20	1	11/07/20 07:23	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	63	22 - 128	11/07/20 07:23	
Tetrachloro-m-xylene	59	14 - 119	11/07/20 07:23	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-150-02
Lab Code: R2010276-003

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	37 U	37	20	1	11/10/20 16:33	11/4/20	
Aroclor 1221	76 U	76	20	1	11/10/20 16:33	11/4/20	
Aroclor 1232	37 U	37	20	1	11/10/20 16:33	11/4/20	
Aroclor 1242	37 U	37	20	1	11/10/20 16:33	11/4/20	
Aroclor 1248	30 J	37	20	1	11/10/20 16:33	11/4/20	
Aroclor 1254	31 J	37	20	1	11/10/20 16:33	11/4/20	
Aroclor 1260	120	37	20	1	11/10/20 16:33	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	64	22 - 128	11/10/20 16:33	
Tetrachloro-m-xylene	67	14 - 119	11/10/20 16:33	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	41 U	41	22	1	11/06/20 14:44	11/4/20	
Aroclor 1221	84 U	84	22	1	11/06/20 14:44	11/4/20	
Aroclor 1232	41 U	41	22	1	11/06/20 14:44	11/4/20	
Aroclor 1242	41 U	41	22	1	11/06/20 14:44	11/4/20	
Aroclor 1248	41 U	41	22	1	11/06/20 14:44	11/4/20	
Aroclor 1254	41 U	41	22	1	11/06/20 14:44	11/4/20	
Aroclor 1260	41 U	41	22	1	11/06/20 14:44	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	39	22 - 128	11/06/20 14:44	
Tetrachloro-m-xylene	46	14 - 119	11/06/20 14:44	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	36 U	36	19	1	11/10/20 16:52	11/4/20	
Aroclor 1221	72 U	72	19	1	11/10/20 16:52	11/4/20	
Aroclor 1232	36 U	36	19	1	11/10/20 16:52	11/4/20	
Aroclor 1242	36 U	36	19	1	11/10/20 16:52	11/4/20	
Aroclor 1248	36 U	36	19	1	11/10/20 16:52	11/4/20	
Aroclor 1254	25 JP	36	19	1	11/10/20 16:52	11/4/20	
Aroclor 1260	65	36	19	1	11/10/20 16:52	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	62	22 - 128	11/10/20 16:52	
Tetrachloro-m-xylene	58	14 - 119	11/10/20 16:52	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	11 U	11	5.8	1	11/10/20 18:33	11/9/20	
2,4,5-TP	11 U	11	5.2	1	11/10/20 18:33	11/9/20	
2,4-D	11 U	11	7.5	1	11/10/20 18:33	11/9/20	
Dicamba	11 U	11	3.6	1	11/10/20 18:33	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	75	10 - 151	11/10/20 18:33	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-150-02
Lab Code: R2010276-003

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	11 U	11	5.7	1	11/10/20 20:12	11/9/20	
2,4,5-TP	11 U	11	5.2	1	11/10/20 20:12	11/9/20	
2,4-D	11 U	11	7.4	1	11/10/20 20:12	11/9/20	
Dicamba	11 U	11	3.6	1	11/10/20 20:12	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	0 *	10 - 151	11/10/20 20:12	*

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20 08:25

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	13 U	13	6.3	1	11/10/20 20:32	11/9/20	
2,4,5-TP	13 U	13	5.7	1	11/10/20 20:32	11/9/20	
2,4-D	13 U	13	8.2	1	11/10/20 20:32	11/9/20	
Dicamba	13 U	13	3.9	1	11/10/20 20:32	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	91	10 - 151	11/10/20 20:32	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	11 U	11	5.4	1	11/10/20 21:11	11/9/20	
2,4,5-TP	11 U	11	4.9	1	11/10/20 21:11	11/9/20	
2,4-D	11 U	11	7.1	1	11/10/20 21:11	11/9/20	
Dicamba	11 U	11	3.4	1	11/10/20 21:11	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	79	10 - 151	11/10/20 21:11	



Metals

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	9640	mg/Kg	21	13	1	11/06/20 03:13	11/04/20	
Antimony, Total	6010D	6.4 U	mg/Kg	6.4	0.6	1	11/06/20 03:13	11/04/20	
Arsenic, Total	6010D	9.6	mg/Kg	1.1	0.8	1	11/06/20 03:13	11/04/20	
Barium, Total	6010D	147	mg/Kg	2.1	1.7	1	11/06/20 03:13	11/04/20	
Beryllium, Total	6010D	1.26	mg/Kg	0.32	0.04	1	11/06/20 03:13	11/04/20	
Cadmium, Total	6010D	0.77	mg/Kg	0.54	0.26	1	11/06/20 03:13	11/04/20	
Calcium, Total	6010D	83300	mg/Kg	1100	400	10	11/06/20 05:01	11/04/20	
Chromium, Total	6010D	17.6	mg/Kg	1.1	0.4	1	11/06/20 03:13	11/04/20	
Cobalt, Total	6010D	3.9 J	mg/Kg	5.4	0.5	1	11/06/20 03:13	11/04/20	
Copper, Total	6010D	32.2	mg/Kg	2.1	0.7	1	11/06/20 03:13	11/04/20	
Iron, Total	6010D	25000	mg/Kg	210	140	10	11/06/20 05:01	11/04/20	
Lead, Total	6010D	74.2	mg/Kg	5.4	0.5	1	11/06/20 03:13	11/04/20	
Magnesium, Total	6010D	17700	mg/Kg	110	20	1	11/06/20 03:13	11/04/20	
Manganese, Total	6010D	1300	mg/Kg	21	17	10	11/06/20 05:01	11/04/20	
Mercury, Total	7471B	0.126	mg/Kg	0.035	0.014	1	11/09/20 15:30	11/06/20	
Nickel, Total	6010D	16.0	mg/Kg	4.3	0.8	1	11/06/20 03:13	11/04/20	
Potassium, Total	6010D	1440	mg/Kg	210	60	1	11/06/20 03:13	11/04/20	
Selenium, Total	6010D	11 U	mg/Kg	11	6	10	11/06/20 05:01	11/04/20	
Silver, Total	6010D	0.2 J	mg/Kg	1.1	0.1	1	11/06/20 03:13	11/04/20	
Sodium, Total	6010D	240	mg/Kg	110	60	1	11/06/20 03:13	11/04/20	
Thallium, Total	6010D	1.1 J	mg/Kg	1.1	0.7	1	11/06/20 03:13	11/04/20	
Vanadium, Total	6010D	21.9	mg/Kg	5.4	0.8	1	11/06/20 03:13	11/04/20	
Zinc, Total	6010D	256	mg/Kg	2.1	1.6	1	11/06/20 03:13	11/04/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-150-02
Lab Code: R2010276-003

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	10100	mg/Kg	21	13	1	11/06/20 03:29	11/04/20	
Antimony, Total	6010D	6.4 U	mg/Kg	6.4	0.6	1	11/06/20 03:29	11/04/20	
Arsenic, Total	6010D	8.1	mg/Kg	1.1	0.8	1	11/06/20 03:29	11/04/20	
Barium, Total	6010D	158	mg/Kg	2.1	1.7	1	11/06/20 03:29	11/04/20	
Beryllium, Total	6010D	1.24	mg/Kg	0.32	0.04	1	11/06/20 03:29	11/04/20	
Cadmium, Total	6010D	1.26	mg/Kg	0.53	0.26	1	11/06/20 03:29	11/04/20	
Calcium, Total	6010D	103000	mg/Kg	1100	400	10	11/06/20 05:17	11/04/20	
Chromium, Total	6010D	15.0	mg/Kg	1.1	0.4	1	11/06/20 03:29	11/04/20	
Cobalt, Total	6010D	3.6 J	mg/Kg	5.3	0.5	1	11/06/20 03:29	11/04/20	
Copper, Total	6010D	22.7	mg/Kg	2.1	0.7	1	11/06/20 03:29	11/04/20	
Iron, Total	6010D	28500	mg/Kg	210	140	10	11/06/20 05:17	11/04/20	
Lead, Total	6010D	68.2	mg/Kg	5.3	0.5	1	11/06/20 03:29	11/04/20	
Magnesium, Total	6010D	23800	mg/Kg	110	20	1	11/06/20 03:29	11/04/20	
Manganese, Total	6010D	1460	mg/Kg	21	17	10	11/06/20 05:17	11/04/20	
Mercury, Total	7471B	0.067	mg/Kg	0.037	0.015	1	11/09/20 15:37	11/06/20	
Nickel, Total	6010D	14.0	mg/Kg	4.3	0.8	1	11/06/20 03:29	11/04/20	
Potassium, Total	6010D	1500	mg/Kg	210	60	1	11/06/20 03:29	11/04/20	
Selenium, Total	6010D	1 J	mg/Kg	1.1	0.6	1	11/06/20 03:29	11/04/20	
Silver, Total	6010D	1.1 U	mg/Kg	1.1	0.1	1	11/06/20 03:29	11/04/20	
Sodium, Total	6010D	260	mg/Kg	110	60	1	11/06/20 03:29	11/04/20	
Thallium, Total	6010D	11 U	mg/Kg	11	7	10	11/06/20 05:17	11/04/20	
Vanadium, Total	6010D	18.0	mg/Kg	5.3	0.8	1	11/06/20 03:29	11/04/20	
Zinc, Total	6010D	479	mg/Kg	21	15	10	11/06/20 05:17	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	1260	mg/Kg	25	16	1	11/06/20 03:39	11/04/20	
Antimony, Total	6010D	7.5 U	mg/Kg	7.5	0.7	1	11/06/20 03:39	11/04/20	
Arsenic, Total	6010D	11.7	mg/Kg	1.3	0.9	1	11/06/20 03:39	11/04/20	
Barium, Total	6010D	96.4	mg/Kg	2.5	1.9	1	11/06/20 03:39	11/04/20	
Beryllium, Total	6010D	1.02	mg/Kg	0.38	0.04	1	11/06/20 03:39	11/04/20	
Cadmium, Total	6010D	0.63 U	mg/Kg	0.63	0.31	1	11/06/20 03:39	11/04/20	
Calcium, Total	6010D	800	mg/Kg	130	50	1	11/06/20 03:39	11/04/20	
Chromium, Total	6010D	14.6	mg/Kg	1.3	0.5	1	11/06/20 03:39	11/04/20	
Cobalt, Total	6010D	4.2 J	mg/Kg	6.3	0.6	1	11/06/20 03:39	11/04/20	
Copper, Total	6010D	42.1	mg/Kg	2.5	0.8	1	11/06/20 03:39	11/04/20	
Iron, Total	6010D	24300	mg/Kg	250	170	10	11/06/20 05:20	11/04/20	
Lead, Total	6010D	19.6	mg/Kg	6.3	0.6	1	11/06/20 03:39	11/04/20	
Magnesium, Total	6010D	170	mg/Kg	130	20	1	11/06/20 03:39	11/04/20	
Manganese, Total	6010D	54.4	mg/Kg	2.5	1.9	1	11/06/20 03:39	11/04/20	
Mercury, Total	7471B	0.040	mg/Kg	0.039	0.016	1	11/09/20 15:40	11/06/20	
Nickel, Total	6010D	12.5	mg/Kg	5.0	0.9	1	11/06/20 03:39	11/04/20	
Potassium, Total	6010D	330	mg/Kg	250	70	1	11/06/20 03:39	11/04/20	
Selenium, Total	6010D	2.5	mg/Kg	1.3	0.7	1	11/06/20 03:39	11/04/20	
Silver, Total	6010D	1.3 U	mg/Kg	1.3	0.2	1	11/06/20 03:39	11/04/20	
Sodium, Total	6010D	230	mg/Kg	130	70	1	11/06/20 03:39	11/04/20	
Thallium, Total	6010D	1.3 U	mg/Kg	1.3	0.9	1	11/06/20 03:39	11/04/20	
Vanadium, Total	6010D	22.6	mg/Kg	6.3	0.9	1	11/06/20 03:39	11/04/20	
Zinc, Total	6010D	21.4	mg/Kg	2.5	1.8	1	11/06/20 03:39	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	23000	mg/Kg	26	16	1	11/06/20 03:42	11/04/20	
Antimony, Total	6010D	7.8 U	mg/Kg	7.8	0.7	1	11/06/20 03:42	11/04/20	
Arsenic, Total	6010D	6.2	mg/Kg	1.3	0.96	1	11/06/20 03:42	11/04/20	
Barium, Total	6010D	148	mg/Kg	2.6	2.0	1	11/06/20 03:42	11/04/20	
Beryllium, Total	6010D	1.23	mg/Kg	0.39	0.04	1	11/06/20 03:42	11/04/20	
Cadmium, Total	6010D	0.37 J	mg/Kg	0.65	0.32	1	11/06/20 03:42	11/04/20	
Calcium, Total	6010D	2660	mg/Kg	130	50	1	11/06/20 03:42	11/04/20	
Chromium, Total	6010D	26.1	mg/Kg	1.3	0.5	1	11/06/20 03:42	11/04/20	
Cobalt, Total	6010D	6.4 J	mg/Kg	6.5	0.6	1	11/06/20 03:42	11/04/20	
Copper, Total	6010D	18.0	mg/Kg	2.6	0.9	1	11/06/20 03:42	11/04/20	
Iron, Total	6010D	26900	mg/Kg	260	170	10	11/06/20 05:23	11/04/20	
Lead, Total	6010D	17.7	mg/Kg	6.5	0.6	1	11/06/20 03:42	11/04/20	
Magnesium, Total	6010D	3510	mg/Kg	130	20	1	11/06/20 03:42	11/04/20	
Manganese, Total	6010D	330	mg/Kg	2.6	2.0	1	11/06/20 03:42	11/04/20	
Mercury, Total	7471B	0.065	mg/Kg	0.042	0.017	1	11/09/20 15:43	11/06/20	
Nickel, Total	6010D	17.5	mg/Kg	5.2	0.9	1	11/06/20 03:42	11/04/20	
Potassium, Total	6010D	2160	mg/Kg	260	70	1	11/06/20 03:42	11/04/20	
Selenium, Total	6010D	1.6	mg/Kg	1.3	0.7	1	11/06/20 03:42	11/04/20	
Silver, Total	6010D	1.3 U	mg/Kg	1.3	0.2	1	11/06/20 03:42	11/04/20	
Sodium, Total	6010D	100 J	mg/Kg	130	70	1	11/06/20 03:42	11/04/20	
Thallium, Total	6010D	1.3 U	mg/Kg	1.3	0.9	1	11/06/20 03:42	11/04/20	
Vanadium, Total	6010D	33.3	mg/Kg	6.5	0.98	1	11/06/20 03:42	11/04/20	
Zinc, Total	6010D	83.8	mg/Kg	2.6	1.9	1	11/06/20 03:42	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:04
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-25-01-10292020
Lab Code: R2010276-008

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	2220	mg/Kg	25	16	1	11/06/20 03:45	11/04/20	
Antimony, Total	6010D	7.6 U	mg/Kg	7.6	0.7	1	11/06/20 03:45	11/04/20	
Arsenic, Total	6010D	5.6	mg/Kg	1.3	0.9	1	11/06/20 03:45	11/04/20	
Barium, Total	6010D	80.3	mg/Kg	2.5	1.9	1	11/06/20 03:45	11/04/20	
Beryllium, Total	6010D	0.54	mg/Kg	0.38	0.04	1	11/06/20 03:45	11/04/20	
Cadmium, Total	6010D	0.51 J	mg/Kg	0.63	0.31	1	11/06/20 03:45	11/04/20	
Calcium, Total	6010D	9130	mg/Kg	130	50	1	11/06/20 03:45	11/04/20	
Chromium, Total	6010D	35.7	mg/Kg	1.3	0.5	1	11/06/20 03:45	11/04/20	
Cobalt, Total	6010D	4.8 J	mg/Kg	6.3	0.6	1	11/06/20 03:45	11/04/20	
Copper, Total	6010D	81.7	mg/Kg	2.5	0.8	1	11/06/20 03:45	11/04/20	
Iron, Total	6010D	30300	mg/Kg	250	170	10	11/06/20 05:27	11/04/20	
Lead, Total	6010D	51.5	mg/Kg	6.3	0.6	1	11/06/20 03:45	11/04/20	
Magnesium, Total	6010D	1390	mg/Kg	130	20	1	11/06/20 03:45	11/04/20	
Manganese, Total	6010D	235	mg/Kg	2.5	1.9	1	11/06/20 03:45	11/04/20	
Mercury, Total	7471B	0.140	mg/Kg	0.043	0.018	1	11/09/20 15:45	11/06/20	
Nickel, Total	6010D	25.6	mg/Kg	5.1	0.9	1	11/06/20 03:45	11/04/20	
Potassium, Total	6010D	390	mg/Kg	250	70	1	11/06/20 03:45	11/04/20	
Selenium, Total	6010D	13 U	mg/Kg	13	7	10	11/06/20 05:27	11/04/20	
Silver, Total	6010D	1.3 U	mg/Kg	1.3	0.2	1	11/06/20 03:45	11/04/20	
Sodium, Total	6010D	70 J	mg/Kg	130	70	1	11/06/20 03:45	11/04/20	
Thallium, Total	6010D	1.3 U	mg/Kg	1.3	0.9	1	11/06/20 03:45	11/04/20	
Vanadium, Total	6010D	12.5	mg/Kg	6.3	0.9	1	11/06/20 03:45	11/04/20	
Zinc, Total	6010D	66.4	mg/Kg	2.5	1.8	1	11/06/20 03:45	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:20
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-SE56-10292020
Lab Code: R2010276-009

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	999	mg/Kg	27	17	1	11/06/20 03:49	11/04/20	
Antimony, Total	6010D	4.9 J	mg/Kg	8.1	0.8	1	11/06/20 03:49	11/04/20	
Arsenic, Total	6010D	32.7	mg/Kg	1.4	1.0	1	11/06/20 03:49	11/04/20	
Barium, Total	6010D	49.9	mg/Kg	2.7	2.1	1	11/06/20 03:49	11/04/20	
Beryllium, Total	6010D	0.41 U	mg/Kg	0.41	0.04	1	11/06/20 03:49	11/04/20	
Cadmium, Total	6010D	0.42 J	mg/Kg	0.68	0.33	1	11/06/20 03:49	11/04/20	
Calcium, Total	6010D	690	mg/Kg	140	50	1	11/06/20 03:49	11/04/20	
Chromium, Total	6010D	48.9	mg/Kg	1.4	0.5	1	11/06/20 03:49	11/04/20	
Cobalt, Total	6010D	2.4 J	mg/Kg	6.8	0.7	1	11/06/20 03:49	11/04/20	
Copper, Total	6010D	499	mg/Kg	2.7	0.9	1	11/06/20 03:49	11/04/20	
Iron, Total	6010D	35000	mg/Kg	270	180	10	11/06/20 05:37	11/04/20	
Lead, Total	6010D	143	mg/Kg	6.8	0.6	1	11/06/20 03:49	11/04/20	
Magnesium, Total	6010D	60 J	mg/Kg	140	20	1	11/06/20 03:49	11/04/20	
Manganese, Total	6010D	44.3	mg/Kg	2.7	2.1	1	11/06/20 03:49	11/04/20	
Mercury, Total	7471B	5.05	mg/Kg	0.25	0.1	5	11/09/20 16:29	11/06/20	
Nickel, Total	6010D	15.2	mg/Kg	5.4	0.9	1	11/06/20 03:49	11/04/20	
Potassium, Total	6010D	650	mg/Kg	270	70	1	11/06/20 03:49	11/04/20	
Selenium, Total	6010D	1.7	mg/Kg	1.4	0.8	1	11/06/20 03:49	11/04/20	
Silver, Total	6010D	0.5 J	mg/Kg	1.4	0.2	1	11/06/20 03:49	11/04/20	
Sodium, Total	6010D	90 J	mg/Kg	140	80	1	11/06/20 03:49	11/04/20	
Thallium, Total	6010D	14.4	mg/Kg	1.4	0.9	1	11/06/20 03:49	11/04/20	
Vanadium, Total	6010D	65.8	mg/Kg	6.8	1	1	11/06/20 03:49	11/04/20	
Zinc, Total	6010D	26.9	mg/Kg	2.7	1.9	1	11/06/20 03:49	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-CL-10292020
Lab Code: R2010276-010

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	13300	mg/Kg	24	15	1	11/06/20 03:52	11/04/20	
Antimony, Total	6010D	7.3 U	mg/Kg	7.3	0.7	1	11/06/20 03:52	11/04/20	
Arsenic, Total	6010D	3.9	mg/Kg	1.2	0.9	1	11/06/20 03:52	11/04/20	
Barium, Total	6010D	96.2	mg/Kg	2.4	1.9	1	11/06/20 03:52	11/04/20	
Beryllium, Total	6010D	0.64	mg/Kg	0.36	0.04	1	11/06/20 03:52	11/04/20	
Cadmium, Total	6010D	0.56 J	mg/Kg	0.61	0.30	1	11/06/20 03:52	11/04/20	
Calcium, Total	6010D	38600	mg/Kg	1200	400	10	11/06/20 05:40	11/04/20	
Chromium, Total	6010D	18.3	mg/Kg	1.2	0.5	1	11/06/20 03:52	11/04/20	
Cobalt, Total	6010D	11.3	mg/Kg	6.1	0.6	1	11/06/20 03:52	11/04/20	
Copper, Total	6010D	21.5	mg/Kg	2.4	0.8	1	11/06/20 03:52	11/04/20	
Iron, Total	6010D	51300	mg/Kg	240	160	10	11/06/20 05:40	11/04/20	
Lead, Total	6010D	11.1	mg/Kg	6.1	0.5	1	11/06/20 03:52	11/04/20	
Magnesium, Total	6010D	16100	mg/Kg	120	20	1	11/06/20 03:52	11/04/20	
Manganese, Total	6010D	2040	mg/Kg	24	19	10	11/06/20 05:40	11/04/20	
Mercury, Total	7471B	0.039 U	mg/Kg	0.039	0.016	1	11/09/20 15:55	11/06/20	
Nickel, Total	6010D	23.2	mg/Kg	4.9	0.9	1	11/06/20 03:52	11/04/20	
Potassium, Total	6010D	2210	mg/Kg	240	70	1	11/06/20 03:52	11/04/20	
Selenium, Total	6010D	1.2 U	mg/Kg	1.2	0.7	1	11/06/20 03:52	11/04/20	
Silver, Total	6010D	1.2 U	mg/Kg	1.2	0.2	1	11/06/20 03:52	11/04/20	
Sodium, Total	6010D	290	mg/Kg	120	70	1	11/06/20 03:52	11/04/20	
Thallium, Total	6010D	1.2 U	mg/Kg	1.2	0.8	1	11/06/20 03:52	11/04/20	
Vanadium, Total	6010D	28.3	mg/Kg	6.1	0.9	1	11/06/20 03:52	11/04/20	
Zinc, Total	6010D	71.4	mg/Kg	2.4	1.8	1	11/06/20 03:52	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	43300	mg/Kg	20	13	1	11/06/20 03:55	11/04/20	
Antimony, Total	6010D	6.1 U	mg/Kg	6.1	0.6	1	11/06/20 03:55	11/04/20	
Arsenic, Total	6010D	0.9 J	mg/Kg	1.0	0.8	1	11/06/20 03:55	11/04/20	
Barium, Total	6010D	1140	mg/Kg	2.0	1.6	1	11/06/20 03:55	11/04/20	
Beryllium, Total	6010D	7.22	mg/Kg	0.31	0.03	1	11/06/20 03:55	11/04/20	
Cadmium, Total	6010D	0.51 U	mg/Kg	0.51	0.25	1	11/06/20 03:55	11/04/20	
Calcium, Total	6010D	250000	mg/Kg	1000	400	10	11/06/20 05:43	11/04/20	
Chromium, Total	6010D	1 J	mg/Kg	1.0	0.4	1	11/06/20 03:55	11/04/20	
Cobalt, Total	6010D	5.1 U	mg/Kg	5.1	0.5	1	11/06/20 03:55	11/04/20	
Copper, Total	6010D	1.3 J	mg/Kg	2.0	0.7	1	11/06/20 03:55	11/04/20	
Iron, Total	6010D	725	mg/Kg	20	14	1	11/06/20 03:55	11/04/20	
Lead, Total	6010D	5.1 U	mg/Kg	5.1	0.5	1	11/06/20 03:55	11/04/20	
Magnesium, Total	6010D	27500	mg/Kg	100	20	1	11/06/20 03:55	11/04/20	
Manganese, Total	6010D	11200	mg/Kg	200	160	100	11/06/20 16:52	11/04/20	
Mercury, Total	7471B	0.035 U	mg/Kg	0.035	0.014	1	11/09/20 15:58	11/06/20	
Nickel, Total	6010D	4.1 U	mg/Kg	4.1	0.7	1	11/06/20 03:55	11/04/20	
Potassium, Total	6010D	5250	mg/Kg	200	60	1	11/06/20 03:55	11/04/20	
Selenium, Total	6010D	8.4	mg/Kg	1.0	0.6	1	11/06/20 03:55	11/04/20	
Silver, Total	6010D	1.0 U	mg/Kg	1.0	0.098	1	11/06/20 03:55	11/04/20	
Sodium, Total	6010D	830	mg/Kg	100	60	1	11/06/20 03:55	11/04/20	
Thallium, Total	6010D	3.5	mg/Kg	1.0	0.7	1	11/06/20 03:55	11/04/20	
Vanadium, Total	6010D	6.4	mg/Kg	5.1	0.8	1	11/06/20 03:55	11/04/20	
Zinc, Total	6010D	2.0 U	mg/Kg	2.0	1.5	1	11/06/20 03:55	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:15
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-46
Lab Code: R2010276-012

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	15400	mg/Kg	23	14	1	11/06/20 03:58	11/04/20	
Antimony, Total	6010D	6.9 U	mg/Kg	6.9	0.7	1	11/06/20 03:58	11/04/20	
Arsenic, Total	6010D	2.9	mg/Kg	1.1	0.8	1	11/06/20 03:58	11/04/20	
Barium, Total	6010D	143	mg/Kg	2.3	1.8	1	11/06/20 03:58	11/04/20	
Beryllium, Total	6010D	0.71	mg/Kg	0.34	0.04	1	11/06/20 03:58	11/04/20	
Cadmium, Total	6010D	0.57 U	mg/Kg	0.57	0.28	1	11/06/20 03:58	11/04/20	
Calcium, Total	6010D	62000	mg/Kg	1100	400	10	11/06/20 05:46	11/04/20	
Chromium, Total	6010D	22.1	mg/Kg	1.1	0.4	1	11/06/20 03:58	11/04/20	
Cobalt, Total	6010D	9.3	mg/Kg	5.7	0.6	1	11/06/20 03:58	11/04/20	
Copper, Total	6010D	19.4	mg/Kg	2.3	0.8	1	11/06/20 03:58	11/04/20	
Iron, Total	6010D	26400	mg/Kg	230	150	10	11/06/20 05:46	11/04/20	
Lead, Total	6010D	9.8	mg/Kg	5.7	0.5	1	11/06/20 03:58	11/04/20	
Magnesium, Total	6010D	17200	mg/Kg	110	20	1	11/06/20 03:58	11/04/20	
Manganese, Total	6010D	471	mg/Kg	2.3	1.8	1	11/06/20 03:58	11/04/20	
Mercury, Total	7471B	0.036 U	mg/Kg	0.036	0.015	1	11/09/20 16:01	11/06/20	
Nickel, Total	6010D	24.2	mg/Kg	4.6	0.8	1	11/06/20 03:58	11/04/20	
Potassium, Total	6010D	2710	mg/Kg	230	60	1	11/06/20 03:58	11/04/20	
Selenium, Total	6010D	1.1 U	mg/Kg	1.1	0.7	1	11/06/20 03:58	11/04/20	
Silver, Total	6010D	1.1 U	mg/Kg	1.1	0.2	1	11/06/20 03:58	11/04/20	
Sodium, Total	6010D	340	mg/Kg	110	60	1	11/06/20 03:58	11/04/20	
Thallium, Total	6010D	1.1 U	mg/Kg	1.1	0.8	1	11/06/20 03:58	11/04/20	
Vanadium, Total	6010D	29.5	mg/Kg	5.7	0.9	1	11/06/20 03:58	11/04/20	
Zinc, Total	6010D	67.6	mg/Kg	2.3	1.6	1	11/06/20 03:58	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:20
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-810
Lab Code: R2010276-013

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	13100	mg/Kg	22	14	1	11/06/20 04:02	11/04/20	
Antimony, Total	6010D	6.7 U	mg/Kg	6.7	0.7	1	11/06/20 04:02	11/04/20	
Arsenic, Total	6010D	2.6	mg/Kg	1.1	0.8	1	11/06/20 04:02	11/04/20	
Barium, Total	6010D	258	mg/Kg	2.2	1.7	1	11/06/20 04:02	11/04/20	
Beryllium, Total	6010D	0.59	mg/Kg	0.33	0.04	1	11/06/20 04:02	11/04/20	
Cadmium, Total	6010D	0.56 U	mg/Kg	0.56	0.27	1	11/06/20 04:02	11/04/20	
Calcium, Total	6010D	66600	mg/Kg	1100	400	10	11/06/20 05:50	11/04/20	
Chromium, Total	6010D	21.3	mg/Kg	1.1	0.4	1	11/06/20 04:02	11/04/20	
Cobalt, Total	6010D	7.3	mg/Kg	5.6	0.6	1	11/06/20 04:02	11/04/20	
Copper, Total	6010D	14.8	mg/Kg	2.2	0.8	1	11/06/20 04:02	11/04/20	
Iron, Total	6010D	24200	mg/Kg	220	150	10	11/06/20 05:50	11/04/20	
Lead, Total	6010D	8.7	mg/Kg	5.6	0.5	1	11/06/20 04:02	11/04/20	
Magnesium, Total	6010D	18900	mg/Kg	110	20	1	11/06/20 04:02	11/04/20	
Manganese, Total	6010D	445	mg/Kg	2.2	1.7	1	11/06/20 04:02	11/04/20	
Mercury, Total	7471B	0.035 U	mg/Kg	0.035	0.014	1	11/09/20 16:03	11/06/20	
Nickel, Total	6010D	20.6	mg/Kg	4.4	0.8	1	11/06/20 04:02	11/04/20	
Potassium, Total	6010D	3010	mg/Kg	220	60	1	11/06/20 04:02	11/04/20	
Selenium, Total	6010D	1.1 U	mg/Kg	1.1	0.7	1	11/06/20 04:02	11/04/20	
Silver, Total	6010D	1.1 U	mg/Kg	1.1	0.2	1	11/06/20 04:02	11/04/20	
Sodium, Total	6010D	230	mg/Kg	110	60	1	11/06/20 04:02	11/04/20	
Thallium, Total	6010D	1.1 U	mg/Kg	1.1	0.8	1	11/06/20 04:02	11/04/20	
Vanadium, Total	6010D	25.9	mg/Kg	5.6	0.8	1	11/06/20 04:02	11/04/20	
Zinc, Total	6010D	68.5	mg/Kg	2.2	1.6	1	11/06/20 04:02	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 13:35
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-1314
Lab Code: R2010276-014

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	12800	mg/Kg	21	13	1	11/06/20 04:05	11/04/20	
Antimony, Total	6010D	6.4 U	mg/Kg	6.4	0.6	1	11/06/20 04:05	11/04/20	
Arsenic, Total	6010D	4.6	mg/Kg	1.1	0.8	1	11/06/20 04:05	11/04/20	
Barium, Total	6010D	114	mg/Kg	2.1	1.7	1	11/06/20 04:05	11/04/20	
Beryllium, Total	6010D	0.63	mg/Kg	0.32	0.04	1	11/06/20 04:05	11/04/20	
Cadmium, Total	6010D	0.33 J	mg/Kg	0.53	0.26	1	11/06/20 04:05	11/04/20	
Calcium, Total	6010D	60600	mg/Kg	1100	400	10	11/06/20 05:53	11/04/20	
Chromium, Total	6010D	19.2	mg/Kg	1.1	0.4	1	11/06/20 04:05	11/04/20	
Cobalt, Total	6010D	10.8	mg/Kg	5.3	0.5	1	11/06/20 04:05	11/04/20	
Copper, Total	6010D	22.0	mg/Kg	2.1	0.7	1	11/06/20 04:05	11/04/20	
Iron, Total	6010D	27200	mg/Kg	210	140	10	11/06/20 05:53	11/04/20	
Lead, Total	6010D	10.7	mg/Kg	5.3	0.5	1	11/06/20 04:05	11/04/20	
Magnesium, Total	6010D	18100	mg/Kg	110	20	1	11/06/20 04:05	11/04/20	
Manganese, Total	6010D	589	mg/Kg	2.1	1.7	1	11/06/20 04:05	11/04/20	
Mercury, Total	7471B	0.036 U	mg/Kg	0.036	0.015	1	11/09/20 16:06	11/06/20	
Nickel, Total	6010D	25.0	mg/Kg	4.3	0.8	1	11/06/20 04:05	11/04/20	
Potassium, Total	6010D	2880	mg/Kg	210	60	1	11/06/20 04:05	11/04/20	
Selenium, Total	6010D	1.1 U	mg/Kg	1.1	0.6	1	11/06/20 04:05	11/04/20	
Silver, Total	6010D	1.1 U	mg/Kg	1.1	0.1	1	11/06/20 04:05	11/04/20	
Sodium, Total	6010D	220	mg/Kg	110	60	1	11/06/20 04:05	11/04/20	
Thallium, Total	6010D	1.1 U	mg/Kg	1.1	0.7	1	11/06/20 04:05	11/04/20	
Vanadium, Total	6010D	28.3	mg/Kg	5.3	0.8	1	11/06/20 04:05	11/04/20	
Zinc, Total	6010D	69.7	mg/Kg	2.1	1.5	1	11/06/20 04:05	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:25
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-15-3638
Lab Code: R2010276-015

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	15200	mg/Kg	24	15	1	11/06/20 04:08	11/04/20	
Antimony, Total	6010D	7.3 U	mg/Kg	7.3	0.7	1	11/06/20 04:08	11/04/20	
Arsenic, Total	6010D	5.5	mg/Kg	1.2	0.9	1	11/06/20 04:08	11/04/20	
Barium, Total	6010D	126	mg/Kg	2.4	1.9	1	11/06/20 04:08	11/04/20	
Beryllium, Total	6010D	0.71	mg/Kg	0.37	0.04	1	11/06/20 04:08	11/04/20	
Cadmium, Total	6010D	0.35 J	mg/Kg	0.61	0.30	1	11/06/20 04:08	11/04/20	
Calcium, Total	6010D	57200	mg/Kg	1200	400	10	11/06/20 05:56	11/04/20	
Chromium, Total	6010D	23.5	mg/Kg	1.2	0.5	1	11/06/20 04:08	11/04/20	
Cobalt, Total	6010D	12.2	mg/Kg	6.1	0.6	1	11/06/20 04:08	11/04/20	
Copper, Total	6010D	27.8	mg/Kg	2.4	0.8	1	11/06/20 04:08	11/04/20	
Iron, Total	6010D	30200	mg/Kg	240	160	10	11/06/20 05:56	11/04/20	
Lead, Total	6010D	13.5	mg/Kg	6.1	0.5	1	11/06/20 04:08	11/04/20	
Magnesium, Total	6010D	21800	mg/Kg	120	20	1	11/06/20 04:08	11/04/20	
Manganese, Total	6010D	504	mg/Kg	2.4	1.9	1	11/06/20 04:08	11/04/20	
Mercury, Total	7471B	0.022 J	mg/Kg	0.042	0.017	1	11/09/20 16:08	11/06/20	
Nickel, Total	6010D	30.6	mg/Kg	4.9	0.9	1	11/06/20 04:08	11/04/20	
Potassium, Total	6010D	3300	mg/Kg	240	70	1	11/06/20 04:08	11/04/20	
Selenium, Total	6010D	1.2 U	mg/Kg	1.2	0.7	1	11/06/20 04:08	11/04/20	
Silver, Total	6010D	1.2 U	mg/Kg	1.2	0.2	1	11/06/20 04:08	11/04/20	
Sodium, Total	6010D	310	mg/Kg	120	70	1	11/06/20 04:08	11/04/20	
Thallium, Total	6010D	1.2 U	mg/Kg	1.2	0.8	1	11/06/20 04:08	11/04/20	
Vanadium, Total	6010D	31.6	mg/Kg	6.1	0.9	1	11/06/20 04:08	11/04/20	
Zinc, Total	6010D	75.5	mg/Kg	2.4	1.8	1	11/06/20 04:08	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Collected: 10/30/20 07:00
Date Received: 10/31/20 08:25

Sample Name: EQB-103020
Lab Code: R2010276-016

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	50 J	ug/L	100	30	1	11/06/20 21:31	11/04/20	
Antimony, Total	6010D	60 U	ug/L	60	5	1	11/06/20 21:31	11/04/20	
Arsenic, Total	6010D	10 U	ug/L	10	6	1	11/06/20 21:31	11/04/20	
Barium, Total	6010D	20 U	ug/L	20	3	1	11/06/20 21:31	11/04/20	
Beryllium, Total	6010D	3.0 U	ug/L	3.0	0.2	1	11/06/20 21:31	11/04/20	
Cadmium, Total	6010D	5.0 U	ug/L	5.0	0.4	1	11/06/20 21:31	11/04/20	
Calcium, Total	6010D	1000 U	ug/L	1000	300	1	11/06/20 21:31	11/04/20	
Chromium, Total	6010D	10 U	ug/L	10	0.6	1	11/06/20 21:31	11/04/20	
Cobalt, Total	6010D	50 U	ug/L	50	0.9	1	11/06/20 21:31	11/04/20	
Copper, Total	6010D	20 U	ug/L	20	4	1	11/06/20 21:31	11/04/20	
Iron, Total	6010D	100 U	ug/L	100	70	1	11/06/20 21:31	11/04/20	
Lead, Total	6010D	50 U	ug/L	50	3	1	11/06/20 21:31	11/04/20	
Magnesium, Total	6010D	60 J	ug/L	1000	30	1	11/06/20 21:31	11/04/20	
Manganese, Total	6010D	10 U	ug/L	10	4	1	11/06/20 21:31	11/04/20	
Mercury, Total	7470A	0.20 U	ug/L	0.20	0.08	1	11/09/20 11:53	11/06/20	
Nickel, Total	6010D	40 U	ug/L	40	3	1	11/06/20 21:31	11/04/20	
Potassium, Total	6010D	2000 U	ug/L	2000	200	1	11/06/20 21:31	11/04/20	
Selenium, Total	6010D	10 U	ug/L	10	7	1	11/06/20 21:31	11/04/20	
Silver, Total	6010D	10 U	ug/L	10	0.6	1	11/06/20 21:31	11/04/20	
Sodium, Total	6010D	1000 U	ug/L	1000	200	1	11/06/20 21:31	11/04/20	
Thallium, Total	6010D	10 U	ug/L	10	7	1	11/06/20 21:31	11/04/20	
Vanadium, Total	6010D	50 U	ug/L	50	0.7	1	11/06/20 21:31	11/04/20	
Zinc, Total	6010D	20 U	ug/L	20	10	1	11/06/20 21:31	11/04/20	



General Chemistry

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20 08:25

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	1.94	mg/Kg	0.26	0.17	1	11/05/20 10:52	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20 08:25

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	87.8	Percent	-	-	1	11/10/20 13:50	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-15-26
Lab Code: R2010276-002

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20 08:25

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	83.7	Percent	-	-	1	11/10/20 13:50	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-150-02
Lab Code: R2010276-003

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.90	mg/Kg	0.31	0.18	1	11/05/20 10:55	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-150-02
Lab Code: R2010276-003

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	88.3	Percent	-	-	1	11/10/20 13:50	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20 08:25

Sample Name: MW-BCP-150-26
Lab Code: R2010276-004

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	86.2	Percent	-	-	1	11/10/20 13:50	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.30 J	mg/Kg	0.35	0.20	1	11/05/20 10:55	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	79.7	Percent	-	-	1	11/10/20 13:50	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007

Service Request: R2010276
Date Collected: 10/29/20 12:18
Date Received: 10/31/20 08:25

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.32 J	mg/Kg	0.37	0.22	1	11/05/20 10:58	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-31-CL-10292020
Lab Code: R2010276-007

Service Request: R2010276
Date Collected: 10/29/20 12:18
Date Received: 10/31/20 08:25

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	73.0	Percent	-	-	1	11/10/20 13:50	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:04
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-25-01-10292020
Lab Code: R2010276-008

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	1.38	mg/Kg	0.36	0.21	1	11/05/20 10:59	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:04
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-25-01-10292020
Lab Code: R2010276-008

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	76.0	Percent	-	-	1	11/10/20 13:50	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-SE56-10292020
Lab Code: R2010276-009

Service Request: R2010276
Date Collected: 10/29/20 15:20
Date Received: 10/31/20 08:25

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	1160	mg/Kg	21	12	50	11/05/20 11:29	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-SE56-10292020
Lab Code: R2010276-009

Service Request: R2010276
Date Collected: 10/29/20 15:20
Date Received: 10/31/20 08:25

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	67.1	Percent	-	-	1	11/10/20 13:50	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-CL-10292020
Lab Code: R2010276-010

Service Request: R2010276
Date Collected: 10/29/20 15:18
Date Received: 10/31/20 08:25

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	9.77	mg/Kg	0.35	0.20	1	11/05/20 11:00	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 15:18
Date Received: 10/31/20 08:25

Sample Name: TP-BCP-CL-10292020
Lab Code: R2010276-010

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	80.7	Percent	-	-	1	11/10/20 13:50	NA	

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dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20 08:25

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.26	mg/Kg	0.25	0.17	1	11/05/20 11:01	11/04/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20 08:25

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	92.5	Percent	-	-	1	11/10/20 13:50	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-15-46
Lab Code: R2010276-012

Service Request: R2010276
Date Collected: 10/29/20 13:15
Date Received: 10/31/20 08:25

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.18 J	mg/Kg	0.25	0.17	1	11/05/20 11:02	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-15-46
Lab Code: R2010276-012

Service Request: R2010276
Date Collected: 10/29/20 13:15
Date Received: 10/31/20 08:25

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	85.8	Percent	-	-	1	11/10/20 13:50	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-15-810
Lab Code: R2010276-013

Service Request: R2010276
Date Collected: 10/29/20 13:20
Date Received: 10/31/20 08:25

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.26 U	mg/Kg	0.26	0.17	1	11/05/20 11:02	11/04/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-15-810
Lab Code: R2010276-013

Service Request: R2010276
Date Collected: 10/29/20 13:20
Date Received: 10/31/20 08:25

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	86.5	Percent	-	-	1	11/10/20 13:50	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-15-1314
Lab Code: R2010276-014

Service Request: R2010276
Date Collected: 10/29/20 13:35
Date Received: 10/31/20 08:25

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.31 U	mg/Kg	0.31	0.18	1	11/05/20 11:03	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-15-1314
Lab Code: R2010276-014

Service Request: R2010276
Date Collected: 10/29/20 13:35
Date Received: 10/31/20 08:25

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	85.1	Percent	-	-	1	11/10/20 13:50	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-15-3638
Lab Code: R2010276-015

Service Request: R2010276
Date Collected: 10/29/20 15:25
Date Received: 10/31/20 08:25

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.37 U	mg/Kg	0.37	0.22	1	11/05/20 11:04	11/04/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-15-3638
Lab Code: R2010276-015

Service Request: R2010276
Date Collected: 10/29/20 15:25
Date Received: 10/31/20 08:25

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	74.4	Percent	-	-	1	11/10/20 13:50	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Sample Name: EQB-103020
Lab Code: R2010276-016

Service Request: R2010276
Date Collected: 10/30/20 07:00
Date Received: 10/31/20 08:25

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.010 U	mg/L	0.010	0.004	1	11/12/20 16:52	11/12/20	



QC Summary Forms

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Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5035A

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		31 - 154	63 - 138	66 - 138
MW-BCP-15-26	R2010276-002	46	118	107
MW-BCP-150-26	R2010276-004	49	119	108
MW-BCP-150-26 RE	R2010276-004	57	117	105
TP-BCP-31-01-10292020	R2010276-006	37	124	103
TP-BCP-31-CL-10292020	R2010276-007	102	103	108
TP-BCP-25-01-10292020	R2010276-008	37	122	110
TP-BCP-25-01-10292020 RE	R2010276-008	41	127	101
TP-BCP-CL-10292020	R2010276-010	101	113	110
MW-BCP-15-61	R2010276-011	47	131	112
MW-BCP-15-61 RE	R2010276-011	59	124	106
MW-BCP-15-46	R2010276-012	98	105	108
MW-BCP-15-810	R2010276-013	103	110	110
MW-BCP-15-1314	R2010276-014	95	111	108
MW-BCP-15-3638	R2010276-015	94	113	112
Lab Control Sample	RQ2013633-03	107	117	107
Method Blank	RQ2013633-04	99	116	109
MW-BCP-15-26 MS	RQ2013633-05	65	123	107
MW-BCP-15-26 DMS	RQ2013633-06	59	122	105
Lab Control Sample	RQ2013655-03	104	109	106
Method Blank	RQ2013655-04	98	95	107
Lab Control Sample	RQ2013853-03	108	118	108
Method Blank	RQ2013853-04	100	114	106

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5030C

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		85 - 122	80 - 116	87 - 121
EQB-103020	R2010276-016	100	108	108
TRIP BLANK	R2010276-017	100	107	110
Lab Control Sample	RQ2013794-03	104	114	106
Method Blank	RQ2013794-04	100	108	108

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20
Date Received: 10/31/20
Date Analyzed: 11/6/20
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW-BCP-15-26
Lab Code: R2010276-002
Analysis Method: 8260C
Prep Method: EPA 5035A

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike RQ2013633-05			Duplicate Matrix Spike RQ2013633-06			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	5.8 U	67.6	57.9	117	65.2	60.3	108	44-124	8	30
1,1,2,2-Tetrachloroethane	5.8 U	57.3	57.9	99	62.2	60.3	103	41-155	4	30
1,1,2-Trichloroethane	5.8 U	35.7	57.9	62	34.8	60.3	58	48-124	7	30
1,1,2-Trichloro-1,2,2-trifluoroethane	5.8 U	67.4	57.9	116	68.9	60.3	114	40-117	2	30
1,1-Dichloroethane (1,1-DCA)	5.8 U	50.0	57.9	86	48.1	60.3	80	41-138	7	30
1,1-Dichloroethene (1,1-DCE)	5.8 U	58.7	57.9	101	57.3	60.3	95	46-124	6	30
1,2,3-Trichlorobenzene	5.8 U	16.9	57.9	29	14.6	60.3	24	10-169	19	30
1,2,4-Trichlorobenzene	5.8 U	17.0	57.9	29	13.4	60.3	22	10-169	27	30
1,2,4-Trimethylbenzene	5.8 U	63.5	57.9	110	47.9	60.3	79	15-141	33*	30
1,2-Dibromo-3-chloropropane (DBCP)	5.8 U	29.8	57.9	51	32.0	60.3	53	30-136	4	30
1,2-Dibromoethane	5.8 U	17.4	57.9	30 *	16.2	60.3	27 *	38-129	11	30
1,2-Dichlorobenzene	5.8 U	33.6	57.9	58	27.8	60.3	46	11-152	23	30
1,2-Dichloroethane	5.8 U	31.2	57.9	54	29.5	60.3	49	49-119	10	30
1,2-Dichloropropane	5.8 U	48.2	57.9	83	44.6	60.3	74	60-126	11	30
1,3,5-Trimethylbenzene	5.8 U	78.9	57.9	136	61.0	60.3	101	21-148	30	30
1,3-Dichlorobenzene	5.8 U	31.1	57.9	54	24.5	60.3	41	13-151	27	30
1,4-Dichlorobenzene	5.8 U	24.0	57.9	41	18.7	60.3	31	10-151	28	30
1,4-Dioxane	120 U	1510	1160	130	1550	1210	128	49-188	2	30
2-Butanone (MEK)	5.8 U	41.4	57.9	71	43.4	60.3	72	13-176	1	30
2-Hexanone	5.8 U	20.1	57.9	35	18.0	60.3	30	12-163	15	30
4-Methyl-2-pentanone	5.8 U	39.2	57.9	68	37.9	60.3	63	38-148	8	30
Acetone	6.3	1110 E	57.9	1906 *	1300 E	60.3	2151 *	11-183	12	30
Benzene	5.8 U	46.1	57.9	80	41.5	60.3	69	51-123	15	30
Bromochloromethane	5.8 U	27.7	57.9	48	25.0	60.3	42 *	46-129	13	30
Bromodichloromethane	5.8 U	34.4	57.9	59	32.6	60.3	54	39-122	9	30
Bromoform	5.8 U	23.4	57.9	40	24.2	60.3	40	16-135	<1	30
Bromomethane	5.8 U	18.8	57.9	32	22.7	60.3	38	10-150	17	30
Carbon Disulfide	5.8 U	20.8	57.9	36 *	20.9	60.3	35 *	44-139	3	30
Carbon Tetrachloride	5.8 U	71.2	57.9	123	69.7	60.3	116	46-137	6	30
Chlorobenzene	5.8 U	31.9	57.9	55	25.5	60.3	42	25-129	27	30
Chloroethane	5.8 U	66.3	57.9	114	64.9	60.3	108	10-166	5	30
Chloroform	5.8 U	47.3	57.9	82	43.7	60.3	72	55-118	13	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20
Date Received: 10/31/20
Date Analyzed: 11/6/20
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW-BCP-15-26
Lab Code: R2010276-002
Analysis Method: 8260C
Prep Method: EPA 5035A

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike RQ2013633-05			Duplicate Matrix Spike RQ2013633-06			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Chloromethane	5.8 U	46.6	57.9	80	50.4	60.3	83	10-139	4	30
Cyclohexane	5.8 U	72.7	57.9	125	70.2	60.3	116	28-126	7	30
Dibromochloromethane	5.8 U	34.0	57.9	59	33.5	60.3	56	36-125	5	30
Dichlorodifluoromethane (CFC 12)	5.8 U	56.8	57.9	98	55.8	60.3	92	51-144	6	30
Dichloromethane	5.8 U	33.8	57.9	58	32.2	60.3	53	49-125	9	30
Ethylbenzene	5.8 U	50.5	57.9	87	37.3	60.3	62	23-132	34*	30
Isopropylbenzene (Cumene)	5.8 U	64.8	57.9	112	44.7	60.3	74	18-133	41*	30
Methyl Acetate	5.8 U	45.6	57.9	79	43.2	60.3	72	10-200	9	30
Methyl tert-Butyl Ether	5.8 U	62.1	57.9	107	64.1	60.3	106	62-130	<1	30
Methylcyclohexane	5.8 U	59.7	57.9	103	53.5	60.3	89	12-134	15	30
Styrene	5.8 U	25.0	57.9	43	18.7	60.3	31	15-160	32*	30
Tetrachloroethene (PCE)	5.8 U	66.6	57.9	115	50.3	60.3	83	21-137	32*	30
Toluene	5.8 U	39.8	57.9	69	31.6	60.3	52	11-152	28	30
Trichloroethene (TCE)	5.8 U	37.4	57.9	65	30.3	60.3	50	23-140	26	30
Trichlorofluoromethane (CFC 11)	5.8 U	106	57.9	183 *	110	60.3	182 *	47-129	<1	30
Vinyl Chloride	5.8 U	56.0	57.9	97	56.7	60.3	94	59-153	3	30
cis-1,2-Dichloroethene	5.8 U	29.1	57.9	50	25.9	60.3	43	42-129	15	30
cis-1,3-Dichloropropene	5.8 U	12.7	57.9	22	11.0	60.3	18	14-139	20	30
m,p-Xylenes	12 U	98.7	116	85	72.1	121	60	20-135	34*	30
o-Xylene	5.8 U	54.1	57.9	93	43.4	60.3	72	26-137	25	30
trans-1,2-Dichloroethene	5.8 U	35.4	57.9	61	32.3	60.3	54	34-128	12	30
trans-1,3-Dichloropropene	5.8 U	7.66	57.9	13 *	6.93	60.3	11 *	17-155	17	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013633-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	11/06/20 17:20	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.44	1	11/06/20 17:20	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	11/06/20 17:20	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	11/06/20 17:20	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	11/06/20 17:20	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.29	1	11/06/20 17:20	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.52	1	11/06/20 17:20	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.42	1	11/06/20 17:20	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	11/06/20 17:20	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.75	1	11/06/20 17:20	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	11/06/20 17:20	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	11/06/20 17:20	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	11/06/20 17:20	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	11/06/20 17:20	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	11/06/20 17:20	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	11/06/20 17:20	
1,4-Dichlorobenzene	5.0 U	5.0	0.22	1	11/06/20 17:20	
1,4-Dioxane	100 U	100	20	1	11/06/20 17:20	
2-Butanone (MEK)	5.0 U	5.0	2.0	1	11/06/20 17:20	
2-Hexanone	5.0 U	5.0	0.36	1	11/06/20 17:20	
4-Methyl-2-pentanone	5.0 U	5.0	0.23	1	11/06/20 17:20	
Acetone	5.0 U	5.0	4.7	1	11/06/20 17:20	
Benzene	5.0 U	5.0	0.20	1	11/06/20 17:20	
Bromochloromethane	5.0 U	5.0	0.20	1	11/06/20 17:20	
Bromodichloromethane	5.0 U	5.0	0.20	1	11/06/20 17:20	
Bromoform	5.0 U	5.0	0.50	1	11/06/20 17:20	
Bromomethane	5.0 U	5.0	2.1	1	11/06/20 17:20	
Carbon Disulfide	5.0 U	5.0	0.29	1	11/06/20 17:20	
Carbon Tetrachloride	5.0 U	5.0	0.26	1	11/06/20 17:20	
Chlorobenzene	5.0 U	5.0	0.20	1	11/06/20 17:20	
Chloroethane	5.0 U	5.0	0.41	1	11/06/20 17:20	
Chloroform	5.0 U	5.0	0.20	1	11/06/20 17:20	
Chloromethane	5.0 U	5.0	1.4	1	11/06/20 17:20	
Cyclohexane	5.0 U	5.0	0.26	1	11/06/20 17:20	
Dibromochloromethane	5.0 U	5.0	0.20	1	11/06/20 17:20	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.33	1	11/06/20 17:20	
Dichloromethane	5.0 U	5.0	2.8	1	11/06/20 17:20	
Ethylbenzene	5.0 U	5.0	0.20	1	11/06/20 17:20	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	11/06/20 17:20	
Methyl Acetate	5.0 U	5.0	0.84	1	11/06/20 17:20	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	11/06/20 17:20	
Methylcyclohexane	5.0 U	5.0	0.31	1	11/06/20 17:20	
Styrene	5.0 U	5.0	0.20	1	11/06/20 17:20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013633-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.23	1	11/06/20 17:20	
Toluene	5.0 U	5.0	0.20	1	11/06/20 17:20	
Trichloroethene (TCE)	5.0 U	5.0	0.22	1	11/06/20 17:20	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.26	1	11/06/20 17:20	
Vinyl Chloride	5.0 U	5.0	0.46	1	11/06/20 17:20	
cis-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/06/20 17:20	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/06/20 17:20	
m,p-Xylenes	10 U	10	0.37	1	11/06/20 17:20	
o-Xylene	5.0 U	5.0	0.20	1	11/06/20 17:20	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/06/20 17:20	
trans-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/06/20 17:20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	31 - 154	11/06/20 17:20	
Dibromofluoromethane	116	63 - 138	11/06/20 17:20	
Toluene-d8	109	66 - 138	11/06/20 17:20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013655-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	250 U	250	10	50	11/08/20 13:38	
1,1,2,2-Tetrachloroethane	250 U	250	22	50	11/08/20 13:38	
1,1,2-Trichloroethane	250 U	250	10	50	11/08/20 13:38	
1,1,2-Trichloro-1,2,2-trifluoroethane	250 U	250	10	50	11/08/20 13:38	
1,1-Dichloroethane (1,1-DCA)	250 U	250	10	50	11/08/20 13:38	
1,1-Dichloroethene (1,1-DCE)	250 U	250	15	50	11/08/20 13:38	
1,2,3-Trichlorobenzene	250 U	250	26	50	11/08/20 13:38	
1,2,4-Trichlorobenzene	250 U	250	21	50	11/08/20 13:38	
1,2,4-Trimethylbenzene	250 U	250	10	50	11/08/20 13:38	
1,2-Dibromo-3-chloropropane (DBCP)	250 U	250	38	50	11/08/20 13:38	
1,2-Dibromoethane	250 U	250	10	50	11/08/20 13:38	
1,2-Dichlorobenzene	250 U	250	10	50	11/08/20 13:38	
1,2-Dichloroethane	250 U	250	10	50	11/08/20 13:38	
1,2-Dichloropropane	250 U	250	10	50	11/08/20 13:38	
1,3,5-Trimethylbenzene	250 U	250	10	50	11/08/20 13:38	
1,3-Dichlorobenzene	250 U	250	10	50	11/08/20 13:38	
1,4-Dichlorobenzene	250 U	250	11	50	11/08/20 13:38	
1,4-Dioxane	5000 U	5000	1000	50	11/08/20 13:38	
2-Butanone (MEK)	250 U	250	100	50	11/08/20 13:38	
2-Hexanone	250 U	250	18	50	11/08/20 13:38	
4-Methyl-2-pentanone	250 U	250	12	50	11/08/20 13:38	
Acetone	250 U	250	240	50	11/08/20 13:38	
Benzene	250 U	250	10	50	11/08/20 13:38	
Bromochloromethane	250 U	250	10	50	11/08/20 13:38	
Bromodichloromethane	250 U	250	10	50	11/08/20 13:38	
Bromoform	250 U	250	25	50	11/08/20 13:38	
Bromomethane	250 U	250	110	50	11/08/20 13:38	
Carbon Disulfide	250 U	250	15	50	11/08/20 13:38	
Carbon Tetrachloride	250 U	250	13	50	11/08/20 13:38	
Chlorobenzene	250 U	250	10	50	11/08/20 13:38	
Chloroethane	250 U	250	21	50	11/08/20 13:38	
Chloroform	250 U	250	10	50	11/08/20 13:38	
Chloromethane	250 U	250	70	50	11/08/20 13:38	
Cyclohexane	250 U	250	13	50	11/08/20 13:38	
Dibromochloromethane	250 U	250	10	50	11/08/20 13:38	
Dichlorodifluoromethane (CFC 12)	250 U	250	17	50	11/08/20 13:38	
Dichloromethane	250 U	250	140	50	11/08/20 13:38	
Ethylbenzene	250 U	250	10	50	11/08/20 13:38	
Isopropylbenzene (Cumene)	250 U	250	10	50	11/08/20 13:38	
Methyl Acetate	61 J	250	42	50	11/08/20 13:38	
Methyl tert-Butyl Ether	250 U	250	10	50	11/08/20 13:38	
Methylcyclohexane	250 U	250	16	50	11/08/20 13:38	
Styrene	250 U	250	10	50	11/08/20 13:38	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013655-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	250 U	250	12	50	11/08/20 13:38	
Toluene	250 U	250	10	50	11/08/20 13:38	
Trichloroethene (TCE)	250 U	250	11	50	11/08/20 13:38	
Trichlorofluoromethane (CFC 11)	250 U	250	13	50	11/08/20 13:38	
Vinyl Chloride	250 U	250	23	50	11/08/20 13:38	
cis-1,2-Dichloroethene	250 U	250	10	50	11/08/20 13:38	
cis-1,3-Dichloropropene	250 U	250	10	50	11/08/20 13:38	
m,p-Xylenes	500 U	500	19	50	11/08/20 13:38	
o-Xylene	250 U	250	10	50	11/08/20 13:38	
trans-1,2-Dichloroethene	250 U	250	10	50	11/08/20 13:38	
trans-1,3-Dichloropropene	250 U	250	10	50	11/08/20 13:38	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	31 - 154	11/08/20 13:38	
Dibromofluoromethane	95	63 - 138	11/08/20 13:38	
Toluene-d8	107	66 - 138	11/08/20 13:38	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013794-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.25	1	11/10/20 14:10	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.34	1	11/10/20 14:10	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.45	1	11/10/20 14:10	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,4-Dichlorobenzene	5.0 U	5.0	0.20	1	11/10/20 14:10	
1,4-Dioxane	100 U	100	13	1	11/10/20 14:10	
2-Butanone (MEK)	10 U	10	0.78	1	11/10/20 14:10	
2-Hexanone	10 U	10	0.20	1	11/10/20 14:10	
4-Methyl-2-pentanone	10 U	10	0.20	1	11/10/20 14:10	
Acetone	10 U	10	5.0	1	11/10/20 14:10	
Benzene	5.0 U	5.0	0.20	1	11/10/20 14:10	
Bromochloromethane	5.0 U	5.0	0.20	1	11/10/20 14:10	
Bromodichloromethane	5.0 U	5.0	0.20	1	11/10/20 14:10	
Bromoform	5.0 U	5.0	0.25	1	11/10/20 14:10	
Bromomethane	5.0 U	5.0	0.70	1	11/10/20 14:10	
Carbon Disulfide	10 U	10	0.42	1	11/10/20 14:10	
Carbon Tetrachloride	5.0 U	5.0	0.34	1	11/10/20 14:10	
Chlorobenzene	5.0 U	5.0	0.20	1	11/10/20 14:10	
Chloroethane	5.0 U	5.0	0.23	1	11/10/20 14:10	
Chloroform	5.0 U	5.0	0.24	1	11/10/20 14:10	
Chloromethane	0.32 J	5.0	0.28	1	11/10/20 14:10	
Cyclohexane	10 U	10	0.26	1	11/10/20 14:10	
Dibromochloromethane	5.0 U	5.0	0.20	1	11/10/20 14:10	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.21	1	11/10/20 14:10	
Dichloromethane	5.0 U	5.0	0.65	1	11/10/20 14:10	
Ethylbenzene	5.0 U	5.0	0.20	1	11/10/20 14:10	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	11/10/20 14:10	
Methyl Acetate	10 U	10	0.33	1	11/10/20 14:10	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	11/10/20 14:10	
Methylcyclohexane	10 U	10	0.20	1	11/10/20 14:10	
Styrene	5.0 U	5.0	0.20	1	11/10/20 14:10	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013794-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.21	1	11/10/20 14:10	
Toluene	5.0 U	5.0	0.20	1	11/10/20 14:10	
Trichloroethene (TCE)	5.0 U	5.0	0.20	1	11/10/20 14:10	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.24	1	11/10/20 14:10	
Vinyl Chloride	5.0 U	5.0	0.20	1	11/10/20 14:10	
cis-1,2-Dichloroethene	5.0 U	5.0	0.23	1	11/10/20 14:10	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/10/20 14:10	
m,p-Xylenes	5.0 U	5.0	0.20	1	11/10/20 14:10	
o-Xylene	5.0 U	5.0	0.20	1	11/10/20 14:10	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/10/20 14:10	
trans-1,3-Dichloropropene	5.0 U	5.0	0.23	1	11/10/20 14:10	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	11/10/20 14:10	
Dibromofluoromethane	108	80 - 116	11/10/20 14:10	
Toluene-d8	108	87 - 121	11/10/20 14:10	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013853-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.44	1	11/11/20 11:18	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.29	1	11/11/20 11:18	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.52	1	11/11/20 11:18	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.42	1	11/11/20 11:18	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.75	1	11/11/20 11:18	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,4-Dichlorobenzene	5.0 U	5.0	0.22	1	11/11/20 11:18	
1,4-Dioxane	100 U	100	20	1	11/11/20 11:18	
2-Butanone (MEK)	5.0 U	5.0	2.0	1	11/11/20 11:18	
2-Hexanone	5.0 U	5.0	0.36	1	11/11/20 11:18	
4-Methyl-2-pentanone	5.0 U	5.0	0.23	1	11/11/20 11:18	
Acetone	5.0 U	5.0	4.7	1	11/11/20 11:18	
Benzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
Bromochloromethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
Bromodichloromethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
Bromoform	5.0 U	5.0	0.50	1	11/11/20 11:18	
Bromomethane	5.0 U	5.0	2.1	1	11/11/20 11:18	
Carbon Disulfide	5.0 U	5.0	0.29	1	11/11/20 11:18	
Carbon Tetrachloride	5.0 U	5.0	0.26	1	11/11/20 11:18	
Chlorobenzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
Chloroethane	5.0 U	5.0	0.41	1	11/11/20 11:18	
Chloroform	5.0 U	5.0	0.20	1	11/11/20 11:18	
Chloromethane	5.0 U	5.0	1.4	1	11/11/20 11:18	
Cyclohexane	5.0 U	5.0	0.26	1	11/11/20 11:18	
Dibromochloromethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.33	1	11/11/20 11:18	
Dichloromethane	5.0 U	5.0	2.8	1	11/11/20 11:18	
Ethylbenzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	11/11/20 11:18	
Methyl Acetate	5.0 U	5.0	0.84	1	11/11/20 11:18	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	11/11/20 11:18	
Methylcyclohexane	5.0 U	5.0	0.31	1	11/11/20 11:18	
Styrene	5.0 U	5.0	0.20	1	11/11/20 11:18	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013853-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.23	1	11/11/20 11:18	
Toluene	5.0 U	5.0	0.20	1	11/11/20 11:18	
Trichloroethene (TCE)	0.22 J	5.0	0.22	1	11/11/20 11:18	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.26	1	11/11/20 11:18	
Vinyl Chloride	5.0 U	5.0	0.46	1	11/11/20 11:18	
cis-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/11/20 11:18	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/11/20 11:18	
m,p-Xylenes	10 U	10	0.37	1	11/11/20 11:18	
o-Xylene	5.0 U	5.0	0.20	1	11/11/20 11:18	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/11/20 11:18	
trans-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/11/20 11:18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	31 - 154	11/11/20 11:18	
Dibromofluoromethane	114	63 - 138	11/11/20 11:18	
Toluene-d8	106	66 - 138	11/11/20 11:18	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/06/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2013633-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	20.4	20.0	102	68-123
1,1,2,2-Tetrachloroethane	8260C	17.1	20.0	86	78-121
1,1,2-Trichloroethane	8260C	20.0	20.0	100	84-117
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	18.1	20.0	90	54-121
1,1-Dichloroethane (1,1-DCA)	8260C	17.6	20.0	88	76-123
1,1-Dichloroethene (1,1-DCE)	8260C	20.0	20.0	100	65-115
1,2,3-Trichlorobenzene	8260C	19.4	20.0	97	60-128
1,2,4-Trichlorobenzene	8260C	19.0	20.0	95	62-130
1,2,4-Trimethylbenzene	8260C	16.9	20.0	85	67-121
1,2-Dibromo-3-chloropropane (DBCP)	8260C	16.3	20.0	81	54-135
1,2-Dibromoethane	8260C	20.0	20.0	100	77-117
1,2-Dichlorobenzene	8260C	18.6	20.0	93	75-116
1,2-Dichloroethane	8260C	21.6	20.0	108	74-116
1,2-Dichloropropane	8260C	18.2	20.0	91	79-112
1,3,5-Trimethylbenzene	8260C	16.9	20.0	85	66-122
1,3-Dichlorobenzene	8260C	18.5	20.0	92	72-118
1,4-Dichlorobenzene	8260C	17.8	20.0	89	72-117
1,4-Dioxane	8260C	346	400	86	59-147
2-Butanone (MEK)	8260C	20.8	20.0	104	67-129
2-Hexanone	8260C	21.4	20.0	107	68-118
4-Methyl-2-pentanone	8260C	20.9	20.0	105	64-123
Acetone	8260C	20.5	20.0	102	32-154
Benzene	8260C	18.2	20.0	91	77-114
Bromochloromethane	8260C	19.2	20.0	96	78-117
Bromodichloromethane	8260C	19.0	20.0	95	72-118
Bromoform	8260C	19.5	20.0	98	55-134
Bromomethane	8260C	25.3	20.0	126	10-150
Carbon Disulfide	8260C	13.2	20.0	66	44-139
Carbon Tetrachloride	8260C	22.8	20.0	114	51-123
Chlorobenzene	8260C	19.2	20.0	96	79-115
Chloroethane	8260C	21.0	20.0	105	10-140
Chloroform	8260C	19.4	20.0	97	76-115
Chloromethane	8260C	18.2	20.0	91	10-131

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/06/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2013633-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyclohexane	8260C	20.4	20.0	102	67-122
Dibromochloromethane	8260C	20.2	20.0	101	68-121
Dichlorodifluoromethane (CFC 12)	8260C	17.9	20.0	89	51-144
Dichloromethane	8260C	16.1	20.0	81	72-118
Ethylbenzene	8260C	19.2	20.0	96	64-118
Isopropylbenzene (Cumene)	8260C	19.0	20.0	95	60-123
Methyl Acetate	8260C	16.6	20.0	83	31-122
Methyl tert-Butyl Ether	8260C	18.9	20.0	94	76-118
Methylcyclohexane	8260C	18.6	20.0	93	70-124
Styrene	8260C	18.7	20.0	93	74-117
Tetrachloroethene (PCE)	8260C	20.9	20.0	104	58-124
Toluene	8260C	18.6	20.0	93	72-116
Trichloroethene (TCE)	8260C	20.5	20.0	102	69-118
Trichlorofluoromethane (CFC 11)	8260C	29.6	20.0	148 *	52-127
Vinyl Chloride	8260C	17.5	20.0	88	59-153
cis-1,2-Dichloroethene	8260C	18.4	20.0	92	79-113
cis-1,3-Dichloropropene	8260C	17.9	20.0	90	66-117
m,p-Xylenes	8260C	38.1	40.0	95	68-118
o-Xylene	8260C	18.9	20.0	95	71-116
trans-1,2-Dichloroethene	8260C	19.7	20.0	99	73-114
trans-1,3-Dichloropropene	8260C	18.6	20.0	93	57-135

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/08/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2013655-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	17.2	20.0	86	68-123
1,1,2,2-Tetrachloroethane	8260C	16.7	20.0	84	78-121
1,1,2-Trichloroethane	8260C	20.0	20.0	100	84-117
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	17.8	20.0	89	54-121
1,1-Dichloroethane (1,1-DCA)	8260C	16.6	20.0	83	76-123
1,1-Dichloroethene (1,1-DCE)	8260C	18.6	20.0	93	65-115
1,2,3-Trichlorobenzene	8260C	21.4	20.0	107	60-128
1,2,4-Trichlorobenzene	8260C	20.2	20.0	101	62-130
1,2,4-Trimethylbenzene	8260C	17.5	20.0	87	67-121
1,2-Dibromo-3-chloropropane (DBCP)	8260C	13.8	20.0	69	54-135
1,2-Dibromoethane	8260C	19.0	20.0	95	77-117
1,2-Dichlorobenzene	8260C	18.2	20.0	91	75-116
1,2-Dichloroethane	8260C	21.3	20.0	106	74-116
1,2-Dichloropropane	8260C	18.6	20.0	93	79-112
1,3,5-Trimethylbenzene	8260C	17.5	20.0	87	66-122
1,3-Dichlorobenzene	8260C	17.7	20.0	89	72-118
1,4-Dichlorobenzene	8260C	17.8	20.0	89	72-117
1,4-Dioxane	8260C	344	400	86	59-147
2-Butanone (MEK)	8260C	20.1	20.0	101	67-129
2-Hexanone	8260C	21.6	20.0	108	68-118
4-Methyl-2-pentanone	8260C	22.2	20.0	111	64-123
Acetone	8260C	22.5	20.0	113	32-154
Benzene	8260C	18.0	20.0	90	77-114
Bromochloromethane	8260C	18.1	20.0	91	78-117
Bromodichloromethane	8260C	16.0	20.0	80	72-118
Bromoform	8260C	15.9	20.0	79	55-134
Bromomethane	8260C	8.42	20.0	42	10-150
Carbon Disulfide	8260C	8.70	20.0	43 *	44-139
Carbon Tetrachloride	8260C	17.6	20.0	88	51-123
Chlorobenzene	8260C	18.3	20.0	91	79-115
Chloroethane	8260C	13.8	20.0	69	10-140
Chloroform	8260C	18.1	20.0	90	76-115
Chloromethane	8260C	16.2	20.0	81	10-131

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/08/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2013655-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyclohexane	8260C	22.1	20.0	110	67-122
Dibromochloromethane	8260C	17.0	20.0	85	68-121
Dichlorodifluoromethane (CFC 12)	8260C	15.7	20.0	79	51-144
Dichloromethane	8260C	16.2	20.0	81	72-118
Ethylbenzene	8260C	17.5	20.0	88	64-118
Isopropylbenzene (Cumene)	8260C	18.3	20.0	91	60-123
Methyl Acetate	8260C	20.6	20.0	103	31-122
Methyl tert-Butyl Ether	8260C	19.5	20.0	98	76-118
Methylcyclohexane	8260C	19.8	20.0	99	70-124
Styrene	8260C	18.0	20.0	90	74-117
Tetrachloroethene (PCE)	8260C	18.4	20.0	92	58-124
Toluene	8260C	17.8	20.0	89	72-116
Trichloroethene (TCE)	8260C	18.6	20.0	93	69-118
Trichlorofluoromethane (CFC 11)	8260C	26.5	20.0	133 *	52-127
Vinyl Chloride	8260C	14.2	20.0	71	59-153
cis-1,2-Dichloroethene	8260C	17.3	20.0	86	79-113
cis-1,3-Dichloropropene	8260C	16.7	20.0	84	66-117
m,p-Xylenes	8260C	36.5	40.0	91	68-118
o-Xylene	8260C	18.1	20.0	91	71-116
trans-1,2-Dichloroethene	8260C	18.3	20.0	92	73-114
trans-1,3-Dichloropropene	8260C	17.4	20.0	87	57-135

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Analyzed: 11/10/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2013794-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	19.2	20.0	96	75-125
1,1,2,2-Tetrachloroethane	8260C	17.8	20.0	89	78-126
1,1,2-Trichloroethane	8260C	19.5	20.0	97	82-121
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	18.0	20.0	90	67-124
1,1-Dichloroethane (1,1-DCA)	8260C	18.0	20.0	90	80-124
1,1-Dichloroethene (1,1-DCE)	8260C	20.7	20.0	103	71-118
1,2,3-Trichlorobenzene	8260C	21.2	20.0	106	67-136
1,2,4-Trichlorobenzene	8260C	21.3	20.0	106	75-132
1,2,4-Trimethylbenzene	8260C	18.8	20.0	94	81-126
1,2-Dibromo-3-chloropropane (DBCP)	8260C	15.3	20.0	77	55-136
1,2-Dibromoethane	8260C	19.4	20.0	97	82-127
1,2-Dichlorobenzene	8260C	19.1	20.0	96	80-119
1,2-Dichloroethane	8260C	21.1	20.0	106	71-127
1,2-Dichloropropane	8260C	18.5	20.0	92	80-119
1,3,5-Trimethylbenzene	8260C	18.9	20.0	94	81-128
1,3-Dichlorobenzene	8260C	19.0	20.0	95	83-121
1,4-Dichlorobenzene	8260C	18.9	20.0	94	79-119
1,4-Dioxane	8260C	263	400	66	44-154
2-Butanone (MEK)	8260C	17.6	20.0	88	61-137
2-Hexanone	8260C	20.4	20.0	102	63-124
4-Methyl-2-pentanone	8260C	21.0	20.0	105	66-124
Acetone	8260C	16.0	20.0	80	40-161
Benzene	8260C	18.6	20.0	93	79-119
Bromochloromethane	8260C	18.3	20.0	92	81-126
Bromodichloromethane	8260C	18.3	20.0	92	81-123
Bromoform	8260C	17.9	20.0	89	65-146
Bromomethane	8260C	27.8	20.0	139	42-166
Carbon Disulfide	8260C	11.6	20.0	58 *	66-128
Carbon Tetrachloride	8260C	21.4	20.0	107	70-127
Chlorobenzene	8260C	18.8	20.0	94	80-121
Chloroethane	8260C	19.5	20.0	97	62-131
Chloroform	8260C	19.1	20.0	96	79-120
Chloromethane	8260C	17.8	20.0	89	65-135

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Analyzed: 11/10/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2013794-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyclohexane	8260C	22.0	20.0	110	69-120
Dibromochloromethane	8260C	18.9	20.0	95	72-128
Dichlorodifluoromethane (CFC 12)	8260C	18.0	20.0	90	59-155
Dichloromethane	8260C	16.4	20.0	82	73-122
Ethylbenzene	8260C	18.4	20.0	92	76-120
Isopropylbenzene (Cumene)	8260C	19.7	20.0	99	77-128
Methyl Acetate	8260C	17.9	20.0	89	61-133
Methyl tert-Butyl Ether	8260C	18.3	20.0	91	75-118
Methylcyclohexane	8260C	19.7	20.0	98	51-129
Styrene	8260C	18.4	20.0	92	80-124
Tetrachloroethene (PCE)	8260C	20.1	20.0	101	72-125
Toluene	8260C	18.7	20.0	93	79-119
Trichloroethene (TCE)	8260C	19.4	20.0	97	74-122
Trichlorofluoromethane (CFC 11)	8260C	25.8	20.0	129	71-136
Vinyl Chloride	8260C	16.7	20.0	84	74-159
cis-1,2-Dichloroethene	8260C	18.0	20.0	90	80-121
cis-1,3-Dichloropropene	8260C	18.2	20.0	91	77-122
m,p-Xylenes	8260C	38.0	40.0	95	80-126
o-Xylene	8260C	19.3	20.0	97	79-123
trans-1,2-Dichloroethene	8260C	19.7	20.0	98	73-118
trans-1,3-Dichloropropene	8260C	18.9	20.0	95	71-133

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/11/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2013853-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	20.0	20.0	100	68-123
1,1,2,2-Tetrachloroethane	8260C	16.7	20.0	83	78-121
1,1,2-Trichloroethane	8260C	20.7	20.0	103	84-117
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	17.9	20.0	89	54-121
1,1-Dichloroethane (1,1-DCA)	8260C	17.3	20.0	87	76-123
1,1-Dichloroethene (1,1-DCE)	8260C	19.4	20.0	97	65-115
1,2,3-Trichlorobenzene	8260C	20.0	20.0	100	60-128
1,2,4-Trichlorobenzene	8260C	19.3	20.0	96	62-130
1,2,4-Trimethylbenzene	8260C	17.3	20.0	86	67-121
1,2-Dibromo-3-chloropropane (DBCP)	8260C	15.9	20.0	79	54-135
1,2-Dibromoethane	8260C	20.4	20.0	102	77-117
1,2-Dichlorobenzene	8260C	19.4	20.0	97	75-116
1,2-Dichloroethane	8260C	22.1	20.0	111	74-116
1,2-Dichloropropane	8260C	18.5	20.0	93	79-112
1,3,5-Trimethylbenzene	8260C	17.5	20.0	87	66-122
1,3-Dichlorobenzene	8260C	19.4	20.0	97	72-118
1,4-Dichlorobenzene	8260C	19.0	20.0	95	72-117
1,4-Dioxane	8260C	411	400	103	59-147
2-Butanone (MEK)	8260C	18.2	20.0	91	67-129
2-Hexanone	8260C	21.7	20.0	109	68-118
4-Methyl-2-pentanone	8260C	22.4	20.0	112	64-123
Acetone	8260C	18.3	20.0	91	32-154
Benzene	8260C	18.3	20.0	92	77-114
Bromochloromethane	8260C	19.3	20.0	96	78-117
Bromodichloromethane	8260C	18.8	20.0	94	72-118
Bromoform	8260C	20.0	20.0	100	55-134
Bromomethane	8260C	27.7	20.0	138	10-150
Carbon Disulfide	8260C	12.1	20.0	61	44-139
Carbon Tetrachloride	8260C	21.8	20.0	109	51-123
Chlorobenzene	8260C	19.7	20.0	98	79-115
Chloroethane	8260C	20.2	20.0	101	10-140
Chloroform	8260C	18.8	20.0	94	76-115
Chloromethane	8260C	16.5	20.0	82	10-131

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/11/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2013853-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyclohexane	8260C	21.4	20.0	107	67-122
Dibromochloromethane	8260C	19.8	20.0	99	68-121
Dichlorodifluoromethane (CFC 12)	8260C	16.0	20.0	80	51-144
Dichloromethane	8260C	16.3	20.0	81	72-118
Ethylbenzene	8260C	19.4	20.0	97	64-118
Isopropylbenzene (Cumene)	8260C	19.7	20.0	99	60-123
Methyl Acetate	8260C	17.2	20.0	86	31-122
Methyl tert-Butyl Ether	8260C	19.0	20.0	95	76-118
Methylcyclohexane	8260C	19.3	20.0	97	70-124
Styrene	8260C	19.4	20.0	97	74-117
Tetrachloroethene (PCE)	8260C	21.2	20.0	106	58-124
Toluene	8260C	19.5	20.0	97	72-116
Trichloroethene (TCE)	8260C	21.0	20.0	105	69-118
Trichlorofluoromethane (CFC 11)	8260C	28.3	20.0	141 *	52-127
Vinyl Chloride	8260C	16.6	20.0	83	59-153
cis-1,2-Dichloroethene	8260C	18.4	20.0	92	79-113
cis-1,3-Dichloropropene	8260C	18.4	20.0	92	66-117
m,p-Xylenes	8260C	39.4	40.0	99	68-118
o-Xylene	8260C	19.9	20.0	99	71-116
trans-1,2-Dichloroethene	8260C	19.3	20.0	97	73-114
trans-1,3-Dichloropropene	8260C	19.1	20.0	95	57-135



Semivolatile Organic Compounds by GC/MS

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276

SURROGATE RECOVERY SUMMARY
Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol
		10 - 109	10 - 102	10 - 88
MW-BCP-15-02	R2010276-001	66	49	48
MW-BCP-150-02	R2010276-003	59	42	38
TP-BCP-31-01-10292020	R2010276-006	63	31	31
TP-BCP-31-01-10292020 DL	R2010276-006	70	34	33
TP-BCP-31-CL-10292020	R2010276-007	46	32	25
TP-BCP-31-CL-10292020 DL	R2010276-007	0 D *	0 D *	0 D *
TP-BCP-31-CL-10292020 DL	R2010276-007	0 D *	0 D *	0 D *
TP-BCP-25-01-10292020	R2010276-008	28	21	16
TP-BCP-25-01-10292020 DL	R2010276-008	29	23	16
TP-BCP-SE56-10292020	R2010276-009	26	17	22
TP-BCP-SE56-10292020 DL	R2010276-009	23	15	19
TP-BCP-CL-10292020	R2010276-010	40	35	41
MW-BCP-15-61	R2010276-011	32	27	23
MW-BCP-15-46	R2010276-012	41	36	38
MW-BCP-15-810	R2010276-013	29	26	29
MW-BCP-15-1314	R2010276-014	34	30	33
MW-BCP-15-3638	R2010276-015	34	27	33
Method Blank	RQ2013452-01	40	38	37
Lab Control Sample	RQ2013452-02	53	46	42
Duplicate Lab Control Sample	RQ2013452-03	51	42	41
MW-BCP-15-02 MS	RQ2013452-04	60	41	41
MW-BCP-15-02 DMS	RQ2013452-05	54	37	33
Method Blank	RQ2013499-01	30	36	34
Lab Control Sample	RQ2013499-02	32	29	27
Duplicate Lab Control Sample	RQ2013499-03	31	9 *	1 *

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276

SURROGATE RECOVERY SUMMARY
Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Nitrobenzene-d5	Phenol-d6	Terphenyl-d14
		10 - 95	10 - 145	10 - 106
MW-BCP-15-02	R2010276-001	55	54	65
MW-BCP-150-02	R2010276-003	41	44	59
TP-BCP-31-01-10292020	R2010276-006	34	34	54
TP-BCP-31-01-10292020 DL	R2010276-006	33	36	59
TP-BCP-31-CL-10292020	R2010276-007	53	28	71
TP-BCP-31-CL-10292020 DL	R2010276-007	0 D *	0 D *	0 D *
TP-BCP-31-CL-10292020 DL	R2010276-007	0 D *	0 D *	0 D *
TP-BCP-25-01-10292020	R2010276-008	19	19	32
TP-BCP-25-01-10292020 DL	R2010276-008	20	20	37
TP-BCP-SE56-10292020	R2010276-009	21	22	26
TP-BCP-SE56-10292020 DL	R2010276-009	17	21	25
TP-BCP-CL-10292020	R2010276-010	39	41	51
MW-BCP-15-61	R2010276-011	25	26	31
MW-BCP-15-46	R2010276-012	37	39	48
MW-BCP-15-810	R2010276-013	27	29	40
MW-BCP-15-1314	R2010276-014	33	34	45
MW-BCP-15-3638	R2010276-015	31	34	34
Method Blank	RQ2013452-01	39	37	67
Lab Control Sample	RQ2013452-02	43	44	56
Duplicate Lab Control Sample	RQ2013452-03	41	42	51
MW-BCP-15-02 MS	RQ2013452-04	43	47	61
MW-BCP-15-02 DMS	RQ2013452-05	35	38	56
Method Blank	RQ2013499-01	35	35	41
Lab Control Sample	RQ2013499-02	27	28	33
Duplicate Lab Control Sample	RQ2013499-03	0 *	8 *	31

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276

SURROGATE RECOVERY SUMMARY
Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: ALS SOP

Sample Name	Lab Code	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol
		35 - 141	31 - 118	10 - 105
EQB-103020	R2010276-016	66	61	37
Method Blank	RQ2013497-01	70	60	42
Method Blank	RQ2013497-01	75	58	38
Lab Control Sample	RQ2013497-02	69	66	41
Lab Control Sample	RQ2013497-02	75	62	37
Duplicate Lab Control Sample	RQ2013497-03	77	73	42
Duplicate Lab Control Sample	RQ2013497-03	84	70	38

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276

SURROGATE RECOVERY SUMMARY
Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: ALS SOP

Sample Name	Lab Code	Nitrobenzene-d5	Phenol-d6	Terphenyl-d14
		31 - 110	10 - 107	10 - 165
EQB-103020	R2010276-016	59	31	83
Method Blank	RQ2013497-01	63	33	73
Method Blank	RQ2013497-01	56	29	79
Lab Control Sample	RQ2013497-02	62	31	71
Lab Control Sample	RQ2013497-02	60	29	74
Duplicate Lab Control Sample	RQ2013497-03	64	34	84
Duplicate Lab Control Sample	RQ2013497-03	61	33	87

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20
Date Received: 10/31/20
Date Analyzed: 11/6/20
Date Extracted: 11/4/20

Duplicate Matrix Spike Summary
Semivolatile Organic Compounds by GC/MS

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001
Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry

Analyte Name	Matrix Spike RQ2013452-04				Duplicate Matrix Spike RQ2013452-05				RPD	RPD Limit
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits		
1,2,4,5-Tetrachlorobenzene	1100 U	989 J	1930	51	892 J	1950	46	10-115	10	30
2,3,4,6-Tetrachlorophenol	1100 U	975 J	1920	51	982 J	1930	51	10-123	<1	30
2,4,5-Trichlorophenol	1100 U	1180	1920	61	1040 J	1930	54	12-109	12	30
2,4,6-Trichlorophenol	1100 U	942 J	1920	49	879 J	1930	45	13-149	9	30
2,4-Dichlorophenol	1100 U	989 J	1920	51	851 J	1930	44	16-98	15	30
2,4-Dimethylphenol	1100 U	865 J	1920	45	794 J	1930	41	10-98	9	30
2,4-Dinitrophenol	5900 U	5900 U	1920	0 *	5900 U	1930	0 *	10-129	NC	30
2,4-Dinitrotoluene	1100 U	1490	1920	78	1310	1930	68	10-124	14	30
2,6-Dinitrotoluene	1100 U	1260	1920	65	1120	1930	58	13-112	11	30
2-Chloronaphthalene	1100 U	899 J	1920	47	787 J	1930	41	10-94	14	30
2-Chlorophenol	1100 U	812 J	1920	42	657 J	1930	34	14-99	21	30
2-Methylnaphthalene	260 J	1130	1920	45	895 J	1930	33	10-90	31*	30
2-Methylphenol	1100 U	887 J	1920	46	769 J	1930	40	10-86	14	30
2-Nitroaniline	1100 U	1260	1920	65	1230	1930	64	10-109	2	30
2-Nitrophenol	1100 U	892 J	1920	46	668 J	1930	35	10-90	27	30
3,3'-Dichlorobenzidine	1100 U	1100 U	1920	0 *	318 J	1930	16	10-118	NC	30
3- and 4-Methylphenol Coelution	1100 U	919 J	1920	48	810 J	1930	42	11-101	13	30
3-Nitroaniline	1100 U	771 J	1920	40	916 J	1930	47	10-104	16	30
4,6-Dinitro-2-methylphenol	5900 U	5900 U	1920	0 *	5900 U	1930	0 *	10-123	NC	30
4-Bromophenyl Phenyl Ether	1100 U	1130	1920	59	1060 J	1930	55	10-99	7	30
4-Chloro-3-methylphenol	1100 U	1230	1920	64	1100	1930	57	10-108	12	30
4-Chloroaniline	1100 U	608 J	1920	32	721 J	1930	37	10-91	14	30
4-Chlorophenyl Phenyl Ether	1100 U	1080 J	1920	56	990 J	1930	51	10-95	9	30
4-Nitroaniline	1100 U	934 J	1920	49	1040 J	1930	54	10-137	10	30
4-Nitrophenol	5900 U	965 J	1920	50	906 J	1930	47	10-130	6	30
Acenaphthene	1100 U	1100	1920	57	955 J	1930	49	10-100	15	30
Acenaphthylene	460 J	1400	1920	49	1140	1930	35	10-102	33*	30
Acetophenone	1100 U	1390	3840	36	1120	3870	29	12-99	22	30
Anthracene	660 J	1770	1920	58	1440	1930	40	10-129	37*	30
Atrazine	1100 U	1350	1920	70	1220	1930	63	15-133	11	30
Benz(a)anthracene	2500	3150	1920	32	2250	1930	-15 *	10-122	553*	30
Benzaldehyde	1100 U	794 J	1920	41	649 J	1930	34	10-103	19	30
Benzo(a)pyrene	3600	4390	1920	43	3060	1930	-26 *	10-122	812*	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20
Date Received: 10/31/20
Date Analyzed: 11/6/20
Date Extracted: 11/4/20

Duplicate Matrix Spike Summary
Semivolatile Organic Compounds by GC/MS

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001
Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry

Analyte Name	Matrix Spike RQ2013452-04				Duplicate Matrix Spike RQ2013452-05					
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Benzo(b)fluoranthene	4400	4850	1920	23	3210	1930	-62 *	10-112	436*	30
Benzo(g,h,i)perylene	1900	2740	1920	42	2020	1930	4 *	10-136	165*	30
Benzo(k)fluoranthene	1500	2640	1920	57	2090	1930	28	10-112	68*	30
Biphenyl	1100 U	814 J	1920	42	722 J	1930	37	10-99	13	30
2,2'-Oxybis(1-chloropropane)	1100 U	845 J	1920	44	666 J	1930	34	10-87	26	30
Bis(2-chloroethoxy)methane	1100 U	907 J	1920	47	754 J	1930	39	16-93	19	30
Bis(2-chloroethyl) Ether	1100 U	862 J	1920	45	639 J	1930	33	10-79	31*	30
Bis(2-ethylhexyl) Phthalate	1700 U	1450 J	1920	75	1290 J	1930	67	10-116	11	30
Butyl Benzyl Phthalate	1100 U	1410	1920	73	1280	1930	66	10-128	10	30
Caprolactam	1100 U	1070 J	1920	56	1020 J	1930	53	10-112	6	30
Carbazole	1100 U	1410	1920	74	1230	1930	64	10-138	14	30
Chrysene	2800	3450	1920	32	2350	1930	-24 *	10-113	1400*	30
Di-n-butyl Phthalate	1100 U	1330	1920	69	1250	1930	64	10-119	8	30
Di-n-octyl Phthalate	1100 U	1950	1920	101	1800	1930	93	10-121	8	30
Dibenz(a,h)anthracene	490 J	1460	1920	51	1240	1930	39	10-130	27	30
Dibenzofuran	1100 U	1160	1920	60	1000 J	1930	52	10-102	14	30
Diethyl Phthalate	1100 U	1070 J	1920	56	951 J	1930	49	10-101	13	30
Dimethyl Phthalate	1100 U	1050 J	1920	54	944 J	1930	49	10-113	10	30
Fluoranthene	4800	4890	1920	5 *	3380	1930	-73 *	10-125	229*	30
Fluorene	1100 U	1240	1920	64	1060 J	1930	55	10-109	15	30
Hexachlorobenzene	1100 U	1200	1920	62	1090 J	1930	56	10-106	10	30
Hexachlorobutadiene	1100 U	910 J	1920	47	767 J	1930	40	10-142	16	30
Hexachlorocyclopentadiene	1100 U	1100 U	1920	0 *	1100 U	1930	0 *	10-133	NC	30
Hexachloroethane	1100 U	605 J	1920	31	462 J	1930	24	10-129	25	30
Indeno(1,2,3-cd)pyrene	2200	3200	1920	53	2110	1930	-4 *	10-124	233*	30
Isophorone	1100 U	812 J	1920	42	701 J	1930	36	10-81	15	30
N-Nitrosodi-n-propylamine	1100 U	823 J	1920	43	659 J	1930	34	10-76	23	30
N-Nitrosodiphenylamine	1100 U	1100	1920	57	1050 J	1930	54	10-114	5	30
Naphthalene	390 J	1190	1920	42	896 J	1930	26	10-89	47*	30
Nitrobenzene	1100 U	887 J	1920	46	694 J	1930	36	10-77	24	30
Pentachlorophenol (PCP)	5900 U	416 J	1920	22	5900 U	1930	0 *	10-118	NC	30
Phenanthrene	2700	3080	1920	22	2210	1930	-23 *	10-137	9000*	30
Phenol	1100 U	918 J	1920	48	753 J	1930	39	10-144	21	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20
Date Received: 10/31/20
Date Analyzed: 11/6/20
Date Extracted: 11/4/20

Duplicate Matrix Spike Summary
Semivolatile Organic Compounds by GC/MS

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001
Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike RQ2013452-04			Duplicate Matrix Spike RQ2013452-05			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Pyrene	5000	5200	1920	13	3520	1930	-74 *	10-118	285*	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013452-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	320 U	320	78	1	11/06/20 10:33	11/4/20	
2,3,4,6-Tetrachlorophenol	320 U	320	69	1	11/06/20 10:33	11/4/20	
2,4,5-Trichlorophenol	320 U	320	280	1	11/06/20 10:33	11/4/20	
2,4,6-Trichlorophenol	320 U	320	58	1	11/06/20 10:33	11/4/20	
2,4-Dichlorophenol	320 U	320	70	1	11/06/20 10:33	11/4/20	
2,4-Dimethylphenol	320 U	320	72	1	11/06/20 10:33	11/4/20	
2,4-Dinitrophenol	1700 U	1700	650	1	11/06/20 10:33	11/4/20	
2,4-Dinitrotoluene	320 U	320	130	1	11/06/20 10:33	11/4/20	
2,6-Dinitrotoluene	320 U	320	96	1	11/06/20 10:33	11/4/20	
2-Chloronaphthalene	320 U	320	79	1	11/06/20 10:33	11/4/20	
2-Chlorophenol	320 U	320	81	1	11/06/20 10:33	11/4/20	
2-Methylnaphthalene	320 U	320	72	1	11/06/20 10:33	11/4/20	
2-Methylphenol	320 U	320	71	1	11/06/20 10:33	11/4/20	
2-Nitroaniline	320 U	320	98	1	11/06/20 10:33	11/4/20	
2-Nitrophenol	320 U	320	95	1	11/06/20 10:33	11/4/20	
3,3'-Dichlorobenzidine	320 U	320	69	1	11/06/20 10:33	11/4/20	
3- and 4-Methylphenol Coelution	320 U	320	63	1	11/06/20 10:33	11/4/20	
3-Nitroaniline	320 U	320	70	1	11/06/20 10:33	11/4/20	
4,6-Dinitro-2-methylphenol	1700 U	1700	140	1	11/06/20 10:33	11/4/20	
4-Bromophenyl Phenyl Ether	320 U	320	120	1	11/06/20 10:33	11/4/20	
4-Chloro-3-methylphenol	320 U	320	72	1	11/06/20 10:33	11/4/20	
4-Chloroaniline	320 U	320	78	1	11/06/20 10:33	11/4/20	
4-Chlorophenyl Phenyl Ether	320 U	320	79	1	11/06/20 10:33	11/4/20	
4-Nitroaniline	320 U	320	70	1	11/06/20 10:33	11/4/20	
4-Nitrophenol	1700 U	1700	110	1	11/06/20 10:33	11/4/20	
Acenaphthene	320 U	320	74	1	11/06/20 10:33	11/4/20	
Acenaphthylene	320 U	320	87	1	11/06/20 10:33	11/4/20	
Acetophenone	320 U	320	75	1	11/06/20 10:33	11/4/20	
Anthracene	320 U	320	92	1	11/06/20 10:33	11/4/20	
Atrazine	320 U	320	130	1	11/06/20 10:33	11/4/20	
Benz(a)anthracene	320 U	320	97	1	11/06/20 10:33	11/4/20	
Benzaldehyde	320 U	320	65	1	11/06/20 10:33	11/4/20	
Benzo(a)pyrene	320 U	320	120	1	11/06/20 10:33	11/4/20	
Benzo(b)fluoranthene	320 U	320	110	1	11/06/20 10:33	11/4/20	
Benzo(g,h,i)perylene	320 U	320	87	1	11/06/20 10:33	11/4/20	
Benzo(k)fluoranthene	320 U	320	120	1	11/06/20 10:33	11/4/20	
Biphenyl	320 U	320	81	1	11/06/20 10:33	11/4/20	
2,2'-Oxybis(1-chloropropane)	320 U	320	130	1	11/06/20 10:33	11/4/20	
Bis(2-chloroethoxy)methane	320 U	320	88	1	11/06/20 10:33	11/4/20	
Bis(2-chloroethyl) Ether	320 U	320	86	1	11/06/20 10:33	11/4/20	
Bis(2-ethylhexyl) Phthalate	490 U	490	88	1	11/06/20 10:33	11/4/20	
Butyl Benzyl Phthalate	320 U	320	82	1	11/06/20 10:33	11/4/20	
Caprolactam	320 U	320	86	1	11/06/20 10:33	11/4/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013452-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	320 U	320	95	1	11/06/20 10:33	11/4/20	
Chrysene	320 U	320	120	1	11/06/20 10:33	11/4/20	
Di-n-butyl Phthalate	320 U	320	100	1	11/06/20 10:33	11/4/20	
Di-n-octyl Phthalate	320 U	320	97	1	11/06/20 10:33	11/4/20	
Dibenz(a,h)anthracene	320 U	320	98	1	11/06/20 10:33	11/4/20	
Dibenzofuran	320 U	320	65	1	11/06/20 10:33	11/4/20	
Diethyl Phthalate	320 U	320	70	1	11/06/20 10:33	11/4/20	
Dimethyl Phthalate	320 U	320	74	1	11/06/20 10:33	11/4/20	
Fluoranthene	320 U	320	120	1	11/06/20 10:33	11/4/20	
Fluorene	320 U	320	76	1	11/06/20 10:33	11/4/20	
Hexachlorobenzene	320 U	320	100	1	11/06/20 10:33	11/4/20	
Hexachlorobutadiene	320 U	320	80	1	11/06/20 10:33	11/4/20	
Hexachlorocyclopentadiene	320 U	320	72	1	11/06/20 10:33	11/4/20	
Hexachloroethane	320 U	320	85	1	11/06/20 10:33	11/4/20	
Indeno(1,2,3-cd)pyrene	320 U	320	110	1	11/06/20 10:33	11/4/20	
Isophorone	320 U	320	90	1	11/06/20 10:33	11/4/20	
N-Nitrosodi-n-propylamine	320 U	320	88	1	11/06/20 10:33	11/4/20	
N-Nitrosodiphenylamine	320 U	320	220	1	11/06/20 10:33	11/4/20	
Naphthalene	320 U	320	85	1	11/06/20 10:33	11/4/20	
Nitrobenzene	320 U	320	85	1	11/06/20 10:33	11/4/20	
Pentachlorophenol (PCP)	1700 U	1700	110	1	11/06/20 10:33	11/4/20	
Phenanthrene	320 U	320	96	1	11/06/20 10:33	11/4/20	
Phenol	320 U	320	78	1	11/06/20 10:33	11/4/20	
Pyrene	320 U	320	130	1	11/06/20 10:33	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	40	10 - 109	11/06/20 10:33	
2-Fluorobiphenyl	38	10 - 102	11/06/20 10:33	
2-Fluorophenol	37	10 - 88	11/06/20 10:33	
Nitrobenzene-d5	39	10 - 95	11/06/20 10:33	
Phenol-d6	37	10 - 145	11/06/20 10:33	
Terphenyl-d14	67	10 - 106	11/06/20 10:33	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013497-01

Units: ug/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	10 U	10	1.2	1	11/10/20 18:15	11/5/20	
2,3,4,6-Tetrachlorophenol	10 U	10	1.2	1	11/10/20 18:15	11/5/20	
2,4,5-Trichlorophenol	10 U	10	1.1	1	11/10/20 18:15	11/5/20	
2,4,6-Trichlorophenol	10 U	10	1.4	1	11/10/20 18:15	11/5/20	
2,4-Dichlorophenol	10 U	10	1.3	1	11/10/20 18:15	11/5/20	
2,4-Dimethylphenol	10 U	10	1.4	1	11/10/20 18:15	11/5/20	
2,4-Dinitrophenol	50 U	50	20	1	11/10/20 18:15	11/5/20	
2,4-Dinitrotoluene	10 U	10	2.4	1	11/10/20 18:15	11/5/20	
2,6-Dinitrotoluene	10 U	10	1.4	1	11/10/20 18:15	11/5/20	
2-Chloronaphthalene	10 U	10	1.4	1	11/10/20 18:15	11/5/20	
2-Chlorophenol	10 U	10	1.1	1	11/10/20 18:15	11/5/20	
2-Methylnaphthalene	10 U	10	1.3	1	11/10/20 18:15	11/5/20	
2-Methylphenol	10 U	10	1.0	1	11/10/20 18:15	11/5/20	
2-Nitroaniline	10 U	10	1.4	1	11/10/20 18:15	11/5/20	
2-Nitrophenol	10 U	10	1.5	1	11/10/20 18:15	11/5/20	
3,3'-Dichlorobenzidine	10 U	10	1.2	1	11/10/20 18:15	11/5/20	
3- and 4-Methylphenol Coelution	10 U	10	1.2	1	11/10/20 18:15	11/5/20	
3-Nitroaniline	10 U	10	2.5	1	11/10/20 18:15	11/5/20	
4,6-Dinitro-2-methylphenol	50 U	50	20	1	11/10/20 18:15	11/5/20	
4-Bromophenyl Phenyl Ether	10 U	10	1.7	1	11/10/20 18:15	11/5/20	
4-Chloro-3-methylphenol	10 U	10	1.1	1	11/10/20 18:15	11/5/20	
4-Chloroaniline	10 U	10	1.0	1	11/10/20 18:15	11/5/20	
4-Chlorophenyl Phenyl Ether	10 U	10	1.5	1	11/10/20 18:15	11/5/20	
4-Nitroaniline	10 U	10	2.7	1	11/10/20 18:15	11/5/20	
4-Nitrophenol	50 U	50	6.4	1	11/10/20 18:15	11/5/20	
Acenaphthene	10 U	10	1.4	1	11/10/20 18:15	11/5/20	
Acenaphthylene	10 U	10	1.4	1	11/10/20 18:15	11/5/20	
Acetophenone	10 U	10	1.3	1	11/10/20 18:15	11/5/20	
Anthracene	10 U	10	1.3	1	11/10/20 18:15	11/5/20	
Atrazine	10 U	10	2.1	1	11/10/20 18:15	11/5/20	
Benz(a)anthracene	10 U	10	1.6	1	11/10/20 18:15	11/5/20	
Benzaldehyde	10 U	10	3.7	1	11/10/20 18:15	11/5/20	
Benzo(a)pyrene	10 U	10	1.2	1	11/10/20 18:15	11/5/20	
Benzo(b)fluoranthene	10 U	10	1.2	1	11/10/20 18:15	11/5/20	
Benzo(g,h,i)perylene	10 U	10	1.0	1	11/10/20 18:15	11/5/20	
Benzo(k)fluoranthene	10 U	10	1.3	1	11/10/20 18:15	11/5/20	
Biphenyl	10 U	10	1.4	1	11/10/20 18:15	11/5/20	
2,2'-Oxybis(1-chloropropane)	10 U	10	1.4	1	11/10/20 18:15	11/5/20	
Bis(2-chloroethoxy)methane	10 U	10	1.9	1	11/10/20 18:15	11/5/20	
Bis(2-chloroethyl) Ether	10 U	10	1.3	1	11/10/20 18:15	11/5/20	
Bis(2-ethylhexyl) Phthalate	10 U	10	1.0	1	11/10/20 18:15	11/5/20	
Butyl Benzyl Phthalate	10 U	10	1.4	1	11/10/20 18:15	11/5/20	
Caprolactam	10 U	10	1.0	1	11/10/20 18:15	11/5/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013497-01

Units: ug/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	10 U	10	1.6	1	11/10/20 18:15	11/5/20	
Chrysene	10 U	10	1.2	1	11/10/20 18:15	11/5/20	
Di-n-butyl Phthalate	10 U	10	2.0	1	11/10/20 18:15	11/5/20	
Di-n-octyl Phthalate	10 U	10	3.3	1	11/10/20 18:15	11/5/20	
Dibenz(a,h)anthracene	10 U	10	1.1	1	11/10/20 18:15	11/5/20	
Dibenzofuran	10 U	10	1.4	1	11/10/20 18:15	11/5/20	
Diethyl Phthalate	10 U	10	1.1	1	11/10/20 18:15	11/5/20	
Dimethyl Phthalate	10 U	10	1.3	1	11/10/20 18:15	11/5/20	
Fluoranthene	10 U	10	1.5	1	11/10/20 18:15	11/5/20	
Fluorene	10 U	10	1.3	1	11/10/20 18:15	11/5/20	
Hexachlorobenzene	10 U	10	1.6	1	11/10/20 18:15	11/5/20	
Hexachlorobutadiene	10 U	10	1.0	1	11/10/20 18:15	11/5/20	
Hexachlorocyclopentadiene	10 U	10	2.2	1	11/10/20 18:15	11/5/20	
Hexachloroethane	10 U	10	1.1	1	11/10/20 18:15	11/5/20	
Indeno(1,2,3-cd)pyrene	10 U	10	1.8	1	11/10/20 18:15	11/5/20	
Isophorone	10 U	10	1.4	1	11/10/20 18:15	11/5/20	
N-Nitrosodi-n-propylamine	10 U	10	1.2	1	11/10/20 18:15	11/5/20	
N-Nitrosodiphenylamine	10 U	10	2.7	1	11/10/20 18:15	11/5/20	
Naphthalene	10 U	10	1.2	1	11/10/20 18:15	11/5/20	
Nitrobenzene	10 U	10	1.5	1	11/10/20 18:15	11/5/20	
Pentachlorophenol (PCP)	50 U	50	9.8	1	11/10/20 18:15	11/5/20	
Phenanthrene	10 U	10	1.4	1	11/10/20 18:15	11/5/20	
Phenol	10 U	10	1.0	1	11/10/20 18:15	11/5/20	
Pyrene	10 U	10	1.5	1	11/10/20 18:15	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	70	35 - 141	11/10/20 18:15	
2-Fluorobiphenyl	60	31 - 118	11/10/20 18:15	
2-Fluorophenol	42	10 - 105	11/10/20 18:15	
Nitrobenzene-d5	63	31 - 110	11/10/20 18:15	
Phenol-d6	33	10 - 107	11/10/20 18:15	
Terphenyl-d14	73	10 - 165	11/10/20 18:15	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013497-01

Units: ug/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	10 U	10	1.2	1	11/16/20 17:17	11/5/20	
2,3,4,6-Tetrachlorophenol	10 U	10	1.2	1	11/16/20 17:17	11/5/20	
2,4,5-Trichlorophenol	10 U	10	1.1	1	11/16/20 17:17	11/5/20	
2,4,6-Trichlorophenol	10 U	10	1.4	1	11/16/20 17:17	11/5/20	
2,4-Dichlorophenol	10 U	10	1.3	1	11/16/20 17:17	11/5/20	
2,4-Dimethylphenol	10 U	10	1.4	1	11/16/20 17:17	11/5/20	
2,4-Dinitrophenol	50 U	50	20	1	11/16/20 17:17	11/5/20	
2,4-Dinitrotoluene	10 U	10	2.4	1	11/16/20 17:17	11/5/20	
2,6-Dinitrotoluene	10 U	10	1.4	1	11/16/20 17:17	11/5/20	
2-Chloronaphthalene	10 U	10	1.4	1	11/16/20 17:17	11/5/20	
2-Chlorophenol	10 U	10	1.1	1	11/16/20 17:17	11/5/20	
2-Methylnaphthalene	10 U	10	1.3	1	11/16/20 17:17	11/5/20	
2-Methylphenol	10 U	10	1.0	1	11/16/20 17:17	11/5/20	
2-Nitroaniline	10 U	10	1.4	1	11/16/20 17:17	11/5/20	
2-Nitrophenol	10 U	10	1.5	1	11/16/20 17:17	11/5/20	
3,3'-Dichlorobenzidine	10 U	10	1.2	1	11/16/20 17:17	11/5/20	
3- and 4-Methylphenol Coelution	10 U	10	1.2	1	11/16/20 17:17	11/5/20	
3-Nitroaniline	10 U	10	2.5	1	11/16/20 17:17	11/5/20	
4,6-Dinitro-2-methylphenol	50 U	50	20	1	11/16/20 17:17	11/5/20	
4-Bromophenyl Phenyl Ether	10 U	10	1.7	1	11/16/20 17:17	11/5/20	
4-Chloro-3-methylphenol	10 U	10	1.1	1	11/16/20 17:17	11/5/20	
4-Chloroaniline	10 U	10	1.0	1	11/16/20 17:17	11/5/20	
4-Chlorophenyl Phenyl Ether	10 U	10	1.5	1	11/16/20 17:17	11/5/20	
4-Nitroaniline	10 U	10	2.7	1	11/16/20 17:17	11/5/20	
4-Nitrophenol	50 U	50	6.4	1	11/16/20 17:17	11/5/20	
Acenaphthene	10 U	10	1.4	1	11/16/20 17:17	11/5/20	
Acenaphthylene	10 U	10	1.4	1	11/16/20 17:17	11/5/20	
Acetophenone	10 U	10	1.3	1	11/16/20 17:17	11/5/20	
Anthracene	10 U	10	1.3	1	11/16/20 17:17	11/5/20	
Atrazine	10 U	10	2.1	1	11/16/20 17:17	11/5/20	
Benz(a)anthracene	10 U	10	1.6	1	11/16/20 17:17	11/5/20	
Benzaldehyde	10 U	10	3.7	1	11/16/20 17:17	11/5/20	
Benzo(a)pyrene	10 U	10	1.2	1	11/16/20 17:17	11/5/20	
Benzo(b)fluoranthene	10 U	10	1.2	1	11/16/20 17:17	11/5/20	
Benzo(g,h,i)perylene	10 U	10	1.0	1	11/16/20 17:17	11/5/20	
Benzo(k)fluoranthene	10 U	10	1.3	1	11/16/20 17:17	11/5/20	
Biphenyl	10 U	10	1.4	1	11/16/20 17:17	11/5/20	
2,2'-Oxybis(1-chloropropane)	10 U	10	1.4	1	11/16/20 17:17	11/5/20	
Bis(2-chloroethoxy)methane	10 U	10	1.9	1	11/16/20 17:17	11/5/20	
Bis(2-chloroethyl) Ether	10 U	10	1.3	1	11/16/20 17:17	11/5/20	
Bis(2-ethylhexyl) Phthalate	10 U	10	1.0	1	11/16/20 17:17	11/5/20	
Butyl Benzyl Phthalate	10 U	10	1.4	1	11/16/20 17:17	11/5/20	
Caprolactam	10 U	10	1.0	1	11/16/20 17:17	11/5/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013497-01

Units: ug/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	10 U	10	1.6	1	11/16/20 17:17	11/5/20	
Chrysene	10 U	10	1.2	1	11/16/20 17:17	11/5/20	
Di-n-butyl Phthalate	10 U	10	2.0	1	11/16/20 17:17	11/5/20	
Di-n-octyl Phthalate	10 U	10	3.3	1	11/16/20 17:17	11/5/20	
Dibenz(a,h)anthracene	10 U	10	1.1	1	11/16/20 17:17	11/5/20	
Dibenzofuran	10 U	10	1.4	1	11/16/20 17:17	11/5/20	
Diethyl Phthalate	10 U	10	1.1	1	11/16/20 17:17	11/5/20	
Dimethyl Phthalate	10 U	10	1.3	1	11/16/20 17:17	11/5/20	
Fluoranthene	10 U	10	1.5	1	11/16/20 17:17	11/5/20	
Fluorene	10 U	10	1.3	1	11/16/20 17:17	11/5/20	
Hexachlorobenzene	10 U	10	1.6	1	11/16/20 17:17	11/5/20	
Hexachlorobutadiene	10 U	10	1.0	1	11/16/20 17:17	11/5/20	
Hexachlorocyclopentadiene	10 U	10	2.2	1	11/16/20 17:17	11/5/20	
Hexachloroethane	10 U	10	1.1	1	11/16/20 17:17	11/5/20	
Indeno(1,2,3-cd)pyrene	10 U	10	1.8	1	11/16/20 17:17	11/5/20	
Isophorone	10 U	10	1.4	1	11/16/20 17:17	11/5/20	
N-Nitrosodi-n-propylamine	10 U	10	1.2	1	11/16/20 17:17	11/5/20	
N-Nitrosodiphenylamine	10 U	10	2.7	1	11/16/20 17:17	11/5/20	
Naphthalene	10 U	10	1.2	1	11/16/20 17:17	11/5/20	
Nitrobenzene	10 U	10	1.5	1	11/16/20 17:17	11/5/20	
Pentachlorophenol (PCP)	50 U	50	9.8	1	11/16/20 17:17	11/5/20	
Phenanthrene	10 U	10	1.4	1	11/16/20 17:17	11/5/20	
Phenol	10 U	10	1.0	1	11/16/20 17:17	11/5/20	
Pyrene	10 U	10	1.5	1	11/16/20 17:17	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	75	35 - 141	11/16/20 17:17	
2-Fluorobiphenyl	58	31 - 118	11/16/20 17:17	
2-Fluorophenol	38	10 - 105	11/16/20 17:17	
Nitrobenzene-d5	56	31 - 110	11/16/20 17:17	
Phenol-d6	29	10 - 107	11/16/20 17:17	
Terphenyl-d14	79	10 - 165	11/16/20 17:17	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013499-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	330 U	330	79	1	11/06/20 14:20	11/5/20	
2,3,4,6-Tetrachlorophenol	330 U	330	70	1	11/06/20 14:20	11/5/20	
2,4,5-Trichlorophenol	330 U	330	290	1	11/06/20 14:20	11/5/20	
2,4,6-Trichlorophenol	330 U	330	59	1	11/06/20 14:20	11/5/20	
2,4-Dichlorophenol	330 U	330	71	1	11/06/20 14:20	11/5/20	
2,4-Dimethylphenol	330 U	330	73	1	11/06/20 14:20	11/5/20	
2,4-Dinitrophenol	1700 U	1700	660	1	11/06/20 14:20	11/5/20	
2,4-Dinitrotoluene	330 U	330	140	1	11/06/20 14:20	11/5/20	
2,6-Dinitrotoluene	330 U	330	98	1	11/06/20 14:20	11/5/20	
2-Chloronaphthalene	330 U	330	80	1	11/06/20 14:20	11/5/20	
2-Chlorophenol	330 U	330	82	1	11/06/20 14:20	11/5/20	
2-Methylnaphthalene	330 U	330	73	1	11/06/20 14:20	11/5/20	
2-Methylphenol	330 U	330	72	1	11/06/20 14:20	11/5/20	
2-Nitroaniline	330 U	330	100	1	11/06/20 14:20	11/5/20	
2-Nitrophenol	330 U	330	97	1	11/06/20 14:20	11/5/20	
3,3'-Dichlorobenzidine	330 U	330	70	1	11/06/20 14:20	11/5/20	
3- and 4-Methylphenol Coelution	330 U	330	64	1	11/06/20 14:20	11/5/20	
3-Nitroaniline	330 U	330	71	1	11/06/20 14:20	11/5/20	
4,6-Dinitro-2-methylphenol	1700 U	1700	150	1	11/06/20 14:20	11/5/20	
4-Bromophenyl Phenyl Ether	330 U	330	130	1	11/06/20 14:20	11/5/20	
4-Chloro-3-methylphenol	330 U	330	73	1	11/06/20 14:20	11/5/20	
4-Chloroaniline	330 U	330	79	1	11/06/20 14:20	11/5/20	
4-Chlorophenyl Phenyl Ether	330 U	330	80	1	11/06/20 14:20	11/5/20	
4-Nitroaniline	330 U	330	71	1	11/06/20 14:20	11/5/20	
4-Nitrophenol	1700 U	1700	120	1	11/06/20 14:20	11/5/20	
Acenaphthene	330 U	330	75	1	11/06/20 14:20	11/5/20	
Acenaphthylene	330 U	330	88	1	11/06/20 14:20	11/5/20	
Acetophenone	330 U	330	76	1	11/06/20 14:20	11/5/20	
Anthracene	330 U	330	94	1	11/06/20 14:20	11/5/20	
Atrazine	330 U	330	140	1	11/06/20 14:20	11/5/20	
Benz(a)anthracene	330 U	330	99	1	11/06/20 14:20	11/5/20	
Benzaldehyde	330 U	330	66	1	11/06/20 14:20	11/5/20	
Benzo(a)pyrene	330 U	330	130	1	11/06/20 14:20	11/5/20	
Benzo(b)fluoranthene	330 U	330	120	1	11/06/20 14:20	11/5/20	
Benzo(g,h,i)perylene	330 U	330	88	1	11/06/20 14:20	11/5/20	
Benzo(k)fluoranthene	330 U	330	130	1	11/06/20 14:20	11/5/20	
Biphenyl	330 U	330	82	1	11/06/20 14:20	11/5/20	
2,2'-Oxybis(1-chloropropane)	330 U	330	140	1	11/06/20 14:20	11/5/20	
Bis(2-chloroethoxy)methane	330 U	330	90	1	11/06/20 14:20	11/5/20	
Bis(2-chloroethyl) Ether	330 U	330	87	1	11/06/20 14:20	11/5/20	
Bis(2-ethylhexyl) Phthalate	510 U	510	90	1	11/06/20 14:20	11/5/20	
Butyl Benzyl Phthalate	330 U	330	83	1	11/06/20 14:20	11/5/20	
Caprolactam	330 U	330	87	1	11/06/20 14:20	11/5/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013499-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	330 U	330	97	1	11/06/20 14:20	11/5/20	
Chrysene	330 U	330	130	1	11/06/20 14:20	11/5/20	
Di-n-butyl Phthalate	330 U	330	110	1	11/06/20 14:20	11/5/20	
Di-n-octyl Phthalate	330 U	330	99	1	11/06/20 14:20	11/5/20	
Dibenz(a,h)anthracene	330 U	330	100	1	11/06/20 14:20	11/5/20	
Dibenzofuran	330 U	330	66	1	11/06/20 14:20	11/5/20	
Diethyl Phthalate	330 U	330	71	1	11/06/20 14:20	11/5/20	
Dimethyl Phthalate	330 U	330	75	1	11/06/20 14:20	11/5/20	
Fluoranthene	330 U	330	130	1	11/06/20 14:20	11/5/20	
Fluorene	330 U	330	77	1	11/06/20 14:20	11/5/20	
Hexachlorobenzene	330 U	330	110	1	11/06/20 14:20	11/5/20	
Hexachlorobutadiene	330 U	330	81	1	11/06/20 14:20	11/5/20	
Hexachlorocyclopentadiene	330 U	330	73	1	11/06/20 14:20	11/5/20	
Hexachloroethane	330 U	330	86	1	11/06/20 14:20	11/5/20	
Indeno(1,2,3-cd)pyrene	330 U	330	120	1	11/06/20 14:20	11/5/20	
Isophorone	330 U	330	92	1	11/06/20 14:20	11/5/20	
N-Nitrosodi-n-propylamine	330 U	330	90	1	11/06/20 14:20	11/5/20	
N-Nitrosodiphenylamine	330 U	330	230	1	11/06/20 14:20	11/5/20	
Naphthalene	330 U	330	86	1	11/06/20 14:20	11/5/20	
Nitrobenzene	330 U	330	86	1	11/06/20 14:20	11/5/20	
Pentachlorophenol (PCP)	1700 U	1700	120	1	11/06/20 14:20	11/5/20	
Phenanthrene	330 U	330	98	1	11/06/20 14:20	11/5/20	
Phenol	330 U	330	79	1	11/06/20 14:20	11/5/20	
Pyrene	330 U	330	140	1	11/06/20 14:20	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	30	10 - 109	11/06/20 14:20	
2-Fluorobiphenyl	36	10 - 102	11/06/20 14:20	
2-Fluorophenol	34	10 - 88	11/06/20 14:20	
Nitrobenzene-d5	35	10 - 95	11/06/20 14:20	
Phenol-d6	35	10 - 145	11/06/20 14:20	
Terphenyl-d14	41	10 - 106	11/06/20 14:20	

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/06/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample					Duplicate Lab Control Sample					
RQ2013452-02					RQ2013452-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,2,4,5-Tetrachlorobenzene	8270D	930	1660	56	865	1680	51	10-115	9	30
2,3,4,6-Tetrachlorophenol	8270D	909	1650	55	891	1670	53	29-100	4	30
2,4,5-Trichlorophenol	8270D	871	1650	53	815	1670	49	29-97	8	30
2,4,6-Trichlorophenol	8270D	771	1650	47	716	1670	43	26-97	9	30
2,4-Dichlorophenol	8270D	782	1650	47	686	1670	41	25-90	14	30
2,4-Dimethylphenol	8270D	817	1650	49	742	1670	44	26-89	11	30
2,4-Dinitrophenol	8270D	1700 U	1650	0 *	660 U	1670	0 *	10-128	NC	30
2,4-Dinitrotoluene	8270D	1060	1650	64	1080	1670	65	30-111	2	30
2,6-Dinitrotoluene	8270D	967	1650	58	995	1670	60	28-105	3	30
2-Chloronaphthalene	8270D	771	1650	47	739	1670	44	21-88	7	30
2-Chlorophenol	8270D	709	1650	43	679	1670	41	18-87	5	30
2-Methylnaphthalene	8270D	767	1650	46	708	1670	42	21-83	9	30
2-Methylphenol	8270D	766	1650	46	732	1670	44	22-86	4	30
2-Nitroaniline	8270D	915	1650	55	914	1670	55	27-105	<1	30
2-Nitrophenol	8270D	717	1650	43	691	1670	41	20-88	5	30
3- and 4-Methylphenol Coelution	8270D	732	1650	44	695	1670	42	27-92	5	30
3-Nitroaniline	8270D	691	1650	42	654	1670	39	27-98	7	30
4,6-Dinitro-2-methylphenol	8270D	719 J	1650	43	505 J	1670	30	11-96	36*	30
4-Bromophenyl Phenyl Ether	8270D	842	1650	51	797	1670	48	25-96	6	30
4-Chloro-3-methylphenol	8270D	826	1650	50	720	1670	43	29-92	15	30
4-Chloroaniline	8270D	621	1650	38	524	1670	31	21-72	20	30
4-Chlorophenyl Phenyl Ether	8270D	872	1650	53	854	1670	51	25-92	4	30
4-Nitroaniline	8270D	852	1650	51	862	1670	52	27-102	2	30
4-Nitrophenol	8270D	777 J	1650	47	748 J	1670	45	10-130	4	30
Acenaphthene	8270D	797	1650	48	751	1670	45	25-92	6	30
Acenaphthylene	8270D	846	1650	51	799	1670	48	27-93	6	30
Acetophenone	8270D	1260	3310	38	1180	3340	35	23-87	8	30
Anthracene	8270D	973	1650	59	900	1670	54	32-106	9	30
Benz(a)anthracene	8270D	972	1650	59	934	1670	56	33-109	5	30
Benzo(a)pyrene	8270D	1260	1650	76	1200	1670	72	34-115	5	30
Benzo(b)fluoranthene	8270D	985	1650	60	929	1670	56	31-107	7	30
Benzo(g,h,i)perylene	8270D	1080	1650	65	1050	1670	63	30-127	3	30
Benzo(k)fluoranthene	8270D	1070	1650	65	1040	1670	62	34-111	5	30

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276

Date Analyzed: 11/06/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg

Basis:Dry

Lab Control Sample
RQ2013452-02

Duplicate Lab Control Sample
RQ2013452-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Biphenyl	8270D	733	1650	44	647	1670	39	26-88	12	30
2,2'-Oxybis(1-chloropropane)	8270D	698	1650	42	677	1670	41	10-82	2	30
Bis(2-chloroethoxy)methane	8270D	792	1650	48	754	1670	45	17-85	6	30
Bis(2-chloroethyl) Ether	8270D	715	1650	43	710	1670	42	10-79	2	30
Bis(2-ethylhexyl) Phthalate	8270D	1010	1650	61	932	1670	56	31-115	9	30
Butyl Benzyl Phthalate	8270D	1010	1650	61	959	1670	57	31-115	7	30
Caprolactam	8270D	787	1650	48	762	1670	46	28-99	4	30
Carbazole	8270D	952	1650	58	931	1670	56	23-129	4	30
Chrysene	8270D	1010	1650	61	980	1670	59	34-108	3	30
Di-n-butyl Phthalate	8270D	1060	1650	64	1020	1670	61	33-114	5	30
Di-n-octyl Phthalate	8270D	1040	1650	63	987	1670	59	32-116	7	30
Dibenz(a,h)anthracene	8270D	1150	1650	69	1110	1670	67	23-122	3	30
Dibenzofuran	8270D	838	1650	51	817	1670	49	27-94	4	30
Diethyl Phthalate	8270D	895	1650	54	875	1670	52	26-101	4	30
Dimethyl Phthalate	8270D	855	1650	52	862	1670	52	27-98	<1	30
Fluoranthene	8270D	980	1650	59	945	1670	57	34-111	3	30
Fluorene	8270D	827	1650	50	814	1670	49	27-95	2	30
Hexachlorobenzene	8270D	952	1650	58	917	1670	55	30-104	5	30
Hexachlorobutadiene	8270D	775	1650	47	763	1670	46	10-142	2	30
Hexachlorocyclopentadiene	8270D	594	1650	36	585	1670	35	10-133	3	30
Hexachloroethane	8270D	611	1650	37	606	1670	36	10-129	3	30
Indeno(1,2,3-cd)pyrene	8270D	1100	1650	66	1060	1670	63	33-121	5	30
Isophorone	8270D	647	1650	39	614	1670	37	21-79	5	30
N-Nitrosodi-n-propylamine	8270D	696	1650	42	661	1670	40	15-78	5	30
N-Nitrosodiphenylamine	8270D	800	1650	48	769	1670	46	29-108	4	30
Naphthalene	8270D	739	1650	45	717	1670	43	18-81	5	30
Nitrobenzene	8270D	727	1650	44	712	1670	43	14-80	2	30
Pentachlorophenol (PCP)	8270D	685 J	1650	41	603 J	1670	36	13-117	13	30
Phenanthrene	8270D	909	1650	55	844	1670	51	33-103	8	30
Phenol	8270D	729	1650	44	697	1670	42	10-144	5	30
Pyrene	8270D	1110	1650	67	1060	1670	63	33-111	6	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Analyzed: 11/10/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Analyte Name	Lab Control Sample RQ2013497-02				Duplicate Lab Control Sample RQ2013497-03				RPD	RPD Limit
	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits		
1,2,4,5-Tetrachlorobenzene	8270D	56.9	80.5	71	65.0	80.5	81	15-132	13	30
2,3,4,6-Tetrachlorophenol	8270D	59.9	80.0	75	67.1	80.0	84	42-136	11	30
2,4,5-Trichlorophenol	8270D	53.5	80.0	67	62.4	80.0	78	48-134	15	30
2,4,6-Trichlorophenol	8270D	53.9	80.0	67	60.6	80.0	76	44-135	13	30
2,4-Dichlorophenol	8270D	52.0	80.0	65	57.7	80.0	72	48-127	10	30
2,4-Dimethylphenol	8270D	55.3	80.0	69	63.0	80.0	79	59-113	14	30
2,4-Dinitrophenol	8270D	50 U	80.0	0 *	20 U	80.0	0 *	21-154	NC	30
2,4-Dinitrotoluene	8270D	63.5	80.0	79	73.8	80.0	92	54-130	15	30
2,6-Dinitrotoluene	8270D	69.8	80.0	87	82.1	80.0	103	51-127	17	30
2-Chloronaphthalene	8270D	51.1	80.0	64	57.5	80.0	72	40-108	12	30
2-Chlorophenol	8270D	48.0	80.0	60	47.6	80.0	60	42-112	<1	30
2-Methylnaphthalene	8270D	50.4	80.0	63	55.0	80.0	69	34-102	9	30
2-Methylphenol	8270D	49.8	80.0	62	54.6	80.0	68	47-100	9	30
2-Nitroaniline	8270D	63.5	80.0	79	73.6	80.0	92	52-133	15	30
2-Nitrophenol	8270D	51.6	80.0	65	57.4	80.0	72	43-131	10	30
3,3'-Dichlorobenzidine	8270D	65.5	80.0	82	75.0	80.0	94	43-126	14	30
3- and 4-Methylphenol Coelution	8270D	46.7	80.0	58	52.9	80.0	66	40-92	13	30
3-Nitroaniline	8270D	54.1	80.0	68	66.0	80.0	83	42-111	20	30
4,6-Dinitro-2-methylphenol	8270D	41.4 J	80.0	52	49.7 J	80.0	62	36-152	18	30
4-Bromophenyl Phenyl Ether	8270D	74.4	80.0	93	85.4	80.0	107	48-114	14	30
4-Chloro-3-methylphenol	8270D	59.9	80.0	75	73.8	80.0	92	52-113	20	30
4-Chloroaniline	8270D	55.8	80.0	70	70.7	80.0	88	44-109	23	30
4-Chlorophenyl Phenyl Ether	8270D	64.3	80.0	80	72.6	80.0	91	51-107	13	30
4-Nitroaniline	8270D	51.2	80.0	64	66.0	80.0	82	54-133	25	30
4-Nitrophenol	8270D	24.2 J	80.0	30	28.8 J	80.0	36	10-126	18	30
Acenaphthene	8270D	56.0	80.0	70	63.5	80.0	79	52-107	12	30
Acenaphthylene	8270D	58.3	80.0	73	68.0	80.0	85	55-109	15	30
Acetophenone	8270D	105	160	66	115	160	72	46-114	9	30
Anthracene	8270D	66.5	80.0	83	76.3	80.0	95	55-116	13	30
Atrazine	8270D	74.0	80.0	92	92.7	80.0	116	61-164	23	30
Benz(a)anthracene	8270D	59.0	80.0	74	68.1	80.0	85	61-121	14	30
Benzaldehyde	8270D	58.2	80.0	73	58.1	80.0	73	45-132	<1	30
Benzo(a)pyrene	8270D	74.6	80.0	93	85.7	80.0	107	44-114	14	30

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Analyzed: 11/10/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2013497-02

Duplicate Lab Control Sample
RQ2013497-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Benzo(b)fluoranthene	8270D	62.9	80.0	79	70.2	80.0	88	62-115	11	30
Benzo(g,h,i)perylene	8270D	70.4	80.0	88	80.0	80.0	100	63-136	13	30
Benzo(k)fluoranthene	8270D	64.3	80.0	80	73.6	80.0	92	49-133	14	30
Biphenyl	8270D	48.6	80.0	61	56.7	80.0	71	39-106	15	30
2,2'-Oxybis(1-chloropropane)	8270D	50.6	80.0	63	52.1	80.0	65	32-122	3	30
Bis(2-chloroethoxy)methane	8270D	61.4	80.0	77	69.1	80.0	86	55-110	11	30
Bis(2-chloroethyl) Ether	8270D	54.8	80.0	68	56.0	80.0	70	46-102	3	30
Bis(2-ethylhexyl) Phthalate	8270D	67.6	80.0	85	74.7	80.0	93	51-132	9	30
Butyl Benzyl Phthalate	8270D	65.3	80.0	82	72.8	80.0	91	41-148	10	30
Caprolactam	8270D	19.7	80.0	25	26.8	80.0	34	10-41	31*	30
Carbazole	8270D	69.3	80.0	87	80.2	80.0	100	56-139	14	30
Chrysene	8270D	63.6	80.0	80	73.3	80.0	92	57-118	14	30
Di-n-butyl Phthalate	8270D	76.2	80.0	95	88.7	80.0	111	57-128	16	30
Di-n-octyl Phthalate	8270D	73.6	80.0	92	81.4	80.0	102	62-124	10	30
Dibenz(a,h)anthracene	8270D	68.1	80.0	85	80.3	80.0	100	54-135	16	30
Dibenzofuran	8270D	61.5	80.0	77	70.3	80.0	88	55-110	13	30
Diethyl Phthalate	8270D	61.4	80.0	77	66.3	80.0	83	53-113	8	30
Dimethyl Phthalate	8270D	68.1	80.0	85	80.0	80.0	100	51-112	16	30
Fluoranthene	8270D	73.0	80.0	91	83.8	80.0	105	66-127	14	30
Fluorene	8270D	62.2	80.0	78	72.0	80.0	90	54-106	14	30
Hexachlorobenzene	8270D	70.7	80.0	88	82.6	80.0	103	53-123	16	30
Hexachlorobutadiene	8270D	46.0	80.0	57	44.0	80.0	55	16-95	4	30
Hexachlorocyclopentadiene	8270D	15.4	80.0	19	16.6	80.0	21	10-99	10	30
Hexachloroethane	8270D	35.2	80.0	44	31.9	80.0	40	15-92	10	30
Indeno(1,2,3-cd)pyrene	8270D	67.7	80.0	85	78.6	80.0	98	62-137	14	30
Isophorone	8270D	50.4	80.0	63	58.7	80.0	73	50-116	15	30
N-Nitrosodi-n-propylamine	8270D	54.2	80.0	68	60.1	80.0	75	49-115	10	30
N-Nitrosodiphenylamine	8270D	75.9	80.0	95	85.0	80.0	106	45-123	11	30
Naphthalene	8270D	47.1	80.0	59	50.4	80.0	63	38-99	7	30
Nitrobenzene	8270D	50.8	80.0	64	55.3	80.0	69	46-108	8	30
Pentachlorophenol (PCP)	8270D	29.5 J	80.0	37	34.6 J	80.0	43	29-164	15	30
Phenanthrene	8270D	62.1	80.0	78	72.8	80.0	91	58-118	15	30
Phenol	8270D	25.8	80.0	32	29.3	80.0	37	10-113	14	30

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Analyzed: 11/10/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample					Duplicate Lab Control Sample					
RQ2013497-02					RQ2013497-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Pyrene	8270D	62.1	80.0	78	71.8	80.0	90	61-122	14	30

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/06/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2013499-02					Duplicate Lab Control Sample RQ2013499-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,2,4,5-Tetrachlorobenzene	8270D	614	1690	36	113 J	1670	7 *	10-115	135*	30
2,3,4,6-Tetrachlorophenol	8270D	580	1680	35	581	1660	35	29-100	<1	30
2,4,5-Trichlorophenol	8270D	507	1680	30	477	1660	29	29-97	3	30
2,4,6-Trichlorophenol	8270D	500	1680	30	370	1660	22 *	26-97	31*	30
2,4-Dichlorophenol	8270D	528	1680	31	86.8 J	1660	5 *	25-90	144*	30
2,4-Dimethylphenol	8270D	545	1680	32	141 J	1660	9 *	26-89	112*	30
2,4-Dinitrophenol	8270D	1700 U	1680	0 *	650 U	1660	0 *	10-128	NC	30
2,4-Dinitrotoluene	8270D	692	1680	41	681	1660	41	30-111	<1	30
2,6-Dinitrotoluene	8270D	659	1680	39	708	1660	43	28-105	10	30
2-Chloronaphthalene	8270D	537	1680	32	169 J	1660	10 *	21-88	105*	30
2-Chlorophenol	8270D	480	1680	29	81 U	1660	0 *	18-87	NC	30
2-Methylnaphthalene	8270D	515	1680	31	72 U	1660	0 *	21-83	NC	30
2-Methylphenol	8270D	504	1680	30	76.9 J	1660	5 *	22-86	143*	30
2-Nitroaniline	8270D	577	1680	34	595	1660	36	27-105	6	30
2-Nitrophenol	8270D	491	1680	29	95 U	1660	0 *	20-88	NC	30
3- and 4-Methylphenol Coelution	8270D	495	1680	30	148 J	1660	9 *	27-92	108*	30
3-Nitroaniline	8270D	533	1680	32	615	1660	37	27-98	14	30
4,6-Dinitro-2-methylphenol	8270D	377 J	1680	22	345 J	1660	21	11-96	5	30
4-Bromophenyl Phenyl Ether	8270D	672	1680	40	767	1660	46	25-96	14	30
4-Chloro-3-methylphenol	8270D	544	1680	32	522	1660	32	29-92	<1	30
4-Chloroaniline	8270D	381	1680	23	172 J	1660	10 *	21-72	79*	30
4-Chlorophenyl Phenyl Ether	8270D	582	1680	35	579	1660	35	25-92	<1	30
4-Nitroaniline	8270D	590	1680	35	604	1660	36	27-102	3	30
4-Nitrophenol	8270D	544 J	1680	32	481 J	1660	29	10-130	10	30
Acenaphthene	8270D	527	1680	31	380	1660	23 *	25-92	30	30
Acenaphthylene	8270D	570	1680	34	366	1660	22 *	27-93	43*	30
Acetophenone	8270D	827	3360	25	75 U	3310	0 *	23-87	NC	30
Anthracene	8270D	686	1680	41	717	1660	43	32-106	5	30
Benz(a)anthracene	8270D	720	1680	43	659	1660	40	33-109	7	30
Benzo(a)pyrene	8270D	908	1680	54	826	1660	50	34-115	8	30
Benzo(b)fluoranthene	8270D	730	1680	44	678	1660	41	31-107	7	30
Benzo(g,h,i)perylene	8270D	759	1680	45	709	1660	43	30-127	5	30
Benzo(k)fluoranthene	8270D	758	1680	45	711	1660	43	34-111	5	30

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/06/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2013499-02					Duplicate Lab Control Sample RQ2013499-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Biphenyl	8270D	473	1680	28	165 J	1660	10 *	26-88	95*	30
2,2'-Oxybis(1-chloropropane)	8270D	454	1680	27	130 U	1660	0 *	10-82	NC	30
Bis(2-chloroethoxy)methane	8270D	545	1680	32	88 U	1660	0 *	17-85	NC	30
Bis(2-chloroethyl) Ether	8270D	483	1680	29	86 U	1660	0 *	10-79	NC	30
Bis(2-ethylhexyl) Phthalate	8270D	812	1680	48	703	1660	42	31-115	13	30
Butyl Benzyl Phthalate	8270D	770	1680	46	693	1660	42	31-115	9	30
Caprolactam	8270D	608	1680	36	653	1660	39	28-99	8	30
Carbazole	8270D	763	1680	45	788	1660	48	23-129	6	30
Chrysene	8270D	767	1680	46	712	1660	43	34-108	7	30
Di-n-butyl Phthalate	8270D	853	1680	51	851	1660	51	33-114	<1	30
Di-n-octyl Phthalate	8270D	819	1680	49	735	1660	44	32-116	11	30
Dibenz(a,h)anthracene	8270D	780	1680	46	727	1660	44	23-122	4	30
Dibenzofuran	8270D	558	1680	33	485	1660	29	27-94	13	30
Diethyl Phthalate	8270D	622	1680	37	579	1660	35	26-101	6	30
Dimethyl Phthalate	8270D	659	1680	39	687	1660	41	27-98	5	30
Fluoranthene	8270D	801	1680	48	802	1660	48	34-111	<1	30
Fluorene	8270D	576	1680	34	578	1660	35	27-95	3	30
Hexachlorobenzene	8270D	716	1680	43	782	1660	47	30-104	9	30
Hexachlorobutadiene	8270D	534	1680	32	80 U	1660	0 *	10-142	NC	30
Hexachlorocyclopentadiene	8270D	335	1680	20	72 U	1660	0 *	10-133	NC	30
Hexachloroethane	8270D	443	1680	26	85 U	1660	0 *	10-129	NC	30
Indeno(1,2,3-cd)pyrene	8270D	774	1680	46	718	1660	43	33-121	7	30
Isophorone	8270D	442	1680	26	125 J	1660	8 *	21-79	106*	30
N-Nitrosodi-n-propylamine	8270D	465	1680	28	88 U	1660	0 *	15-78	NC	30
N-Nitrosodiphenylamine	8270D	709	1680	42	775	1660	47	29-108	11	30
Naphthalene	8270D	534	1680	32	85 U	1660	0 *	18-81	NC	30
Nitrobenzene	8270D	496	1680	30	85 U	1660	0 *	14-80	NC	30
Pentachlorophenol (PCP)	8270D	384 J	1680	23	367 J	1660	22	13-117	4	30
Phenanthrene	8270D	658	1680	39	679	1660	41	33-103	5	30
Phenol	8270D	498	1680	30	138 J	1660	8 *	10-144	116*	30
Pyrene	8270D	732	1680	44	687	1660	41	33-111	7	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	Nitrobenzene-d5	p-Terphenyl-d14
		10 - 115	10 - 130	10 - 130
MW-BCP-15-02	R2010276-001	69	73	70
MW-BCP-150-02	R2010276-003	77	87	88
TP-BCP-31-01-10292020	R2010276-006	66	97	80
MW-BCP-15-61	R2010276-011	63	66	72
MW-BCP-15-02 MS	RQ2013579-01	62	105	87
MW-BCP-15-02 DMS	RQ2013579-02	68	93	74
Method Blank	RQ2013579-03	63	67	78
Lab Control Sample	RQ2013579-04	74	76	83
Duplicate Lab Control Sample	RQ2013579-05	62	68	80

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20
Date Received: 10/31/20
Date Analyzed: 11/16/20
Date Extracted: 11/6/20

Duplicate Matrix Spike Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001
Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry

Analyte Name	Matrix Spike RQ2013579-01				Duplicate Matrix Spike RQ2013579-02				% Rec Limits	RPD	RPD Limit
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec				
1,4-Dioxane	760 U	760 U	230	0 *	760 U	232	0 *	13-91	NC		30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013579-03

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	67 U	67	35	1	11/11/20 14:10	11/6/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	63	10 - 115	11/11/20 14:10	
Nitrobenzene-d5	67	10 - 130	11/11/20 14:10	
p-Terphenyl-d14	78	10 - 130	11/11/20 14:10	

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/11/20

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ2013579-04			RQ2013579-05				
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,4-Dioxane	8270D	70.7	203	35	45.0 J	200	22 *	24-101	44*	30



Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory

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ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276

SURROGATE RECOVERY SUMMARY
Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Extraction Method: EPA 3541

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10 - 145	10 - 123
MW-BCP-15-02	R2010276-001	77	72
MW-BCP-150-02	R2010276-003	76	60
TP-BCP-31-01-10292020	R2010276-006	81	44
MW-BCP-15-61	R2010276-011	70	69
Method Blank	RQ2013370-01	51	66
Lab Control Sample	RQ2013370-02	56	67
Duplicate Lab Control Sample	RQ2013370-03	63	67
MW-BCP-15-02 MS	RQ2013370-06	76	63
MW-BCP-15-02 DMS	RQ2013370-07	67	62

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20
Date Received: 10/31/20
Date Analyzed: 11/6/20
Date Extracted: 11/4/20

Duplicate Matrix Spike Summary
Organochlorine Pesticides by Gas Chromatography

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001
Analysis Method: 8081B
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike RQ2013370-06			Duplicate Matrix Spike RQ2013370-07			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
4,4'-DDD	9.7 U	6.50 J	7.62	85	5.63 J	7.53	75	10-165	14	30
4,4'-DDE	9.7 U	5.29 J	7.62	69	9.6 U	7.53	0 *	10-200	NC	30
4,4'-DDT	5.8 J	9.51 J	7.62	49	5.89 J	7.53	1 *	10-200	47*	30
Aldrin	9.7 U	9.7 U	7.62	0 *	9.6 U	7.53	0 *	10-171	NC	30
Dieldrin	9.7 U	7.40 J	7.62	97	9.6 U	7.53	0 *	10-200	NC	30
Endosulfan I	9.7 U	27.0	7.62	355 *	20.7	7.53	275 *	10-174	27	30
Endosulfan II	9.7 U	9.7 U	7.62	0 *	9.6 U	7.53	0 *	10-185	NC	30
Endosulfan Sulfate	9.7 U	22.6	7.62	296 *	4.97 J	7.53	66	10-155	128*	30
Endrin	9.7 U	9.7 U	7.62	0 *	9.6 U	7.53	0 *	10-200	NC	30
Endrin Aldehyde	9.7 U	7.59 J	7.62	100	6.46 J	7.53	86	10-148	16	30
Endrin Ketone	9.7 U	6.60 J	7.62	87	9.6 U	7.53	0 *	10-197	NC	30
Heptachlor	9.7 U	5.43 J	7.62	71	7.26 J	7.53	96	12-160	29	30
Heptachlor Epoxide	9.7 U	5.06 J	7.62	66	9.6 U	7.53	0 *	10-180	NC	30
Methoxychlor	9.7 U	49.3	7.62	647 *	44.6	7.53	592 *	10-200	10	30
alpha-BHC	9.7 U	9.7 U	7.62	0 *	9.6 U	7.53	0 *	10-149	NC	30
alpha-Chlordane	9.7 U	9.7 U	7.62	0 *	9.6 U	7.53	0 *	10-175	NC	30
beta-BHC	9.7 U	9.7 U	7.62	0 *	21.4	7.53	284 *	10-162	NC	30
delta-BHC	9.7 U	4.90 J	7.62	64	5.21 J	7.53	69	10-157	6	30
gamma-BHC (Lindane)	9.7 U	9.7 U	7.62	0 *	9.6 U	7.53	0 *	10-170	NC	30
gamma-Chlordane	9.7 U	9.7 U	7.62	0 *	9.6 U	7.53	0 *	10-176	NC	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013370-01

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
4,4'-DDE	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
4,4'-DDT	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
Aldrin	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
Dieldrin	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
Endosulfan I	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
Endosulfan II	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
Endosulfan Sulfate	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
Endrin	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
Endrin Aldehyde	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
Endrin Ketone	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
Heptachlor	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
Heptachlor Epoxide	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
Methoxychlor	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
Toxaphene	33 U	33	19	1	11/05/20 13:19	11/4/20	
alpha-BHC	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
alpha-Chlordane	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
beta-BHC	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
delta-BHC	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
gamma-BHC (Lindane)	1.7 U	1.7	0.84	1	11/05/20 13:19	11/4/20	
gamma-Chlordane	1.7 U	1.7	0.84	1	11/17/20 12:49	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	51	10 - 145	11/05/20 13:19	
Tetrachloro-m-xylene	66	10 - 123	11/05/20 13:19	

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/05/20 - 11/17/20

Duplicate Lab Control Sample Summary
Organochlorine Pesticides by Gas Chromatography

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2013370-02					Duplicate Lab Control Sample RQ2013370-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
4,4'-DDD	8081B	4.55	6.64	69	5.10	6.65	77	33-149	11	30
4,4'-DDE	8081B	4.49	6.64	68	4.71	6.65	71	38-147	5	30
4,4'-DDT	8081B	3.61	6.64	54	4.32	6.65	65	37-146	18	30
Aldrin	8081B	4.45	6.64	67	4.59	6.65	69	25-146	3	30
Dieldrin	8081B	4.39	6.64	66	4.66	6.65	70	40-140	6	30
Endosulfan I	8081B	4.31	6.64	65	4.57	6.65	69	35-116	6	30
Endosulfan II	8081B	3.80	6.64	57	4.47	6.65	67	39-122	16	30
Endosulfan Sulfate	8081B	4.10	6.64	62	4.49	6.65	68	31-132	9	30
Endrin	8081B	4.53	6.64	68	4.87	6.65	73	40-144	7	30
Endrin Aldehyde	8081B	4.11	6.64	62	4.20	6.65	63	10-109	2	30
Endrin Ketone	8081B	3.97	6.64	60	4.52	6.65	68	38-122	13	30
Heptachlor	8081B	4.71	6.64	71	4.97	6.65	75	34-142	5	30
Heptachlor Epoxide	8081B	4.45	6.64	67	4.65	6.65	70	37-113	5	30
Methoxychlor	8081B	3.80	6.64	57	4.18	6.65	63	41-152	10	30
alpha-BHC	8081B	4.66	6.64	70	4.82	6.65	73	28-145	3	30
alpha-Chlordane	8081B	4.38	6.64	66	4.59	6.65	69	37-114	5	30
beta-BHC	8081B	4.54	6.64	68	4.86	6.65	73	38-144	7	30
delta-BHC	8081B	5.06	6.64	76	5.17	6.65	78	30-153	2	30
gamma-BHC (Lindane)	8081B	4.47	6.64	67	4.70	6.65	71	32-145	5	30
gamma-Chlordane	8081B	4.63	6.64	70	4.58	6.65	69	34-123	1	30

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001

Units: ug/Kg
Basis: Dry
Percent Solids: 87.8

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDT	4.8	5.8	10	53	J	5	11/06/20 10:29

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20

Sample Name: MW-BCP-150-02
Lab Code: R2010276-003

Units: ug/Kg
Basis: Dry
Percent Solids: 88.3

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDT	4.8	6.3	10	45	J	5	11/06/20 11:26

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil
Sample Name: TP-BCP-31-01-10292020
Lab Code: R2010276-006

Service Request: R2010276
Date Collected: 10/29/20 12:00
Date Received: 10/31/20

Units: ug/Kg

Basis: Dry

Percent Solids: 79.7

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-Chlordane	5.3	9.7	3500	199	J	5	11/06/20 11:46

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276

Date Collected: NA

Date Received:

Sample Name: Lab Control Sample

Lab Code: RQ2013370-02

Units: ug/Kg

Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B

Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-Chlordane	0.84	4.63	4.69	1		1	11/17/20 13:08
4,4'-DDD	0.84	4.55	4.82	6		1	11/05/20 13:38
4,4'-DDE	0.84	4.49	4.55	1		1	11/05/20 13:38
4,4'-DDT	0.84	3.61	3.97	9		1	11/05/20 13:38
Aldrin	0.84	4.45	4.65	4		1	11/05/20 13:38
Diieldrin	0.84	4.39	4.47	2		1	11/05/20 13:38
Endosulfan I	0.84	4.31	4.37	1		1	11/05/20 13:38
Endosulfan II	0.84	3.80	4.11	8		1	11/05/20 13:38
Endosulfan Sulfate	0.84	4.10	4.23	3		1	11/05/20 13:38
Endrin	0.84	4.53	4.60	2		1	11/05/20 13:38
Endrin Aldehyde	0.84	4.11	4.20	2		1	11/05/20 13:38
Endrin Ketone	0.84	3.97	4.24	7		1	11/05/20 13:38
Heptachlor	0.84	4.71	5.16	9		1	11/05/20 13:38
Heptachlor Epoxide	0.84	4.45	4.47	<1		1	11/05/20 13:38
Methoxychlor	0.84	3.80	4.10	8		1	11/05/20 13:38
alpha-BHC	0.84	4.66	4.72	1		1	11/05/20 13:38
alpha-Chlordane	0.84	4.38	4.46	2		1	11/05/20 13:38
beta-BHC	0.84	4.54	4.76	5		1	11/05/20 13:38
delta-BHC	0.84	5.06	5.08	<1		1	11/05/20 13:38
gamma-BHC (Lindane)	0.84	4.47	4.62	3		1	11/05/20 13:38

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276

Date Collected: NA

Date Received:

Sample Name: Duplicate Lab Control Sample

Lab Code: RQ2013370-03

Units: ug/Kg

Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B

Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-Chlordane	0.84	4.58	4.71	3		1	11/17/20 13:27
4,4'-DDD	0.84	5.10	5.21	2		1	11/05/20 13:57
4,4'-DDE	0.84	4.71	4.76	1		1	11/05/20 13:57
4,4'-DDT	0.84	4.32	4.43	3		1	11/05/20 13:57
Aldrin	0.84	4.59	4.90	7		1	11/05/20 13:57
Diieldrin	0.84	4.66	4.84	4		1	11/05/20 13:57
Endosulfan I	0.84	4.57	4.67	2		1	11/05/20 13:57
Endosulfan II	0.84	4.47	4.51	<1		1	11/05/20 13:57
Endosulfan Sulfate	0.84	4.49	4.72	5		1	11/05/20 13:57
Endrin	0.84	4.87	5.04	3		1	11/05/20 13:57
Endrin Aldehyde	0.84	4.20	4.39	4		1	11/05/20 13:57
Endrin Ketone	0.84	4.52	4.60	2		1	11/05/20 13:57
Heptachlor	0.84	4.97	5.23	5		1	11/05/20 13:57
Heptachlor Epoxide	0.84	4.65	4.74	2		1	11/05/20 13:57
Methoxychlor	0.84	4.18	4.52	8		1	11/05/20 13:57
alpha-BHC	0.84	4.82	4.84	<1		1	11/05/20 13:57
alpha-Chlordane	0.84	4.59	4.73	3		1	11/05/20 13:57
beta-BHC	0.84	4.86	4.89	<1		1	11/05/20 13:57
delta-BHC	0.84	5.17	5.36	4		1	11/05/20 13:57
gamma-BHC (Lindane)	0.84	4.70	4.76	1		1	11/05/20 13:57

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20

Sample Name: MW-BCP-15-02
Lab Code: RQ2013370-06

Units: ug/Kg
Basis: Dry
Percent Solids: 87.8

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	4.9	6.50	11.7	57	J	5	11/06/20 10:48
4,4'-DDE	4.9	5.29	7.10	29	J	5	11/06/20 10:48
4,4'-DDT	4.9	9.51	10.8	13	J	5	11/06/20 10:48
Dieldrin	4.9	7.40	7.78	5	J	5	11/06/20 10:48
Endosulfan I	4.9	27.0	4.9	139		5	11/06/20 10:48
Endosulfan Sulfate	4.9	22.6	7.41	101		5	11/06/20 10:48
Endrin Aldehyde	4.9	7.59	16.6	74	J	5	11/06/20 10:48
Endrin Ketone	4.9	6.60	107	177	J	5	11/06/20 10:48
Heptachlor	4.9	5.43	7.11	27	J	5	11/06/20 10:48
Heptachlor Epoxide	4.9	5.06	6.35	23	J	5	11/06/20 10:48
Methoxychlor	4.9	49.3	10.1	132		5	11/06/20 10:48
delta-BHC	4.9	4.90	5.12	4	J	5	11/06/20 10:48

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20

Sample Name: MW-BCP-15-02
Lab Code: RQ2013370-07

Units: ug/Kg
Basis: Dry
Percent Solids: 87.8

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	4.8	5.63	9.43	50	J	5	11/06/20 11:07
4,4'-DDT	4.8	5.89	9.29	45	J	5	11/06/20 11:07
Endosulfan I	4.8	20.7	4.8	125		5	11/06/20 11:07
Endosulfan Sulfate	4.8	4.97	15.3	102	J	5	11/06/20 11:07
Endrin Aldehyde	4.8	6.46	12.6	64	J	5	11/06/20 11:07
Heptachlor	4.8	7.26	11.6	46	J	5	11/06/20 11:07
Methoxychlor	4.8	44.6	7.29	144		5	11/06/20 11:07
beta-BHC	4.8	21.4	5.24	121		5	11/06/20 11:07
delta-BHC	4.8	5.21	9.74	61	J	5	11/06/20 11:07

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Sample Name: Performance Evaluation
Lab Code: RQ2013877-01

Service Request: R2010276
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

8081B

Prep Method:

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDT	0.84	35	30	15	E	1	11/05/20 12:02
Endrin	0.84	15	17	12		1	11/05/20 12:02
Methoxychlor	0.84	61	73	18	E	1	11/05/20 12:02
alpha-BHC	0.84	3.4	3.3	3		1	11/05/20 12:02
beta-BHC	0.84	3.4	3.5	3		1	11/05/20 12:02
gamma-BHC (Lindane)	0.84	3.4	3.2	6		1	11/05/20 12:02

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Sample Name: Performance Evaluation
Lab Code: RQ2013878-01

Service Request: R2010276
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

8081B

Prep Method:

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDT	0.84	26	30	14		1	11/06/20 09:32
Endrin	0.84	14	15	7		1	11/06/20 09:32
Methoxychlor	0.84	55	64	15	E	1	11/06/20 09:32
alpha-BHC	0.84	3.0	3.1	3		1	11/06/20 09:32
beta-BHC	0.84	3.1	3.2	3		1	11/06/20 09:32
gamma-BHC (Lindane)	0.84	3.0	3.1	3		1	11/06/20 09:32

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Sample Name: Performance Evaluation
Lab Code: RQ2014730-03

Service Request: R2010276
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

8081B

Prep Method:

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDT	0.84	38	33	14	E	1	11/17/20 10:36
Endrin	0.84	18	20	11		1	11/17/20 10:36
Methoxychlor	0.84	69	78	12	E	1	11/17/20 10:36
alpha-BHC	0.84	3.9	4.0	3		1	11/17/20 10:36
beta-BHC	0.84	4.0	4.1	2		1	11/17/20 10:36
gamma-BHC (Lindane)	0.84	3.9	4.0	3		1	11/17/20 10:36

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Sample Name: Performance Evaluation
Lab Code: RQ2014734-04

Service Request: R2010276
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

8081B

Prep Method:

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.84	1.3	1.6	21	J	1	11/18/20 08:47
4,4'-DDT	0.84	36	46	24	E	1	11/18/20 08:47
Endrin	0.84	21	24	13		1	11/18/20 08:47
Methoxychlor	0.84	76	91	18	E	1	11/18/20 08:47
alpha-BHC	0.84	4.7	5.0	6		1	11/18/20 08:47
beta-BHC	0.84	4.9	4.9	<1		1	11/18/20 08:47
gamma-BHC (Lindane)	0.84	4.7	4.9	4		1	11/18/20 08:47

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Extraction Method: EPA 3541

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		22 - 128	14 - 119
MW-BCP-15-02	R2010276-001	63	59
MW-BCP-150-02	R2010276-003	64	67
TP-BCP-31-01-10292020	R2010276-006	39	46
MW-BCP-15-61	R2010276-011	62	58
Method Blank	RQ2013370-01	82	74
Lab Control Sample	RQ2013370-04	76	67
Duplicate Lab Control Sample	RQ2013370-05	73	61
MW-BCP-15-02 MS	RQ2013370-08	63	67
MW-BCP-15-02 DMS	RQ2013370-09	54	60

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20
Date Received: 10/31/20
Date Analyzed: 11/7/20
Date Extracted: 11/4/20

Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs) by GC

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001
Analysis Method: 8082A
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike RQ2013370-08		Result	Duplicate Matrix Spike RQ2013370-09		% Rec Limits	RPD	RPD Limit
			Spike Amount	% Rec		Spike Amount	% Rec			
Aroclor 1016	38 U	151	191	79	129	188	68	26-137	16	30
Aroclor 1260	94	240	191	77	199	188	56	30-156	19	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013370-01

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	33 U	33	17	1	11/05/20 20:11	11/4/20	
Aroclor 1221	67 U	67	17	1	11/05/20 20:11	11/4/20	
Aroclor 1232	33 U	33	17	1	11/05/20 20:11	11/4/20	
Aroclor 1242	33 U	33	17	1	11/05/20 20:11	11/4/20	
Aroclor 1248	33 U	33	17	1	11/05/20 20:11	11/4/20	
Aroclor 1254	33 U	33	17	1	11/05/20 20:11	11/4/20	
Aroclor 1260	33 U	33	17	1	11/05/20 20:11	11/4/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	82	22 - 128	11/05/20 20:11	
Tetrachloro-m-xylene	74	14 - 119	11/05/20 20:11	

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/05/20

Duplicate Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Units:ug/Kg
Basis:Dry

Lab Control Sample					Duplicate Lab Control Sample					
RQ2013370-04					RQ2013370-05					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aroclor 1016	8082A	115	167	69	112	167	67	41-127	3	30
Aroclor 1260	8082A	125	167	75	122	167	73	37-127	2	30

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001

Units: ug/Kg
Basis: Dry
Percent Solids: 87.8

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1260	20	94	130	32		1	11/07/20 07:23

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:05
Date Received: 10/31/20

Sample Name: MW-BCP-150-02
Lab Code: R2010276-003

Units: ug/Kg
Basis: Dry
Percent Solids: 88.3

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1248	20	30	34	12	J	1	11/10/20 16:33
Aroclor 1254	20	31	49	45	J	1	11/10/20 16:33
Aroclor 1260	20	120	140	15		1	11/10/20 16:33

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 12:45
Date Received: 10/31/20

Sample Name: MW-BCP-15-61
Lab Code: R2010276-011

Units: ug/Kg
Basis: Dry
Percent Solids: 92.5

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1254	19	25	53	72	JP	1	11/10/20 16:52
Aroclor 1260	19	65	82	23		1	11/10/20 16:52

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: RQ2013370-04

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1016	18	115	132	14		1	11/05/20 20:30
Aroclor 1260	18	125	144	14		1	11/05/20 20:30

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276

Date Collected: NA

Date Received:

Sample Name: Duplicate Lab Control Sample

Lab Code: RQ2013370-05

Units: ug/Kg

Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A

Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1016	18	112	128	13		1	11/05/20 20:50
Aroclor 1260	18	122	140	14		1	11/05/20 20:50

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20

Sample Name: MW-BCP-15-02
Lab Code: RQ2013370-08

Units: ug/Kg
Basis: Dry
Percent Solids: 87.8

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1016	20	151	164	8		1	11/07/20 07:42
Aroclor 1260	20	240	288	18		1	11/07/20 07:42

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20

Sample Name: MW-BCP-15-02
Lab Code: RQ2013370-09

Units: ug/Kg
Basis: Dry
Percent Solids: 87.8

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1016	20	129	139	7		1	11/07/20 08:02
Aroclor 1260	20	199	256	25		1	11/07/20 08:02

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic
		Acid 10 - 151
MW-BCP-15-02	R2010276-001	75
MW-BCP-150-02	R2010276-003	0 *
TP-BCP-31-01-10292020	R2010276-006	91
MW-BCP-15-61	R2010276-011	79
MW-BCP-15-02 MS	RQ2013660-01	79
MW-BCP-15-02 DMS	RQ2013660-02	6 *
Method Blank	RQ2013660-03	60
Lab Control Sample	RQ2013660-04	74
Duplicate Lab Control Sample	RQ2013660-05	66

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20
Date Received: 10/31/20
Date Analyzed: 11/10/20
Date Extracted: 11/9/20

Duplicate Matrix Spike Summary
Chlorinated Herbicides by GC

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001
Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike RQ2013660-01			Duplicate Matrix Spike RQ2013660-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-T	11 U	37.4	57.0	66	11 U	57.4	0 *	19-127	NC	30
2,4,5-TP	11 U	28.9	57.0	51	11 U	57.4	0 *	11-133	NC	30
2,4-D	11 U	35.1	57.0	62	11 U	57.4	0 *	24-165	NC	30
Dicamba	11 U	29.3	57.0	51	11 U	57.4	0 *	10-136	NC	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: RQ2013660-03

Service Request: R2010276
Date Collected: NA
Date Received: NA

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	10 U	10	5.0	1	11/10/20 17:33	11/9/20	
2,4,5-TP	10 U	10	4.5	1	11/10/20 17:33	11/9/20	
2,4-D	10 U	10	6.5	1	11/10/20 17:33	11/9/20	
Dicamba	10 U	10	3.1	1	11/10/20 17:33	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	60	10 - 151	11/10/20 17:33	

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/10/20

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Units:ug/Kg
Basis:Dry

Lab Control Sample					Duplicate Lab Control Sample					
RQ2013660-04					RQ2013660-05					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2,4,5-T	8151A	30.0	49.9	60	31.0	50.4	61	19-127	3	30
2,4,5-TP	8151A	31.6	49.9	63	32.5	50.4	64	18-122	3	30
2,4-D	8151A	28.7	49.9	58	29.8	50.4	59	24-165	4	30
Dicamba	8151A	29.0	49.9	58	28.5	50.4	57	26-128	2	30

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20 10:00
Date Received: 10/31/20

Sample Name: MW-BCP-15-02
Lab Code: RQ2013660-01

Units: ug/Kg
Basis: Dry
Percent Solids: 87.8

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	5.8	37.4	41.9	11		1	11/10/20 19:32
2,4,5-TP	5.2	28.9	43.4	40		1	11/10/20 19:32
2,4-D	7.5	35.1	41.1	16		1	11/10/20 19:32
Dicamba	3.6	29.3	41.0	33		1	11/10/20 19:32

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276

Date Collected: NA

Date Received:

Sample Name: Lab Control Sample

Lab Code: RQ2013660-04

Units: ug/Kg

Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A

Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	5.0	30.0	44.2	38		1	11/10/20 17:53
2,4,5-TP	4.5	31.6	39.2	21		1	11/10/20 17:53
2,4-D	6.5	28.7	41.2	36		1	11/10/20 17:53
Dicamba	3.1	29.0	37.3	25		1	11/10/20 17:53

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received:

Sample Name: Duplicate Lab Control Sample
Lab Code: RQ2013660-05

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	5.1	31.0	44.0	35		1	11/10/20 18:13
2,4,5-TP	4.6	32.5	41.8	25		1	11/10/20 18:13
2,4-D	6.6	29.8	43.1	36		1	11/10/20 18:13
Dicamba	3.2	28.5	38.4	30		1	11/10/20 18:13



Metals

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: R2010276-MB1

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	20 U	mg/Kg	20	12	1	11/06/20 03:00	11/04/20	
Antimony, Total	6010D	6.0 U	mg/Kg	6.0	0.6	1	11/06/20 03:00	11/04/20	
Arsenic, Total	6010D	1.0 U	mg/Kg	1.0	0.7	1	11/06/20 03:00	11/04/20	
Barium, Total	6010D	2.0 U	mg/Kg	2.0	1.5	1	11/06/20 03:00	11/04/20	
Beryllium, Total	6010D	0.30 U	mg/Kg	0.30	0.03	1	11/06/20 03:00	11/04/20	
Cadmium, Total	6010D	0.50 U	mg/Kg	0.50	0.24	1	11/06/20 03:00	11/04/20	
Calcium, Total	6010D	100 U	mg/Kg	100	40	1	11/06/20 03:00	11/04/20	
Chromium, Total	6010D	1.0 U	mg/Kg	1.0	0.4	1	11/06/20 03:00	11/04/20	
Cobalt, Total	6010D	5.0 U	mg/Kg	5.0	0.5	1	11/06/20 03:00	11/04/20	
Copper, Total	6010D	2.0 U	mg/Kg	2.0	0.7	1	11/06/20 03:00	11/04/20	
Iron, Total	6010D	20 U	mg/Kg	20	13	1	11/06/20 03:00	11/04/20	
Lead, Total	6010D	5.0 U	mg/Kg	5.0	0.4	1	11/06/20 03:00	11/04/20	
Magnesium, Total	6010D	100 U	mg/Kg	100	20	1	11/06/20 03:00	11/04/20	
Manganese, Total	6010D	2.0 U	mg/Kg	2.0	1.5	1	11/06/20 03:00	11/04/20	
Mercury, Total	7471B	0.033 U	mg/Kg	0.033	0.013	1	11/09/20 15:24	11/06/20	
Nickel, Total	6010D	4.0 U	mg/Kg	4.0	0.7	1	11/06/20 03:00	11/04/20	
Potassium, Total	6010D	200 U	mg/Kg	200	50	1	11/06/20 03:00	11/04/20	
Selenium, Total	6010D	1.0 U	mg/Kg	1.0	0.6	1	11/06/20 03:00	11/04/20	
Silver, Total	6010D	1.0 U	mg/Kg	1.0	0.09	1	11/06/20 03:00	11/04/20	
Sodium, Total	6010D	100 U	mg/Kg	100	60	1	11/06/20 03:00	11/04/20	
Thallium, Total	6010D	1.0 U	mg/Kg	1.0	0.7	1	11/06/20 03:00	11/04/20	
Vanadium, Total	6010D	5.0 U	mg/Kg	5.0	0.8	1	11/06/20 03:00	11/04/20	
Zinc, Total	6010D	2.0 U	mg/Kg	2.0	1.4	1	11/06/20 03:00	11/04/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: R2010276-MB2

Service Request: R2010276
Date Collected: NA
Date Received: NA

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	100 U	ug/L	100	30	1	11/06/20 19:34	11/04/20	
Antimony, Total	6010D	5 J	ug/L	60	5	1	11/06/20 19:34	11/04/20	
Arsenic, Total	6010D	10 U	ug/L	10	6	1	11/06/20 19:34	11/04/20	
Barium, Total	6010D	20 U	ug/L	20	3	1	11/06/20 19:34	11/04/20	
Beryllium, Total	6010D	3.0 U	ug/L	3.0	0.2	1	11/06/20 19:34	11/04/20	
Cadmium, Total	6010D	5.0 U	ug/L	5.0	0.4	1	11/06/20 19:34	11/04/20	
Calcium, Total	6010D	1000 U	ug/L	1000	300	1	11/06/20 19:34	11/04/20	
Chromium, Total	6010D	10 U	ug/L	10	0.6	1	11/06/20 19:34	11/04/20	
Cobalt, Total	6010D	50 U	ug/L	50	0.9	1	11/06/20 19:34	11/04/20	
Copper, Total	6010D	20 U	ug/L	20	4	1	11/06/20 19:34	11/04/20	
Iron, Total	6010D	100 U	ug/L	100	70	1	11/06/20 19:34	11/04/20	
Lead, Total	6010D	50 U	ug/L	50	3	1	11/06/20 19:34	11/04/20	
Magnesium, Total	6010D	1000 U	ug/L	1000	30	1	11/06/20 19:34	11/04/20	
Manganese, Total	6010D	10 U	ug/L	10	4	1	11/06/20 19:34	11/04/20	
Mercury, Total	7470A	0.20 U	ug/L	0.20	0.08	1	11/09/20 11:48	11/06/20	
Nickel, Total	6010D	40 U	ug/L	40	3	1	11/06/20 19:34	11/04/20	
Potassium, Total	6010D	2000 U	ug/L	2000	200	1	11/06/20 19:34	11/04/20	
Selenium, Total	6010D	10 U	ug/L	10	7	1	11/06/20 19:34	11/04/20	
Silver, Total	6010D	10 U	ug/L	10	0.6	1	11/06/20 19:34	11/04/20	
Sodium, Total	6010D	1000 U	ug/L	1000	200	1	11/06/20 19:34	11/04/20	
Thallium, Total	6010D	10 U	ug/L	10	7	1	11/06/20 19:34	11/04/20	
Vanadium, Total	6010D	50 U	ug/L	50	0.7	1	11/06/20 19:34	11/04/20	
Zinc, Total	6010D	20 U	ug/L	20	10	1	11/06/20 19:34	11/04/20	

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20
Date Received: 10/31/20
Date Analyzed: 11/06/20 - 11/09/20

Duplicate Matrix Spike Summary
Inorganic Parameters

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001

Units: mg/Kg
Basis: Dry

Matrix Spike R2010276-001MS						Duplicate Matrix Spike R2010276-001DMS					
Analyte Name	Method	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aluminum, Total	6010D	9640	8610	223	-460 #	11400	215	815 #	75-125	28*	20
Antimony, Total	6010D	6.7 U	34.3	55.8	61 *	29.1	53.7	54 *	75-125	16	20
Arsenic, Total	6010D	9.6	12.0	4.5	54 *	12.5	4.3	69 *	75-125	5	20
Barium, Total	6010D	147	320	223	78	348	215	94	75-125	8	20
Beryllium, Total	6010D	1.26	6.02	5.58	85	6.27	5.37	93	75-125	4	20
Cadmium, Total	6010D	0.77	5.82	5.58	90	5.37	5.37	86	75-125	8	20
Calcium, Total	6010D	83300	98700	200	6877 #	106000	200	10424 #	75-125	7	20
Chromium, Total	6010D	17.6	34.8	22.3	77	39.5	21.5	102	75-125	13	20
Cobalt, Total	6010D	3.9 J	54.7	55.8	91	52.1	53.7	90	75-125	5	20
Copper, Total	6010D	32.2	48.3	27.9	57 *	53.0	26.9	77	75-125	9	20
Iron, Total	6010D	25000	21100	110	-3439 #	24500	110	-463 #	75-125	15	20
Lead, Total	6010D	74.2	110	55.8	65 *	122	53.7	88	75-125	10	20
Magnesium, Total	6010D	17700	17700	220	-16 #	30700	210	6030 #	75-125	54*	20
Manganese, Total	6010D	1300	1080	56	-408 #	1550	54	450 #	75-125	36*	20
Mercury, Total	7471B	0.126	0.285	0.190	83	0.285	0.178	89	80-120	<1	20
Nickel, Total	6010D	16.0	62.7	55.8	84	60.0	53.7	82	75-125	4	20
Potassium, Total	6010D	1440	3580	2230	96	3730	2150	106	75-125	4	20
Selenium, Total	6010D	11 U	94	113	83	93	109	86	75-125	<1	20
Silver, Total	6010D	0.2 J	5.7	5.6	99	5.5	5.4	100	75-125	3	20
Sodium, Total	6010D	240	2510	2230	102	2540	2150	107	75-125	1	20
Thallium, Total	6010D	1.1 J	222	223	99	216	215	100	75-125	3	20
Vanadium, Total	6010D	21.9	69.1	55.8	85	68.5	53.7	87	75-125	<1	20
Zinc, Total	6010D	256	347	55.8	162 #	328	53.7	134 #	75-125	6	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/06/20 - 11/09/20

Lab Control Sample Summary
Inorganic Parameters

Units:mg/Kg
Basis:Dry

Lab Control Sample
R2010276-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum, Total	6010D	193	200	96	80-120
Antimony, Total	6010D	46.2	50.0	92	80-120
Arsenic, Total	6010D	3.71	4.0	93	80-120
Barium, Total	6010D	203	200	102	80-120
Beryllium, Total	6010D	4.90	5.00	98	80-120
Cadmium, Total	6010D	5.06	5.00	101	80-120
Calcium, Total	6010D	205	200	103	80-120
Chromium, Total	6010D	20.4	20.0	102	80-120
Cobalt, Total	6010D	50.3	50.0	101	80-120
Copper, Total	6010D	24.3	25.0	97	80-120
Iron, Total	6010D	99.3	100	99	80-120
Lead, Total	6010D	49.4	50.0	99	80-120
Magnesium, Total	6010D	192	200	96	80-120
Manganese, Total	6010D	49.4	50.0	99	80-120
Mercury, Total	7471B	0.161	0.167	97	80-120
Nickel, Total	6010D	50.1	50.0	100	80-120
Potassium, Total	6010D	1880	2000	94	80-120
Selenium, Total	6010D	84.9	101	84	80-120
Silver, Total	6010D	4.73	5.0	95	80-120
Sodium, Total	6010D	1950	2000	98	80-120
Thallium, Total	6010D	179	200	89	80-120
Vanadium, Total	6010D	49.9	50.0	100	80-120
Zinc, Total	6010D	48.6	50.0	97	80-120

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Analyzed: 11/06/20 - 11/09/20

Lab Control Sample Summary
Inorganic Parameters

Units:ug/L
Basis:NA

Lab Control Sample
R2010276-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum, Total	6010D	1970	2000	98	80-120
Antimony, Total	6010D	476	500	95	80-120
Arsenic, Total	6010D	41.9	40	105	80-120
Barium, Total	6010D	2030	2000	102	80-120
Beryllium, Total	6010D	49.1	50.0	98	80-120
Cadmium, Total	6010D	49.9	50.0	100	80-120
Calcium, Total	6010D	2020	2000	101	80-120
Chromium, Total	6010D	201	200	101	80-120
Cobalt, Total	6010D	500	500	100	80-120
Copper, Total	6010D	240	250	96	80-120
Iron, Total	6010D	984	1000	98	80-120
Lead, Total	6010D	491	500	98	80-120
Magnesium, Total	6010D	1910	2000	95	80-120
Manganese, Total	6010D	491	500	98	80-120
Mercury, Total	7470A	1.01	1.00	101	80-120
Nickel, Total	6010D	498	500	100	80-120
Potassium, Total	6010D	19000	20000	95	80-120
Selenium, Total	6010D	949	1010	94	80-120
Silver, Total	6010D	47.7	50	95	80-120
Sodium, Total	6010D	19600	20000	98	80-120
Thallium, Total	6010D	1830	2000	92	80-120
Vanadium, Total	6010D	498	500	100	80-120
Zinc, Total	6010D	491	500	98	80-120



General Chemistry

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: R2010276-MB1

Service Request: R2010276
Date Collected: NA
Date Received: NA

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.30 U	mg/Kg	0.30	0.17	1	11/05/20 10:44	11/04/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: R2010276-MB2

Service Request: R2010276
Date Collected: NA
Date Received: NA

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.010 U	mg/L	0.010	0.004	1	11/12/20 16:48	11/12/20	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20
Date Received: 10/31/20
Date Analyzed: 11/5/20
Date Extracted: 11/4/20

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001
Analysis Method: 9012B
Prep Method: Method

Units: mg/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike		Result	Duplicate Matrix Spike		% Rec Limits	RPD	RPD Limit
			Spike Amount	% Rec		Spike Amount	% Rec			
Cyanide, Total	1.94	3.49	3.09	50	4.22	3.00	76	10-159	19	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

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QA/QC Report

Client: Inventum Engineering
Project Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20
Date Received: 10/31/20
Date Analyzed: 11/10/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name: MW-BCP-15-02
Lab Code: R2010276-001

Units: Percent
Basis: As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample R2010276-001DUP	Average	RPD	RPD Limit
					Result			
Total Solids	ALS SOP	-	-	87.8	92.1	89.9	5	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

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QA/QC Report

Client: Inventum Engineering
Project Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Collected: 10/29/20
Date Received: 10/31/20
Date Analyzed: 11/10/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name: MW-BCP-15-26
Lab Code: R2010276-002

Units: Percent
Basis: As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample R2010276-002DUP	Average	RPD	RPD Limit
					Result			
Total Solids	ALS SOP	-	-	83.7	85.6	84.6	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010276
Date Analyzed: 11/05/20

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/Kg
Basis:Dry

Lab Control Sample
R2010276-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	9012B	3.04	3.00	101	85-115

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QA/QC Report

Client: Inventum Engineering

Project: Riverview - BCP RI

Sample Matrix: Soil

Service Request: R2010276

Date Analyzed: 11/05/20

Lab Control Sample Summary

General Chemistry Parameters

Units:mg/Kg

Basis:Dry

Lab Control Sample

R2010276-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	9012B	17.6	18.0	98	85-115

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Analyzed: 11/12/20

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
R2010276-LCS3

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	9012B	0.104	0.100	104	85-115

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010276
Date Analyzed: 11/12/20

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
R2010276-LCS4

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	9012B	0.587	0.600	98	85-115



February 18, 2025

Service Request No:R2010340

Mr. Todd Waldrop
Inventum Engineering
481 Carlisle Drive
Herndon, VA 20170

Laboratory Results for: Riverview - BCP RI

Dear Mr.Waldrop,

Enclosed are the results of the sample(s) submitted to our laboratory November 03, 2020
For your reference, these analyses have been assigned our service request number **R2010340**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7475. You may also contact me via email at Meghan.Pedro@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Meghan Pedro
Project Manager



Narrative Documents

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil, Water

Service Request: R2010340
Date Received: 11/03/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Manual Integrations may have been used in the quantitation of the results in this report. Manual Integrations are readily identified in the raw data on the Quantitation Reports (Organics) by the automatic placement of an "m" next to the sample result. For Ion Chromatography, the manual integrations are identified by the automatic placement of "manipulated" or "manually integrated" in the upper left corner of the chromatogram (Hexavalent Chromium) or "M" by the result in the "Type" column (anions). The reason for the manual integration is noted on the "after" chromatogram, which is found with the original chromatogram and quantitation report. All integrations follow the lab SOP ADM-INT "Manual Integration."

Sample Receipt:

Ten soil, water samples were received for analysis at ALS Environmental on 11/03/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 11/06/2020: The lower control limit for the spike recovery of the Laboratory Control Sample Duplicate (LCSD) was exceeded for one or more analyte. Precision is also outside limits. The LCS was within limits for all. There was an obvious issue with the LCSD during prep that caused it to go out low. There was batch QC run that shows the issue is isolated to the LCSD. The analytes affected are flagged in the LCS Summary.

2,4-Dinitrophenol has been reported as zero percent recovery in the LCS due to a limitation in LIMs. 2,4-Dinitrophenol was detected at 10% recovery, respectively, within laboratory limits. The LCS is acceptable and should not be flagged on the summary form. The precision is also outside laboratory control limits.

2,4-Dinitrophenol has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. 2,4-Dinitrophenol was detected at 19% and 27% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form. The precision is also outside laboratory control limits.

Method 8270D, 11/17/2020: The lower control limit for the spike recovery of the Laboratory Control Sample Duplicate (LCSD) was exceeded for one or more analyte. Precision is also outside limits. There were no detections of the analyte(s) in the associated field samples. The LCS and batch QC are within limits for that compound. The analytes affected are flagged in the LCS Summary.

Method 8270D, 11/21/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 11/30/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 11/30/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken. P-Phenylenediamine is >40%. Samples run are dilutions for the PAH compounds only.

2,4-Dinitrophenol has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. 2,4-Dinitrophenol was detected at 19% and 27% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be

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Date 02/18/2025

flagged on the summary form. The precision is also outside laboratory control limits.

Semivolatile GC:

Method 8081B, 11/13/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8081B, 11/16/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8081B, r2010340-004,005: The control limits were exceeded for one or more surrogates due to matrix interferences. Due to the presence of non-target background components that prevented adequate resolution of the surrogate, accurate quantitation was not possible. No further corrective action was appropriate.

Method 8081B, r2010340-003,004,005: The Method Reporting Limit (MRL) was elevated due to dark color of the extract of the sample.

Method 8081B, 11/16/2020: The control limits were exceeded for analytes in the Continuing Calibration Verification (CCV). The QC failure was most likely due to the composition of the sample(s) immediately preceding the failing CCV. In order to protect the integrity of the instrument, no further corrective action was taken. Results should be considered estimated. Samples ran 2x with the same result to the closing ccv.

Method 8081B, 11/16/2020: The control limits were exceeded for one of the QC samples associated with samples in this report. The associated recoveries of target compounds were in control for some of the lcsd. Due to analyst error an acid cleanup was done on the lcsd which removes some pesticide compounds.

Method 8151A, 11/13/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8151A, 11/13/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8151A, 11/10/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8151A, 11/10/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Subcontracted Analytical Parameters:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Method 8260C, 11/11/2020: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.



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Date 02/18/2025



Method 8260C, 11/11/2020, R2010340-003,006,009: The recovery of one or more internal standards was outside control limits because of suspected matrix interference. The sample was re-extracted and reanalyzed, but produced similar results. No further corrective action was appropriate.

Method 8260C, 11/11/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 11/12/2020: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Method 8260C, 11/12/2020, R2010340-003,006,009: The recovery of one or more internal standards was outside control limits because of suspected matrix interference. The sample was re-extracted and reanalyzed, but produced similar results. No further corrective action was appropriate.

Method 8260C, 11/12/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 11/12/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8260C, R2010340-009: The control limits were exceeded for one or more surrogates due to matrix interferences. A re-extraction and reanalysis was performed, but produced similar results. No further corrective action was required.

Method 8260C, 11/11/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Reports revised 2/18/25 to include 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene, this is the summary report and does not include any sub lab results.

Meghan Pedro

Approved by _____

Date 02/18/2025



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP-BCP-09-01-1122020			Lab ID: R2010340-004			
Analyte	Results	Flag	MDL	MRL	Units	Method
1,2,4-Trimethylbenzene	20		0.38	9.4	ug/Kg	8260C
1,3,5-Trimethylbenzene	12		0.38	9.4	ug/Kg	8260C
2-Methylnaphthalene	460		87	400	ug/Kg	8270D
2-Methylnaphthalene	500	DJ	180	790	ug/Kg	8270D
Acenaphthylene	680		110	400	ug/Kg	8270D
Acenaphthylene	730	DJ	210	790	ug/Kg	8270D
Aluminum, Total	1540		15	24	mg/Kg	6010D
Anthracene	790		120	400	ug/Kg	8270D
Anthracene	880	D	230	790	ug/Kg	8270D
Aroclor 1248	56		21	39	ug/Kg	8082A
Aroclor 1254	64		21	39	ug/Kg	8082A
Aroclor 1260	90	P	21	39	ug/Kg	8082A
Arsenic, Total	15.1		0.9	1.2	mg/Kg	6010D
Barium, Total	3290		18	24	mg/Kg	6010D
Benz(a)anthracene	2600		120	400	ug/Kg	8270D
Benz(a)anthracene	2700	D	240	790	ug/Kg	8270D
Benzene	22		0.38	9.4	ug/Kg	8260C
Benzo(a)pyrene	3300		150	400	ug/Kg	8270D
Benzo(a)pyrene	3500	D	290	790	ug/Kg	8270D
Benzo(b)fluoranthene	3900		140	400	ug/Kg	8270D
Benzo(b)fluoranthene	4100	D	270	790	ug/Kg	8270D
Benzo(g,h,i)perylene	2200		110	400	ug/Kg	8270D
Benzo(g,h,i)perylene	2000	D	210	790	ug/Kg	8270D
Benzo(k)fluoranthene	1200		150	400	ug/Kg	8270D
Benzo(k)fluoranthene	1300	D	290	790	ug/Kg	8270D
Beryllium, Total	0.66		0.04	0.36	mg/Kg	6010D
Cadmium, Total	1.42		0.29	0.59	mg/Kg	6010D
Calcium, Total	2780		40	120	mg/Kg	6010D
Carbazole	360	J	120	400	ug/Kg	8270D
Carbazole	390	DJ	230	790	ug/Kg	8270D
Chromium, Total	42.5		0.5	1.2	mg/Kg	6010D
Chrysene	3000		150	400	ug/Kg	8270D
Chrysene	3100	D	290	790	ug/Kg	8270D
Cobalt, Total	5.6	J	0.6	5.9	mg/Kg	6010D
Copper, Total	146		0.8	2.4	mg/Kg	6010D
Cyanide, Total	2.66		0.17	0.28	mg/Kg	9012B
Dibenz(a,h)anthracene	540		120	400	ug/Kg	8270D
Dibenz(a,h)anthracene	510	DJ	240	790	ug/Kg	8270D
Dibenzofuran	310	J	79	400	ug/Kg	8270D
Dibenzofuran	320	DJ	160	790	ug/Kg	8270D



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP-BCP-09-01-1122020			Lab ID: R2010340-004			
Analyte	Results	Flag	MDL	MRL	Units	Method
Ethylbenzene	1.7	J	0.38	9.4	ug/Kg	8260C
Fluoranthene	5100	E	150	400	ug/Kg	8270D
Fluoranthene	5200	D	290	790	ug/Kg	8270D
Fluorene	280	J	92	400	ug/Kg	8270D
Fluorene	300	DJ	190	790	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	2400		140	400	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	2200	D	270	790	ug/Kg	8270D
Iron, Total	51800		160	240	mg/Kg	6010D
Lead, Total	122		0.5	5.9	mg/Kg	6010D
m,p-Xylenes	32		0.70	19	ug/Kg	8260C
Magnesium, Total	530		20	120	mg/Kg	6010D
Manganese, Total	474		1.8	2.4	mg/Kg	6010D
Mercury, Total	0.227		0.015	0.037	mg/Kg	7471B
Methylcyclohexane	1.1	J	0.59	9.4	ug/Kg	8260C
Naphthalene	1300		110	400	ug/Kg	8270D
Naphthalene	1400	D	210	790	ug/Kg	8270D
Nickel, Total	44.2		0.8	4.7	mg/Kg	6010D
o-Xylene	15		0.38	9.4	ug/Kg	8260C
Phenanthrene	2600		120	400	ug/Kg	8270D
Phenanthrene	2700	D	240	790	ug/Kg	8270D
Potassium, Total	320		60	240	mg/Kg	6010D
Pyrene	4400	E	160	400	ug/Kg	8270D
Pyrene	4500	D	320	790	ug/Kg	8270D
Silver, Total	0.7	J	0.2	1.2	mg/Kg	6010D
Sodium, Total	100	J	70	120	mg/Kg	6010D
Styrene	1.8	J	0.38	9.4	ug/Kg	8260C
Tetrachloroethene (PCE)	3.2	J	0.44	9.4	ug/Kg	8260C
Toluene	17		0.38	9.4	ug/Kg	8260C
Total Solids	84.3				Percent	ALS SOP
Vanadium, Total	56.0		0.9	5.9	mg/Kg	6010D
Zinc, Total	142		1.7	2.4	mg/Kg	6010D

CLIENT ID: MW-BCP-17-01			Lab ID: R2010340-009			
Analyte	Results	Flag	MDL	MRL	Units	Method
1,2,4-Trimethylbenzene	0.72	J	0.40	9.8	ug/Kg	8260C
1,3,5-Trimethylbenzene	0.51	J	0.37	9.1	ug/Kg	8260C
1,3,5-Trimethylbenzene	0.43	J	0.40	9.8	ug/Kg	8260C
1,3-Dichlorobenzene	0.45	J	0.37	9.1	ug/Kg	8260C
1,4-Dichlorobenzene	0.56	J	0.40	9.1	ug/Kg	8260C
2-Methylnaphthalene	1600		260	1200	ug/Kg	8270D
Acenaphthene	780	J	270	1200	ug/Kg	8270D



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: MW-BCP-17-01			Lab ID: R2010340-009			
Analyte	Results	Flag	MDL	MRL	Units	Method
Acenaphthylene	510	J	310	1200	ug/Kg	8270D
Aluminum, Total	4010		13	22	mg/Kg	6010D
Anthracene	1200		330	1200	ug/Kg	8270D
Arsenic, Total	11.6		0.8	1.1	mg/Kg	6010D
Barium, Total	92.8		1.7	2.2	mg/Kg	6010D
Benz(a)anthracene	6400		350	1200	ug/Kg	8270D
Benzene	0.93	J	0.40	9.8	ug/Kg	8260C
Benzo(a)pyrene	10000		430	1200	ug/Kg	8270D
Benzo(b)fluoranthene	11000		390	1200	ug/Kg	8270D
Benzo(g,h,i)perylene	5500		310	1200	ug/Kg	8270D
Benzo(k)fluoranthene	3800		430	1200	ug/Kg	8270D
Beryllium, Total	0.92		0.04	0.32	mg/Kg	6010D
Cadmium, Total	0.28	J	0.26	0.54	mg/Kg	6010D
Calcium, Total	1320		40	110	mg/Kg	6010D
Carbazole	920	J	340	1200	ug/Kg	8270D
Chromium, Total	10.1		0.4	1.1	mg/Kg	6010D
Chrysene	7500		430	1200	ug/Kg	8270D
Cobalt, Total	3.3	J	0.5	5.4	mg/Kg	6010D
Copper, Total	18.1		0.7	2.2	mg/Kg	6010D
Cyclohexane	3.9	J	0.48	9.1	ug/Kg	8260C
Cyclohexane	4.7	J	0.52	9.8	ug/Kg	8260C
Dibenz(a,h)anthracene	1500		350	1200	ug/Kg	8270D
Dibenzofuran	720	J	230	1200	ug/Kg	8270D
Fluoranthene	8500		430	1200	ug/Kg	8270D
Fluorene	330	J	270	1200	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	6200		390	1200	ug/Kg	8270D
Iron, Total	21300		140	220	mg/Kg	6010D
Lead, Total	12.4		0.5	5.4	mg/Kg	6010D
m,p-Xylenes	1.2	J	0.73	20	ug/Kg	8260C
Magnesium, Total	800		20	110	mg/Kg	6010D
Manganese, Total	58.3		1.7	2.2	mg/Kg	6010D
Mercury, Total	0.025	J	0.016	0.038	mg/Kg	7471B
Methylcyclohexane	4.4	J	0.57	9.1	ug/Kg	8260C
Methylcyclohexane	5.2	J	0.61	9.8	ug/Kg	8260C
Naphthalene	1600		310	1200	ug/Kg	8270D
Nickel, Total	9.7		0.8	4.3	mg/Kg	6010D
o-Xylene	0.63	J	0.37	9.1	ug/Kg	8260C
o-Xylene	1.1	J	0.40	9.8	ug/Kg	8260C
Phenanthrene	5200		340	1200	ug/Kg	8270D
Potassium, Total	820		60	220	mg/Kg	6010D



SAMPLE DETECTION SUMMARY

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CLIENT ID: MW-BCP-17-01			Lab ID: R2010340-009			

Analyte	Results	Flag	MDL	MRL	Units	Method
Pyrene	8500		460	1200	ug/Kg	8270D
Selenium, Total	1.9	B	0.6	1.1	mg/Kg	6010D
Sodium, Total	90	J	60	110	mg/Kg	6010D
Toluene	0.71	J	0.37	9.1	ug/Kg	8260C
Toluene	2.4	J	0.40	9.8	ug/Kg	8260C
Total Solids	86.1				Percent	ALS SOP
Vanadium, Total	22.9		0.8	5.4	mg/Kg	6010D
Zinc, Total	28.8		1.6	2.2	mg/Kg	6010D

CLIENT ID: TP-BCP-36-01-1122020			Lab ID: R2010340-003			

Analyte	Results	Flag	MDL	MRL	Units	Method
2-Methylnaphthalene	170	J	110	460	ug/Kg	8270D
Acenaphthylene	980		130	460	ug/Kg	8270D
Acenaphthylene	840		140	500	ug/Kg	8270D
Acenaphthylene	860	DJ	270	1000	ug/Kg	8270D
Acetone	29		13	13	ug/Kg	8260C
Acetone	60		16	17	ug/Kg	8260C
Aluminum, Total	3410		16	26	mg/Kg	6010D
Anthracene	660		130	460	ug/Kg	8270D
Anthracene	1200		150	500	ug/Kg	8270D
Anthracene	1200	D	290	1000	ug/Kg	8270D
Aroclor 1254	43	J	26	49	ug/Kg	8082A
Aroclor 1260	37	JP	26	49	ug/Kg	8082A
Arsenic, Total	12.1		1.0	1.3	mg/Kg	6010D
Barium, Total	102		2.0	2.6	mg/Kg	6010D
Benz(a)anthracene	2100		140	460	ug/Kg	8270D
Benz(a)anthracene	2700		150	500	ug/Kg	8270D
Benz(a)anthracene	2800	D	300	1000	ug/Kg	8270D
Benzo(a)pyrene	2500		170	460	ug/Kg	8270D
Benzo(a)pyrene	3100		190	500	ug/Kg	8270D
Benzo(a)pyrene	3200	D	370	1000	ug/Kg	8270D
Benzo(b)fluoranthene	2900		160	460	ug/Kg	8270D
Benzo(b)fluoranthene	3300		170	500	ug/Kg	8270D
Benzo(b)fluoranthene	3500	D	340	1000	ug/Kg	8270D
Benzo(g,h,i)perylene	1800		130	460	ug/Kg	8270D
Benzo(g,h,i)perylene	2600		140	500	ug/Kg	8270D
Benzo(g,h,i)perylene	2700	D	270	1000	ug/Kg	8270D
Benzo(k)fluoranthene	950		170	460	ug/Kg	8270D
Benzo(k)fluoranthene	1200		190	500	ug/Kg	8270D
Benzo(k)fluoranthene	1200	D	370	1000	ug/Kg	8270D
Beryllium, Total	0.67		0.04	0.39	mg/Kg	6010D



SAMPLE DETECTION SUMMARY

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CLIENT ID: TP-BCP-36-01-1122020			Lab ID: R2010340-003			
Analyte	Results	Flag	MDL	MRL	Units	Method
Cadmium, Total	0.59	J	0.32	0.66	mg/Kg	6010D
Calcium, Total	4870		50	130	mg/Kg	6010D
Carbazole	220	J	140	460	ug/Kg	8270D
Carbazole	270	J	150	500	ug/Kg	8270D
Carbon Disulfide	1.1	J	0.99	17	ug/Kg	8260C
Chromium, Total	21.8		0.5	1.3	mg/Kg	6010D
Chrysene	2100		170	460	ug/Kg	8270D
Chrysene	2800		190	500	ug/Kg	8270D
Chrysene	2900	D	370	1000	ug/Kg	8270D
Cobalt, Total	4.7	J	0.7	6.6	mg/Kg	6010D
Copper, Total	42.2		0.9	2.6	mg/Kg	6010D
Cyanide, Total	4.16		0.22	0.37	mg/Kg	9012B
Cyclohexane	2.0	J	0.89	17	ug/Kg	8260C
Dibenz(a,h)anthracene	410	J	140	460	ug/Kg	8270D
Dibenz(a,h)anthracene	450	J	150	500	ug/Kg	8270D
Dibenz(a,h)anthracene	490	DJ	300	1000	ug/Kg	8270D
Dibenzofuran	130	J	91	460	ug/Kg	8270D
Dibenzofuran	170	J	100	500	ug/Kg	8270D
Dicamba	6.3	J	4.6	15	ug/Kg	8151A
Endrin Ketone	6.8	J	6.3	13	ug/Kg	8081B
Fluoranthene	4100		170	460	ug/Kg	8270D
Fluoranthene	6100	E	190	500	ug/Kg	8270D
Fluoranthene	6600	D	370	1000	ug/Kg	8270D
Fluorene	200	J	110	460	ug/Kg	8270D
Fluorene	320	J	120	500	ug/Kg	8270D
Fluorene	350	DJ	240	1000	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	1800		160	460	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	2100		170	500	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	2100	D	340	1000	ug/Kg	8270D
Iron, Total	12500		180	260	mg/Kg	6010D
Lead, Total	36.1		0.6	6.6	mg/Kg	6010D
Magnesium, Total	720		20	130	mg/Kg	6010D
Manganese, Total	148		2.0	2.6	mg/Kg	6010D
Mercury, Total	0.091		0.017	0.043	mg/Kg	7471B
Naphthalene	530		120	460	ug/Kg	8270D
Naphthalene	300	J	130	500	ug/Kg	8270D
Naphthalene	290	DJ	260	1000	ug/Kg	8270D
Nickel, Total	62.5		0.9	5.2	mg/Kg	6010D
Phenanthrene	2000		140	460	ug/Kg	8270D
Phenanthrene	3400		150	500	ug/Kg	8270D



SAMPLE DETECTION SUMMARY

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CLIENT ID: TP-BCP-36-01-1122020			Lab ID: R2010340-003			

Analyte	Results	Flag	MDL	MRL	Units	Method
Phenanthrene	3500	D	300	1000	ug/Kg	8270D
Potassium, Total	550		70	260	mg/Kg	6010D
Pyrene	3600		190	460	ug/Kg	8270D
Pyrene	5300	E	200	500	ug/Kg	8270D
Pyrene	5600	D	400	1000	ug/Kg	8270D
Selenium, Total	1.3	BJ	0.8	1.3	mg/Kg	6010D
Sodium, Total	90	J	70	130	mg/Kg	6010D
Total Solids	76.2				Percent	ALS SOP
Vanadium, Total	48.0		1.0	6.6	mg/Kg	6010D
Zinc, Total	85.0		1.9	2.6	mg/Kg	6010D

CLIENT ID: MLS-BCP-17-02			Lab ID: R2010340-005			

Analyte	Results	Flag	MDL	MRL	Units	Method
2-Methylnaphthalene	370	J	93	430	ug/Kg	8270D
Acenaphthene	420	J	96	430	ug/Kg	8270D
Acenaphthene	500	DJ	480	2100	ug/Kg	8270D
Acenaphthylene	210	J	120	430	ug/Kg	8270D
Aluminum, Total	10500		15	24	mg/Kg	6010D
Anthracene	1300		120	430	ug/Kg	8270D
Anthracene	1600	DJ	600	2100	ug/Kg	8270D
Arsenic, Total	9.7		0.9	1.2	mg/Kg	6010D
Barium, Total	91.6		1.8	2.4	mg/Kg	6010D
Benz(a)anthracene	5300	E	130	430	ug/Kg	8270D
Benz(a)anthracene	6300	D	630	2100	ug/Kg	8270D
Benzo(a)pyrene	8000	E	160	430	ug/Kg	8270D
Benzo(a)pyrene	9700	D	780	2100	ug/Kg	8270D
Benzo(b)fluoranthene	8500	E	150	430	ug/Kg	8270D
Benzo(b)fluoranthene	10000	D	710	2100	ug/Kg	8270D
Benzo(g,h,i)perylene	4600	E	120	430	ug/Kg	8270D
Benzo(g,h,i)perylene	5300	D	570	2100	ug/Kg	8270D
Benzo(k)fluoranthene	2900		160	430	ug/Kg	8270D
Benzo(k)fluoranthene	3700	D	780	2100	ug/Kg	8270D
Beryllium, Total	0.96		0.04	0.36	mg/Kg	6010D
Cadmium, Total	0.51	J	0.29	0.59	mg/Kg	6010D
Calcium, Total	1300		40	120	mg/Kg	6010D
Carbazole	1000		130	430	ug/Kg	8270D
Carbazole	1200	DJ	620	2100	ug/Kg	8270D
Chromium, Total	17.2		0.5	1.2	mg/Kg	6010D
Chrysene	5900	E	160	430	ug/Kg	8270D
Chrysene	7100	D	780	2100	ug/Kg	8270D
Cobalt, Total	15.0		0.6	5.9	mg/Kg	6010D



SAMPLE DETECTION SUMMARY

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CLIENT ID: MLS-BCP-17-02			Lab ID: R2010340-005			

Analyte	Results	Flag	MDL	MRL	Units	Method
Copper, Total	18.4		0.8	2.4	mg/Kg	6010D
Dibenz(a,h)anthracene	1300		130	430	ug/Kg	8270D
Dibenz(a,h)anthracene	1400	DJ	640	2100	ug/Kg	8270D
Dibenzofuran	410	J	84	430	ug/Kg	8270D
Dibenzofuran	470	DJ	420	2100	ug/Kg	8270D
Fluoranthene	7000	E	160	430	ug/Kg	8270D
Fluoranthene	9500	D	780	2100	ug/Kg	8270D
Fluorene	420	J	98	430	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	5100	E	150	430	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	6000	D	710	2100	ug/Kg	8270D
Iron, Total	36200		160	240	mg/Kg	6010D
Lead, Total	17.3		0.5	5.9	mg/Kg	6010D
Magnesium, Total	2100		20	120	mg/Kg	6010D
Manganese, Total	379		1.8	2.4	mg/Kg	6010D
Mercury, Total	0.046		0.016	0.039	mg/Kg	7471B
Naphthalene	1200		110	430	ug/Kg	8270D
Naphthalene	1400	DJ	550	2100	ug/Kg	8270D
Nickel, Total	18.9		0.8	4.8	mg/Kg	6010D
Phenanthrene	4300		130	430	ug/Kg	8270D
Phenanthrene	5700	D	620	2100	ug/Kg	8270D
Potassium, Total	1380		60	240	mg/Kg	6010D
Pyrene	6900	E	170	430	ug/Kg	8270D
Pyrene	9100	D	840	2100	ug/Kg	8270D
Total Solids	77.9				Percent	ALS SOP
Vanadium, Total	34.4		0.9	5.9	mg/Kg	6010D
Zinc, Total	66.3		1.7	2.4	mg/Kg	6010D

CLIENT ID: MW-BCP-17-06			Lab ID: R2010340-006			

Analyte	Results	Flag	MDL	MRL	Units	Method
Acetone	11		5.2	5.5	ug/Kg	8260C
Acetone	32		5.7	6.0	ug/Kg	8260C
Total Solids	80.5				Percent	ALS SOP

CLIENT ID: MW-BCP-17-810			Lab ID: R2010340-008			

Analyte	Results	Flag	MDL	MRL	Units	Method
Acetone	5.4		4.0	4.2	ug/Kg	8260C
Aluminum, Total	14300		13	21	mg/Kg	6010D
Arsenic, Total	4.4		0.8	1.1	mg/Kg	6010D
Barium, Total	56.9		1.6	2.1	mg/Kg	6010D
Beryllium, Total	0.69		0.04	0.32	mg/Kg	6010D
Cadmium, Total	0.36	J	0.26	0.53	mg/Kg	6010D



SAMPLE DETECTION SUMMARY

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CLIENT ID: MW-BCP-17-810			Lab ID: R2010340-008			

Analyte	Results	Flag	MDL	MRL	Units	Method
Calcium, Total	62400		400	1100	mg/Kg	6010D
Chromium, Total	21.7		0.4	1.1	mg/Kg	6010D
Cobalt, Total	9.1		0.5	5.3	mg/Kg	6010D
Copper, Total	21.9		0.7	2.1	mg/Kg	6010D
Iron, Total	27900		140	210	mg/Kg	6010D
Lead, Total	10.6		0.5	5.3	mg/Kg	6010D
Magnesium, Total	19100		20	110	mg/Kg	6010D
Manganese, Total	535		1.6	2.1	mg/Kg	6010D
Nickel, Total	24.5		0.7	4.2	mg/Kg	6010D
Potassium, Total	3240		60	210	mg/Kg	6010D
Sodium, Total	230		60	110	mg/Kg	6010D
Total Solids	86.2				Percent	ALS SOP
Vanadium, Total	30.3		0.8	5.3	mg/Kg	6010D
Zinc, Total	85.9		1.5	2.1	mg/Kg	6010D

CLIENT ID: TP-BCP-28-CL-10302020			Lab ID: R2010340-001			

Analyte	Results	Flag	MDL	MRL	Units	Method
Aluminum, Total	22800		15	24	mg/Kg	6010D
Arsenic, Total	5.5		0.9	1.2	mg/Kg	6010D
Barium, Total	168		1.8	2.4	mg/Kg	6010D
Beryllium, Total	1.42		0.04	0.36	mg/Kg	6010D
Cadmium, Total	0.40	J	0.29	0.60	mg/Kg	6010D
Calcium, Total	2640		40	120	mg/Kg	6010D
Chromium, Total	28.8		0.5	1.2	mg/Kg	6010D
Cobalt, Total	15.8		0.6	6.0	mg/Kg	6010D
Copper, Total	19.2		0.8	2.4	mg/Kg	6010D
Iron, Total	37700		160	240	mg/Kg	6010D
Lead, Total	14.0		0.5	6.0	mg/Kg	6010D
Magnesium, Total	6020		20	120	mg/Kg	6010D
Manganese, Total	376		1.8	2.4	mg/Kg	6010D
Mercury, Total	0.027	J	0.016	0.040	mg/Kg	7471B
Nickel, Total	33.2		0.8	4.8	mg/Kg	6010D
Potassium, Total	2080		60	240	mg/Kg	6010D
Sodium, Total	200		70	120	mg/Kg	6010D
Total Solids	80.8				Percent	ALS SOP
Vanadium, Total	39.6		0.9	6.0	mg/Kg	6010D
Zinc, Total	92.9		1.7	2.4	mg/Kg	6010D

CLIENT ID: TP-BCP-35-10302020			Lab ID: R2010340-002			

Analyte	Results	Flag	MDL	MRL	Units	Method
Aluminum, Total	384		15	25	mg/Kg	6010D



SAMPLE DETECTION SUMMARY

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CLIENT ID: TP-BCP-35-10302020			Lab ID: R2010340-002			

Analyte	Results	Flag	MDL	MRL	Units	Method
Antimony, Total	0.8	J	0.7	7.5	mg/Kg	6010D
Arsenic, Total	5.2		0.9	1.3	mg/Kg	6010D
Barium, Total	84.1		1.9	2.5	mg/Kg	6010D
Beryllium, Total	0.06	J	0.04	0.38	mg/Kg	6010D
Cadmium, Total	0.46	J	0.30	0.63	mg/Kg	6010D
Calcium, Total	650		40	130	mg/Kg	6010D
Chromium, Total	6.1		0.5	1.3	mg/Kg	6010D
Copper, Total	76.3		0.8	2.5	mg/Kg	6010D
Cyanide, Total	68.1		0.9	1.6	mg/Kg	9012B
Iron, Total	32600		170	250	mg/Kg	6010D
Lead, Total	182		0.5	6.3	mg/Kg	6010D
Magnesium, Total	60	J	20	130	mg/Kg	6010D
Manganese, Total	38.9		1.9	2.5	mg/Kg	6010D
Mercury, Total	3.19		0.08	0.19	mg/Kg	7471B
Nickel, Total	9.2		0.9	5.0	mg/Kg	6010D
Potassium, Total	900		70	250	mg/Kg	6010D
Selenium, Total	1.0	BJ	0.7	1.3	mg/Kg	6010D
Silver, Total	0.4	J	0.2	1.3	mg/Kg	6010D
Sodium, Total	940		70	130	mg/Kg	6010D
Total Solids	80.0				Percent	ALS SOP
Vanadium, Total	4.3	J	0.9	6.3	mg/Kg	6010D
Zinc, Total	17.5		1.8	2.5	mg/Kg	6010D

CLIENT ID: MLS-BCP-17-57			Lab ID: R2010340-007			

Analyte	Results	Flag	MDL	MRL	Units	Method
Aluminum, Total	13600		14	22	mg/Kg	6010D
Arsenic, Total	4.3		0.8	1.1	mg/Kg	6010D
Barium, Total	128		1.7	2.2	mg/Kg	6010D
Beryllium, Total	0.65		0.04	0.34	mg/Kg	6010D
Cadmium, Total	0.31	J	0.27	0.56	mg/Kg	6010D
Calcium, Total	64400		400	1100	mg/Kg	6010D
Chromium, Total	19.9		0.4	1.1	mg/Kg	6010D
Cobalt, Total	10.5		0.6	5.6	mg/Kg	6010D
Copper, Total	20.3		0.8	2.2	mg/Kg	6010D
Iron, Total	26300		150	220	mg/Kg	6010D
Lead, Total	9.8		0.5	5.6	mg/Kg	6010D
Magnesium, Total	18800		20	110	mg/Kg	6010D
Manganese, Total	520		1.7	2.2	mg/Kg	6010D
Nickel, Total	23.3		0.8	4.5	mg/Kg	6010D
Potassium, Total	2820		60	220	mg/Kg	6010D
Sodium, Total	220		60	110	mg/Kg	6010D



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: MLS-BCP-17-57			Lab ID: R2010340-007			
Analyte	Results	Flag	MDL	MRL	Units	Method
Total Solids	87.3				Percent	ALS SOP
Vanadium, Total	28.6		0.8	5.6	mg/Kg	6010D
Zinc, Total	62.9		1.6	2.2	mg/Kg	6010D



Sample Receipt Information

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com

Client: Inventum Engineering
Project: Riverview - BCP RI

Service Request:R2010340

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2010340-001	TP-BCP-28-CL-10302020	10/30/2020	0937
R2010340-002	TP-BCP-35-10302020	10/30/2020	1435
R2010340-003	TP-BCP-36-01-1122020	11/2/2020	0920
R2010340-004	TP-BCP-09-01-1122020	11/2/2020	1310
R2010340-005	MLS-BCP-17-02	10/30/2020	0840
R2010340-006	MW-BCP-17-06	11/2/2020	0900
R2010340-007	MLS-BCP-17-57	11/2/2020	1016
R2010340-008	MW-BCP-17-810	11/2/2020	1035
R2010340-009	MW-BCP-17-01	11/2/2020	0940
R2010340-010	Trip Blank	11/2/2020	

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

004408

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE OF

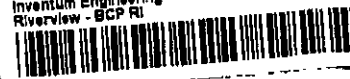
[illegible]



Cooler Receipt and Preservation Check Form

R2010340

5

Inventum Engineering
Riverview - BCP RIProject/Client Inventum Folder Number _____Cooler received on 11/3/2020 by: APW COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y ☒ N ☐
2	Custody papers properly completed (ink, signed)?	Y ☒ N ☐
3	Did all bottles arrive in good condition (unbroken)?	Y ☒ N ☐
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	Y ☒ N ☐

5a	Perchlorate samples have required headspace?	Y ☐ N ☒ NA ☐
5b	Did <u>VOA</u> vials, Alk, or Sulfide have sig* bubbles?	Y ☒ N ☐ NA ☐
6	Where did the bottles originate?	<u>ALS/ROD</u> CLIENT
7	Soil VOA received as: Bulk - Encore <u>5035se</u>	NA

8. Temperature Readings Date: 11/3/2020 Time: 1630 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>1.9</u>	<u>1.8</u>						
Within 0-6°C?	Y ☒ N ☐	Y ☒ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐
If <0°C, were samples frozen?	Y ☐ N ☒	Y ☐ N ☒	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐

If out of Temperature, note packing/ice condition: _____ Ice melted? ☐ Poorly Packed (described below) Same Day Rule

& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R002 by DPW on 11/3/2020 at 1635
5035 samples placed in storage location: F09 by GR on 11/3/2020 at 1640 within 48 hours of sampling? Y ☐ N ☐Cooler Breakdown/Preservation Check**: Date: 11/4/2020 Time: 1420 by: GR

9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES ☐ NO ☒
10. Did all bottle labels and tags agree with custody papers? YES ☐ NO ☒
11. Were correct containers used for the tests indicated? YES ☒ NO ☐
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES ☒ NO ☐ N/A
13. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH	Yes No						
≤2		HNO ₃							
≤2		H ₂ SO ₄							
<4		NaHSO ₄							
5-9		For 608pest		No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522		If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃							
		ZnAcetate	- -						
		HCl	** **						

**VOAs and 1664 Not to be tested before analysis.
Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).Bottle lot numbers: 083120-15K 080320-17W

Explain all Discrepancies/ Other Comments:

all POTS were unlabelled. (5035 pots)Rec'd PFAS for MW-BCP-17-01 and not for MW-BCP-17-57

HPRD	BULK
HTR	FLDT
<u>SUB</u>	HGFB
ALS	LL3541

Labels secondary reviewed by: GRPC Secondary Review: WA

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

ALS Environmental—Rochester Laboratory

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REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.	+	Correlation coefficient for MSA is <0.995.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).	N	Inorganics- Matrix spike recovery was outside laboratory limits.
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.	N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.	S	Concentration has been determined using Method of Standard Additions (MSA).
E	Organics- Concentration has exceeded the calibration range for that specific analysis.	W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.	P	Concentration >40% difference between the two GC columns.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.	C	Confirmed by GC/MS
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.	Q	DoD reports: indicates a pesticide/Aroclor is not confirmed ($\geq 100\%$ Difference between two GC columns).
#	Spike was diluted out.	X	See Case Narrative for discussion.
		MRL	Method Reporting Limit. Also known as:
		LOQ	Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
		MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
		LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
		ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Accreditations¹



NELAP States
Florida ID # E87674
New Hampshire ID # 2941
New York ID # 10145
Pennsylvania ID# 68-786
Texas ID#T104704581
Virginia #460167

Non-NELAP States
Connecticut ID #PH0556
Delaware Approved
Maine ID #NY01587
North Carolina #36701
North Carolina #676
Rhode Island LAO00333

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory. To verify NH accredited analytes, go to <https://www4.des.state.nh.us/CertifiedLabs/Certified-Method.aspx>.

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Client: Inventum Engineering
Project: Riverview - BCP RI

Service Request: R2010340

Non-Certified Analytes

Certifying Agency: New York Department of Health

Method	Matrix	Analyte
ALS SOP	Soil	Total Solids

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: Riverview - BCP RI/

Service Request: R2010340

Sample Name: TP-BCP-28-CL-10302020
Lab Code: R2010340-001
Sample Matrix: Soil

Date Collected: 10/30/20
Date Received: 11/3/20

Analysis Method	Extracted/Digested By	Analyzed By
6010D	AKONZEL	KMCLAEN
7471B	AKONZEL	KMCLAEN
8260C		FNAEGLER
8270D	KSERCU	JMISIUREWICZ
9012B	MROGERSON	MROGERSON
ALS SOP		KAWONG

Sample Name: TP-BCP-35-10302020
Lab Code: R2010340-002
Sample Matrix: Soil

Date Collected: 10/30/20
Date Received: 11/3/20

Analysis Method	Extracted/Digested By	Analyzed By
6010D	AKONZEL	KMCLAEN
7471B	AKONZEL	KMCLAEN
9012B	MROGERSON	MROGERSON
ALS SOP		KAWONG

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003
Sample Matrix: Soil

Date Collected: 11/2/20
Date Received: 11/3/20

Analysis Method	Extracted/Digested By	Analyzed By
6010D	AKONZEL	KMCLAEN
7471B	AKONZEL	KMCLAEN
8081B	KSERCU	BALLGEIER
8082A	KSERCU	BALLGEIER
8151A	KSERCU	BALLGEIER
8260C		FNAEGLER
8270D	KSERCU	JMISIUREWICZ
9012B	MROGERSON	MROGERSON
ALS SOP		KAWONG
PFC/537M	MSESSIONS	CCONOVER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: Riverview - BCP RI/

Service Request: R2010340

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003.R01
Sample Matrix: Soil

Date Collected: 11/2/20
Date Received: 11/3/20

Analysis Method

8260C
8270D

Extracted/Digested By

KSERCU

Analyzed By

FNAEGLER
JMISIUREWICZ

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003.R02
Sample Matrix: Soil

Date Collected: 11/2/20
Date Received: 11/3/20

Analysis Method

8270D

Extracted/Digested By

KSERCU

Analyzed By

JMISIUREWICZ

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004
Sample Matrix: Soil

Date Collected: 11/2/20
Date Received: 11/3/20

Analysis Method

6010D
7471B
8081B
8082A
8151A
8260C
8270D
9012B
ALS SOP
PFC/537M

Extracted/Digested By

AKONZEL
AKONZEL
KSERCU
KSERCU
KSERCU
KSERCU
MROGERSON
MSESSIONS

Analyzed By

KMCLAEN
KMCLAEN
BALLGEIER
BALLGEIER
BALLGEIER
FNAEGLER
JMISIUREWICZ
MROGERSON
KAWONG
CCONOVER

ALS Group USA, Corp.
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Analyst Summary report

Client: Inventum Engineering
Project: Riverview - BCP RI/

Service Request: R2010340

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004.R01
Sample Matrix: Soil

Date Collected: 11/2/20
Date Received: 11/3/20

Analysis Method
8270D

Extracted/Digested By
KSERCU

Analyzed By
JMISIUREWICZ

Sample Name: MLS-BCP-17-02
Lab Code: R2010340-005
Sample Matrix: Soil

Date Collected: 10/30/20
Date Received: 11/3/20

Analysis Method
6010D
7471B
8081B
8082A
8151A
8270D
ALS SOP
PFC/537M

Extracted/Digested By
AKONZEL
AKONZEL
KSERCU
KSERCU
KSERCU
KSERCU
MSESSIONS

Analyzed By
KMCLAEN
KMCLAEN
BALLGEIER
BALLGEIER
BALLGEIER
JMISIUREWICZ
KAWONG
CCONOVER

Sample Name: MLS-BCP-17-02
Lab Code: R2010340-005.R01
Sample Matrix: Soil

Date Collected: 10/30/20
Date Received: 11/3/20

Analysis Method
8270D

Extracted/Digested By
KSERCU

Analyzed By
JMISIUREWICZ

Sample Name: MW-BCP-17-06
Lab Code: R2010340-006
Sample Matrix: Soil

Date Collected: 11/2/20
Date Received: 11/3/20

Analysis Method
8260C
ALS SOP

Extracted/Digested By

Analyzed By
FNAEGLER
KAWONG

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: Riverview - BCP RI/

Service Request: R2010340

Sample Name: MW-BCP-17-06
Lab Code: R2010340-006.R01
Sample Matrix: Soil

Date Collected: 11/2/20
Date Received: 11/3/20

Analysis Method
8260C

Extracted/Digested By

Analyzed By
FNAEGLER

Sample Name: MLS-BCP-17-57
Lab Code: R2010340-007
Sample Matrix: Soil

Date Collected: 11/2/20
Date Received: 11/3/20

Analysis Method

6010D
7471B
8081B
8082A
8151A

Extracted/Digested By

AKONZEL
AKONZEL
KSERCU
KSERCU
KSERCU

Analyzed By

KMCLAEN
KMCLAEN
BALLGEIER
BALLGEIER
BALLGEIER

8260C
8270D
9012B
ALS SOP

KSERCU
MROGERSON

FNAEGLER
JMISIUREWICZ
MROGERSON
KAWONG

Sample Name: MW-BCP-17-810
Lab Code: R2010340-008
Sample Matrix: Soil

Date Collected: 11/2/20
Date Received: 11/3/20

Analysis Method

6010D
7471B
8260C
8270D
9012B

Extracted/Digested By

AKONZEL
AKONZEL
KSERCU
MROGERSON

Analyzed By

KMCLAEN
KMCLAEN
FNAEGLER
JMISIUREWICZ
MROGERSON

ALS SOP

KAWONG

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: Riverview - BCP RI/

Service Request: R2010340

Sample Name: MW-BCP-17-01
Lab Code: R2010340-009
Sample Matrix: Soil

Date Collected: 11/2/20
Date Received: 11/3/20

Analysis Method	Extracted/Digested By	Analyzed By
6010D	AKONZEL	KMCLAEN
7471B	AKONZEL	KMCLAEN
8260C		FNAEGLER
8270D	KSERCU	JMISIUREWICZ
9012B	MROGERSON	MROGERSON
ALS SOP		KAWONG
PFC/537M	MSESSIONS	CCONOVER

Sample Name: MW-BCP-17-01
Lab Code: R2010340-009.R01
Sample Matrix: Soil

Date Collected: 11/2/20
Date Received: 11/3/20

Analysis Method	Extracted/Digested By	Analyzed By
8260C		FNAEGLER

Sample Name: Trip Blank
Lab Code: R2010340-010
Sample Matrix: Water

Date Collected: 11/2/20
Date Received: 11/3/20

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST



PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

INORGANIC

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C or 6010D	3005A/3010A
6020A or 6020B	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-N-2016 Amenable and Residual Cyanide	SM 4500-CN-G and SM 4500-CN-B,C-2016
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C or 6010D	3050B
6020A or 6020B	3050B
6010C or 6010D TCLP (1311) extract	3005A/3010A
6010C or 6010D SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

ORGANIC

Preparation Methods for Organic methods are listed in the header of the Results pages.

Regarding "Bulk/5035A":

For soil/solid samples submitted in soil jars for Volatiles analysis, the prep method is listed as "Bulk/5035A". The lab follows the closed-system EPA 5035A protocols once the sample is transferred to a sealed vial, but collection in bulk in soil jars does not follow the collection protocols listed in EPA 5035A. In accordance with the NYSDOH technical notice of October 2012, all results or reporting limits <200 ug/kg are to be considered estimated due to potential low bias.



Sample Results

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Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 09:37
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-28-CL-10302020
Lab Code: R2010340-001

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.8 U	5.8	0.24	.94	11/11/20 16:48	
1,1,2,2-Tetrachloroethane	5.8 U	5.8	0.52	.94	11/11/20 16:48	
1,1,2-Trichloroethane	5.8 U	5.8	0.24	.94	11/11/20 16:48	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.8 U	5.8	0.24	.94	11/11/20 16:48	
1,1-Dichloroethane (1,1-DCA)	5.8 U	5.8	0.24	.94	11/11/20 16:48	
1,1-Dichloroethene (1,1-DCE)	5.8 U	5.8	0.34	.94	11/11/20 16:48	
1,2,3-Trichlorobenzene	5.8 U	5.8	0.61	.94	11/11/20 16:48	
1,2,4-Trichlorobenzene	5.8 U	5.8	0.49	.94	11/11/20 16:48	
1,2,4-Trimethylbenzene	5.8 U	5.8	0.24	.94	11/11/20 16:48	
1,2-Dibromo-3-chloropropane (DBCP)	5.8 U	5.8	0.88	.94	11/11/20 16:48	
1,2-Dibromoethane	5.8 U	5.8	0.24	.94	11/11/20 16:48	
1,2-Dichlorobenzene	5.8 U	5.8	0.24	.94	11/11/20 16:48	
1,2-Dichloroethane	5.8 U	5.8	0.24	.94	11/11/20 16:48	
1,2-Dichloropropane	5.8 U	5.8	0.24	.94	11/11/20 16:48	
1,3,5-Trimethylbenzene	5.8 U	5.8	0.24	.94	11/11/20 16:48	
1,3-Dichlorobenzene	5.8 U	5.8	0.24	.94	11/11/20 16:48	
1,4-Dichlorobenzene	5.8 U	5.8	0.26	.94	11/11/20 16:48	
1,4-Dioxane	120 U	120	24	.94	11/11/20 16:48	
2-Butanone (MEK)	5.8 U	5.8	2.4	.94	11/11/20 16:48	
2-Hexanone	5.8 U	5.8	0.42	.94	11/11/20 16:48	
4-Methyl-2-pentanone	5.8 U	5.8	0.27	.94	11/11/20 16:48	
Acetone	5.8 U	5.8	5.5	.94	11/11/20 16:48	
Benzene	5.8 U	5.8	0.24	.94	11/11/20 16:48	
Bromochloromethane	5.8 U	5.8	0.24	.94	11/11/20 16:48	
Bromodichloromethane	5.8 U	5.8	0.24	.94	11/11/20 16:48	
Bromoform	5.8 U	5.8	0.59	.94	11/11/20 16:48	
Bromomethane	5.8 U	5.8	2.5	.94	11/11/20 16:48	
Carbon Disulfide	5.8 U	5.8	0.34	.94	11/11/20 16:48	
Carbon Tetrachloride	5.8 U	5.8	0.31	.94	11/11/20 16:48	
Chlorobenzene	5.8 U	5.8	0.24	.94	11/11/20 16:48	
Chloroethane	5.8 U	5.8	0.48	.94	11/11/20 16:48	
Chloroform	5.8 U	5.8	0.24	.94	11/11/20 16:48	
Chloromethane	5.8 U	5.8	1.7	.94	11/11/20 16:48	
Cyclohexane	5.8 U	5.8	0.31	.94	11/11/20 16:48	
Dibromochloromethane	5.8 U	5.8	0.24	.94	11/11/20 16:48	
Dichlorodifluoromethane (CFC 12)	5.8 U	5.8	0.39	.94	11/11/20 16:48	
Dichloromethane	5.8 U	5.8	3.3	.94	11/11/20 16:48	
Ethylbenzene	5.8 U	5.8	0.24	.94	11/11/20 16:48	
Isopropylbenzene (Cumene)	5.8 U	5.8	0.24	.94	11/11/20 16:48	
Methyl Acetate	5.8 U	5.8	0.98	.94	11/11/20 16:48	
Methyl tert-Butyl Ether	5.8 U	5.8	0.24	.94	11/11/20 16:48	
Methylcyclohexane	5.8 U	5.8	0.37	.94	11/11/20 16:48	
Styrene	5.8 U	5.8	0.24	.94	11/11/20 16:48	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-28-CL-10302020
Lab Code: R2010340-001

Service Request: R2010340
Date Collected: 10/30/20 09:37
Date Received: 11/03/20 16:15

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.8 U	5.8	0.27	.94	11/11/20 16:48	
Toluene	5.8 U	5.8	0.24	.94	11/11/20 16:48	
Trichloroethene (TCE)	5.8 U	5.8	0.26	.94	11/11/20 16:48	
Trichlorofluoromethane (CFC 11)	5.8 U	5.8	0.31	.94	11/11/20 16:48	
Vinyl Chloride	5.8 U	5.8	0.54	.94	11/11/20 16:48	
cis-1,2-Dichloroethene	5.8 U	5.8	0.24	.94	11/11/20 16:48	
cis-1,3-Dichloropropene	5.8 U	5.8	0.24	.94	11/11/20 16:48	
m,p-Xylenes	12 U	12	0.44	.94	11/11/20 16:48	
o-Xylene	5.8 U	5.8	0.24	.94	11/11/20 16:48	
trans-1,2-Dichloroethene	5.8 U	5.8	0.24	.94	11/11/20 16:48	
trans-1,3-Dichloropropene	5.8 U	5.8	0.24	.94	11/11/20 16:48	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	31 - 154	11/11/20 16:48	
Dibromofluoromethane	112	63 - 138	11/11/20 16:48	
Toluene-d8	108	66 - 138	11/11/20 16:48	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	13 U	13	0.52	1.98	11/11/20 17:11	
1,1,2,2-Tetrachloroethane	13 U	13	1.2	1.98	11/11/20 17:11	
1,1,2-Trichloroethane	13 U	13	0.52	1.98	11/11/20 17:11	
1,1,2-Trichloro-1,2,2-trifluoroethane	13 U	13	0.52	1.98	11/11/20 17:11	
1,1-Dichloroethane (1,1-DCA)	13 U	13	0.52	1.98	11/11/20 17:11	
1,1-Dichloroethene (1,1-DCE)	13 U	13	0.76	1.98	11/11/20 17:11	
1,2,3-Trichlorobenzene	13 U	13	1.4	1.98	11/11/20 17:11	
1,2,4-Trichlorobenzene	13 U	13	1.1	1.98	11/11/20 17:11	
1,2,4-Trimethylbenzene	13 U	13	0.52	1.98	11/11/20 17:11	
1,2-Dibromo-3-chloropropane (DBCP)	13 U	13	2.0	1.98	11/11/20 17:11	
1,2-Dibromoethane	13 U	13	0.52	1.98	11/11/20 17:11	
1,2-Dichlorobenzene	13 U	13	0.52	1.98	11/11/20 17:11	
1,2-Dichloroethane	13 U	13	0.52	1.98	11/11/20 17:11	
1,2-Dichloropropane	13 U	13	0.52	1.98	11/11/20 17:11	
1,3,5-Trimethylbenzene	13 U	13	0.52	1.98	11/11/20 17:11	
1,3-Dichlorobenzene	13 U	13	0.52	1.98	11/11/20 17:11	
1,4-Dichlorobenzene	13 U	13	0.58	1.98	11/11/20 17:11	
1,4-Dioxane	260 U	260	52	1.98	11/11/20 17:11	
2-Butanone (MEK)	13 U	13	5.2	1.98	11/11/20 17:11	
2-Hexanone	13 U	13	0.94	1.98	11/11/20 17:11	
4-Methyl-2-pentanone	13 U	13	0.60	1.98	11/11/20 17:11	
Acetone	29	13	13	1.98	11/11/20 17:11	
Benzene	13 U	13	0.52	1.98	11/11/20 17:11	
Bromochloromethane	13 U	13	0.52	1.98	11/11/20 17:11	
Bromodichloromethane	13 U	13	0.52	1.98	11/11/20 17:11	
Bromoform	13 U	13	1.3	1.98	11/11/20 17:11	
Bromomethane	13 U	13	5.5	1.98	11/11/20 17:11	
Carbon Disulfide	13 U	13	0.76	1.98	11/11/20 17:11	
Carbon Tetrachloride	13 U	13	0.68	1.98	11/11/20 17:11	
Chlorobenzene	13 U	13	0.52	1.98	11/11/20 17:11	
Chloroethane	13 U	13	1.1	1.98	11/11/20 17:11	
Chloroform	13 U	13	0.52	1.98	11/11/20 17:11	
Chloromethane	13 U	13	3.7	1.98	11/11/20 17:11	
Cyclohexane	13 U	13	0.68	1.98	11/11/20 17:11	
Dibromochloromethane	13 U	13	0.52	1.98	11/11/20 17:11	
Dichlorodifluoromethane (CFC 12)	13 U	13	0.86	1.98	11/11/20 17:11	
Dichloromethane	13 U	13	7.3	1.98	11/11/20 17:11	
Ethylbenzene	13 U	13	0.52	1.98	11/11/20 17:11	
Isopropylbenzene (Cumene)	13 U	13	0.52	1.98	11/11/20 17:11	
Methyl Acetate	13 U	13	2.2	1.98	11/11/20 17:11	
Methyl tert-Butyl Ether	13 U	13	0.52	1.98	11/11/20 17:11	
Methylcyclohexane	13 U	13	0.81	1.98	11/11/20 17:11	
Styrene	13 U	13	0.52	1.98	11/11/20 17:11	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	13 U	13	0.60	1.98	11/11/20 17:11	
Toluene	13 U	13	0.52	1.98	11/11/20 17:11	
Trichloroethene (TCE)	13 U	13	0.58	1.98	11/11/20 17:11	
Trichlorofluoromethane (CFC 11)	13 U	13	0.68	1.98	11/11/20 17:11	
Vinyl Chloride	13 U	13	1.2	1.98	11/11/20 17:11	
cis-1,2-Dichloroethene	13 U	13	0.52	1.98	11/11/20 17:11	
cis-1,3-Dichloropropene	13 U	13	0.52	1.98	11/11/20 17:11	
m,p-Xylenes	26 U	26	0.97	1.98	11/11/20 17:11	
o-Xylene	13 U	13	0.52	1.98	11/11/20 17:11	
trans-1,2-Dichloroethene	13 U	13	0.52	1.98	11/11/20 17:11	
trans-1,3-Dichloropropene	13 U	13	0.52	1.98	11/11/20 17:11	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	73	31 - 154	11/11/20 17:11	
Dibromofluoromethane	121	63 - 138	11/11/20 17:11	
Toluene-d8	110	66 - 138	11/11/20 17:11	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	17 U	17	0.68	2.59	11/12/20 13:09	
1,1,2,2-Tetrachloroethane	17 U	17	1.5	2.59	11/12/20 13:09	
1,1,2-Trichloroethane	17 U	17	0.68	2.59	11/12/20 13:09	
1,1,2-Trichloro-1,2,2-trifluoroethane	17 U	17	0.68	2.59	11/12/20 13:09	
1,1-Dichloroethane (1,1-DCA)	17 U	17	0.68	2.59	11/12/20 13:09	
1,1-Dichloroethene (1,1-DCE)	17 U	17	0.99	2.59	11/12/20 13:09	
1,2,3-Trichlorobenzene	17 U	17	1.8	2.59	11/12/20 13:09	
1,2,4-Trichlorobenzene	17 U	17	1.5	2.59	11/12/20 13:09	
1,2,4-Trimethylbenzene	17 U	17	0.68	2.59	11/12/20 13:09	
1,2-Dibromo-3-chloropropane (DBCP)	17 U	17	2.6	2.59	11/12/20 13:09	
1,2-Dibromoethane	17 U	17	0.68	2.59	11/12/20 13:09	
1,2-Dichlorobenzene	17 U	17	0.68	2.59	11/12/20 13:09	
1,2-Dichloroethane	17 U	17	0.68	2.59	11/12/20 13:09	
1,2-Dichloropropane	17 U	17	0.68	2.59	11/12/20 13:09	
1,3,5-Trimethylbenzene	17 U	17	0.68	2.59	11/12/20 13:09	
1,3-Dichlorobenzene	17 U	17	0.68	2.59	11/12/20 13:09	
1,4-Dichlorobenzene	17 U	17	0.75	2.59	11/12/20 13:09	
1,4-Dioxane	340 U	340	68	2.59	11/12/20 13:09	
2-Butanone (MEK)	17 U	17	6.8	2.59	11/12/20 13:09	
2-Hexanone	17 U	17	1.3	2.59	11/12/20 13:09	
4-Methyl-2-pentanone	17 U	17	0.79	2.59	11/12/20 13:09	
Acetone	60	17	16	2.59	11/12/20 13:09	
Benzene	17 U	17	0.68	2.59	11/12/20 13:09	
Bromochloromethane	17 U	17	0.68	2.59	11/12/20 13:09	
Bromodichloromethane	17 U	17	0.68	2.59	11/12/20 13:09	
Bromoform	17 U	17	1.7	2.59	11/12/20 13:09	
Bromomethane	17 U	17	7.2	2.59	11/12/20 13:09	
Carbon Disulfide	1.1 J	17	0.99	2.59	11/12/20 13:09	
Carbon Tetrachloride	17 U	17	0.89	2.59	11/12/20 13:09	
Chlorobenzene	17 U	17	0.68	2.59	11/12/20 13:09	
Chloroethane	17 U	17	1.4	2.59	11/12/20 13:09	
Chloroform	17 U	17	0.68	2.59	11/12/20 13:09	
Chloromethane	17 U	17	4.8	2.59	11/12/20 13:09	
Cyclohexane	2.0 J	17	0.89	2.59	11/12/20 13:09	
Dibromochloromethane	17 U	17	0.68	2.59	11/12/20 13:09	
Dichlorodifluoromethane (CFC 12)	17 U	17	1.2	2.59	11/12/20 13:09	
Dichloromethane	17 U	17	9.6	2.59	11/12/20 13:09	
Ethylbenzene	17 U	17	0.68	2.59	11/12/20 13:09	
Isopropylbenzene (Cumene)	17 U	17	0.68	2.59	11/12/20 13:09	
Methyl Acetate	17 U	17	2.9	2.59	11/12/20 13:09	
Methyl tert-Butyl Ether	17 U	17	0.68	2.59	11/12/20 13:09	
Methylcyclohexane	17 U	17	1.1	2.59	11/12/20 13:09	
Styrene	17 U	17	0.68	2.59	11/12/20 13:09	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	17 U	17	0.79	2.59	11/12/20 13:09	
Toluene	17 U	17	0.68	2.59	11/12/20 13:09	
Trichloroethene (TCE)	17 U	17	0.75	2.59	11/12/20 13:09	
Trichlorofluoromethane (CFC 11)	17 U	17	0.89	2.59	11/12/20 13:09	
Vinyl Chloride	17 U	17	1.6	2.59	11/12/20 13:09	
cis-1,2-Dichloroethene	17 U	17	0.68	2.59	11/12/20 13:09	
cis-1,3-Dichloropropene	17 U	17	0.68	2.59	11/12/20 13:09	
m,p-Xylenes	34 U	34	1.3	2.59	11/12/20 13:09	
o-Xylene	17 U	17	0.68	2.59	11/12/20 13:09	
trans-1,2-Dichloroethene	17 U	17	0.68	2.59	11/12/20 13:09	
trans-1,3-Dichloropropene	17 U	17	0.68	2.59	11/12/20 13:09	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	76	31 - 154	11/12/20 13:09	
Dibromofluoromethane	128	63 - 138	11/12/20 13:09	
Toluene-d8	111	66 - 138	11/12/20 13:09	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
1,1,2,2-Tetrachloroethane	9.4 U	9.4	0.83	1.58	11/11/20 17:34	
1,1,2-Trichloroethane	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
1,1-Dichloroethane (1,1-DCA)	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
1,1-Dichloroethene (1,1-DCE)	9.4 U	9.4	0.55	1.58	11/11/20 17:34	
1,2,3-Trichlorobenzene	9.4 U	9.4	0.98	1.58	11/11/20 17:34	
1,2,4-Trichlorobenzene	9.4 U	9.4	0.79	1.58	11/11/20 17:34	
1,2,4-Trimethylbenzene	20	9.4	0.38	1.58	11/11/20 17:34	
1,2-Dibromo-3-chloropropane (DBCP)	9.4 U	9.4	1.5	1.58	11/11/20 17:34	
1,2-Dibromoethane	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
1,2-Dichlorobenzene	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
1,2-Dichloroethane	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
1,2-Dichloropropane	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
1,3,5-Trimethylbenzene	12	9.4	0.38	1.58	11/11/20 17:34	
1,3-Dichlorobenzene	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
1,4-Dichlorobenzene	9.4 U	9.4	0.42	1.58	11/11/20 17:34	
1,4-Dioxane	190 U	190	38	1.58	11/11/20 17:34	
2-Butanone (MEK)	9.4 U	9.4	3.8	1.58	11/11/20 17:34	
2-Hexanone	9.4 U	9.4	0.68	1.58	11/11/20 17:34	
4-Methyl-2-pentanone	9.4 U	9.4	0.44	1.58	11/11/20 17:34	
Acetone	9.4 U	9.4	8.9	1.58	11/11/20 17:34	
Benzene	22	9.4	0.38	1.58	11/11/20 17:34	
Bromochloromethane	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
Bromodichloromethane	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
Bromoform	9.4 U	9.4	0.94	1.58	11/11/20 17:34	
Bromomethane	9.4 U	9.4	4.0	1.58	11/11/20 17:34	
Carbon Disulfide	9.4 U	9.4	0.55	1.58	11/11/20 17:34	
Carbon Tetrachloride	9.4 U	9.4	0.49	1.58	11/11/20 17:34	
Chlorobenzene	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
Chloroethane	9.4 U	9.4	0.77	1.58	11/11/20 17:34	
Chloroform	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
Chloromethane	9.4 U	9.4	2.7	1.58	11/11/20 17:34	
Cyclohexane	9.4 U	9.4	0.49	1.58	11/11/20 17:34	
Dibromochloromethane	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
Dichlorodifluoromethane (CFC 12)	9.4 U	9.4	0.62	1.58	11/11/20 17:34	
Dichloromethane	9.4 U	9.4	5.3	1.58	11/11/20 17:34	
Ethylbenzene	1.7 J	9.4	0.38	1.58	11/11/20 17:34	
Isopropylbenzene (Cumene)	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
Methyl Acetate	9.4 U	9.4	1.6	1.58	11/11/20 17:34	
Methyl tert-Butyl Ether	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
Methylcyclohexane	1.1 J	9.4	0.59	1.58	11/11/20 17:34	
Styrene	1.8 J	9.4	0.38	1.58	11/11/20 17:34	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	3.2 J	9.4	0.44	1.58	11/11/20 17:34	
Toluene	17	9.4	0.38	1.58	11/11/20 17:34	
Trichloroethene (TCE)	9.4 U	9.4	0.42	1.58	11/11/20 17:34	
Trichlorofluoromethane (CFC 11)	9.4 U	9.4	0.49	1.58	11/11/20 17:34	
Vinyl Chloride	9.4 U	9.4	0.87	1.58	11/11/20 17:34	
cis-1,2-Dichloroethene	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
cis-1,3-Dichloropropene	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
m,p-Xylenes	32	19	0.70	1.58	11/11/20 17:34	
o-Xylene	15	9.4	0.38	1.58	11/11/20 17:34	
trans-1,2-Dichloroethene	9.4 U	9.4	0.38	1.58	11/11/20 17:34	
trans-1,3-Dichloropropene	9.4 U	9.4	0.38	1.58	11/11/20 17:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	86	31 - 154	11/11/20 17:34	
Dibromofluoromethane	113	63 - 138	11/11/20 17:34	
Toluene-d8	106	66 - 138	11/11/20 17:34	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:00
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-06
Lab Code: R2010340-006

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.5 U	5.5	0.22	.88	11/12/20 13:32	
1,1,2,2-Tetrachloroethane	5.5 U	5.5	0.49	.88	11/12/20 13:32	
1,1,2-Trichloroethane	5.5 U	5.5	0.22	.88	11/12/20 13:32	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.5 U	5.5	0.22	.88	11/12/20 13:32	
1,1-Dichloroethane (1,1-DCA)	5.5 U	5.5	0.22	.88	11/12/20 13:32	
1,1-Dichloroethene (1,1-DCE)	5.5 U	5.5	0.32	.88	11/12/20 13:32	
1,2,3-Trichlorobenzene	5.5 U	5.5	0.57	.88	11/12/20 13:32	
1,2,4-Trichlorobenzene	5.5 U	5.5	0.46	.88	11/12/20 13:32	
1,2,4-Trimethylbenzene	5.5 U	5.5	0.22	.88	11/12/20 13:32	
1,2-Dibromo-3-chloropropane (DBCP)	5.5 U	5.5	0.82	.88	11/12/20 13:32	
1,2-Dibromoethane	5.5 U	5.5	0.22	.88	11/12/20 13:32	
1,2-Dichlorobenzene	5.5 U	5.5	0.22	.88	11/12/20 13:32	
1,2-Dichloroethane	5.5 U	5.5	0.22	.88	11/12/20 13:32	
1,2-Dichloropropane	5.5 U	5.5	0.22	.88	11/12/20 13:32	
1,3,5-Trimethylbenzene	5.5 U	5.5	0.22	.88	11/12/20 13:32	
1,3-Dichlorobenzene	5.5 U	5.5	0.22	.88	11/12/20 13:32	
1,4-Dichlorobenzene	5.5 U	5.5	0.25	.88	11/12/20 13:32	
1,4-Dioxane	110 U	110	22	.88	11/12/20 13:32	
2-Butanone (MEK)	5.5 U	5.5	2.2	.88	11/12/20 13:32	
2-Hexanone	5.5 U	5.5	0.40	.88	11/12/20 13:32	
4-Methyl-2-pentanone	5.5 U	5.5	0.26	.88	11/12/20 13:32	
Acetone	11	5.5	5.2	.88	11/12/20 13:32	
Benzene	5.5 U	5.5	0.22	.88	11/12/20 13:32	
Bromochloromethane	5.5 U	5.5	0.22	.88	11/12/20 13:32	
Bromodichloromethane	5.5 U	5.5	0.22	.88	11/12/20 13:32	
Bromoform	5.5 U	5.5	0.55	.88	11/12/20 13:32	
Bromomethane	5.5 U	5.5	2.3	.88	11/12/20 13:32	
Carbon Disulfide	5.5 U	5.5	0.32	.88	11/12/20 13:32	
Carbon Tetrachloride	5.5 U	5.5	0.29	.88	11/12/20 13:32	
Chlorobenzene	5.5 U	5.5	0.22	.88	11/12/20 13:32	
Chloroethane	5.5 U	5.5	0.45	.88	11/12/20 13:32	
Chloroform	5.5 U	5.5	0.22	.88	11/12/20 13:32	
Chloromethane	5.5 U	5.5	1.6	.88	11/12/20 13:32	
Cyclohexane	5.5 U	5.5	0.29	.88	11/12/20 13:32	
Dibromochloromethane	5.5 U	5.5	0.22	.88	11/12/20 13:32	
Dichlorodifluoromethane (CFC 12)	5.5 U	5.5	0.37	.88	11/12/20 13:32	
Dichloromethane	5.5 U	5.5	3.1	.88	11/12/20 13:32	
Ethylbenzene	5.5 U	5.5	0.22	.88	11/12/20 13:32	
Isopropylbenzene (Cumene)	5.5 U	5.5	0.22	.88	11/12/20 13:32	
Methyl Acetate	5.5 U	5.5	0.92	.88	11/12/20 13:32	
Methyl tert-Butyl Ether	5.5 U	5.5	0.22	.88	11/12/20 13:32	
Methylcyclohexane	5.5 U	5.5	0.34	.88	11/12/20 13:32	
Styrene	5.5 U	5.5	0.22	.88	11/12/20 13:32	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:00
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-06
Lab Code: R2010340-006

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.5 U	5.5	0.26	.88	11/12/20 13:32	
Toluene	5.5 U	5.5	0.22	.88	11/12/20 13:32	
Trichloroethene (TCE)	5.5 U	5.5	0.25	.88	11/12/20 13:32	
Trichlorofluoromethane (CFC 11)	5.5 U	5.5	0.29	.88	11/12/20 13:32	
Vinyl Chloride	5.5 U	5.5	0.51	.88	11/12/20 13:32	
cis-1,2-Dichloroethene	5.5 U	5.5	0.22	.88	11/12/20 13:32	
cis-1,3-Dichloropropene	5.5 U	5.5	0.22	.88	11/12/20 13:32	
m,p-Xylenes	11 U	11	0.41	.88	11/12/20 13:32	
o-Xylene	5.5 U	5.5	0.22	.88	11/12/20 13:32	
trans-1,2-Dichloroethene	5.5 U	5.5	0.22	.88	11/12/20 13:32	
trans-1,3-Dichloropropene	5.5 U	5.5	0.22	.88	11/12/20 13:32	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	70	31 - 154	11/12/20 13:32	
Dibromofluoromethane	115	63 - 138	11/12/20 13:32	
Toluene-d8	105	66 - 138	11/12/20 13:32	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:00
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-06
Lab Code: R2010340-006

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	6.0 U	6.0	0.25	.97	11/11/20 17:58	
1,1,2,2-Tetrachloroethane	6.0 U	6.0	0.54	.97	11/11/20 17:58	
1,1,2-Trichloroethane	6.0 U	6.0	0.25	.97	11/11/20 17:58	
1,1,2-Trichloro-1,2,2-trifluoroethane	6.0 U	6.0	0.25	.97	11/11/20 17:58	
1,1-Dichloroethane (1,1-DCA)	6.0 U	6.0	0.25	.97	11/11/20 17:58	
1,1-Dichloroethene (1,1-DCE)	6.0 U	6.0	0.35	.97	11/11/20 17:58	
1,2,3-Trichlorobenzene	6.0 U	6.0	0.63	.97	11/11/20 17:58	
1,2,4-Trichlorobenzene	6.0 U	6.0	0.51	.97	11/11/20 17:58	
1,2,4-Trimethylbenzene	6.0 U	6.0	0.25	.97	11/11/20 17:58	
1,2-Dibromo-3-chloropropane (DBCP)	6.0 U	6.0	0.91	.97	11/11/20 17:58	
1,2-Dibromoethane	6.0 U	6.0	0.25	.97	11/11/20 17:58	
1,2-Dichlorobenzene	6.0 U	6.0	0.25	.97	11/11/20 17:58	
1,2-Dichloroethane	6.0 U	6.0	0.25	.97	11/11/20 17:58	
1,2-Dichloropropane	6.0 U	6.0	0.25	.97	11/11/20 17:58	
1,3,5-Trimethylbenzene	6.0 U	6.0	0.25	.97	11/11/20 17:58	
1,3-Dichlorobenzene	6.0 U	6.0	0.25	.97	11/11/20 17:58	
1,4-Dichlorobenzene	6.0 U	6.0	0.27	.97	11/11/20 17:58	
1,4-Dioxane	120 U	120	25	.97	11/11/20 17:58	
2-Butanone (MEK)	6.0 U	6.0	2.5	.97	11/11/20 17:58	
2-Hexanone	6.0 U	6.0	0.44	.97	11/11/20 17:58	
4-Methyl-2-pentanone	6.0 U	6.0	0.28	.97	11/11/20 17:58	
Acetone	32	6.0	5.7	.97	11/11/20 17:58	
Benzene	6.0 U	6.0	0.25	.97	11/11/20 17:58	
Bromochloromethane	6.0 U	6.0	0.25	.97	11/11/20 17:58	
Bromodichloromethane	6.0 U	6.0	0.25	.97	11/11/20 17:58	
Bromoform	6.0 U	6.0	0.61	.97	11/11/20 17:58	
Bromomethane	6.0 U	6.0	2.6	.97	11/11/20 17:58	
Carbon Disulfide	6.0 U	6.0	0.35	.97	11/11/20 17:58	
Carbon Tetrachloride	6.0 U	6.0	0.32	.97	11/11/20 17:58	
Chlorobenzene	6.0 U	6.0	0.25	.97	11/11/20 17:58	
Chloroethane	6.0 U	6.0	0.50	.97	11/11/20 17:58	
Chloroform	6.0 U	6.0	0.25	.97	11/11/20 17:58	
Chloromethane	6.0 U	6.0	1.7	.97	11/11/20 17:58	
Cyclohexane	6.0 U	6.0	0.32	.97	11/11/20 17:58	
Dibromochloromethane	6.0 U	6.0	0.25	.97	11/11/20 17:58	
Dichlorodifluoromethane (CFC 12)	6.0 U	6.0	0.40	.97	11/11/20 17:58	
Dichloromethane	6.0 U	6.0	3.4	.97	11/11/20 17:58	
Ethylbenzene	6.0 U	6.0	0.25	.97	11/11/20 17:58	
Isopropylbenzene (Cumene)	6.0 U	6.0	0.25	.97	11/11/20 17:58	
Methyl Acetate	6.0 U	6.0	1.1	.97	11/11/20 17:58	
Methyl tert-Butyl Ether	6.0 U	6.0	0.25	.97	11/11/20 17:58	
Methylcyclohexane	6.0 U	6.0	0.38	.97	11/11/20 17:58	
Styrene	6.0 U	6.0	0.25	.97	11/11/20 17:58	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:00
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-06
Lab Code: R2010340-006

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	6.0 U	6.0	0.28	.97	11/11/20 17:58	
Toluene	6.0 U	6.0	0.25	.97	11/11/20 17:58	
Trichloroethene (TCE)	6.0 U	6.0	0.27	.97	11/11/20 17:58	
Trichlorofluoromethane (CFC 11)	6.0 U	6.0	0.32	.97	11/11/20 17:58	
Vinyl Chloride	6.0 U	6.0	0.56	.97	11/11/20 17:58	
cis-1,2-Dichloroethene	6.0 U	6.0	0.25	.97	11/11/20 17:58	
cis-1,3-Dichloropropene	6.0 U	6.0	0.25	.97	11/11/20 17:58	
m,p-Xylenes	12 U	12	0.45	.97	11/11/20 17:58	
o-Xylene	6.0 U	6.0	0.25	.97	11/11/20 17:58	
trans-1,2-Dichloroethene	6.0 U	6.0	0.25	.97	11/11/20 17:58	
trans-1,3-Dichloropropene	6.0 U	6.0	0.25	.97	11/11/20 17:58	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	31 - 154	11/11/20 17:58	
Dibromofluoromethane	114	63 - 138	11/11/20 17:58	
Toluene-d8	105	66 - 138	11/11/20 17:58	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:16
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-57
Lab Code: R2010340-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	4.3 U	4.3	0.18	.75	11/11/20 18:21	
1,1,2,2-Tetrachloroethane	4.3 U	4.3	0.38	.75	11/11/20 18:21	
1,1,2-Trichloroethane	4.3 U	4.3	0.18	.75	11/11/20 18:21	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.3 U	4.3	0.18	.75	11/11/20 18:21	
1,1-Dichloroethane (1,1-DCA)	4.3 U	4.3	0.18	.75	11/11/20 18:21	
1,1-Dichloroethene (1,1-DCE)	4.3 U	4.3	0.25	.75	11/11/20 18:21	
1,2,3-Trichlorobenzene	4.3 U	4.3	0.45	.75	11/11/20 18:21	
1,2,4-Trichlorobenzene	4.3 U	4.3	0.37	.75	11/11/20 18:21	
1,2,4-Trimethylbenzene	4.3 U	4.3	0.18	.75	11/11/20 18:21	
1,2-Dibromo-3-chloropropane (DBCP)	4.3 U	4.3	0.65	.75	11/11/20 18:21	
1,2-Dibromoethane	4.3 U	4.3	0.18	.75	11/11/20 18:21	
1,2-Dichlorobenzene	4.3 U	4.3	0.18	.75	11/11/20 18:21	
1,2-Dichloroethane	4.3 U	4.3	0.18	.75	11/11/20 18:21	
1,2-Dichloropropane	4.3 U	4.3	0.18	.75	11/11/20 18:21	
1,3,5-Trimethylbenzene	4.3 U	4.3	0.18	.75	11/11/20 18:21	
1,3-Dichlorobenzene	4.3 U	4.3	0.18	.75	11/11/20 18:21	
1,4-Dichlorobenzene	4.3 U	4.3	0.19	.75	11/11/20 18:21	
1,4-Dioxane	86 U	86	18	.75	11/11/20 18:21	
2-Butanone (MEK)	4.3 U	4.3	1.8	.75	11/11/20 18:21	
2-Hexanone	4.3 U	4.3	0.31	.75	11/11/20 18:21	
4-Methyl-2-pentanone	4.3 U	4.3	0.20	.75	11/11/20 18:21	
Acetone	4.3 U	4.3	4.1	.75	11/11/20 18:21	
Benzene	4.3 U	4.3	0.18	.75	11/11/20 18:21	
Bromochloromethane	4.3 U	4.3	0.18	.75	11/11/20 18:21	
Bromodichloromethane	4.3 U	4.3	0.18	.75	11/11/20 18:21	
Bromoform	4.3 U	4.3	0.43	.75	11/11/20 18:21	
Bromomethane	4.3 U	4.3	1.9	.75	11/11/20 18:21	
Carbon Disulfide	4.3 U	4.3	0.25	.75	11/11/20 18:21	
Carbon Tetrachloride	4.3 U	4.3	0.23	.75	11/11/20 18:21	
Chlorobenzene	4.3 U	4.3	0.18	.75	11/11/20 18:21	
Chloroethane	4.3 U	4.3	0.36	.75	11/11/20 18:21	
Chloroform	4.3 U	4.3	0.18	.75	11/11/20 18:21	
Chloromethane	4.3 U	4.3	1.3	.75	11/11/20 18:21	
Cyclohexane	4.3 U	4.3	0.23	.75	11/11/20 18:21	
Dibromochloromethane	4.3 U	4.3	0.18	.75	11/11/20 18:21	
Dichlorodifluoromethane (CFC 12)	4.3 U	4.3	0.29	.75	11/11/20 18:21	
Dichloromethane	4.3 U	4.3	2.5	.75	11/11/20 18:21	
Ethylbenzene	4.3 U	4.3	0.18	.75	11/11/20 18:21	
Isopropylbenzene (Cumene)	4.3 U	4.3	0.18	.75	11/11/20 18:21	
Methyl Acetate	4.3 U	4.3	0.73	.75	11/11/20 18:21	
Methyl tert-Butyl Ether	4.3 U	4.3	0.18	.75	11/11/20 18:21	
Methylcyclohexane	4.3 U	4.3	0.27	.75	11/11/20 18:21	
Styrene	4.3 U	4.3	0.18	.75	11/11/20 18:21	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:16
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-57
Lab Code: R2010340-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	4.3 U	4.3	0.20	.75	11/11/20 18:21	
Toluene	4.3 U	4.3	0.18	.75	11/11/20 18:21	
Trichloroethene (TCE)	4.3 U	4.3	0.19	.75	11/11/20 18:21	
Trichlorofluoromethane (CFC 11)	4.3 U	4.3	0.23	.75	11/11/20 18:21	
Vinyl Chloride	4.3 U	4.3	0.40	.75	11/11/20 18:21	
cis-1,2-Dichloroethene	4.3 U	4.3	0.18	.75	11/11/20 18:21	
cis-1,3-Dichloropropene	4.3 U	4.3	0.18	.75	11/11/20 18:21	
m,p-Xylenes	8.6 U	8.6	0.32	.75	11/11/20 18:21	
o-Xylene	4.3 U	4.3	0.18	.75	11/11/20 18:21	
trans-1,2-Dichloroethene	4.3 U	4.3	0.18	.75	11/11/20 18:21	
trans-1,3-Dichloropropene	4.3 U	4.3	0.18	.75	11/11/20 18:21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	31 - 154	11/11/20 18:21	
Dibromofluoromethane	111	63 - 138	11/11/20 18:21	
Toluene-d8	106	66 - 138	11/11/20 18:21	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:35
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-810
Lab Code: R2010340-008

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	4.2 U	4.2	0.17	.72	11/11/20 18:44	
1,1,2,2-Tetrachloroethane	4.2 U	4.2	0.37	.72	11/11/20 18:44	
1,1,2-Trichloroethane	4.2 U	4.2	0.17	.72	11/11/20 18:44	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.2 U	4.2	0.17	.72	11/11/20 18:44	
1,1-Dichloroethane (1,1-DCA)	4.2 U	4.2	0.17	.72	11/11/20 18:44	
1,1-Dichloroethene (1,1-DCE)	4.2 U	4.2	0.25	.72	11/11/20 18:44	
1,2,3-Trichlorobenzene	4.2 U	4.2	0.44	.72	11/11/20 18:44	
1,2,4-Trichlorobenzene	4.2 U	4.2	0.36	.72	11/11/20 18:44	
1,2,4-Trimethylbenzene	4.2 U	4.2	0.17	.72	11/11/20 18:44	
1,2-Dibromo-3-chloropropane (DBCP)	4.2 U	4.2	0.63	.72	11/11/20 18:44	
1,2-Dibromoethane	4.2 U	4.2	0.17	.72	11/11/20 18:44	
1,2-Dichlorobenzene	4.2 U	4.2	0.17	.72	11/11/20 18:44	
1,2-Dichloroethane	4.2 U	4.2	0.17	.72	11/11/20 18:44	
1,2-Dichloropropane	4.2 U	4.2	0.17	.72	11/11/20 18:44	
1,3,5-Trimethylbenzene	4.2 U	4.2	0.17	.72	11/11/20 18:44	
1,3-Dichlorobenzene	4.2 U	4.2	0.17	.72	11/11/20 18:44	
1,4-Dichlorobenzene	4.2 U	4.2	0.19	.72	11/11/20 18:44	
1,4-Dioxane	84 U	84	17	.72	11/11/20 18:44	
2-Butanone (MEK)	4.2 U	4.2	1.7	.72	11/11/20 18:44	
2-Hexanone	4.2 U	4.2	0.31	.72	11/11/20 18:44	
4-Methyl-2-pentanone	4.2 U	4.2	0.20	.72	11/11/20 18:44	
Acetone	5.4	4.2	4.0	.72	11/11/20 18:44	
Benzene	4.2 U	4.2	0.17	.72	11/11/20 18:44	
Bromochloromethane	4.2 U	4.2	0.17	.72	11/11/20 18:44	
Bromodichloromethane	4.2 U	4.2	0.17	.72	11/11/20 18:44	
Bromoform	4.2 U	4.2	0.42	.72	11/11/20 18:44	
Bromomethane	4.2 U	4.2	1.8	.72	11/11/20 18:44	
Carbon Disulfide	4.2 U	4.2	0.25	.72	11/11/20 18:44	
Carbon Tetrachloride	4.2 U	4.2	0.22	.72	11/11/20 18:44	
Chlorobenzene	4.2 U	4.2	0.17	.72	11/11/20 18:44	
Chloroethane	4.2 U	4.2	0.35	.72	11/11/20 18:44	
Chloroform	4.2 U	4.2	0.17	.72	11/11/20 18:44	
Chloromethane	4.2 U	4.2	1.2	.72	11/11/20 18:44	
Cyclohexane	4.2 U	4.2	0.22	.72	11/11/20 18:44	
Dibromochloromethane	4.2 U	4.2	0.17	.72	11/11/20 18:44	
Dichlorodifluoromethane (CFC 12)	4.2 U	4.2	0.28	.72	11/11/20 18:44	
Dichloromethane	4.2 U	4.2	2.4	.72	11/11/20 18:44	
Ethylbenzene	4.2 U	4.2	0.17	.72	11/11/20 18:44	
Isopropylbenzene (Cumene)	4.2 U	4.2	0.17	.72	11/11/20 18:44	
Methyl Acetate	4.2 U	4.2	0.71	.72	11/11/20 18:44	
Methyl tert-Butyl Ether	4.2 U	4.2	0.17	.72	11/11/20 18:44	
Methylcyclohexane	4.2 U	4.2	0.26	.72	11/11/20 18:44	
Styrene	4.2 U	4.2	0.17	.72	11/11/20 18:44	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:35
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-810
Lab Code: R2010340-008

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	4.2 U	4.2	0.20	.72	11/11/20 18:44	
Toluene	4.2 U	4.2	0.17	.72	11/11/20 18:44	
Trichloroethene (TCE)	4.2 U	4.2	0.19	.72	11/11/20 18:44	
Trichlorofluoromethane (CFC 11)	4.2 U	4.2	0.22	.72	11/11/20 18:44	
Vinyl Chloride	4.2 U	4.2	0.39	.72	11/11/20 18:44	
cis-1,2-Dichloroethene	4.2 U	4.2	0.17	.72	11/11/20 18:44	
cis-1,3-Dichloropropene	4.2 U	4.2	0.17	.72	11/11/20 18:44	
m,p-Xylenes	8.4 U	8.4	0.31	.72	11/11/20 18:44	
o-Xylene	4.2 U	4.2	0.17	.72	11/11/20 18:44	
trans-1,2-Dichloroethene	4.2 U	4.2	0.17	.72	11/11/20 18:44	
trans-1,3-Dichloropropene	4.2 U	4.2	0.17	.72	11/11/20 18:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	86	31 - 154	11/11/20 18:44	
Dibromofluoromethane	111	63 - 138	11/11/20 18:44	
Toluene-d8	98	66 - 138	11/11/20 18:44	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:40
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-01
Lab Code: R2010340-009

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
1,1,2,2-Tetrachloroethane	9.1 U	9.1	0.80	1.56	11/12/20 13:56	
1,1,2-Trichloroethane	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
1,1-Dichloroethane (1,1-DCA)	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
1,1-Dichloroethene (1,1-DCE)	9.1 U	9.1	0.53	1.56	11/12/20 13:56	
1,2,3-Trichlorobenzene	9.1 U	9.1	0.95	1.56	11/12/20 13:56	
1,2,4-Trichlorobenzene	9.1 U	9.1	0.77	1.56	11/12/20 13:56	
1,2,4-Trimethylbenzene	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
1,2-Dibromo-3-chloropropane (DBCP)	9.1 U	9.1	1.4	1.56	11/12/20 13:56	
1,2-Dibromoethane	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
1,2-Dichlorobenzene	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
1,2-Dichloroethane	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
1,2-Dichloropropane	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
1,3,5-Trimethylbenzene	0.51 J	9.1	0.37	1.56	11/12/20 13:56	
1,3-Dichlorobenzene	0.45 J	9.1	0.37	1.56	11/12/20 13:56	
1,4-Dichlorobenzene	0.56 J	9.1	0.40	1.56	11/12/20 13:56	
1,4-Dioxane	180 U	180	37	1.56	11/12/20 13:56	
2-Butanone (MEK)	9.1 U	9.1	3.7	1.56	11/12/20 13:56	
2-Hexanone	9.1 U	9.1	0.66	1.56	11/12/20 13:56	
4-Methyl-2-pentanone	9.1 U	9.1	0.42	1.56	11/12/20 13:56	
Acetone	9.1 U	9.1	8.6	1.56	11/12/20 13:56	
Benzene	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
Bromochloromethane	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
Bromodichloromethane	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
Bromoform	9.1 U	9.1	0.91	1.56	11/12/20 13:56	
Bromomethane	9.1 U	9.1	3.9	1.56	11/12/20 13:56	
Carbon Disulfide	9.1 U	9.1	0.53	1.56	11/12/20 13:56	
Carbon Tetrachloride	9.1 U	9.1	0.48	1.56	11/12/20 13:56	
Chlorobenzene	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
Chloroethane	9.1 U	9.1	0.75	1.56	11/12/20 13:56	
Chloroform	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
Chloromethane	9.1 U	9.1	2.6	1.56	11/12/20 13:56	
Cyclohexane	3.9 J	9.1	0.48	1.56	11/12/20 13:56	
Dibromochloromethane	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
Dichlorodifluoromethane (CFC 12)	9.1 U	9.1	0.60	1.56	11/12/20 13:56	
Dichloromethane	9.1 U	9.1	5.1	1.56	11/12/20 13:56	
Ethylbenzene	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
Isopropylbenzene (Cumene)	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
Methyl Acetate	9.1 U	9.1	1.6	1.56	11/12/20 13:56	
Methyl tert-Butyl Ether	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
Methylcyclohexane	4.4 J	9.1	0.57	1.56	11/12/20 13:56	
Styrene	9.1 U	9.1	0.37	1.56	11/12/20 13:56	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:40
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-01
Lab Code: R2010340-009

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	9.1 U	9.1	0.42	1.56	11/12/20 13:56	
Toluene	0.71 J	9.1	0.37	1.56	11/12/20 13:56	
Trichloroethene (TCE)	9.1 U	9.1	0.40	1.56	11/12/20 13:56	
Trichlorofluoromethane (CFC 11)	9.1 U	9.1	0.48	1.56	11/12/20 13:56	
Vinyl Chloride	9.1 U	9.1	0.84	1.56	11/12/20 13:56	
cis-1,2-Dichloroethene	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
cis-1,3-Dichloropropene	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
m,p-Xylenes	18 U	18	0.68	1.56	11/12/20 13:56	
o-Xylene	0.63 J	9.1	0.37	1.56	11/12/20 13:56	
trans-1,2-Dichloroethene	9.1 U	9.1	0.37	1.56	11/12/20 13:56	
trans-1,3-Dichloropropene	9.1 U	9.1	0.37	1.56	11/12/20 13:56	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	33	31 - 154	11/12/20 13:56	
Dibromofluoromethane	149 *	63 - 138	11/12/20 13:56	*
Toluene-d8	108	66 - 138	11/12/20 13:56	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:40
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-01
Lab Code: R2010340-009

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
1,1,2,2-Tetrachloroethane	9.8 U	9.8	0.87	1.69	11/11/20 19:07	
1,1,2-Trichloroethane	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
1,1-Dichloroethane (1,1-DCA)	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
1,1-Dichloroethene (1,1-DCE)	9.8 U	9.8	0.57	1.69	11/11/20 19:07	
1,2,3-Trichlorobenzene	9.8 U	9.8	1.1	1.69	11/11/20 19:07	
1,2,4-Trichlorobenzene	9.8 U	9.8	0.83	1.69	11/11/20 19:07	
1,2,4-Trimethylbenzene	0.72 J	9.8	0.40	1.69	11/11/20 19:07	
1,2-Dibromo-3-chloropropane (DBCP)	9.8 U	9.8	1.5	1.69	11/11/20 19:07	
1,2-Dibromoethane	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
1,2-Dichlorobenzene	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
1,2-Dichloroethane	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
1,2-Dichloropropane	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
1,3,5-Trimethylbenzene	0.43 J	9.8	0.40	1.69	11/11/20 19:07	
1,3-Dichlorobenzene	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
1,4-Dichlorobenzene	9.8 U	9.8	0.44	1.69	11/11/20 19:07	
1,4-Dioxane	200 U	200	40	1.69	11/11/20 19:07	
2-Butanone (MEK)	9.8 U	9.8	4.0	1.69	11/11/20 19:07	
2-Hexanone	9.8 U	9.8	0.71	1.69	11/11/20 19:07	
4-Methyl-2-pentanone	9.8 U	9.8	0.46	1.69	11/11/20 19:07	
Acetone	9.8 U	9.8	9.3	1.69	11/11/20 19:07	
Benzene	0.93 J	9.8	0.40	1.69	11/11/20 19:07	
Bromochloromethane	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
Bromodichloromethane	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
Bromoform	9.8 U	9.8	0.99	1.69	11/11/20 19:07	
Bromomethane	9.8 U	9.8	4.2	1.69	11/11/20 19:07	
Carbon Disulfide	9.8 U	9.8	0.57	1.69	11/11/20 19:07	
Carbon Tetrachloride	9.8 U	9.8	0.52	1.69	11/11/20 19:07	
Chlorobenzene	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
Chloroethane	9.8 U	9.8	0.81	1.69	11/11/20 19:07	
Chloroform	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
Chloromethane	9.8 U	9.8	2.8	1.69	11/11/20 19:07	
Cyclohexane	4.7 J	9.8	0.52	1.69	11/11/20 19:07	
Dibromochloromethane	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
Dichlorodifluoromethane (CFC 12)	9.8 U	9.8	0.65	1.69	11/11/20 19:07	
Dichloromethane	9.8 U	9.8	5.5	1.69	11/11/20 19:07	
Ethylbenzene	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
Isopropylbenzene (Cumene)	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
Methyl Acetate	9.8 U	9.8	1.7	1.69	11/11/20 19:07	
Methyl tert-Butyl Ether	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
Methylcyclohexane	5.2 J	9.8	0.61	1.69	11/11/20 19:07	
Styrene	9.8 U	9.8	0.40	1.69	11/11/20 19:07	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:40
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-01
Lab Code: R2010340-009

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	9.8 U	9.8	0.46	1.69	11/11/20 19:07	
Toluene	2.4 J	9.8	0.40	1.69	11/11/20 19:07	
Trichloroethene (TCE)	9.8 U	9.8	0.44	1.69	11/11/20 19:07	
Trichlorofluoromethane (CFC 11)	9.8 U	9.8	0.52	1.69	11/11/20 19:07	
Vinyl Chloride	9.8 U	9.8	0.91	1.69	11/11/20 19:07	
cis-1,2-Dichloroethene	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
cis-1,3-Dichloropropene	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
m,p-Xylenes	1.2 J	20	0.73	1.69	11/11/20 19:07	
o-Xylene	1.1 J	9.8	0.40	1.69	11/11/20 19:07	
trans-1,2-Dichloroethene	9.8 U	9.8	0.40	1.69	11/11/20 19:07	
trans-1,3-Dichloropropene	9.8 U	9.8	0.40	1.69	11/11/20 19:07	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	38	31 - 154	11/11/20 19:07	
Dibromofluoromethane	134	63 - 138	11/11/20 19:07	
Toluene-d8	101	66 - 138	11/11/20 19:07	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010340
Date Collected: 11/02/20
Date Received: 11/03/20 16:15

Sample Name: Trip Blank
Lab Code: R2010340-010

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.25	1	11/11/20 13:16	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.34	1	11/11/20 13:16	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.45	1	11/11/20 13:16	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,4-Dichlorobenzene	5.0 U	5.0	0.20	1	11/11/20 13:16	
1,4-Dioxane	100 U	100	13	1	11/11/20 13:16	
2-Butanone (MEK)	10 U	10	0.78	1	11/11/20 13:16	
2-Hexanone	10 U	10	0.20	1	11/11/20 13:16	
4-Methyl-2-pentanone	10 U	10	0.20	1	11/11/20 13:16	
Acetone	10 U	10	5.0	1	11/11/20 13:16	
Benzene	5.0 U	5.0	0.20	1	11/11/20 13:16	
Bromochloromethane	5.0 U	5.0	0.20	1	11/11/20 13:16	
Bromodichloromethane	5.0 U	5.0	0.20	1	11/11/20 13:16	
Bromoform	5.0 U	5.0	0.25	1	11/11/20 13:16	
Bromomethane	5.0 U	5.0	0.70	1	11/11/20 13:16	
Carbon Disulfide	10 U	10	0.42	1	11/11/20 13:16	
Carbon Tetrachloride	5.0 U	5.0	0.34	1	11/11/20 13:16	
Chlorobenzene	5.0 U	5.0	0.20	1	11/11/20 13:16	
Chloroethane	5.0 U	5.0	0.23	1	11/11/20 13:16	
Chloroform	5.0 U	5.0	0.24	1	11/11/20 13:16	
Chloromethane	5.0 U	5.0	0.28	1	11/11/20 13:16	
Cyclohexane	10 U	10	0.26	1	11/11/20 13:16	
Dibromochloromethane	5.0 U	5.0	0.20	1	11/11/20 13:16	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.21	1	11/11/20 13:16	
Dichloromethane	5.0 U	5.0	0.65	1	11/11/20 13:16	
Ethylbenzene	5.0 U	5.0	0.20	1	11/11/20 13:16	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	11/11/20 13:16	
Methyl Acetate	10 U	10	0.33	1	11/11/20 13:16	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	11/11/20 13:16	
Methylcyclohexane	10 U	10	0.20	1	11/11/20 13:16	
Styrene	5.0 U	5.0	0.20	1	11/11/20 13:16	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010340
Date Collected: 11/02/20
Date Received: 11/03/20 16:15

Sample Name: Trip Blank
Lab Code: R2010340-010

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.21	1	11/11/20 13:16	
Toluene	5.0 U	5.0	0.20	1	11/11/20 13:16	
Trichloroethene (TCE)	5.0 U	5.0	0.20	1	11/11/20 13:16	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.24	1	11/11/20 13:16	
Vinyl Chloride	5.0 U	5.0	0.20	1	11/11/20 13:16	
cis-1,2-Dichloroethene	5.0 U	5.0	0.23	1	11/11/20 13:16	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/11/20 13:16	
m,p-Xylenes	5.0 U	5.0	0.20	1	11/11/20 13:16	
o-Xylene	5.0 U	5.0	0.20	1	11/11/20 13:16	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/11/20 13:16	
trans-1,3-Dichloropropene	5.0 U	5.0	0.23	1	11/11/20 13:16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	85 - 122	11/11/20 13:16	
Dibromofluoromethane	91	80 - 116	11/11/20 13:16	
Toluene-d8	98	87 - 121	11/11/20 13:16	



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 09:37
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-28-CL-10302020
Lab Code: R2010340-001

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	410 U	410	97	1	11/18/20 22:37	11/5/20	
2,3,4,6-Tetrachlorophenol	410 U	410	86	1	11/18/20 22:37	11/5/20	
2,4,5-Trichlorophenol	410 U	410	350	1	11/18/20 22:37	11/5/20	
2,4,6-Trichlorophenol	410 U	410	72	1	11/18/20 22:37	11/5/20	
2,4-Dichlorophenol	410 U	410	87	1	11/18/20 22:37	11/5/20	
2,4-Dimethylphenol	410 U	410	90	1	11/18/20 22:37	11/5/20	
2,4-Dinitrophenol	2100 U	2100	810	1	11/18/20 22:37	11/5/20	
2,4-Dinitrotoluene	410 U	410	170	1	11/18/20 22:37	11/5/20	
2,6-Dinitrotoluene	410 U	410	120	1	11/18/20 22:37	11/5/20	
2-Chloronaphthalene	410 U	410	98	1	11/18/20 22:37	11/5/20	
2-Chlorophenol	410 U	410	110	1	11/18/20 22:37	11/5/20	
2-Methylnaphthalene	410 U	410	90	1	11/18/20 22:37	11/5/20	
2-Methylphenol	410 U	410	88	1	11/18/20 22:37	11/5/20	
2-Nitroaniline	410 U	410	130	1	11/18/20 22:37	11/5/20	
2-Nitrophenol	410 U	410	120	1	11/18/20 22:37	11/5/20	
3,3'-Dichlorobenzidine	410 U	410	86	1	11/18/20 22:37	11/5/20	
3- and 4-Methylphenol Coelution	410 U	410	78	1	11/18/20 22:37	11/5/20	
3-Nitroaniline	410 U	410	87	1	11/18/20 22:37	11/5/20	
4,6-Dinitro-2-methylphenol	2100 U	2100	180	1	11/18/20 22:37	11/5/20	
4-Bromophenyl Phenyl Ether	410 U	410	150	1	11/18/20 22:37	11/5/20	
4-Chloro-3-methylphenol	410 U	410	90	1	11/18/20 22:37	11/5/20	
4-Chloroaniline	410 U	410	97	1	11/18/20 22:37	11/5/20	
4-Chlorophenyl Phenyl Ether	410 U	410	98	1	11/18/20 22:37	11/5/20	
4-Nitroaniline	410 U	410	87	1	11/18/20 22:37	11/5/20	
4-Nitrophenol	2100 U	2100	140	1	11/18/20 22:37	11/5/20	
Acenaphthene	410 U	410	92	1	11/18/20 22:37	11/5/20	
Acenaphthylene	410 U	410	110	1	11/18/20 22:37	11/5/20	
Acetophenone	410 U	410	93	1	11/18/20 22:37	11/5/20	
Anthracene	410 U	410	120	1	11/18/20 22:37	11/5/20	
Atrazine	410 U	410	170	1	11/18/20 22:37	11/5/20	
Benz(a)anthracene	410 U	410	130	1	11/18/20 22:37	11/5/20	
Benzaldehyde	410 U	410	81	1	11/18/20 22:37	11/5/20	
Benzo(a)pyrene	410 U	410	150	1	11/18/20 22:37	11/5/20	
Benzo(b)fluoranthene	410 U	410	140	1	11/18/20 22:37	11/5/20	
Benzo(g,h,i)perylene	410 U	410	110	1	11/18/20 22:37	11/5/20	
Benzo(k)fluoranthene	410 U	410	150	1	11/18/20 22:37	11/5/20	
Biphenyl	410 U	410	110	1	11/18/20 22:37	11/5/20	
2,2'-Oxybis(1-chloropropane)	410 U	410	170	1	11/18/20 22:37	11/5/20	
Bis(2-chloroethoxy)methane	410 U	410	110	1	11/18/20 22:37	11/5/20	
Bis(2-chloroethyl) Ether	410 U	410	110	1	11/18/20 22:37	11/5/20	
Bis(2-ethylhexyl) Phthalate	620 U	620	110	1	11/18/20 22:37	11/5/20	
Butyl Benzyl Phthalate	410 U	410	110	1	11/18/20 22:37	11/5/20	
Caprolactam	410 U	410	110	1	11/18/20 22:37	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 09:37
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-28-CL-10302020
Lab Code: R2010340-001

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	410 U	410	120	1	11/18/20 22:37	11/5/20	
Chrysene	410 U	410	150	1	11/18/20 22:37	11/5/20	
Di-n-butyl Phthalate	410 U	410	130	1	11/18/20 22:37	11/5/20	
Di-n-octyl Phthalate	410 U	410	130	1	11/18/20 22:37	11/5/20	
Dibenz(a,h)anthracene	410 U	410	130	1	11/18/20 22:37	11/5/20	
Dibenzofuran	410 U	410	81	1	11/18/20 22:37	11/5/20	
Diethyl Phthalate	410 U	410	87	1	11/18/20 22:37	11/5/20	
Dimethyl Phthalate	410 U	410	92	1	11/18/20 22:37	11/5/20	
Fluoranthene	410 U	410	150	1	11/18/20 22:37	11/5/20	
Fluorene	410 U	410	95	1	11/18/20 22:37	11/5/20	
Hexachlorobenzene	410 U	410	130	1	11/18/20 22:37	11/5/20	
Hexachlorobutadiene	410 U	410	99	1	11/18/20 22:37	11/5/20	
Hexachlorocyclopentadiene	410 U	410	90	1	11/18/20 22:37	11/5/20	
Hexachloroethane	410 U	410	110	1	11/18/20 22:37	11/5/20	
Indeno(1,2,3-cd)pyrene	410 U	410	140	1	11/18/20 22:37	11/5/20	
Isophorone	410 U	410	120	1	11/18/20 22:37	11/5/20	
N-Nitrosodi-n-propylamine	410 U	410	110	1	11/18/20 22:37	11/5/20	
N-Nitrosodiphenylamine	410 U	410	280	1	11/18/20 22:37	11/5/20	
Naphthalene	410 U	410	110	1	11/18/20 22:37	11/5/20	
Nitrobenzene	410 U	410	110	1	11/18/20 22:37	11/5/20	
Pentachlorophenol (PCP)	2100 U	2100	140	1	11/18/20 22:37	11/5/20	
Phenanthrene	410 U	410	120	1	11/18/20 22:37	11/5/20	
Phenol	410 U	410	97	1	11/18/20 22:37	11/5/20	
Pyrene	410 U	410	170	1	11/18/20 22:37	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	48	10 - 109	11/18/20 22:37	
2-Fluorobiphenyl	29	10 - 102	11/18/20 22:37	
2-Fluorophenol	29	10 - 88	11/18/20 22:37	
Nitrobenzene-d5	27	10 - 95	11/18/20 22:37	
Phenol-d6	31	10 - 145	11/18/20 22:37	
Terphenyl-d14	51	10 - 106	11/18/20 22:37	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	460 U	460	110	1	11/18/20 23:06	11/5/20	
2,3,4,6-Tetrachlorophenol	460 U	460	97	1	11/18/20 23:06	11/5/20	
2,4,5-Trichlorophenol	460 U	460	400	1	11/18/20 23:06	11/5/20	
2,4,6-Trichlorophenol	460 U	460	82	1	11/18/20 23:06	11/5/20	
2,4-Dichlorophenol	460 U	460	98	1	11/18/20 23:06	11/5/20	
2,4-Dimethylphenol	460 U	460	110	1	11/18/20 23:06	11/5/20	
2,4-Dinitrophenol	2400 U	2400	910	1	11/18/20 23:06	11/5/20	
2,4-Dinitrotoluene	460 U	460	190	1	11/18/20 23:06	11/5/20	
2,6-Dinitrotoluene	460 U	460	140	1	11/18/20 23:06	11/5/20	
2-Chloronaphthalene	460 U	460	120	1	11/18/20 23:06	11/5/20	
2-Chlorophenol	460 U	460	120	1	11/18/20 23:06	11/5/20	
2-Methylnaphthalene	170 J	460	110	1	11/18/20 23:06	11/5/20	
2-Methylphenol	460 U	460	100	1	11/18/20 23:06	11/5/20	
2-Nitroaniline	460 U	460	140	1	11/18/20 23:06	11/5/20	
2-Nitrophenol	460 U	460	140	1	11/18/20 23:06	11/5/20	
3,3'-Dichlorobenzidine	460 U	460	97	1	11/18/20 23:06	11/5/20	
3- and 4-Methylphenol Coelution	460 U	460	89	1	11/18/20 23:06	11/5/20	
3-Nitroaniline	460 U	460	98	1	11/18/20 23:06	11/5/20	
4,6-Dinitro-2-methylphenol	2400 U	2400	200	1	11/18/20 23:06	11/5/20	
4-Bromophenyl Phenyl Ether	460 U	460	170	1	11/18/20 23:06	11/5/20	
4-Chloro-3-methylphenol	460 U	460	110	1	11/18/20 23:06	11/5/20	
4-Chloroaniline	460 U	460	110	1	11/18/20 23:06	11/5/20	
4-Chlorophenyl Phenyl Ether	460 U	460	120	1	11/18/20 23:06	11/5/20	
4-Nitroaniline	460 U	460	98	1	11/18/20 23:06	11/5/20	
4-Nitrophenol	2400 U	2400	160	1	11/18/20 23:06	11/5/20	
Acenaphthene	460 U	460	110	1	11/18/20 23:06	11/5/20	
Acenaphthylene	980	460	130	1	11/18/20 23:06	11/5/20	
Acetophenone	460 U	460	110	1	11/18/20 23:06	11/5/20	
Anthracene	660	460	130	1	11/18/20 23:06	11/5/20	
Atrazine	460 U	460	190	1	11/18/20 23:06	11/5/20	
Benz(a)anthracene	2100	460	140	1	11/18/20 23:06	11/5/20	
Benzaldehyde	460 U	460	91	1	11/18/20 23:06	11/5/20	
Benzo(a)pyrene	2500	460	170	1	11/18/20 23:06	11/5/20	
Benzo(b)fluoranthene	2900	460	160	1	11/18/20 23:06	11/5/20	
Benzo(g,h,i)perylene	1800	460	130	1	11/18/20 23:06	11/5/20	
Benzo(k)fluoranthene	950	460	170	1	11/18/20 23:06	11/5/20	
Biphenyl	460 U	460	120	1	11/18/20 23:06	11/5/20	
2,2'-Oxybis(1-chloropropane)	460 U	460	190	1	11/18/20 23:06	11/5/20	
Bis(2-chloroethoxy)methane	460 U	460	130	1	11/18/20 23:06	11/5/20	
Bis(2-chloroethyl) Ether	460 U	460	130	1	11/18/20 23:06	11/5/20	
Bis(2-ethylhexyl) Phthalate	700 U	700	130	1	11/18/20 23:06	11/5/20	
Butyl Benzyl Phthalate	460 U	460	120	1	11/18/20 23:06	11/5/20	
Caprolactam	460 U	460	130	1	11/18/20 23:06	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	220 J	460	140	1	11/18/20 23:06	11/5/20	
Chrysene	2100	460	170	1	11/18/20 23:06	11/5/20	
Di-n-butyl Phthalate	460 U	460	140	1	11/18/20 23:06	11/5/20	
Di-n-octyl Phthalate	460 U	460	140	1	11/18/20 23:06	11/5/20	
Dibenz(a,h)anthracene	410 J	460	140	1	11/18/20 23:06	11/5/20	
Dibenzofuran	130 J	460	91	1	11/18/20 23:06	11/5/20	
Diethyl Phthalate	460 U	460	98	1	11/18/20 23:06	11/5/20	
Dimethyl Phthalate	460 U	460	110	1	11/18/20 23:06	11/5/20	
Fluoranthene	4100	460	170	1	11/18/20 23:06	11/5/20	
Fluorene	200 J	460	110	1	11/18/20 23:06	11/5/20	
Hexachlorobenzene	460 U	460	140	1	11/18/20 23:06	11/5/20	
Hexachlorobutadiene	460 U	460	120	1	11/18/20 23:06	11/5/20	
Hexachlorocyclopentadiene	460 U	460	110	1	11/18/20 23:06	11/5/20	
Hexachloroethane	460 U	460	120	1	11/18/20 23:06	11/5/20	
Indeno(1,2,3-cd)pyrene	1800	460	160	1	11/18/20 23:06	11/5/20	
Isophorone	460 U	460	130	1	11/18/20 23:06	11/5/20	
N-Nitrosodi-n-propylamine	460 U	460	130	1	11/18/20 23:06	11/5/20	
N-Nitrosodiphenylamine	460 U	460	310	1	11/18/20 23:06	11/5/20	
Naphthalene	530	460	120	1	11/18/20 23:06	11/5/20	
Nitrobenzene	460 U	460	120	1	11/18/20 23:06	11/5/20	
Pentachlorophenol (PCP)	2400 U	2400	160	1	11/18/20 23:06	11/5/20	
Phenanthrene	2000	460	140	1	11/18/20 23:06	11/5/20	
Phenol	460 U	460	110	1	11/18/20 23:06	11/5/20	
Pyrene	3600	460	190	1	11/18/20 23:06	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	5 *	10 - 109	11/18/20 23:06	*
2-Fluorobiphenyl	23	10 - 102	11/18/20 23:06	
2-Fluorophenol	6 *	10 - 88	11/18/20 23:06	*
Nitrobenzene-d5	21	10 - 95	11/18/20 23:06	
Phenol-d6	9 *	10 - 145	11/18/20 23:06	*
Terphenyl-d14	34	10 - 106	11/18/20 23:06	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	500 U	500	120	1	11/24/20 20:13	11/20/20	*
2,3,4,6-Tetrachlorophenol	500 U	500	110	1	11/24/20 20:13	11/20/20	*
2,4,5-Trichlorophenol	500 U	500	430	1	11/24/20 20:13	11/20/20	*
2,4,6-Trichlorophenol	500 U	500	89	1	11/24/20 20:13	11/20/20	*
2,4-Dichlorophenol	500 U	500	110	1	11/24/20 20:13	11/20/20	*
2,4-Dimethylphenol	500 U	500	110	1	11/24/20 20:13	11/20/20	*
2,4-Dinitrophenol	2600 U	2600	1000	1	11/24/20 20:13	11/20/20	*
2,4-Dinitrotoluene	500 U	500	200	1	11/24/20 20:13	11/20/20	*
2,6-Dinitrotoluene	500 U	500	150	1	11/24/20 20:13	11/20/20	*
2-Chloronaphthalene	500 U	500	130	1	11/24/20 20:13	11/20/20	*
2-Chlorophenol	500 U	500	130	1	11/24/20 20:13	11/20/20	*
2-Methylnaphthalene	500 U	500	110	1	11/24/20 20:13	11/20/20	*
2-Methylphenol	500 U	500	110	1	11/24/20 20:13	11/20/20	*
2-Nitroaniline	500 U	500	150	1	11/24/20 20:13	11/20/20	*
2-Nitrophenol	500 U	500	150	1	11/24/20 20:13	11/20/20	*
3,3'-Dichlorobenzidine	500 U	500	110	1	11/24/20 20:13	11/20/20	*
3- and 4-Methylphenol Coelution	500 U	500	97	1	11/24/20 20:13	11/20/20	*
3-Nitroaniline	500 U	500	110	1	11/24/20 20:13	11/20/20	*
4,6-Dinitro-2-methylphenol	2600 U	2600	220	1	11/24/20 20:13	11/20/20	*
4-Bromophenyl Phenyl Ether	500 U	500	190	1	11/24/20 20:13	11/20/20	*
4-Chloro-3-methylphenol	500 U	500	110	1	11/24/20 20:13	11/20/20	*
4-Chloroaniline	500 U	500	120	1	11/24/20 20:13	11/20/20	*
4-Chlorophenyl Phenyl Ether	500 U	500	130	1	11/24/20 20:13	11/20/20	*
4-Nitroaniline	500 U	500	110	1	11/24/20 20:13	11/20/20	*
4-Nitrophenol	2600 U	2600	170	1	11/24/20 20:13	11/20/20	*
Acenaphthene	500 U	500	120	1	11/24/20 20:13	11/20/20	*
Acenaphthylene	840	500	140	1	11/24/20 20:13	11/20/20	*
Acetophenone	500 U	500	120	1	11/24/20 20:13	11/20/20	*
Anthracene	1200	500	150	1	11/24/20 20:13	11/20/20	*
Atrazine	500 U	500	200	1	11/24/20 20:13	11/20/20	*
Benz(a)anthracene	2700	500	150	1	11/24/20 20:13	11/20/20	*
Benzaldehyde	500 U	500	100	1	11/24/20 20:13	11/20/20	*
Benzo(a)pyrene	3100	500	190	1	11/24/20 20:13	11/20/20	*
Benzo(b)fluoranthene	3300	500	170	1	11/24/20 20:13	11/20/20	*
Benzo(g,h,i)perylene	2600	500	140	1	11/24/20 20:13	11/20/20	*
Benzo(k)fluoranthene	1200	500	190	1	11/24/20 20:13	11/20/20	*
Biphenyl	500 U	500	130	1	11/24/20 20:13	11/20/20	*
2,2'-Oxybis(1-chloropropane)	500 U	500	200	1	11/24/20 20:13	11/20/20	*
Bis(2-chloroethoxy)methane	500 U	500	140	1	11/24/20 20:13	11/20/20	*
Bis(2-chloroethyl) Ether	500 U	500	140	1	11/24/20 20:13	11/20/20	*
Bis(2-ethylhexyl) Phthalate	760 U	760	140	1	11/24/20 20:13	11/20/20	*
Butyl Benzyl Phthalate	500 U	500	130	1	11/24/20 20:13	11/20/20	*
Caprolactam	500 U	500	140	1	11/24/20 20:13	11/20/20	*

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	270 J	500	150	1	11/24/20 20:13	11/20/20	*
Chrysene	2800	500	190	1	11/24/20 20:13	11/20/20	*
Di-n-butyl Phthalate	500 U	500	160	1	11/24/20 20:13	11/20/20	*
Di-n-octyl Phthalate	500 U	500	150	1	11/24/20 20:13	11/20/20	*
Dibenz(a,h)anthracene	450 J	500	150	1	11/24/20 20:13	11/20/20	*
Dibenzofuran	170 J	500	100	1	11/24/20 20:13	11/20/20	*
Diethyl Phthalate	500 U	500	110	1	11/24/20 20:13	11/20/20	*
Dimethyl Phthalate	500 U	500	120	1	11/24/20 20:13	11/20/20	*
Fluoranthene	6100 E	500	190	1	11/24/20 20:13	11/20/20	*
Fluorene	320 J	500	120	1	11/24/20 20:13	11/20/20	*
Hexachlorobenzene	500 U	500	160	1	11/24/20 20:13	11/20/20	*
Hexachlorobutadiene	500 U	500	130	1	11/24/20 20:13	11/20/20	*
Hexachlorocyclopentadiene	500 U	500	110	1	11/24/20 20:13	11/20/20	*
Hexachloroethane	500 U	500	130	1	11/24/20 20:13	11/20/20	*
Indeno(1,2,3-cd)pyrene	2100	500	170	1	11/24/20 20:13	11/20/20	*
Isophorone	500 U	500	140	1	11/24/20 20:13	11/20/20	*
N-Nitrosodi-n-propylamine	500 U	500	140	1	11/24/20 20:13	11/20/20	*
N-Nitrosodiphenylamine	500 U	500	340	1	11/24/20 20:13	11/20/20	*
Naphthalene	300 J	500	130	1	11/24/20 20:13	11/20/20	*
Nitrobenzene	500 U	500	130	1	11/24/20 20:13	11/20/20	*
Pentachlorophenol (PCP)	2600 U	2600	170	1	11/24/20 20:13	11/20/20	*
Phenanthrene	3400	500	150	1	11/24/20 20:13	11/20/20	*
Phenol	500 U	500	120	1	11/24/20 20:13	11/20/20	*
Pyrene	5300 E	500	200	1	11/24/20 20:13	11/20/20	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	6 *	10 - 109	11/24/20 20:13	*
2-Fluorobiphenyl	23	10 - 102	11/24/20 20:13	
2-Fluorophenol	6 *	10 - 88	11/24/20 20:13	*
Nitrobenzene-d5	21	10 - 95	11/24/20 20:13	
Phenol-d6	10	10 - 145	11/24/20 20:13	
Terphenyl-d14	45	10 - 106	11/24/20 20:13	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	1000 U	1000	240	2	11/30/20 09:19	11/20/20	*
2,3,4,6-Tetrachlorophenol	1000 U	1000	220	2	11/30/20 09:19	11/20/20	*
2,4,5-Trichlorophenol	1000 U	1000	860	2	11/30/20 09:19	11/20/20	*
2,4,6-Trichlorophenol	1000 U	1000	180	2	11/30/20 09:19	11/20/20	*
2,4-Dichlorophenol	1000 U	1000	220	2	11/30/20 09:19	11/20/20	*
2,4-Dimethylphenol	1000 U	1000	220	2	11/30/20 09:19	11/20/20	*
2,4-Dinitrophenol	5200 U	5200	2000	2	11/30/20 09:19	11/20/20	*
2,4-Dinitrotoluene	1000 U	1000	400	2	11/30/20 09:19	11/20/20	*
2,6-Dinitrotoluene	1000 U	1000	300	2	11/30/20 09:19	11/20/20	*
2-Chloronaphthalene	1000 U	1000	250	2	11/30/20 09:19	11/20/20	*
2-Chlorophenol	1000 U	1000	250	2	11/30/20 09:19	11/20/20	*
2-Methylnaphthalene	1000 U	1000	220	2	11/30/20 09:19	11/20/20	*
2-Methylphenol	1000 U	1000	220	2	11/30/20 09:19	11/20/20	*
2-Nitroaniline	1000 U	1000	300	2	11/30/20 09:19	11/20/20	*
2-Nitrophenol	1000 U	1000	290	2	11/30/20 09:19	11/20/20	*
3,3'-Dichlorobenzidine	1000 U	1000	220	2	11/30/20 09:19	11/20/20	*
3- and 4-Methylphenol Coelution	1000 U	1000	200	2	11/30/20 09:19	11/20/20	*
3-Nitroaniline	1000 U	1000	220	2	11/30/20 09:19	11/20/20	*
4,6-Dinitro-2-methylphenol	5200 U	5200	430	2	11/30/20 09:19	11/20/20	*
4-Bromophenyl Phenyl Ether	1000 U	1000	370	2	11/30/20 09:19	11/20/20	*
4-Chloro-3-methylphenol	1000 U	1000	220	2	11/30/20 09:19	11/20/20	*
4-Chloroaniline	1000 U	1000	240	2	11/30/20 09:19	11/20/20	*
4-Chlorophenyl Phenyl Ether	1000 U	1000	250	2	11/30/20 09:19	11/20/20	*
4-Nitroaniline	1000 U	1000	220	2	11/30/20 09:19	11/20/20	*
4-Nitrophenol	5200 U	5200	340	2	11/30/20 09:19	11/20/20	*
Acenaphthene	1000 U	1000	230	2	11/30/20 09:19	11/20/20	*
Acenaphthylene	860 DJ	1000	270	2	11/30/20 09:19	11/20/20	*
Acetophenone	1000 U	1000	230	2	11/30/20 09:19	11/20/20	*
Anthracene	1200 D	1000	290	2	11/30/20 09:19	11/20/20	*
Atrazine	1000 U	1000	400	2	11/30/20 09:19	11/20/20	*
Benz(a)anthracene	2800 D	1000	300	2	11/30/20 09:19	11/20/20	*
Benzaldehyde	1000 U	1000	200	2	11/30/20 09:19	11/20/20	*
Benzo(a)pyrene	3200 D	1000	370	2	11/30/20 09:19	11/20/20	*
Benzo(b)fluoranthene	3500 D	1000	340	2	11/30/20 09:19	11/20/20	*
Benzo(g,h,i)perylene	2700 D	1000	270	2	11/30/20 09:19	11/20/20	*
Benzo(k)fluoranthene	1200 D	1000	370	2	11/30/20 09:19	11/20/20	*
Biphenyl	1000 U	1000	250	2	11/30/20 09:19	11/20/20	*
2,2'-Oxybis(1-chloropropane)	1000 U	1000	400	2	11/30/20 09:19	11/20/20	*
Bis(2-chloroethoxy)methane	1000 U	1000	270	2	11/30/20 09:19	11/20/20	*
Bis(2-chloroethyl) Ether	1000 U	1000	270	2	11/30/20 09:19	11/20/20	*
Bis(2-ethylhexyl) Phthalate	1500 U	1500	270	2	11/30/20 09:19	11/20/20	*
Butyl Benzyl Phthalate	1000 U	1000	250	2	11/30/20 09:19	11/20/20	*
Caprolactam	1000 U	1000	270	2	11/30/20 09:19	11/20/20	*

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	1000 U	1000	290	2	11/30/20 09:19	11/20/20	*
Chrysene	2900 D	1000	370	2	11/30/20 09:19	11/20/20	*
Di-n-butyl Phthalate	1000 U	1000	310	2	11/30/20 09:19	11/20/20	*
Di-n-octyl Phthalate	1000 U	1000	300	2	11/30/20 09:19	11/20/20	*
Dibenz(a,h)anthracene	490 DJ	1000	300	2	11/30/20 09:19	11/20/20	*
Dibenzofuran	1000 U	1000	200	2	11/30/20 09:19	11/20/20	*
Diethyl Phthalate	1000 U	1000	220	2	11/30/20 09:19	11/20/20	*
Dimethyl Phthalate	1000 U	1000	230	2	11/30/20 09:19	11/20/20	*
Fluoranthene	6600 D	1000	370	2	11/30/20 09:19	11/20/20	*
Fluorene	350 DJ	1000	240	2	11/30/20 09:19	11/20/20	*
Hexachlorobenzene	1000 U	1000	310	2	11/30/20 09:19	11/20/20	*
Hexachlorobutadiene	1000 U	1000	250	2	11/30/20 09:19	11/20/20	*
Hexachlorocyclopentadiene	1000 U	1000	220	2	11/30/20 09:19	11/20/20	*
Hexachloroethane	1000 U	1000	260	2	11/30/20 09:19	11/20/20	*
Indeno(1,2,3-cd)pyrene	2100 D	1000	340	2	11/30/20 09:19	11/20/20	*
Isophorone	1000 U	1000	280	2	11/30/20 09:19	11/20/20	*
N-Nitrosodi-n-propylamine	1000 U	1000	270	2	11/30/20 09:19	11/20/20	*
N-Nitrosodiphenylamine	1000 U	1000	680	2	11/30/20 09:19	11/20/20	*
Naphthalene	290 DJ	1000	260	2	11/30/20 09:19	11/20/20	*
Nitrobenzene	1000 U	1000	260	2	11/30/20 09:19	11/20/20	*
Pentachlorophenol (PCP)	5200 U	5200	340	2	11/30/20 09:19	11/20/20	*
Phenanthrene	3500 D	1000	300	2	11/30/20 09:19	11/20/20	*
Phenol	1000 U	1000	240	2	11/30/20 09:19	11/20/20	*
Pyrene	5600 D	1000	400	2	11/30/20 09:19	11/20/20	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	4 *	10 - 109	11/30/20 09:19	*
2-Fluorobiphenyl	24	10 - 102	11/30/20 09:19	
2-Fluorophenol	6 *	10 - 88	11/30/20 09:19	*
Nitrobenzene-d5	23	10 - 95	11/30/20 09:19	
Phenol-d6	11	10 - 145	11/30/20 09:19	
Terphenyl-d14	44	10 - 106	11/30/20 09:19	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	400 U	400	94	1	11/18/20 23:35	11/5/20	
2,3,4,6-Tetrachlorophenol	400 U	400	83	1	11/18/20 23:35	11/5/20	
2,4,5-Trichlorophenol	400 U	400	340	1	11/18/20 23:35	11/5/20	
2,4,6-Trichlorophenol	400 U	400	70	1	11/18/20 23:35	11/5/20	
2,4-Dichlorophenol	400 U	400	85	1	11/18/20 23:35	11/5/20	
2,4-Dimethylphenol	400 U	400	87	1	11/18/20 23:35	11/5/20	
2,4-Dinitrophenol	2000 U	2000	790	1	11/18/20 23:35	11/5/20	
2,4-Dinitrotoluene	400 U	400	160	1	11/18/20 23:35	11/5/20	
2,6-Dinitrotoluene	400 U	400	120	1	11/18/20 23:35	11/5/20	
2-Chloronaphthalene	400 U	400	95	1	11/18/20 23:35	11/5/20	
2-Chlorophenol	400 U	400	98	1	11/18/20 23:35	11/5/20	
2-Methylnaphthalene	460	400	87	1	11/18/20 23:35	11/5/20	
2-Methylphenol	400 U	400	86	1	11/18/20 23:35	11/5/20	
2-Nitroaniline	400 U	400	120	1	11/18/20 23:35	11/5/20	
2-Nitrophenol	400 U	400	120	1	11/18/20 23:35	11/5/20	
3,3'-Dichlorobenzidine	400 U	400	83	1	11/18/20 23:35	11/5/20	
3- and 4-Methylphenol Coelution	400 U	400	76	1	11/18/20 23:35	11/5/20	
3-Nitroaniline	400 U	400	85	1	11/18/20 23:35	11/5/20	
4,6-Dinitro-2-methylphenol	2000 U	2000	170	1	11/18/20 23:35	11/5/20	
4-Bromophenyl Phenyl Ether	400 U	400	150	1	11/18/20 23:35	11/5/20	
4-Chloro-3-methylphenol	400 U	400	87	1	11/18/20 23:35	11/5/20	
4-Chloroaniline	400 U	400	94	1	11/18/20 23:35	11/5/20	
4-Chlorophenyl Phenyl Ether	400 U	400	95	1	11/18/20 23:35	11/5/20	
4-Nitroaniline	400 U	400	85	1	11/18/20 23:35	11/5/20	
4-Nitrophenol	2000 U	2000	140	1	11/18/20 23:35	11/5/20	
Acenaphthene	400 U	400	89	1	11/18/20 23:35	11/5/20	
Acenaphthylene	680	400	110	1	11/18/20 23:35	11/5/20	
Acetophenone	400 U	400	91	1	11/18/20 23:35	11/5/20	
Anthracene	790	400	120	1	11/18/20 23:35	11/5/20	
Atrazine	400 U	400	160	1	11/18/20 23:35	11/5/20	
Benz(a)anthracene	2600	400	120	1	11/18/20 23:35	11/5/20	
Benzaldehyde	400 U	400	79	1	11/18/20 23:35	11/5/20	
Benzo(a)pyrene	3300	400	150	1	11/18/20 23:35	11/5/20	
Benzo(b)fluoranthene	3900	400	140	1	11/18/20 23:35	11/5/20	
Benzo(g,h,i)perylene	2200	400	110	1	11/18/20 23:35	11/5/20	
Benzo(k)fluoranthene	1200	400	150	1	11/18/20 23:35	11/5/20	
Biphenyl	400 U	400	98	1	11/18/20 23:35	11/5/20	
2,2'-Oxybis(1-chloropropane)	400 U	400	160	1	11/18/20 23:35	11/5/20	
Bis(2-chloroethoxy)methane	400 U	400	110	1	11/18/20 23:35	11/5/20	
Bis(2-chloroethyl) Ether	400 U	400	110	1	11/18/20 23:35	11/5/20	
Bis(2-ethylhexyl) Phthalate	600 U	600	110	1	11/18/20 23:35	11/5/20	
Butyl Benzyl Phthalate	400 U	400	99	1	11/18/20 23:35	11/5/20	
Caprolactam	400 U	400	110	1	11/18/20 23:35	11/5/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	360 J	400	120	1	11/18/20 23:35	11/5/20	
Chrysene	3000	400	150	1	11/18/20 23:35	11/5/20	
Di-n-butyl Phthalate	400 U	400	130	1	11/18/20 23:35	11/5/20	
Di-n-octyl Phthalate	400 U	400	120	1	11/18/20 23:35	11/5/20	
Dibenz(a,h)anthracene	540	400	120	1	11/18/20 23:35	11/5/20	
Dibenzofuran	310 J	400	79	1	11/18/20 23:35	11/5/20	
Diethyl Phthalate	400 U	400	85	1	11/18/20 23:35	11/5/20	
Dimethyl Phthalate	400 U	400	89	1	11/18/20 23:35	11/5/20	
Fluoranthene	5100 E	400	150	1	11/18/20 23:35	11/5/20	
Fluorene	280 J	400	92	1	11/18/20 23:35	11/5/20	
Hexachlorobenzene	400 U	400	130	1	11/18/20 23:35	11/5/20	
Hexachlorobutadiene	400 U	400	97	1	11/18/20 23:35	11/5/20	
Hexachlorocyclopentadiene	400 U	400	87	1	11/18/20 23:35	11/5/20	
Hexachloroethane	400 U	400	110	1	11/18/20 23:35	11/5/20	
Indeno(1,2,3-cd)pyrene	2400	400	140	1	11/18/20 23:35	11/5/20	
Isophorone	400 U	400	110	1	11/18/20 23:35	11/5/20	
N-Nitrosodi-n-propylamine	400 U	400	110	1	11/18/20 23:35	11/5/20	
N-Nitrosodiphenylamine	400 U	400	270	1	11/18/20 23:35	11/5/20	
Naphthalene	1300	400	110	1	11/18/20 23:35	11/5/20	
Nitrobenzene	400 U	400	110	1	11/18/20 23:35	11/5/20	
Pentachlorophenol (PCP)	2000 U	2000	140	1	11/18/20 23:35	11/5/20	
Phenanthrene	2600	400	120	1	11/18/20 23:35	11/5/20	
Phenol	400 U	400	94	1	11/18/20 23:35	11/5/20	
Pyrene	4400 E	400	160	1	11/18/20 23:35	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	21	10 - 109	11/18/20 23:35	
2-Fluorobiphenyl	19	10 - 102	11/18/20 23:35	
2-Fluorophenol	12	10 - 88	11/18/20 23:35	
Nitrobenzene-d5	16	10 - 95	11/18/20 23:35	
Phenol-d6	16	10 - 145	11/18/20 23:35	
Terphenyl-d14	25	10 - 106	11/18/20 23:35	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	790 U	790	190	2	11/21/20 16:46	11/5/20	
2,3,4,6-Tetrachlorophenol	790 U	790	170	2	11/21/20 16:46	11/5/20	
2,4,5-Trichlorophenol	790 U	790	680	2	11/21/20 16:46	11/5/20	
2,4,6-Trichlorophenol	790 U	790	140	2	11/21/20 16:46	11/5/20	
2,4-Dichlorophenol	790 U	790	170	2	11/21/20 16:46	11/5/20	
2,4-Dimethylphenol	790 U	790	180	2	11/21/20 16:46	11/5/20	
2,4-Dinitrophenol	4100 U	4100	1600	2	11/21/20 16:46	11/5/20	
2,4-Dinitrotoluene	790 U	790	320	2	11/21/20 16:46	11/5/20	
2,6-Dinitrotoluene	790 U	790	240	2	11/21/20 16:46	11/5/20	
2-Chloronaphthalene	790 U	790	190	2	11/21/20 16:46	11/5/20	
2-Chlorophenol	790 U	790	200	2	11/21/20 16:46	11/5/20	
2-Methylnaphthalene	500 DJ	790	180	2	11/21/20 16:46	11/5/20	
2-Methylphenol	790 U	790	180	2	11/21/20 16:46	11/5/20	
2-Nitroaniline	790 U	790	240	2	11/21/20 16:46	11/5/20	
2-Nitrophenol	790 U	790	230	2	11/21/20 16:46	11/5/20	
3,3'-Dichlorobenzidine	790 U	790	170	2	11/21/20 16:46	11/5/20	
3- and 4-Methylphenol Coelution	790 U	790	160	2	11/21/20 16:46	11/5/20	
3-Nitroaniline	790 U	790	170	2	11/21/20 16:46	11/5/20	
4,6-Dinitro-2-methylphenol	4100 U	4100	340	2	11/21/20 16:46	11/5/20	
4-Bromophenyl Phenyl Ether	790 U	790	290	2	11/21/20 16:46	11/5/20	
4-Chloro-3-methylphenol	790 U	790	180	2	11/21/20 16:46	11/5/20	
4-Chloroaniline	790 U	790	190	2	11/21/20 16:46	11/5/20	
4-Chlorophenyl Phenyl Ether	790 U	790	190	2	11/21/20 16:46	11/5/20	
4-Nitroaniline	790 U	790	170	2	11/21/20 16:46	11/5/20	
4-Nitrophenol	4100 U	4100	270	2	11/21/20 16:46	11/5/20	
Acenaphthene	790 U	790	180	2	11/21/20 16:46	11/5/20	
Acenaphthylene	730 DJ	790	210	2	11/21/20 16:46	11/5/20	
Acetophenone	790 U	790	190	2	11/21/20 16:46	11/5/20	
Anthracene	880 D	790	230	2	11/21/20 16:46	11/5/20	
Atrazine	790 U	790	320	2	11/21/20 16:46	11/5/20	
Benz(a)anthracene	2700 D	790	240	2	11/21/20 16:46	11/5/20	
Benzaldehyde	790 U	790	160	2	11/21/20 16:46	11/5/20	
Benzo(a)pyrene	3500 D	790	290	2	11/21/20 16:46	11/5/20	
Benzo(b)fluoranthene	4100 D	790	270	2	11/21/20 16:46	11/5/20	
Benzo(g,h,i)perylene	2000 D	790	210	2	11/21/20 16:46	11/5/20	
Benzo(k)fluoranthene	1300 D	790	290	2	11/21/20 16:46	11/5/20	
Biphenyl	790 U	790	200	2	11/21/20 16:46	11/5/20	
2,2'-Oxybis(1-chloropropane)	790 U	790	320	2	11/21/20 16:46	11/5/20	
Bis(2-chloroethoxy)methane	790 U	790	220	2	11/21/20 16:46	11/5/20	
Bis(2-chloroethyl) Ether	790 U	790	210	2	11/21/20 16:46	11/5/20	
Bis(2-ethylhexyl) Phthalate	1200 U	1200	220	2	11/21/20 16:46	11/5/20	
Butyl Benzyl Phthalate	790 U	790	200	2	11/21/20 16:46	11/5/20	
Caprolactam	790 U	790	210	2	11/21/20 16:46	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	390 DJ	790	230	2	11/21/20 16:46	11/5/20	
Chrysene	3100 D	790	290	2	11/21/20 16:46	11/5/20	
Di-n-butyl Phthalate	790 U	790	250	2	11/21/20 16:46	11/5/20	
Di-n-octyl Phthalate	790 U	790	240	2	11/21/20 16:46	11/5/20	
Dibenz(a,h)anthracene	510 DJ	790	240	2	11/21/20 16:46	11/5/20	
Dibenzofuran	320 DJ	790	160	2	11/21/20 16:46	11/5/20	
Diethyl Phthalate	790 U	790	170	2	11/21/20 16:46	11/5/20	
Dimethyl Phthalate	790 U	790	180	2	11/21/20 16:46	11/5/20	
Fluoranthene	5200 D	790	290	2	11/21/20 16:46	11/5/20	
Fluorene	300 DJ	790	190	2	11/21/20 16:46	11/5/20	
Hexachlorobenzene	790 U	790	250	2	11/21/20 16:46	11/5/20	
Hexachlorobutadiene	790 U	790	200	2	11/21/20 16:46	11/5/20	
Hexachlorocyclopentadiene	790 U	790	180	2	11/21/20 16:46	11/5/20	
Hexachloroethane	790 U	790	210	2	11/21/20 16:46	11/5/20	
Indeno(1,2,3-cd)pyrene	2200 D	790	270	2	11/21/20 16:46	11/5/20	
Isophorone	790 U	790	220	2	11/21/20 16:46	11/5/20	
N-Nitrosodi-n-propylamine	790 U	790	220	2	11/21/20 16:46	11/5/20	
N-Nitrosodiphenylamine	790 U	790	530	2	11/21/20 16:46	11/5/20	
Naphthalene	1400 D	790	210	2	11/21/20 16:46	11/5/20	
Nitrobenzene	790 U	790	210	2	11/21/20 16:46	11/5/20	
Pentachlorophenol (PCP)	4100 U	4100	270	2	11/21/20 16:46	11/5/20	
Phenanthrene	2700 D	790	240	2	11/21/20 16:46	11/5/20	
Phenol	790 U	790	190	2	11/21/20 16:46	11/5/20	
Pyrene	4500 D	790	320	2	11/21/20 16:46	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	20	10 - 109	11/21/20 16:46	
2-Fluorobiphenyl	20	10 - 102	11/21/20 16:46	
2-Fluorophenol	13	10 - 88	11/21/20 16:46	
Nitrobenzene-d5	17	10 - 95	11/21/20 16:46	
Phenol-d6	16	10 - 145	11/21/20 16:46	
Terphenyl-d14	27	10 - 106	11/21/20 16:46	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 08:40
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-02
Lab Code: R2010340-005

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	430 U	430	110	1	11/18/20 00:04	11/5/20	
2,3,4,6-Tetrachlorophenol	430 U	430	89	1	11/18/20 00:04	11/5/20	
2,4,5-Trichlorophenol	430 U	430	370	1	11/18/20 00:04	11/5/20	
2,4,6-Trichlorophenol	430 U	430	75	1	11/18/20 00:04	11/5/20	
2,4-Dichlorophenol	430 U	430	91	1	11/18/20 00:04	11/5/20	
2,4-Dimethylphenol	430 U	430	93	1	11/18/20 00:04	11/5/20	
2,4-Dinitrophenol	2200 U	2200	840	1	11/18/20 00:04	11/5/20	
2,4-Dinitrotoluene	430 U	430	170	1	11/18/20 00:04	11/5/20	
2,6-Dinitrotoluene	430 U	430	130	1	11/18/20 00:04	11/5/20	
2-Chloronaphthalene	430 U	430	110	1	11/18/20 00:04	11/5/20	
2-Chlorophenol	430 U	430	110	1	11/18/20 00:04	11/5/20	
2-Methylnaphthalene	370 J	430	93	1	11/18/20 00:04	11/5/20	
2-Methylphenol	430 U	430	92	1	11/18/20 00:04	11/5/20	
2-Nitroaniline	430 U	430	130	1	11/18/20 00:04	11/5/20	
2-Nitrophenol	430 U	430	130	1	11/18/20 00:04	11/5/20	
3,3'-Dichlorobenzidine	430 U	430	89	1	11/18/20 00:04	11/5/20	
3- and 4-Methylphenol Coelution	430 U	430	82	1	11/18/20 00:04	11/5/20	
3-Nitroaniline	430 U	430	91	1	11/18/20 00:04	11/5/20	
4,6-Dinitro-2-methylphenol	2200 U	2200	190	1	11/18/20 00:04	11/5/20	
4-Bromophenyl Phenyl Ether	430 U	430	160	1	11/18/20 00:04	11/5/20	
4-Chloro-3-methylphenol	430 U	430	93	1	11/18/20 00:04	11/5/20	
4-Chloroaniline	430 U	430	110	1	11/18/20 00:04	11/5/20	
4-Chlorophenyl Phenyl Ether	430 U	430	110	1	11/18/20 00:04	11/5/20	
4-Nitroaniline	430 U	430	91	1	11/18/20 00:04	11/5/20	
4-Nitrophenol	2200 U	2200	150	1	11/18/20 00:04	11/5/20	
Acenaphthene	420 J	430	96	1	11/18/20 00:04	11/5/20	
Acenaphthylene	210 J	430	120	1	11/18/20 00:04	11/5/20	
Acetophenone	430 U	430	97	1	11/18/20 00:04	11/5/20	
Anthracene	1300	430	120	1	11/18/20 00:04	11/5/20	
Atrazine	430 U	430	170	1	11/18/20 00:04	11/5/20	
Benz(a)anthracene	5300 E	430	130	1	11/18/20 00:04	11/5/20	
Benzaldehyde	430 U	430	84	1	11/18/20 00:04	11/5/20	
Benzo(a)pyrene	8000 E	430	160	1	11/18/20 00:04	11/5/20	
Benzo(b)fluoranthene	8500 E	430	150	1	11/18/20 00:04	11/5/20	
Benzo(g,h,i)perylene	4600 E	430	120	1	11/18/20 00:04	11/5/20	
Benzo(k)fluoranthene	2900	430	160	1	11/18/20 00:04	11/5/20	
Biphenyl	430 U	430	110	1	11/18/20 00:04	11/5/20	
2,2'-Oxybis(1-chloropropane)	430 U	430	170	1	11/18/20 00:04	11/5/20	
Bis(2-chloroethoxy)methane	430 U	430	120	1	11/18/20 00:04	11/5/20	
Bis(2-chloroethyl) Ether	430 U	430	120	1	11/18/20 00:04	11/5/20	
Bis(2-ethylhexyl) Phthalate	640 U	640	120	1	11/18/20 00:04	11/5/20	
Butyl Benzyl Phthalate	430 U	430	110	1	11/18/20 00:04	11/5/20	
Caprolactam	430 U	430	120	1	11/18/20 00:04	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 08:40
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-02
Lab Code: R2010340-005

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	1000	430	130	1	11/18/20 00:04	11/5/20	
Chrysene	5900 E	430	160	1	11/18/20 00:04	11/5/20	
Di-n-butyl Phthalate	430 U	430	130	1	11/18/20 00:04	11/5/20	
Di-n-octyl Phthalate	430 U	430	130	1	11/18/20 00:04	11/5/20	
Dibenz(a,h)anthracene	1300	430	130	1	11/18/20 00:04	11/5/20	
Dibenzofuran	410 J	430	84	1	11/18/20 00:04	11/5/20	
Diethyl Phthalate	430 U	430	91	1	11/18/20 00:04	11/5/20	
Dimethyl Phthalate	430 U	430	96	1	11/18/20 00:04	11/5/20	
Fluoranthene	7000 E	430	160	1	11/18/20 00:04	11/5/20	
Fluorene	420 J	430	98	1	11/18/20 00:04	11/5/20	
Hexachlorobenzene	430 U	430	130	1	11/18/20 00:04	11/5/20	
Hexachlorobutadiene	430 U	430	110	1	11/18/20 00:04	11/5/20	
Hexachlorocyclopentadiene	430 U	430	93	1	11/18/20 00:04	11/5/20	
Hexachloroethane	430 U	430	110	1	11/18/20 00:04	11/5/20	
Indeno(1,2,3-cd)pyrene	5100 E	430	150	1	11/18/20 00:04	11/5/20	
Isophorone	430 U	430	120	1	11/18/20 00:04	11/5/20	
N-Nitrosodi-n-propylamine	430 U	430	120	1	11/18/20 00:04	11/5/20	
N-Nitrosodiphenylamine	430 U	430	290	1	11/18/20 00:04	11/5/20	
Naphthalene	1200	430	110	1	11/18/20 00:04	11/5/20	
Nitrobenzene	430 U	430	110	1	11/18/20 00:04	11/5/20	
Pentachlorophenol (PCP)	2200 U	2200	150	1	11/18/20 00:04	11/5/20	
Phenanthrene	4300	430	130	1	11/18/20 00:04	11/5/20	
Phenol	430 U	430	110	1	11/18/20 00:04	11/5/20	
Pyrene	6900 E	430	170	1	11/18/20 00:04	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	34	10 - 109	11/18/20 00:04	
2-Fluorobiphenyl	19	10 - 102	11/18/20 00:04	
2-Fluorophenol	17	10 - 88	11/18/20 00:04	
Nitrobenzene-d5	17	10 - 95	11/18/20 00:04	
Phenol-d6	19	10 - 145	11/18/20 00:04	
Terphenyl-d14	31	10 - 106	11/18/20 00:04	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 08:40
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-02
Lab Code: R2010340-005

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	2100 U	2100	510	5	11/21/20 17:15	11/5/20	
2,3,4,6-Tetrachlorophenol	2100 U	2100	450	5	11/21/20 17:15	11/5/20	
2,4,5-Trichlorophenol	2100 U	2100	1900	5	11/21/20 17:15	11/5/20	
2,4,6-Trichlorophenol	2100 U	2100	380	5	11/21/20 17:15	11/5/20	
2,4-Dichlorophenol	2100 U	2100	460	5	11/21/20 17:15	11/5/20	
2,4-Dimethylphenol	2100 U	2100	470	5	11/21/20 17:15	11/5/20	
2,4-Dinitrophenol	11000 U	11000	4200	5	11/21/20 17:15	11/5/20	
2,4-Dinitrotoluene	2100 U	2100	840	5	11/21/20 17:15	11/5/20	
2,6-Dinitrotoluene	2100 U	2100	620	5	11/21/20 17:15	11/5/20	
2-Chloronaphthalene	2100 U	2100	510	5	11/21/20 17:15	11/5/20	
2-Chlorophenol	2100 U	2100	530	5	11/21/20 17:15	11/5/20	
2-Methylnaphthalene	2100 U	2100	470	5	11/21/20 17:15	11/5/20	
2-Methylphenol	2100 U	2100	460	5	11/21/20 17:15	11/5/20	
2-Nitroaniline	2100 U	2100	640	5	11/21/20 17:15	11/5/20	
2-Nitrophenol	2100 U	2100	620	5	11/21/20 17:15	11/5/20	
3,3'-Dichlorobenzidine	2100 U	2100	450	5	11/21/20 17:15	11/5/20	
3- and 4-Methylphenol Coelution	2100 U	2100	410	5	11/21/20 17:15	11/5/20	
3-Nitroaniline	2100 U	2100	460	5	11/21/20 17:15	11/5/20	
4,6-Dinitro-2-methylphenol	11000 U	11000	910	5	11/21/20 17:15	11/5/20	
4-Bromophenyl Phenyl Ether	2100 U	2100	780	5	11/21/20 17:15	11/5/20	
4-Chloro-3-methylphenol	2100 U	2100	470	5	11/21/20 17:15	11/5/20	
4-Chloroaniline	2100 U	2100	510	5	11/21/20 17:15	11/5/20	
4-Chlorophenyl Phenyl Ether	2100 U	2100	510	5	11/21/20 17:15	11/5/20	
4-Nitroaniline	2100 U	2100	460	5	11/21/20 17:15	11/5/20	
4-Nitrophenol	11000 U	11000	710	5	11/21/20 17:15	11/5/20	
Acenaphthene	500 DJ	2100	480	5	11/21/20 17:15	11/5/20	
Acenaphthylene	2100 U	2100	570	5	11/21/20 17:15	11/5/20	
Acetophenone	2100 U	2100	490	5	11/21/20 17:15	11/5/20	
Anthracene	1600 DJ	2100	600	5	11/21/20 17:15	11/5/20	
Atrazine	2100 U	2100	840	5	11/21/20 17:15	11/5/20	
Benz(a)anthracene	6300 D	2100	630	5	11/21/20 17:15	11/5/20	
Benzaldehyde	2100 U	2100	420	5	11/21/20 17:15	11/5/20	
Benzo(a)pyrene	9700 D	2100	780	5	11/21/20 17:15	11/5/20	
Benzo(b)fluoranthene	10000 D	2100	710	5	11/21/20 17:15	11/5/20	
Benzo(g,h,i)perylene	5300 D	2100	570	5	11/21/20 17:15	11/5/20	
Benzo(k)fluoranthene	3700 D	2100	780	5	11/21/20 17:15	11/5/20	
Biphenyl	2100 U	2100	530	5	11/21/20 17:15	11/5/20	
2,2'-Oxybis(1-chloropropane)	2100 U	2100	840	5	11/21/20 17:15	11/5/20	
Bis(2-chloroethoxy)methane	2100 U	2100	570	5	11/21/20 17:15	11/5/20	
Bis(2-chloroethyl) Ether	2100 U	2100	560	5	11/21/20 17:15	11/5/20	
Bis(2-ethylhexyl) Phthalate	3200 U	3200	570	5	11/21/20 17:15	11/5/20	
Butyl Benzyl Phthalate	2100 U	2100	530	5	11/21/20 17:15	11/5/20	
Caprolactam	2100 U	2100	560	5	11/21/20 17:15	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 08:40
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-02
Lab Code: R2010340-005

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	1200 DJ	2100	620	5	11/21/20 17:15	11/5/20	
Chrysene	7100 D	2100	780	5	11/21/20 17:15	11/5/20	
Di-n-butyl Phthalate	2100 U	2100	650	5	11/21/20 17:15	11/5/20	
Di-n-octyl Phthalate	2100 U	2100	630	5	11/21/20 17:15	11/5/20	
Dibenz(a,h)anthracene	1400 DJ	2100	640	5	11/21/20 17:15	11/5/20	
Dibenzofuran	470 DJ	2100	420	5	11/21/20 17:15	11/5/20	
Diethyl Phthalate	2100 U	2100	460	5	11/21/20 17:15	11/5/20	
Dimethyl Phthalate	2100 U	2100	480	5	11/21/20 17:15	11/5/20	
Fluoranthene	9500 D	2100	780	5	11/21/20 17:15	11/5/20	
Fluorene	2100 U	2100	490	5	11/21/20 17:15	11/5/20	
Hexachlorobenzene	2100 U	2100	650	5	11/21/20 17:15	11/5/20	
Hexachlorobutadiene	2100 U	2100	520	5	11/21/20 17:15	11/5/20	
Hexachlorocyclopentadiene	2100 U	2100	470	5	11/21/20 17:15	11/5/20	
Hexachloroethane	2100 U	2100	550	5	11/21/20 17:15	11/5/20	
Indeno(1,2,3-cd)pyrene	6000 D	2100	710	5	11/21/20 17:15	11/5/20	
Isophorone	2100 U	2100	580	5	11/21/20 17:15	11/5/20	
N-Nitrosodi-n-propylamine	2100 U	2100	570	5	11/21/20 17:15	11/5/20	
N-Nitrosodiphenylamine	2100 U	2100	1500	5	11/21/20 17:15	11/5/20	
Naphthalene	1400 DJ	2100	550	5	11/21/20 17:15	11/5/20	
Nitrobenzene	2100 U	2100	550	5	11/21/20 17:15	11/5/20	
Pentachlorophenol (PCP)	11000 U	11000	710	5	11/21/20 17:15	11/5/20	
Phenanthrene	5700 D	2100	620	5	11/21/20 17:15	11/5/20	
Phenol	2100 U	2100	510	5	11/21/20 17:15	11/5/20	
Pyrene	9100 D	2100	840	5	11/21/20 17:15	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	35	10 - 109	11/21/20 17:15	
2-Fluorobiphenyl	23	10 - 102	11/21/20 17:15	
2-Fluorophenol	19	10 - 88	11/21/20 17:15	
Nitrobenzene-d5	22	10 - 95	11/21/20 17:15	
Phenol-d6	22	10 - 145	11/21/20 17:15	
Terphenyl-d14	37	10 - 106	11/21/20 17:15	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:16
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-57
Lab Code: R2010340-007

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	470 U	470	120	1	11/18/20 00:33	11/5/20	
2,3,4,6-Tetrachlorophenol	470 U	470	98	1	11/18/20 00:33	11/5/20	
2,4,5-Trichlorophenol	470 U	470	400	1	11/18/20 00:33	11/5/20	
2,4,6-Trichlorophenol	470 U	470	83	1	11/18/20 00:33	11/5/20	
2,4-Dichlorophenol	470 U	470	99	1	11/18/20 00:33	11/5/20	
2,4-Dimethylphenol	470 U	470	110	1	11/18/20 00:33	11/5/20	
2,4-Dinitrophenol	2400 U	2400	920	1	11/18/20 00:33	11/5/20	
2,4-Dinitrotoluene	470 U	470	190	1	11/18/20 00:33	11/5/20	
2,6-Dinitrotoluene	470 U	470	140	1	11/18/20 00:33	11/5/20	
2-Chloronaphthalene	470 U	470	120	1	11/18/20 00:33	11/5/20	
2-Chlorophenol	470 U	470	120	1	11/18/20 00:33	11/5/20	
2-Methylnaphthalene	470 U	470	110	1	11/18/20 00:33	11/5/20	
2-Methylphenol	470 U	470	110	1	11/18/20 00:33	11/5/20	
2-Nitroaniline	470 U	470	140	1	11/18/20 00:33	11/5/20	
2-Nitrophenol	470 U	470	140	1	11/18/20 00:33	11/5/20	
3,3'-Dichlorobenzidine	470 U	470	98	1	11/18/20 00:33	11/5/20	
3- and 4-Methylphenol Coelution	470 U	470	90	1	11/18/20 00:33	11/5/20	
3-Nitroaniline	470 U	470	99	1	11/18/20 00:33	11/5/20	
4,6-Dinitro-2-methylphenol	2400 U	2400	200	1	11/18/20 00:33	11/5/20	
4-Bromophenyl Phenyl Ether	470 U	470	170	1	11/18/20 00:33	11/5/20	
4-Chloro-3-methylphenol	470 U	470	110	1	11/18/20 00:33	11/5/20	
4-Chloroaniline	470 U	470	120	1	11/18/20 00:33	11/5/20	
4-Chlorophenyl Phenyl Ether	470 U	470	120	1	11/18/20 00:33	11/5/20	
4-Nitroaniline	470 U	470	99	1	11/18/20 00:33	11/5/20	
4-Nitrophenol	2400 U	2400	160	1	11/18/20 00:33	11/5/20	
Acenaphthene	470 U	470	110	1	11/18/20 00:33	11/5/20	
Acenaphthylene	470 U	470	130	1	11/18/20 00:33	11/5/20	
Acetophenone	470 U	470	110	1	11/18/20 00:33	11/5/20	
Anthracene	470 U	470	140	1	11/18/20 00:33	11/5/20	
Atrazine	470 U	470	190	1	11/18/20 00:33	11/5/20	
Benz(a)anthracene	470 U	470	140	1	11/18/20 00:33	11/5/20	
Benzaldehyde	470 U	470	92	1	11/18/20 00:33	11/5/20	
Benzo(a)pyrene	470 U	470	170	1	11/18/20 00:33	11/5/20	
Benzo(b)fluoranthene	470 U	470	160	1	11/18/20 00:33	11/5/20	
Benzo(g,h,i)perylene	470 U	470	130	1	11/18/20 00:33	11/5/20	
Benzo(k)fluoranthene	470 U	470	170	1	11/18/20 00:33	11/5/20	
Biphenyl	470 U	470	120	1	11/18/20 00:33	11/5/20	
2,2'-Oxybis(1-chloropropane)	470 U	470	190	1	11/18/20 00:33	11/5/20	
Bis(2-chloroethoxy)methane	470 U	470	130	1	11/18/20 00:33	11/5/20	
Bis(2-chloroethyl) Ether	470 U	470	130	1	11/18/20 00:33	11/5/20	
Bis(2-ethylhexyl) Phthalate	710 U	710	130	1	11/18/20 00:33	11/5/20	
Butyl Benzyl Phthalate	470 U	470	120	1	11/18/20 00:33	11/5/20	
Caprolactam	470 U	470	130	1	11/18/20 00:33	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:16
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-57
Lab Code: R2010340-007

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	470 U	470	140	1	11/18/20 00:33	11/5/20	
Chrysene	470 U	470	170	1	11/18/20 00:33	11/5/20	
Di-n-butyl Phthalate	470 U	470	150	1	11/18/20 00:33	11/5/20	
Di-n-octyl Phthalate	470 U	470	140	1	11/18/20 00:33	11/5/20	
Dibenz(a,h)anthracene	470 U	470	140	1	11/18/20 00:33	11/5/20	
Dibenzofuran	470 U	470	92	1	11/18/20 00:33	11/5/20	
Diethyl Phthalate	470 U	470	99	1	11/18/20 00:33	11/5/20	
Dimethyl Phthalate	470 U	470	110	1	11/18/20 00:33	11/5/20	
Fluoranthene	470 U	470	170	1	11/18/20 00:33	11/5/20	
Fluorene	470 U	470	110	1	11/18/20 00:33	11/5/20	
Hexachlorobenzene	470 U	470	150	1	11/18/20 00:33	11/5/20	
Hexachlorobutadiene	470 U	470	120	1	11/18/20 00:33	11/5/20	
Hexachlorocyclopentadiene	470 U	470	110	1	11/18/20 00:33	11/5/20	
Hexachloroethane	470 U	470	130	1	11/18/20 00:33	11/5/20	
Indeno(1,2,3-cd)pyrene	470 U	470	160	1	11/18/20 00:33	11/5/20	
Isophorone	470 U	470	130	1	11/18/20 00:33	11/5/20	
N-Nitrosodi-n-propylamine	470 U	470	130	1	11/18/20 00:33	11/5/20	
N-Nitrosodiphenylamine	470 U	470	320	1	11/18/20 00:33	11/5/20	
Naphthalene	470 U	470	130	1	11/18/20 00:33	11/5/20	
Nitrobenzene	470 U	470	130	1	11/18/20 00:33	11/5/20	
Pentachlorophenol (PCP)	2400 U	2400	160	1	11/18/20 00:33	11/5/20	
Phenanthrene	470 U	470	140	1	11/18/20 00:33	11/5/20	
Phenol	470 U	470	120	1	11/18/20 00:33	11/5/20	
Pyrene	470 U	470	190	1	11/18/20 00:33	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	23	10 - 109	11/18/20 00:33	
2-Fluorobiphenyl	21	10 - 102	11/18/20 00:33	
2-Fluorophenol	25	10 - 88	11/18/20 00:33	
Nitrobenzene-d5	21	10 - 95	11/18/20 00:33	
Phenol-d6	28	10 - 145	11/18/20 00:33	
Terphenyl-d14	38	10 - 106	11/18/20 00:33	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:35
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-810
Lab Code: R2010340-008

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	530 U	530	130	1	11/19/20 01:02	11/5/20	
2,3,4,6-Tetrachlorophenol	530 U	530	120	1	11/19/20 01:02	11/5/20	
2,4,5-Trichlorophenol	530 U	530	460	1	11/19/20 01:02	11/5/20	
2,4,6-Trichlorophenol	530 U	530	94	1	11/19/20 01:02	11/5/20	
2,4-Dichlorophenol	530 U	530	120	1	11/19/20 01:02	11/5/20	
2,4-Dimethylphenol	530 U	530	120	1	11/19/20 01:02	11/5/20	
2,4-Dinitrophenol	2800 U	2800	1100	1	11/19/20 01:02	11/5/20	
2,4-Dinitrotoluene	530 U	530	220	1	11/19/20 01:02	11/5/20	
2,6-Dinitrotoluene	530 U	530	160	1	11/19/20 01:02	11/5/20	
2-Chloronaphthalene	530 U	530	130	1	11/19/20 01:02	11/5/20	
2-Chlorophenol	530 U	530	140	1	11/19/20 01:02	11/5/20	
2-Methylnaphthalene	530 U	530	120	1	11/19/20 01:02	11/5/20	
2-Methylphenol	530 U	530	120	1	11/19/20 01:02	11/5/20	
2-Nitroaniline	530 U	530	160	1	11/19/20 01:02	11/5/20	
2-Nitrophenol	530 U	530	160	1	11/19/20 01:02	11/5/20	
3,3'-Dichlorobenzidine	530 U	530	120	1	11/19/20 01:02	11/5/20	
3- and 4-Methylphenol Coelution	530 U	530	110	1	11/19/20 01:02	11/5/20	
3-Nitroaniline	530 U	530	120	1	11/19/20 01:02	11/5/20	
4,6-Dinitro-2-methylphenol	2800 U	2800	230	1	11/19/20 01:02	11/5/20	
4-Bromophenyl Phenyl Ether	530 U	530	200	1	11/19/20 01:02	11/5/20	
4-Chloro-3-methylphenol	530 U	530	120	1	11/19/20 01:02	11/5/20	
4-Chloroaniline	530 U	530	130	1	11/19/20 01:02	11/5/20	
4-Chlorophenyl Phenyl Ether	530 U	530	130	1	11/19/20 01:02	11/5/20	
4-Nitroaniline	530 U	530	120	1	11/19/20 01:02	11/5/20	
4-Nitrophenol	2800 U	2800	180	1	11/19/20 01:02	11/5/20	
Acenaphthene	530 U	530	120	1	11/19/20 01:02	11/5/20	
Acenaphthylene	530 U	530	150	1	11/19/20 01:02	11/5/20	
Acetophenone	530 U	530	130	1	11/19/20 01:02	11/5/20	
Anthracene	530 U	530	150	1	11/19/20 01:02	11/5/20	
Atrazine	530 U	530	220	1	11/19/20 01:02	11/5/20	
Benz(a)anthracene	530 U	530	160	1	11/19/20 01:02	11/5/20	
Benzaldehyde	530 U	530	110	1	11/19/20 01:02	11/5/20	
Benzo(a)pyrene	530 U	530	200	1	11/19/20 01:02	11/5/20	
Benzo(b)fluoranthene	530 U	530	180	1	11/19/20 01:02	11/5/20	
Benzo(g,h,i)perylene	530 U	530	150	1	11/19/20 01:02	11/5/20	
Benzo(k)fluoranthene	530 U	530	200	1	11/19/20 01:02	11/5/20	
Biphenyl	530 U	530	140	1	11/19/20 01:02	11/5/20	
2,2'-Oxybis(1-chloropropane)	530 U	530	220	1	11/19/20 01:02	11/5/20	
Bis(2-chloroethoxy)methane	530 U	530	150	1	11/19/20 01:02	11/5/20	
Bis(2-chloroethyl) Ether	530 U	530	140	1	11/19/20 01:02	11/5/20	
Bis(2-ethylhexyl) Phthalate	810 U	810	150	1	11/19/20 01:02	11/5/20	
Butyl Benzyl Phthalate	530 U	530	140	1	11/19/20 01:02	11/5/20	
Caprolactam	530 U	530	140	1	11/19/20 01:02	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:35
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-810
Lab Code: R2010340-008

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	530 U	530	160	1	11/19/20 01:02	11/5/20	
Chrysene	530 U	530	200	1	11/19/20 01:02	11/5/20	
Di-n-butyl Phthalate	530 U	530	170	1	11/19/20 01:02	11/5/20	
Di-n-octyl Phthalate	530 U	530	160	1	11/19/20 01:02	11/5/20	
Dibenz(a,h)anthracene	530 U	530	160	1	11/19/20 01:02	11/5/20	
Dibenzofuran	530 U	530	110	1	11/19/20 01:02	11/5/20	
Diethyl Phthalate	530 U	530	120	1	11/19/20 01:02	11/5/20	
Dimethyl Phthalate	530 U	530	120	1	11/19/20 01:02	11/5/20	
Fluoranthene	530 U	530	200	1	11/19/20 01:02	11/5/20	
Fluorene	530 U	530	130	1	11/19/20 01:02	11/5/20	
Hexachlorobenzene	530 U	530	170	1	11/19/20 01:02	11/5/20	
Hexachlorobutadiene	530 U	530	130	1	11/19/20 01:02	11/5/20	
Hexachlorocyclopentadiene	530 U	530	120	1	11/19/20 01:02	11/5/20	
Hexachloroethane	530 U	530	140	1	11/19/20 01:02	11/5/20	
Indeno(1,2,3-cd)pyrene	530 U	530	180	1	11/19/20 01:02	11/5/20	
Isophorone	530 U	530	150	1	11/19/20 01:02	11/5/20	
N-Nitrosodi-n-propylamine	530 U	530	150	1	11/19/20 01:02	11/5/20	
N-Nitrosodiphenylamine	530 U	530	360	1	11/19/20 01:02	11/5/20	
Naphthalene	530 U	530	140	1	11/19/20 01:02	11/5/20	
Nitrobenzene	530 U	530	140	1	11/19/20 01:02	11/5/20	
Pentachlorophenol (PCP)	2800 U	2800	180	1	11/19/20 01:02	11/5/20	
Phenanthrene	530 U	530	160	1	11/19/20 01:02	11/5/20	
Phenol	530 U	530	130	1	11/19/20 01:02	11/5/20	
Pyrene	530 U	530	220	1	11/19/20 01:02	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	29	10 - 109	11/19/20 01:02	
2-Fluorobiphenyl	25	10 - 102	11/19/20 01:02	
2-Fluorophenol	27	10 - 88	11/19/20 01:02	
Nitrobenzene-d5	25	10 - 95	11/19/20 01:02	
Phenol-d6	30	10 - 145	11/19/20 01:02	
Terphenyl-d14	41	10 - 106	11/19/20 01:02	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:40
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-01
Lab Code: R2010340-009

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	1200 U	1200	280	3	11/21/20 17:44	11/5/20	
2,3,4,6-Tetrachlorophenol	1200 U	1200	250	3	11/21/20 17:44	11/5/20	
2,4,5-Trichlorophenol	1200 U	1200	1000	3	11/21/20 17:44	11/5/20	
2,4,6-Trichlorophenol	1200 U	1200	210	3	11/21/20 17:44	11/5/20	
2,4-Dichlorophenol	1200 U	1200	250	3	11/21/20 17:44	11/5/20	
2,4-Dimethylphenol	1200 U	1200	260	3	11/21/20 17:44	11/5/20	
2,4-Dinitrophenol	6000 U	6000	2300	3	11/21/20 17:44	11/5/20	
2,4-Dinitrotoluene	1200 U	1200	460	3	11/21/20 17:44	11/5/20	
2,6-Dinitrotoluene	1200 U	1200	340	3	11/21/20 17:44	11/5/20	
2-Chloronaphthalene	1200 U	1200	280	3	11/21/20 17:44	11/5/20	
2-Chlorophenol	1200 U	1200	290	3	11/21/20 17:44	11/5/20	
2-Methylnaphthalene	1600	1200	260	3	11/21/20 17:44	11/5/20	
2-Methylphenol	1200 U	1200	260	3	11/21/20 17:44	11/5/20	
2-Nitroaniline	1200 U	1200	350	3	11/21/20 17:44	11/5/20	
2-Nitrophenol	1200 U	1200	340	3	11/21/20 17:44	11/5/20	
3,3'-Dichlorobenzidine	1200 U	1200	250	3	11/21/20 17:44	11/5/20	
3- and 4-Methylphenol Coelution	1200 U	1200	230	3	11/21/20 17:44	11/5/20	
3-Nitroaniline	1200 U	1200	250	3	11/21/20 17:44	11/5/20	
4,6-Dinitro-2-methylphenol	6000 U	6000	500	3	11/21/20 17:44	11/5/20	
4-Bromophenyl Phenyl Ether	1200 U	1200	430	3	11/21/20 17:44	11/5/20	
4-Chloro-3-methylphenol	1200 U	1200	260	3	11/21/20 17:44	11/5/20	
4-Chloroaniline	1200 U	1200	280	3	11/21/20 17:44	11/5/20	
4-Chlorophenyl Phenyl Ether	1200 U	1200	280	3	11/21/20 17:44	11/5/20	
4-Nitroaniline	1200 U	1200	250	3	11/21/20 17:44	11/5/20	
4-Nitrophenol	6000 U	6000	390	3	11/21/20 17:44	11/5/20	
Acenaphthene	780 J	1200	270	3	11/21/20 17:44	11/5/20	
Acenaphthylene	510 J	1200	310	3	11/21/20 17:44	11/5/20	
Acetophenone	1200 U	1200	270	3	11/21/20 17:44	11/5/20	
Anthracene	1200	1200	330	3	11/21/20 17:44	11/5/20	
Atrazine	1200 U	1200	460	3	11/21/20 17:44	11/5/20	
Benz(a)anthracene	6400	1200	350	3	11/21/20 17:44	11/5/20	
Benzaldehyde	1200 U	1200	230	3	11/21/20 17:44	11/5/20	
Benzo(a)pyrene	10000	1200	430	3	11/21/20 17:44	11/5/20	
Benzo(b)fluoranthene	11000	1200	390	3	11/21/20 17:44	11/5/20	
Benzo(g,h,i)perylene	5500	1200	310	3	11/21/20 17:44	11/5/20	
Benzo(k)fluoranthene	3800	1200	430	3	11/21/20 17:44	11/5/20	
Biphenyl	1200 U	1200	290	3	11/21/20 17:44	11/5/20	
2,2'-Oxybis(1-chloropropane)	1200 U	1200	460	3	11/21/20 17:44	11/5/20	
Bis(2-chloroethoxy)methane	1200 U	1200	320	3	11/21/20 17:44	11/5/20	
Bis(2-chloroethyl) Ether	1200 U	1200	310	3	11/21/20 17:44	11/5/20	
Bis(2-ethylhexyl) Phthalate	1800 U	1800	320	3	11/21/20 17:44	11/5/20	
Butyl Benzyl Phthalate	1200 U	1200	300	3	11/21/20 17:44	11/5/20	
Caprolactam	1200 U	1200	310	3	11/21/20 17:44	11/5/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:40
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-01
Lab Code: R2010340-009

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	920 J	1200	340	3	11/21/20 17:44	11/5/20	
Chrysene	7500	1200	430	3	11/21/20 17:44	11/5/20	
Di-n-butyl Phthalate	1200 U	1200	360	3	11/21/20 17:44	11/5/20	
Di-n-octyl Phthalate	1200 U	1200	350	3	11/21/20 17:44	11/5/20	
Dibenz(a,h)anthracene	1500	1200	350	3	11/21/20 17:44	11/5/20	
Dibenzofuran	720 J	1200	230	3	11/21/20 17:44	11/5/20	
Diethyl Phthalate	1200 U	1200	250	3	11/21/20 17:44	11/5/20	
Dimethyl Phthalate	1200 U	1200	270	3	11/21/20 17:44	11/5/20	
Fluoranthene	8500	1200	430	3	11/21/20 17:44	11/5/20	
Fluorene	330 J	1200	270	3	11/21/20 17:44	11/5/20	
Hexachlorobenzene	1200 U	1200	360	3	11/21/20 17:44	11/5/20	
Hexachlorobutadiene	1200 U	1200	290	3	11/21/20 17:44	11/5/20	
Hexachlorocyclopentadiene	1200 U	1200	260	3	11/21/20 17:44	11/5/20	
Hexachloroethane	1200 U	1200	310	3	11/21/20 17:44	11/5/20	
Indeno(1,2,3-cd)pyrene	6200	1200	390	3	11/21/20 17:44	11/5/20	
Isophorone	1200 U	1200	320	3	11/21/20 17:44	11/5/20	
N-Nitrosodi-n-propylamine	1200 U	1200	320	3	11/21/20 17:44	11/5/20	
N-Nitrosodiphenylamine	1200 U	1200	780	3	11/21/20 17:44	11/5/20	
Naphthalene	1600	1200	310	3	11/21/20 17:44	11/5/20	
Nitrobenzene	1200 U	1200	310	3	11/21/20 17:44	11/5/20	
Pentachlorophenol (PCP)	6000 U	6000	390	3	11/21/20 17:44	11/5/20	
Phenanthrene	5200	1200	340	3	11/21/20 17:44	11/5/20	
Phenol	1200 U	1200	280	3	11/21/20 17:44	11/5/20	
Pyrene	8500	1200	460	3	11/21/20 17:44	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	59	10 - 109	11/21/20 17:44	
2-Fluorobiphenyl	33	10 - 102	11/21/20 17:44	
2-Fluorophenol	36	10 - 88	11/21/20 17:44	
Nitrobenzene-d5	35	10 - 95	11/21/20 17:44	
Phenol-d6	40	10 - 145	11/21/20 17:44	
Terphenyl-d14	69	10 - 106	11/21/20 17:44	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	320 U	320	170	3	11/17/20 01:04	11/6/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	69	10 - 115	11/17/20 01:04	
Nitrobenzene-d5	84	10 - 130	11/17/20 01:04	
p-Terphenyl-d14	81	10 - 130	11/17/20 01:04	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	84 U	84	43	1	11/17/20 01:32	11/6/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	65	10 - 115	11/17/20 01:32	
Nitrobenzene-d5	87	10 - 130	11/17/20 01:32	
p-Terphenyl-d14	70	10 - 130	11/17/20 01:32	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 08:40
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-02
Lab Code: R2010340-005

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	88 U	88	45	1	11/17/20 02:01	11/6/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	51	10 - 115	11/17/20 02:01	
Nitrobenzene-d5	60	10 - 130	11/17/20 02:01	
p-Terphenyl-d14	52	10 - 130	11/17/20 02:01	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:16
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-57
Lab Code: R2010340-007

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	78 U	78	40	1	11/20/20 22:09	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	64	10 - 115	11/20/20 22:09	
Nitrobenzene-d5	65	10 - 130	11/20/20 22:09	
p-Terphenyl-d14	67	10 - 130	11/20/20 22:09	



Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
4,4'-DDE	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
4,4'-DDT	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
Aldrin	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
Dieldrin	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
Endosulfan I	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
Endosulfan II	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
Endosulfan Sulfate	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
Endrin	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
Endrin Aldehyde	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
Endrin Ketone	6.8 J	13	6.3	5	11/16/20 17:04	11/9/20	
Heptachlor	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
Heptachlor Epoxide	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
Methoxychlor	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
Toxaphene	240 U	240	150	5	11/16/20 17:04	11/9/20	
alpha-BHC	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
alpha-Chlordane	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
beta-BHC	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
delta-BHC	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
gamma-BHC (Lindane)	13 U	13	6.3	5	11/16/20 17:04	11/9/20	
gamma-Chlordane	13 U	13	6.3	5	11/16/20 17:04	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	64	10 - 145	11/16/20 17:04	
Tetrachloro-m-xylene	54	10 - 123	11/16/20 17:04	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
4,4'-DDE	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
4,4'-DDT	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
Aldrin	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
Dieldrin	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
Endosulfan I	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
Endosulfan II	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
Endosulfan Sulfate	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
Endrin	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
Endrin Aldehyde	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
Endrin Ketone	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
Heptachlor	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
Heptachlor Epoxide	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
Methoxychlor	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
Toxaphene	200 U	200	120	5	11/16/20 17:23	11/9/20	
alpha-BHC	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
alpha-Chlordane	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
beta-BHC	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
delta-BHC	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
gamma-BHC (Lindane)	10 U	10	5.1	5	11/16/20 17:23	11/9/20	
gamma-Chlordane	10 U	10	5.1	5	11/16/20 17:23	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	110	10 - 145	11/16/20 17:23	
Tetrachloro-m-xylene	63	10 - 123	11/16/20 17:23	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 08:40
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-02
Lab Code: R2010340-005

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
4,4'-DDE	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
4,4'-DDT	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
Aldrin	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
Dieldrin	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
Endosulfan I	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
Endosulfan II	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
Endosulfan Sulfate	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
Endrin	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
Endrin Aldehyde	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
Endrin Ketone	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
Heptachlor	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
Heptachlor Epoxide	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
Methoxychlor	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
Toxaphene	210 U	210	130	5	11/16/20 17:42	11/9/20	
alpha-BHC	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
alpha-Chlordane	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
beta-BHC	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
delta-BHC	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
gamma-BHC (Lindane)	11 U	11	5.5	5	11/16/20 17:42	11/9/20	
gamma-Chlordane	11 U	11	5.5	5	11/16/20 17:42	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	121	10 - 145	11/16/20 17:42	
Tetrachloro-m-xylene	37	10 - 123	11/16/20 17:42	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:16
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-57
Lab Code: R2010340-007

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
4,4'-DDE	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
4,4'-DDT	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
Aldrin	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
Dieldrin	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
Endosulfan I	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
Endosulfan II	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
Endosulfan Sulfate	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
Endrin	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
Endrin Aldehyde	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
Endrin Ketone	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
Heptachlor	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
Heptachlor Epoxide	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
Methoxychlor	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
Toxaphene	39 U	39	23	1	11/13/20 18:24	11/9/20	
alpha-BHC	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
alpha-Chlordane	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
beta-BHC	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
delta-BHC	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
gamma-BHC (Lindane)	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	
gamma-Chlordane	2.0 U	2.0	1.1	1	11/13/20 18:24	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	58	10 - 145	11/13/20 18:24	
Tetrachloro-m-xylene	51	10 - 123	11/13/20 18:24	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	49 U	49	26	1	11/11/20 04:00	11/9/20	
Aroclor 1221	99 U	99	26	1	11/11/20 04:00	11/9/20	
Aroclor 1232	49 U	49	26	1	11/11/20 04:00	11/9/20	
Aroclor 1242	49 U	49	26	1	11/11/20 04:00	11/9/20	
Aroclor 1248	49 U	49	26	1	11/11/20 04:00	11/9/20	
Aroclor 1254	43 J	49	26	1	11/11/20 04:00	11/9/20	
Aroclor 1260	37 JP	49	26	1	11/11/20 04:00	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	53	22 - 128	11/11/20 04:00	
Tetrachloro-m-xylene	51	14 - 119	11/11/20 04:00	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	39 U	39	21	1	11/11/20 04:19	11/9/20	
Aroclor 1221	80 U	80	21	1	11/11/20 04:19	11/9/20	
Aroclor 1232	39 U	39	21	1	11/11/20 04:19	11/9/20	
Aroclor 1242	39 U	39	21	1	11/11/20 04:19	11/9/20	
Aroclor 1248	56	39	21	1	11/11/20 04:19	11/9/20	
Aroclor 1254	64	39	21	1	11/11/20 04:19	11/9/20	
Aroclor 1260	90 P	39	21	1	11/11/20 04:19	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	57	22 - 128	11/11/20 04:19	
Tetrachloro-m-xylene	53	14 - 119	11/11/20 04:19	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 08:40
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-02
Lab Code: R2010340-005

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	43 U	43	22	1	11/11/20 04:39	11/9/20	
Aroclor 1221	87 U	87	22	1	11/11/20 04:39	11/9/20	
Aroclor 1232	43 U	43	22	1	11/11/20 04:39	11/9/20	
Aroclor 1242	43 U	43	22	1	11/11/20 04:39	11/9/20	
Aroclor 1248	43 U	43	22	1	11/11/20 04:39	11/9/20	
Aroclor 1254	43 U	43	22	1	11/11/20 04:39	11/9/20	
Aroclor 1260	43 U	43	22	1	11/11/20 04:39	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	38	22 - 128	11/11/20 04:39	
Tetrachloro-m-xylene	35	14 - 119	11/11/20 04:39	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:16
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-57
Lab Code: R2010340-007

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	39 U	39	21	1	11/11/20 04:58	11/9/20	
Aroclor 1221	80 U	80	21	1	11/11/20 04:58	11/9/20	
Aroclor 1232	39 U	39	21	1	11/11/20 04:58	11/9/20	
Aroclor 1242	39 U	39	21	1	11/11/20 04:58	11/9/20	
Aroclor 1248	39 U	39	21	1	11/11/20 04:58	11/9/20	
Aroclor 1254	39 U	39	21	1	11/11/20 04:58	11/9/20	
Aroclor 1260	39 U	39	21	1	11/11/20 04:58	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	54	22 - 128	11/11/20 04:58	
Tetrachloro-m-xylene	49	14 - 119	11/11/20 04:58	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	15 U	15	7.3	1	11/10/20 21:31	11/9/20	
2,4,5-TP	15 U	15	6.6	1	11/10/20 21:31	11/9/20	
2,4-D	15 U	15	9.5	1	11/10/20 21:31	11/9/20	
Dicamba	6.3 J	15	4.6	1	11/10/20 21:31	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	86	10 - 151	11/10/20 21:31	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	12 U	12	6.0	1	11/10/20 21:51	11/9/20	
2,4,5-TP	12 U	12	5.4	1	11/10/20 21:51	11/9/20	
2,4-D	12 U	12	7.8	1	11/10/20 21:51	11/9/20	
Dicamba	12 U	12	3.7	1	11/10/20 21:51	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	68	10 - 151	11/10/20 21:51	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 08:40
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-02
Lab Code: R2010340-005

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	13 U	13	6.5	1	11/10/20 22:11	11/9/20	
2,4,5-TP	13 U	13	5.8	1	11/10/20 22:11	11/9/20	
2,4-D	13 U	13	8.4	1	11/10/20 22:11	11/9/20	
Dicamba	13 U	13	4.0	1	11/10/20 22:11	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	53	10 - 151	11/10/20 22:11	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:16
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-57
Lab Code: R2010340-007

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	12 U	12	6.0	1	11/13/20 19:12	11/12/20	
2,4,5-TP	12 U	12	5.4	1	11/13/20 19:12	11/12/20	
2,4-D	12 U	12	7.8	1	11/13/20 19:12	11/12/20	
Dicamba	12 U	12	3.7	1	11/13/20 19:12	11/12/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	57	10 - 151	11/13/20 19:12	



Metals

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 09:37
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-28-CL-10302020
Lab Code: R2010340-001

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	22800	mg/Kg	24	15	1	11/12/20 21:06	11/09/20	
Antimony, Total	6010D	7.1 U	mg/Kg	7.1	0.7	1	11/12/20 21:06	11/09/20	
Arsenic, Total	6010D	5.5	mg/Kg	1.2	0.9	1	11/12/20 21:06	11/09/20	
Barium, Total	6010D	168	mg/Kg	2.4	1.8	1	11/12/20 21:06	11/09/20	
Beryllium, Total	6010D	1.42	mg/Kg	0.36	0.04	1	11/12/20 21:06	11/09/20	
Cadmium, Total	6010D	0.40 J	mg/Kg	0.60	0.29	1	11/12/20 21:06	11/09/20	
Calcium, Total	6010D	2640	mg/Kg	120	40	1	11/12/20 21:06	11/09/20	
Chromium, Total	6010D	28.8	mg/Kg	1.2	0.5	1	11/12/20 21:06	11/09/20	
Cobalt, Total	6010D	15.8	mg/Kg	6.0	0.6	1	11/12/20 21:06	11/09/20	
Copper, Total	6010D	19.2	mg/Kg	2.4	0.8	1	11/12/20 21:06	11/09/20	
Iron, Total	6010D	37700	mg/Kg	240	160	10	11/12/20 22:27	11/09/20	
Lead, Total	6010D	14.0	mg/Kg	6.0	0.5	1	11/12/20 21:06	11/09/20	
Magnesium, Total	6010D	6020	mg/Kg	120	20	1	11/12/20 21:06	11/09/20	
Manganese, Total	6010D	376	mg/Kg	2.4	1.8	1	11/12/20 21:06	11/09/20	
Mercury, Total	7471B	0.027 J	mg/Kg	0.040	0.016	1	11/09/20 16:11	11/06/20	
Nickel, Total	6010D	33.2	mg/Kg	4.8	0.8	1	11/12/20 21:06	11/09/20	
Potassium, Total	6010D	2080	mg/Kg	240	60	1	11/12/20 21:06	11/09/20	
Selenium, Total	6010D	12 U	mg/Kg	12	7	10	11/12/20 22:27	11/09/20	
Silver, Total	6010D	1.2 U	mg/Kg	1.2	0.2	1	11/12/20 21:06	11/09/20	
Sodium, Total	6010D	200	mg/Kg	120	70	1	11/12/20 21:06	11/09/20	
Thallium, Total	6010D	12 U	mg/Kg	12	8	10	11/12/20 22:27	11/09/20	
Vanadium, Total	6010D	39.6	mg/Kg	6.0	0.9	1	11/12/20 21:06	11/09/20	
Zinc, Total	6010D	92.9	mg/Kg	2.4	1.7	1	11/12/20 21:06	11/09/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 14:35
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-35-10302020
Lab Code: R2010340-002

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	384	mg/Kg	25	15	1	11/12/20 21:09	11/09/20	
Antimony, Total	6010D	0.8 J	mg/Kg	7.5	0.7	1	11/12/20 21:09	11/09/20	
Arsenic, Total	6010D	5.2	mg/Kg	1.3	0.9	1	11/12/20 21:09	11/09/20	
Barium, Total	6010D	84.1	mg/Kg	2.5	1.9	1	11/12/20 21:09	11/09/20	
Beryllium, Total	6010D	0.06 J	mg/Kg	0.38	0.04	1	11/12/20 21:09	11/09/20	
Cadmium, Total	6010D	0.46 J	mg/Kg	0.63	0.30	1	11/12/20 21:09	11/09/20	
Calcium, Total	6010D	650	mg/Kg	130	40	1	11/12/20 21:09	11/09/20	
Chromium, Total	6010D	6.1	mg/Kg	1.3	0.5	1	11/12/20 21:09	11/09/20	
Cobalt, Total	6010D	6.3 U	mg/Kg	6.3	0.6	1	11/12/20 21:09	11/09/20	
Copper, Total	6010D	76.3	mg/Kg	2.5	0.8	1	11/12/20 21:09	11/09/20	
Iron, Total	6010D	32600	mg/Kg	250	170	10	11/12/20 22:30	11/09/20	
Lead, Total	6010D	182	mg/Kg	6.3	0.5	1	11/12/20 21:09	11/09/20	
Magnesium, Total	6010D	60 J	mg/Kg	130	20	1	11/12/20 21:09	11/09/20	
Manganese, Total	6010D	38.9	mg/Kg	2.5	1.9	1	11/12/20 21:09	11/09/20	
Mercury, Total	7471B	3.19	mg/Kg	0.19	0.08	5	11/09/20 16:31	11/06/20	
Nickel, Total	6010D	9.2	mg/Kg	5.0	0.9	1	11/12/20 21:09	11/09/20	
Potassium, Total	6010D	900	mg/Kg	250	70	1	11/12/20 21:09	11/09/20	
Selenium, Total	6010D	1.0 BJ	mg/Kg	1.3	0.7	1	11/12/20 21:09	11/09/20	
Silver, Total	6010D	0.4 J	mg/Kg	1.3	0.2	1	11/12/20 21:09	11/09/20	
Sodium, Total	6010D	940	mg/Kg	130	70	1	11/12/20 21:09	11/09/20	
Thallium, Total	6010D	1.3 U	mg/Kg	1.3	0.9	1	11/12/20 21:09	11/09/20	
Vanadium, Total	6010D	4.3 J	mg/Kg	6.3	0.9	1	11/12/20 21:09	11/09/20	
Zinc, Total	6010D	17.5	mg/Kg	2.5	1.8	1	11/12/20 21:09	11/09/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	3410	mg/Kg	26	16	1	11/12/20 21:12	11/09/20	
Antimony, Total	6010D	7.9 U	mg/Kg	7.9	0.8	1	11/12/20 21:12	11/09/20	
Arsenic, Total	6010D	12.1	mg/Kg	1.3	1.0	1	11/12/20 21:12	11/09/20	
Barium, Total	6010D	102	mg/Kg	2.6	2.0	1	11/12/20 21:12	11/09/20	
Beryllium, Total	6010D	0.67	mg/Kg	0.39	0.04	1	11/12/20 21:12	11/09/20	
Cadmium, Total	6010D	0.59 J	mg/Kg	0.66	0.32	1	11/12/20 21:12	11/09/20	
Calcium, Total	6010D	4870	mg/Kg	130	50	1	11/12/20 21:12	11/09/20	
Chromium, Total	6010D	21.8	mg/Kg	1.3	0.5	1	11/12/20 21:12	11/09/20	
Cobalt, Total	6010D	4.7 J	mg/Kg	6.6	0.7	1	11/12/20 21:12	11/09/20	
Copper, Total	6010D	42.2	mg/Kg	2.6	0.9	1	11/12/20 21:12	11/09/20	
Iron, Total	6010D	12500	mg/Kg	260	180	10	11/12/20 22:34	11/09/20	
Lead, Total	6010D	36.1	mg/Kg	6.6	0.6	1	11/12/20 21:12	11/09/20	
Magnesium, Total	6010D	720	mg/Kg	130	20	1	11/12/20 21:12	11/09/20	
Manganese, Total	6010D	148	mg/Kg	2.6	2.0	1	11/12/20 21:12	11/09/20	
Mercury, Total	7471B	0.091	mg/Kg	0.043	0.017	1	11/09/20 16:16	11/06/20	
Nickel, Total	6010D	62.5	mg/Kg	5.2	0.9	1	11/12/20 21:12	11/09/20	
Potassium, Total	6010D	550	mg/Kg	260	70	1	11/12/20 21:12	11/09/20	
Selenium, Total	6010D	1.3 BJ	mg/Kg	1.3	0.8	1	11/12/20 21:12	11/09/20	
Silver, Total	6010D	1.3 U	mg/Kg	1.3	0.2	1	11/12/20 21:12	11/09/20	
Sodium, Total	6010D	90 J	mg/Kg	130	70	1	11/12/20 21:12	11/09/20	
Thallium, Total	6010D	1.3 U	mg/Kg	1.3	0.9	1	11/12/20 21:12	11/09/20	
Vanadium, Total	6010D	48.0	mg/Kg	6.6	1.0	1	11/12/20 21:12	11/09/20	
Zinc, Total	6010D	85.0	mg/Kg	2.6	1.9	1	11/12/20 21:12	11/09/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	1540	mg/Kg	24	15	1	11/12/20 21:35	11/09/20	
Antimony, Total	6010D	7.1 U	mg/Kg	7.1	0.7	1	11/12/20 21:35	11/09/20	
Arsenic, Total	6010D	15.1	mg/Kg	1.2	0.9	1	11/12/20 21:35	11/09/20	
Barium, Total	6010D	3290	mg/Kg	24	18	10	11/12/20 22:56	11/09/20	
Beryllium, Total	6010D	0.66	mg/Kg	0.36	0.04	1	11/12/20 21:35	11/09/20	
Cadmium, Total	6010D	1.42	mg/Kg	0.59	0.29	1	11/12/20 21:35	11/09/20	
Calcium, Total	6010D	2780	mg/Kg	120	40	1	11/12/20 21:35	11/09/20	
Chromium, Total	6010D	42.5	mg/Kg	1.2	0.5	1	11/12/20 21:35	11/09/20	
Cobalt, Total	6010D	5.6 J	mg/Kg	5.9	0.6	1	11/12/20 21:35	11/09/20	
Copper, Total	6010D	146	mg/Kg	2.4	0.8	1	11/12/20 21:35	11/09/20	
Iron, Total	6010D	51800	mg/Kg	240	160	10	11/12/20 22:56	11/09/20	
Lead, Total	6010D	122	mg/Kg	5.9	0.5	1	11/12/20 21:35	11/09/20	
Magnesium, Total	6010D	530	mg/Kg	120	20	1	11/12/20 21:35	11/09/20	
Manganese, Total	6010D	474	mg/Kg	2.4	1.8	1	11/12/20 21:35	11/09/20	
Mercury, Total	7471B	0.227	mg/Kg	0.037	0.015	1	11/09/20 16:19	11/06/20	
Nickel, Total	6010D	44.2	mg/Kg	4.7	0.8	1	11/12/20 21:35	11/09/20	
Potassium, Total	6010D	320	mg/Kg	240	60	1	11/12/20 21:35	11/09/20	
Selenium, Total	6010D	12 U	mg/Kg	12	7	10	11/12/20 22:56	11/09/20	
Silver, Total	6010D	0.7 J	mg/Kg	1.2	0.2	1	11/12/20 21:35	11/09/20	
Sodium, Total	6010D	100 J	mg/Kg	120	70	1	11/12/20 21:35	11/09/20	
Thallium, Total	6010D	1.2 U	mg/Kg	1.2	0.8	1	11/12/20 21:35	11/09/20	
Vanadium, Total	6010D	56.0	mg/Kg	5.9	0.9	1	11/12/20 21:35	11/09/20	
Zinc, Total	6010D	142	mg/Kg	2.4	1.7	1	11/12/20 21:35	11/09/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20 08:40
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-02
Lab Code: R2010340-005

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	10500	mg/Kg	24	15	1	11/12/20 21:38	11/09/20	
Antimony, Total	6010D	7.1 U	mg/Kg	7.1	0.7	1	11/12/20 21:38	11/09/20	
Arsenic, Total	6010D	9.7	mg/Kg	1.2	0.9	1	11/12/20 21:38	11/09/20	
Barium, Total	6010D	91.6	mg/Kg	2.4	1.8	1	11/12/20 21:38	11/09/20	
Beryllium, Total	6010D	0.96	mg/Kg	0.36	0.04	1	11/12/20 21:38	11/09/20	
Cadmium, Total	6010D	0.51 J	mg/Kg	0.59	0.29	1	11/12/20 21:38	11/09/20	
Calcium, Total	6010D	1300	mg/Kg	120	40	1	11/12/20 21:38	11/09/20	
Chromium, Total	6010D	17.2	mg/Kg	1.2	0.5	1	11/12/20 21:38	11/09/20	
Cobalt, Total	6010D	15.0	mg/Kg	5.9	0.6	1	11/12/20 21:38	11/09/20	
Copper, Total	6010D	18.4	mg/Kg	2.4	0.8	1	11/12/20 21:38	11/09/20	
Iron, Total	6010D	36200	mg/Kg	240	160	10	11/12/20 23:00	11/09/20	
Lead, Total	6010D	17.3	mg/Kg	5.9	0.5	1	11/12/20 21:38	11/09/20	
Magnesium, Total	6010D	2100	mg/Kg	120	20	1	11/12/20 21:38	11/09/20	
Manganese, Total	6010D	379	mg/Kg	2.4	1.8	1	11/12/20 21:38	11/09/20	
Mercury, Total	7471B	0.046	mg/Kg	0.039	0.016	1	11/09/20 16:26	11/06/20	
Nickel, Total	6010D	18.9	mg/Kg	4.8	0.8	1	11/12/20 21:38	11/09/20	
Potassium, Total	6010D	1380	mg/Kg	240	60	1	11/12/20 21:38	11/09/20	
Selenium, Total	6010D	12 U	mg/Kg	12	7	10	11/12/20 23:00	11/09/20	
Silver, Total	6010D	1.2 U	mg/Kg	1.2	0.2	1	11/12/20 21:38	11/09/20	
Sodium, Total	6010D	120 U	mg/Kg	120	70	1	11/12/20 21:38	11/09/20	
Thallium, Total	6010D	1.2 U	mg/Kg	1.2	0.8	1	11/12/20 21:38	11/09/20	
Vanadium, Total	6010D	34.4	mg/Kg	5.9	0.9	1	11/12/20 21:38	11/09/20	
Zinc, Total	6010D	66.3	mg/Kg	2.4	1.7	1	11/12/20 21:38	11/09/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:16
Date Received: 11/03/20 16:15

Sample Name: MLS-BCP-17-57
Lab Code: R2010340-007

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	13600	mg/Kg	22	14	1	11/12/20 21:42	11/09/20	
Antimony, Total	6010D	6.7 U	mg/Kg	6.7	0.7	1	11/12/20 21:42	11/09/20	
Arsenic, Total	6010D	4.3	mg/Kg	1.1	0.8	1	11/12/20 21:42	11/09/20	
Barium, Total	6010D	128	mg/Kg	2.2	1.7	1	11/12/20 21:42	11/09/20	
Beryllium, Total	6010D	0.65	mg/Kg	0.34	0.04	1	11/12/20 21:42	11/09/20	
Cadmium, Total	6010D	0.31 J	mg/Kg	0.56	0.27	1	11/12/20 21:42	11/09/20	
Calcium, Total	6010D	64400	mg/Kg	1100	400	10	11/12/20 23:03	11/09/20	
Chromium, Total	6010D	19.9	mg/Kg	1.1	0.4	1	11/12/20 21:42	11/09/20	
Cobalt, Total	6010D	10.5	mg/Kg	5.6	0.6	1	11/12/20 21:42	11/09/20	
Copper, Total	6010D	20.3	mg/Kg	2.2	0.8	1	11/12/20 21:42	11/09/20	
Iron, Total	6010D	26300	mg/Kg	220	150	10	11/12/20 23:03	11/09/20	
Lead, Total	6010D	9.8	mg/Kg	5.6	0.5	1	11/12/20 21:42	11/09/20	
Magnesium, Total	6010D	18800	mg/Kg	110	20	1	11/12/20 21:42	11/09/20	
Manganese, Total	6010D	520	mg/Kg	2.2	1.7	1	11/12/20 21:42	11/09/20	
Mercury, Total	7471B	0.038 U	mg/Kg	0.038	0.015	1	11/09/20 16:34	11/06/20	
Nickel, Total	6010D	23.3	mg/Kg	4.5	0.8	1	11/12/20 21:42	11/09/20	
Potassium, Total	6010D	2820	mg/Kg	220	60	1	11/12/20 21:42	11/09/20	
Selenium, Total	6010D	1.1 U	mg/Kg	1.1	0.7	1	11/12/20 21:42	11/09/20	
Silver, Total	6010D	1.1 U	mg/Kg	1.1	0.2	1	11/12/20 21:42	11/09/20	
Sodium, Total	6010D	220	mg/Kg	110	60	1	11/12/20 21:42	11/09/20	
Thallium, Total	6010D	1.1 U	mg/Kg	1.1	0.8	1	11/12/20 21:42	11/09/20	
Vanadium, Total	6010D	28.6	mg/Kg	5.6	0.8	1	11/12/20 21:42	11/09/20	
Zinc, Total	6010D	62.9	mg/Kg	2.2	1.6	1	11/12/20 21:42	11/09/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 10:35
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-810
Lab Code: R2010340-008

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	14300	mg/Kg	21	13	1	11/12/20 21:45	11/09/20	
Antimony, Total	6010D	6.3 U	mg/Kg	6.3	0.6	1	11/12/20 21:45	11/09/20	
Arsenic, Total	6010D	4.4	mg/Kg	1.1	0.8	1	11/12/20 21:45	11/09/20	
Barium, Total	6010D	56.9	mg/Kg	2.1	1.6	1	11/12/20 21:45	11/09/20	
Beryllium, Total	6010D	0.69	mg/Kg	0.32	0.04	1	11/12/20 21:45	11/09/20	
Cadmium, Total	6010D	0.36 J	mg/Kg	0.53	0.26	1	11/12/20 21:45	11/09/20	
Calcium, Total	6010D	62400	mg/Kg	1100	400	10	11/12/20 23:06	11/09/20	
Chromium, Total	6010D	21.7	mg/Kg	1.1	0.4	1	11/12/20 21:45	11/09/20	
Cobalt, Total	6010D	9.1	mg/Kg	5.3	0.5	1	11/12/20 21:45	11/09/20	
Copper, Total	6010D	21.9	mg/Kg	2.1	0.7	1	11/12/20 21:45	11/09/20	
Iron, Total	6010D	27900	mg/Kg	210	140	10	11/12/20 23:06	11/09/20	
Lead, Total	6010D	10.6	mg/Kg	5.3	0.5	1	11/12/20 21:45	11/09/20	
Magnesium, Total	6010D	19100	mg/Kg	110	20	1	11/12/20 21:45	11/09/20	
Manganese, Total	6010D	535	mg/Kg	2.1	1.6	1	11/12/20 21:45	11/09/20	
Mercury, Total	7471B	0.038 U	mg/Kg	0.038	0.015	1	11/09/20 16:37	11/06/20	
Nickel, Total	6010D	24.5	mg/Kg	4.2	0.7	1	11/12/20 21:45	11/09/20	
Potassium, Total	6010D	3240	mg/Kg	210	60	1	11/12/20 21:45	11/09/20	
Selenium, Total	6010D	1.1 U	mg/Kg	1.1	0.6	1	11/12/20 21:45	11/09/20	
Silver, Total	6010D	1.1 U	mg/Kg	1.1	0.10	1	11/12/20 21:45	11/09/20	
Sodium, Total	6010D	230	mg/Kg	110	60	1	11/12/20 21:45	11/09/20	
Thallium, Total	6010D	1.1 U	mg/Kg	1.1	0.7	1	11/12/20 21:45	11/09/20	
Vanadium, Total	6010D	30.3	mg/Kg	5.3	0.8	1	11/12/20 21:45	11/09/20	
Zinc, Total	6010D	85.9	mg/Kg	2.1	1.5	1	11/12/20 21:45	11/09/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:40
Date Received: 11/03/20 16:15

Sample Name: MW-BCP-17-01
Lab Code: R2010340-009

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	4010	mg/Kg	22	13	1	11/12/20 21:48	11/09/20	
Antimony, Total	6010D	6.5 U	mg/Kg	6.5	0.6	1	11/12/20 21:48	11/09/20	
Arsenic, Total	6010D	11.6	mg/Kg	1.1	0.8	1	11/12/20 21:48	11/09/20	
Barium, Total	6010D	92.8	mg/Kg	2.2	1.7	1	11/12/20 21:48	11/09/20	
Beryllium, Total	6010D	0.92	mg/Kg	0.32	0.04	1	11/12/20 21:48	11/09/20	
Cadmium, Total	6010D	0.28 J	mg/Kg	0.54	0.26	1	11/12/20 21:48	11/09/20	
Calcium, Total	6010D	1320	mg/Kg	110	40	1	11/12/20 21:48	11/09/20	
Chromium, Total	6010D	10.1	mg/Kg	1.1	0.4	1	11/12/20 21:48	11/09/20	
Cobalt, Total	6010D	3.3 J	mg/Kg	5.4	0.5	1	11/12/20 21:48	11/09/20	
Copper, Total	6010D	18.1	mg/Kg	2.2	0.7	1	11/12/20 21:48	11/09/20	
Iron, Total	6010D	21300	mg/Kg	220	140	10	11/12/20 23:09	11/09/20	
Lead, Total	6010D	12.4	mg/Kg	5.4	0.5	1	11/12/20 21:48	11/09/20	
Magnesium, Total	6010D	800	mg/Kg	110	20	1	11/12/20 21:48	11/09/20	
Manganese, Total	6010D	58.3	mg/Kg	2.2	1.7	1	11/12/20 21:48	11/09/20	
Mercury, Total	7471B	0.025 J	mg/Kg	0.038	0.016	1	11/09/20 16:39	11/06/20	
Nickel, Total	6010D	9.7	mg/Kg	4.3	0.8	1	11/12/20 21:48	11/09/20	
Potassium, Total	6010D	820	mg/Kg	220	60	1	11/12/20 21:48	11/09/20	
Selenium, Total	6010D	1.9 B	mg/Kg	1.1	0.6	1	11/12/20 21:48	11/09/20	
Silver, Total	6010D	1.1 U	mg/Kg	1.1	0.10	1	11/12/20 21:48	11/09/20	
Sodium, Total	6010D	90 J	mg/Kg	110	60	1	11/12/20 21:48	11/09/20	
Thallium, Total	6010D	1.1 U	mg/Kg	1.1	0.7	1	11/12/20 21:48	11/09/20	
Vanadium, Total	6010D	22.9	mg/Kg	5.4	0.8	1	11/12/20 21:48	11/09/20	
Zinc, Total	6010D	28.8	mg/Kg	2.2	1.6	1	11/12/20 21:48	11/09/20	



General Chemistry

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-28-CL-10302020
Lab Code: R2010340-001

Service Request: R2010340
Date Collected: 10/30/20 09:37
Date Received: 11/03/20 16:15

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.25 U	mg/Kg	0.25	0.17	1	11/12/20 11:55	11/11/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-28-CL-10302020
Lab Code: R2010340-001

Service Request: R2010340
Date Collected: 10/30/20 09:37
Date Received: 11/03/20 16:15

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	80.8	Percent	-	-	1	11/10/20 15:30	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-35-10302020
Lab Code: R2010340-002

Service Request: R2010340
Date Collected: 10/30/20 14:35
Date Received: 11/03/20 16:15

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	68.1	mg/Kg	1.6	0.9	5	11/12/20 13:14	11/11/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-35-10302020
Lab Code: R2010340-002

Service Request: R2010340
Date Collected: 10/30/20 14:35
Date Received: 11/03/20 16:15

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	80.0	Percent	-	-	1	11/10/20 15:30	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	4.16	mg/Kg	0.37	0.22	1	11/12/20 11:58	11/11/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	76.2	Percent	-	-	1	11/10/20 15:30	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/03/20 16:15

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	2.66	mg/Kg	0.28	0.17	1	11/12/20 11:59	11/11/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/03/20 16:15

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	84.3	Percent	-	-	1	11/10/20 15:30	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MLS-BCP-17-02
Lab Code: R2010340-005

Service Request: R2010340
Date Collected: 10/30/20 08:40
Date Received: 11/03/20 16:15

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	77.9	Percent	-	-	1	11/10/20 15:30	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-17-06
Lab Code: R2010340-006

Service Request: R2010340
Date Collected: 11/02/20 09:00
Date Received: 11/03/20 16:15

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	80.5	Percent	-	-	1	11/10/20 15:30	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MLS-BCP-17-57
Lab Code: R2010340-007

Service Request: R2010340
Date Collected: 11/02/20 10:16
Date Received: 11/03/20 16:15

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.29 U	mg/Kg	0.29	0.17	1	11/12/20 11:59	11/11/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MLS-BCP-17-57
Lab Code: R2010340-007

Service Request: R2010340
Date Collected: 11/02/20 10:16
Date Received: 11/03/20 16:15

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	87.3	Percent	-	-	1	11/10/20 15:30	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-17-810
Lab Code: R2010340-008

Service Request: R2010340
Date Collected: 11/02/20 10:35
Date Received: 11/03/20 16:15

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.26 U	mg/Kg	0.26	0.17	1	11/12/20 12:00	11/11/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-17-810
Lab Code: R2010340-008

Service Request: R2010340
Date Collected: 11/02/20 10:35
Date Received: 11/03/20 16:15

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	86.2	Percent	-	-	1	11/10/20 15:30	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-17-01
Lab Code: R2010340-009

Service Request: R2010340
Date Collected: 11/02/20 09:40
Date Received: 11/03/20 16:15

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.28 U	mg/Kg	0.28	0.17	1	11/12/20 12:01	11/11/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: MW-BCP-17-01
Lab Code: R2010340-009

Service Request: R2010340
Date Collected: 11/02/20 09:40
Date Received: 11/03/20 16:15

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	86.1	Percent	-	-	1	11/10/20 15:30	NA	



QC Summary Forms

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Volatile Organic Compounds by GC/MS

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5035A

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		31 - 154	63 - 138	66 - 138
TP-BCP-28-CL-10302020	R2010340-001	99	112	108
TP-BCP-36-01-1122020	R2010340-003	73	121	110
TP-BCP-36-01-1122020 RE	R2010340-003	76	128	111
TP-BCP-09-01-1122020	R2010340-004	86	113	106
MW-BCP-17-06	R2010340-006	70	115	105
MW-BCP-17-06 RE	R2010340-006	82	114	105
MLS-BCP-17-57	R2010340-007	99	111	106
MW-BCP-17-810	R2010340-008	86	111	98
MW-BCP-17-01	R2010340-009	33	149 *	108
MW-BCP-17-01 DL	R2010340-009	38	134	101
Lab Control Sample	RQ2013853-03	108	118	108
Method Blank	RQ2013853-04	100	114	106
Lab Control Sample	RQ2013908-03	105	118	105
Duplicate Lab Control Sample	RQ2013908-04	109	118	107
Method Blank	RQ2013908-05	100	115	106

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010340

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5030C

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		85 - 122	80 - 116	87 - 121
Trip Blank	R2010340-010	92	91	98
Lab Control Sample	RQ2013864-03	94	94	98
Method Blank	RQ2013864-04	94	91	99

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013853-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.44	1	11/11/20 11:18	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.29	1	11/11/20 11:18	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.52	1	11/11/20 11:18	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.42	1	11/11/20 11:18	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.75	1	11/11/20 11:18	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
1,4-Dichlorobenzene	5.0 U	5.0	0.22	1	11/11/20 11:18	
1,4-Dioxane	100 U	100	20	1	11/11/20 11:18	
2-Butanone (MEK)	5.0 U	5.0	2.0	1	11/11/20 11:18	
2-Hexanone	5.0 U	5.0	0.36	1	11/11/20 11:18	
4-Methyl-2-pentanone	5.0 U	5.0	0.23	1	11/11/20 11:18	
Acetone	5.0 U	5.0	4.7	1	11/11/20 11:18	
Benzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
Bromochloromethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
Bromodichloromethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
Bromoform	5.0 U	5.0	0.50	1	11/11/20 11:18	
Bromomethane	5.0 U	5.0	2.1	1	11/11/20 11:18	
Carbon Disulfide	5.0 U	5.0	0.29	1	11/11/20 11:18	
Carbon Tetrachloride	5.0 U	5.0	0.26	1	11/11/20 11:18	
Chlorobenzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
Chloroethane	5.0 U	5.0	0.41	1	11/11/20 11:18	
Chloroform	5.0 U	5.0	0.20	1	11/11/20 11:18	
Chloromethane	5.0 U	5.0	1.4	1	11/11/20 11:18	
Cyclohexane	5.0 U	5.0	0.26	1	11/11/20 11:18	
Dibromochloromethane	5.0 U	5.0	0.20	1	11/11/20 11:18	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.33	1	11/11/20 11:18	
Dichloromethane	5.0 U	5.0	2.8	1	11/11/20 11:18	
Ethylbenzene	5.0 U	5.0	0.20	1	11/11/20 11:18	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	11/11/20 11:18	
Methyl Acetate	5.0 U	5.0	0.84	1	11/11/20 11:18	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	11/11/20 11:18	
Methylcyclohexane	5.0 U	5.0	0.31	1	11/11/20 11:18	
Styrene	5.0 U	5.0	0.20	1	11/11/20 11:18	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013853-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.23	1	11/11/20 11:18	
Toluene	5.0 U	5.0	0.20	1	11/11/20 11:18	
Trichloroethene (TCE)	0.22 J	5.0	0.22	1	11/11/20 11:18	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.26	1	11/11/20 11:18	
Vinyl Chloride	5.0 U	5.0	0.46	1	11/11/20 11:18	
cis-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/11/20 11:18	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/11/20 11:18	
m,p-Xylenes	10 U	10	0.37	1	11/11/20 11:18	
o-Xylene	5.0 U	5.0	0.20	1	11/11/20 11:18	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/11/20 11:18	
trans-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/11/20 11:18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	31 - 154	11/11/20 11:18	
Dibromofluoromethane	114	63 - 138	11/11/20 11:18	
Toluene-d8	106	66 - 138	11/11/20 11:18	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013864-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.25	1	11/11/20 12:47	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.34	1	11/11/20 12:47	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.45	1	11/11/20 12:47	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,4-Dichlorobenzene	5.0 U	5.0	0.20	1	11/11/20 12:47	
1,4-Dioxane	100 U	100	13	1	11/11/20 12:47	
2-Butanone (MEK)	10 U	10	0.78	1	11/11/20 12:47	
2-Hexanone	10 U	10	0.20	1	11/11/20 12:47	
4-Methyl-2-pentanone	10 U	10	0.20	1	11/11/20 12:47	
Acetone	10 U	10	5.0	1	11/11/20 12:47	
Benzene	5.0 U	5.0	0.20	1	11/11/20 12:47	
Bromochloromethane	5.0 U	5.0	0.20	1	11/11/20 12:47	
Bromodichloromethane	5.0 U	5.0	0.20	1	11/11/20 12:47	
Bromoform	5.0 U	5.0	0.25	1	11/11/20 12:47	
Bromomethane	5.0 U	5.0	0.70	1	11/11/20 12:47	
Carbon Disulfide	0.46 J	10	0.42	1	11/11/20 12:47	
Carbon Tetrachloride	5.0 U	5.0	0.34	1	11/11/20 12:47	
Chlorobenzene	5.0 U	5.0	0.20	1	11/11/20 12:47	
Chloroethane	5.0 U	5.0	0.23	1	11/11/20 12:47	
Chloroform	5.0 U	5.0	0.24	1	11/11/20 12:47	
Chloromethane	0.56 J	5.0	0.28	1	11/11/20 12:47	
Cyclohexane	10 U	10	0.26	1	11/11/20 12:47	
Dibromochloromethane	5.0 U	5.0	0.20	1	11/11/20 12:47	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.21	1	11/11/20 12:47	
Dichloromethane	5.0 U	5.0	0.65	1	11/11/20 12:47	
Ethylbenzene	5.0 U	5.0	0.20	1	11/11/20 12:47	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	11/11/20 12:47	
Methyl Acetate	10 U	10	0.33	1	11/11/20 12:47	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	11/11/20 12:47	
Methylcyclohexane	10 U	10	0.20	1	11/11/20 12:47	
Styrene	5.0 U	5.0	0.20	1	11/11/20 12:47	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013864-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.21	1	11/11/20 12:47	
Toluene	5.0 U	5.0	0.20	1	11/11/20 12:47	
Trichloroethene (TCE)	0.21 J	5.0	0.20	1	11/11/20 12:47	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.24	1	11/11/20 12:47	
Vinyl Chloride	5.0 U	5.0	0.20	1	11/11/20 12:47	
cis-1,2-Dichloroethene	5.0 U	5.0	0.23	1	11/11/20 12:47	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/11/20 12:47	
m,p-Xylenes	5.0 U	5.0	0.20	1	11/11/20 12:47	
o-Xylene	5.0 U	5.0	0.20	1	11/11/20 12:47	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/11/20 12:47	
trans-1,3-Dichloropropene	5.0 U	5.0	0.23	1	11/11/20 12:47	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	85 - 122	11/11/20 12:47	
Dibromofluoromethane	91	80 - 116	11/11/20 12:47	
Toluene-d8	99	87 - 121	11/11/20 12:47	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013908-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	11/12/20 12:13	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.44	1	11/12/20 12:13	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	11/12/20 12:13	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	11/12/20 12:13	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	11/12/20 12:13	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.29	1	11/12/20 12:13	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.52	1	11/12/20 12:13	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.42	1	11/12/20 12:13	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	11/12/20 12:13	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.75	1	11/12/20 12:13	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	11/12/20 12:13	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	11/12/20 12:13	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	11/12/20 12:13	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	11/12/20 12:13	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	11/12/20 12:13	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	11/12/20 12:13	
1,4-Dichlorobenzene	5.0 U	5.0	0.22	1	11/12/20 12:13	
1,4-Dioxane	100 U	100	20	1	11/12/20 12:13	
2-Butanone (MEK)	5.0 U	5.0	2.0	1	11/12/20 12:13	
2-Hexanone	5.0 U	5.0	0.36	1	11/12/20 12:13	
4-Methyl-2-pentanone	5.0 U	5.0	0.23	1	11/12/20 12:13	
Acetone	5.0 U	5.0	4.7	1	11/12/20 12:13	
Benzene	5.0 U	5.0	0.20	1	11/12/20 12:13	
Bromochloromethane	5.0 U	5.0	0.20	1	11/12/20 12:13	
Bromodichloromethane	5.0 U	5.0	0.20	1	11/12/20 12:13	
Bromoform	5.0 U	5.0	0.50	1	11/12/20 12:13	
Bromomethane	5.0 U	5.0	2.1	1	11/12/20 12:13	
Carbon Disulfide	5.0 U	5.0	0.29	1	11/12/20 12:13	
Carbon Tetrachloride	5.0 U	5.0	0.26	1	11/12/20 12:13	
Chlorobenzene	5.0 U	5.0	0.20	1	11/12/20 12:13	
Chloroethane	5.0 U	5.0	0.41	1	11/12/20 12:13	
Chloroform	5.0 U	5.0	0.20	1	11/12/20 12:13	
Chloromethane	5.0 U	5.0	1.4	1	11/12/20 12:13	
Cyclohexane	5.0 U	5.0	0.26	1	11/12/20 12:13	
Dibromochloromethane	5.0 U	5.0	0.20	1	11/12/20 12:13	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.33	1	11/12/20 12:13	
Dichloromethane	5.0 U	5.0	2.8	1	11/12/20 12:13	
Ethylbenzene	5.0 U	5.0	0.20	1	11/12/20 12:13	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	11/12/20 12:13	
Methyl Acetate	5.0 U	5.0	0.84	1	11/12/20 12:13	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	11/12/20 12:13	
Methylcyclohexane	5.0 U	5.0	0.31	1	11/12/20 12:13	
Styrene	5.0 U	5.0	0.20	1	11/12/20 12:13	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013908-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.23	1	11/12/20 12:13	
Toluene	5.0 U	5.0	0.20	1	11/12/20 12:13	
Trichloroethene (TCE)	5.0 U	5.0	0.22	1	11/12/20 12:13	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.26	1	11/12/20 12:13	
Vinyl Chloride	5.0 U	5.0	0.46	1	11/12/20 12:13	
cis-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/12/20 12:13	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/12/20 12:13	
m,p-Xylenes	10 U	10	0.37	1	11/12/20 12:13	
o-Xylene	5.0 U	5.0	0.20	1	11/12/20 12:13	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/12/20 12:13	
trans-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/12/20 12:13	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	31 - 154	11/12/20 12:13	
Dibromofluoromethane	115	63 - 138	11/12/20 12:13	
Toluene-d8	106	66 - 138	11/12/20 12:13	

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/11/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2013853-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	20.0	20.0	100	68-123
1,1,2,2-Tetrachloroethane	8260C	16.7	20.0	83	78-121
1,1,2-Trichloroethane	8260C	20.7	20.0	103	84-117
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	17.9	20.0	89	54-121
1,1-Dichloroethane (1,1-DCA)	8260C	17.3	20.0	87	76-123
1,1-Dichloroethene (1,1-DCE)	8260C	19.4	20.0	97	65-115
1,2,3-Trichlorobenzene	8260C	20.0	20.0	100	60-128
1,2,4-Trichlorobenzene	8260C	19.3	20.0	96	62-130
1,2,4-Trimethylbenzene	8260C	17.3	20.0	86	67-121
1,2-Dibromo-3-chloropropane (DBCP)	8260C	15.9	20.0	79	54-135
1,2-Dibromoethane	8260C	20.4	20.0	102	77-117
1,2-Dichlorobenzene	8260C	19.4	20.0	97	75-116
1,2-Dichloroethane	8260C	22.1	20.0	111	74-116
1,2-Dichloropropane	8260C	18.5	20.0	93	79-112
1,3,5-Trimethylbenzene	8260C	17.5	20.0	87	66-122
1,3-Dichlorobenzene	8260C	19.4	20.0	97	72-118
1,4-Dichlorobenzene	8260C	19.0	20.0	95	72-117
1,4-Dioxane	8260C	411	400	103	59-147
2-Butanone (MEK)	8260C	18.2	20.0	91	67-129
2-Hexanone	8260C	21.7	20.0	109	68-118
4-Methyl-2-pentanone	8260C	22.4	20.0	112	64-123
Acetone	8260C	18.3	20.0	91	32-154
Benzene	8260C	18.3	20.0	92	77-114
Bromochloromethane	8260C	19.3	20.0	96	78-117
Bromodichloromethane	8260C	18.8	20.0	94	72-118
Bromoform	8260C	20.0	20.0	100	55-134
Bromomethane	8260C	27.7	20.0	138	10-150
Carbon Disulfide	8260C	12.1	20.0	61	44-139
Carbon Tetrachloride	8260C	21.8	20.0	109	51-123
Chlorobenzene	8260C	19.7	20.0	98	79-115
Chloroethane	8260C	20.2	20.0	101	10-140
Chloroform	8260C	18.8	20.0	94	76-115
Chloromethane	8260C	16.5	20.0	82	10-131

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/11/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2013853-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyclohexane	8260C	21.4	20.0	107	67-122
Dibromochloromethane	8260C	19.8	20.0	99	68-121
Dichlorodifluoromethane (CFC 12)	8260C	16.0	20.0	80	51-144
Dichloromethane	8260C	16.3	20.0	81	72-118
Ethylbenzene	8260C	19.4	20.0	97	64-118
Isopropylbenzene (Cumene)	8260C	19.7	20.0	99	60-123
Methyl Acetate	8260C	17.2	20.0	86	31-122
Methyl tert-Butyl Ether	8260C	19.0	20.0	95	76-118
Methylcyclohexane	8260C	19.3	20.0	97	70-124
Styrene	8260C	19.4	20.0	97	74-117
Tetrachloroethene (PCE)	8260C	21.2	20.0	106	58-124
Toluene	8260C	19.5	20.0	97	72-116
Trichloroethene (TCE)	8260C	21.0	20.0	105	69-118
Trichlorofluoromethane (CFC 11)	8260C	28.3	20.0	141 *	52-127
Vinyl Chloride	8260C	16.6	20.0	83	59-153
cis-1,2-Dichloroethene	8260C	18.4	20.0	92	79-113
cis-1,3-Dichloropropene	8260C	18.4	20.0	92	66-117
m,p-Xylenes	8260C	39.4	40.0	99	68-118
o-Xylene	8260C	19.9	20.0	99	71-116
trans-1,2-Dichloroethene	8260C	19.3	20.0	97	73-114
trans-1,3-Dichloropropene	8260C	19.1	20.0	95	57-135

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010340
Date Analyzed: 11/11/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2013864-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	18.6	20.0	93	75-125
1,1,2,2-Tetrachloroethane	8260C	24.9	20.0	124	78-126
1,1,2-Trichloroethane	8260C	21.2	20.0	106	82-121
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	20.1	20.0	100	67-124
1,1-Dichloroethane (1,1-DCA)	8260C	20.3	20.0	101	80-124
1,1-Dichloroethene (1,1-DCE)	8260C	22.2	20.0	111	71-118
1,2,3-Trichlorobenzene	8260C	21.6	20.0	108	67-136
1,2,4-Trichlorobenzene	8260C	22.3	20.0	112	75-132
1,2,4-Trimethylbenzene	8260C	21.3	20.0	107	81-126
1,2-Dibromo-3-chloropropane (DBCP)	8260C	23.5	20.0	118	55-136
1,2-Dibromoethane	8260C	19.6	20.0	98	82-127
1,2-Dichlorobenzene	8260C	20.9	20.0	104	80-119
1,2-Dichloroethane	8260C	18.7	20.0	93	71-127
1,2-Dichloropropane	8260C	21.0	20.0	105	80-119
1,3,5-Trimethylbenzene	8260C	21.0	20.0	105	81-128
1,3-Dichlorobenzene	8260C	21.4	20.0	107	83-121
1,4-Dichlorobenzene	8260C	20.3	20.0	102	79-119
1,4-Dioxane	8260C	366	400	91	44-154
2-Butanone (MEK)	8260C	21.8	20.0	109	61-137
2-Hexanone	8260C	21.8	20.0	109	63-124
4-Methyl-2-pentanone	8260C	22.2	20.0	111	66-124
Acetone	8260C	20.2	20.0	101	40-161
Benzene	8260C	21.0	20.0	105	79-119
Bromochloromethane	8260C	19.7	20.0	98	81-126
Bromodichloromethane	8260C	19.0	20.0	95	81-123
Bromoform	8260C	23.2	20.0	116	65-146
Bromomethane	8260C	18.4	20.0	92	42-166
Carbon Disulfide	8260C	17.5	20.0	87	66-128
Carbon Tetrachloride	8260C	18.7	20.0	94	70-127
Chlorobenzene	8260C	20.3	20.0	102	80-121
Chloroethane	8260C	16.9	20.0	84	62-131
Chloroform	8260C	19.9	20.0	99	79-120
Chloromethane	8260C	25.4	20.0	127	65-135

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Water

Service Request: R2010340
Date Analyzed: 11/11/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2013864-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyclohexane	8260C	20.2	20.0	101	69-120
Dibromochloromethane	8260C	21.7	20.0	109	72-128
Dichlorodifluoromethane (CFC 12)	8260C	20.1	20.0	100	59-155
Dichloromethane	8260C	20.4	20.0	102	73-122
Ethylbenzene	8260C	19.7	20.0	99	76-120
Isopropylbenzene (Cumene)	8260C	21.5	20.0	108	77-128
Methyl Acetate	8260C	21.9	20.0	109	61-133
Methyl tert-Butyl Ether	8260C	20.8	20.0	104	75-118
Methylcyclohexane	8260C	22.0	20.0	110	51-129
Styrene	8260C	20.5	20.0	103	80-124
Tetrachloroethene (PCE)	8260C	21.0	20.0	105	72-125
Toluene	8260C	21.1	20.0	105	79-119
Trichloroethene (TCE)	8260C	18.0	20.0	90	74-122
Trichlorofluoromethane (CFC 11)	8260C	18.8	20.0	94	71-136
Vinyl Chloride	8260C	19.9	20.0	99	74-159
cis-1,2-Dichloroethene	8260C	21.0	20.0	105	80-121
cis-1,3-Dichloropropene	8260C	20.1	20.0	100	77-122
m,p-Xylenes	8260C	41.8	40.0	104	80-126
o-Xylene	8260C	20.4	20.0	102	79-123
trans-1,2-Dichloroethene	8260C	21.9	20.0	110	73-118
trans-1,3-Dichloropropene	8260C	19.7	20.0	99	71-133

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/12/20

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2013908-03					Duplicate Lab Control Sample RQ2013908-04					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	8260C	20.9	20.0	105	19.2	20.0	96	68-123	9	30
1,1,2,2-Tetrachloroethane	8260C	16.7	20.0	83	16.7	20.0	83	78-121	<1	30
1,1,2-Trichloroethane	8260C	20.5	20.0	102	20.1	20.0	100	84-117	2	30
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	18.4	20.0	92	15.7	20.0	78	54-121	16	30
1,1-Dichloroethane (1,1-DCA)	8260C	17.7	20.0	88	16.7	20.0	84	76-123	5	30
1,1-Dichloroethene (1,1-DCE)	8260C	18.8	20.0	94	17.9	20.0	90	65-115	4	30
1,2,3-Trichlorobenzene	8260C	22.5	20.0	112	18.7	20.0	93	60-128	19	30
1,2,4-Trichlorobenzene	8260C	21.4	20.0	107	18.6	20.0	93	62-130	14	30
1,2,4-Trimethylbenzene	8260C	17.8	20.0	89	15.7	20.0	79	67-121	12	30
1,2-Dibromo-3-chloropropane (DBCP)	8260C	17.4	20.0	87	16.3	20.0	81	54-135	7	30
1,2-Dibromoethane	8260C	20.4	20.0	102	20.3	20.0	102	77-117	<1	30
1,2-Dichlorobenzene	8260C	19.8	20.0	99	18.2	20.0	91	75-116	8	30
1,2-Dichloroethane	8260C	22.3	20.0	112	21.7	20.0	108	74-116	4	30
1,2-Dichloropropane	8260C	18.3	20.0	91	17.3	20.0	86	79-112	6	30
1,3,5-Trimethylbenzene	8260C	18.2	20.0	91	16.0	20.0	80	66-122	13	30
1,3-Dichlorobenzene	8260C	20.0	20.0	100	17.8	20.0	89	72-118	12	30
1,4-Dichlorobenzene	8260C	19.5	20.0	98	17.8	20.0	89	72-117	10	30
1,4-Dioxane	8260C	388	400	97	379	400	95	59-147	2	30
2-Butanone (MEK)	8260C	21.8	20.0	109	20.2	20.0	101	67-129	8	30
2-Hexanone	8260C	21.0	20.0	105	20.4	20.0	102	68-118	3	30
4-Methyl-2-pentanone	8260C	21.6	20.0	108	20.6	20.0	103	64-123	5	30
Acetone	8260C	21.8	20.0	109	19.3	20.0	97	32-154	12	30
Benzene	8260C	18.6	20.0	93	17.5	20.0	87	77-114	7	30
Bromochloromethane	8260C	20.6	20.0	103	19.2	20.0	96	78-117	7	30
Bromodichloromethane	8260C	18.8	20.0	94	19.0	20.0	95	72-118	1	30
Bromoform	8260C	20.8	20.0	104	20.4	20.0	102	55-134	2	30
Bromomethane	8260C	27.1	20.0	135	25.8	20.0	129	10-150	5	30
Carbon Disulfide	8260C	11.1	20.0	56	10.4	20.0	52	44-139	7	30
Carbon Tetrachloride	8260C	24.0	20.0	120	19.7	20.0	98	51-123	20	30
Chlorobenzene	8260C	20.0	20.0	100	18.6	20.0	93	79-115	7	30
Chloroethane	8260C	19.8	20.0	99	20.7	20.0	104	10-140	5	30
Chloroform	8260C	19.9	20.0	99	18.8	20.0	94	76-115	5	30

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/12/20

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Analyte Name	Lab Control Sample RQ2013908-03				Duplicate Lab Control Sample RQ2013908-04					
	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Chloromethane	8260C	17.3	20.0	86	16.2	20.0	81	10-131	6	30
Cyclohexane	8260C	20.5	20.0	103	19.6	20.0	98	67-122	5	30
Dibromochloromethane	8260C	20.6	20.0	103	19.9	20.0	100	68-121	3	30
Dichlorodifluoromethane (CFC 12)	8260C	16.1	20.0	81	15.3	20.0	77	51-144	5	30
Dichloromethane	8260C	16.1	20.0	81	16.1	20.0	80	72-118	1	30
Ethylbenzene	8260C	19.7	20.0	99	17.8	20.0	89	64-118	11	30
Isopropylbenzene (Cumene)	8260C	20.4	20.0	102	18.4	20.0	92	60-123	10	30
Methyl Acetate	8260C	20.4	20.0	102	17.5	20.0	88	31-122	15	30
Methyl tert-Butyl Ether	8260C	19.7	20.0	99	19.1	20.0	96	76-118	3	30
Methylcyclohexane	8260C	18.7	20.0	93	17.4	20.0	87	70-124	7	30
Styrene	8260C	19.7	20.0	98	18.3	20.0	91	74-117	7	30
Tetrachloroethene (PCE)	8260C	21.6	20.0	108	20.0	20.0	100	58-124	8	30
Toluene	8260C	19.4	20.0	97	18.1	20.0	90	72-116	7	30
Trichloroethene (TCE)	8260C	21.3	20.0	107	20.0	20.0	100	69-118	7	30
Trichlorofluoromethane (CFC 11)	8260C	29.5	20.0	148 *	26.6	20.0	133 *	52-127	11	30
Vinyl Chloride	8260C	16.6	20.0	83	16.2	20.0	81	59-153	2	30
cis-1,2-Dichloroethene	8260C	18.9	20.0	94	17.9	20.0	90	79-113	4	30
cis-1,3-Dichloropropene	8260C	18.4	20.0	92	17.6	20.0	88	66-117	4	30
m,p-Xylenes	8260C	40.3	40.0	101	36.5	40.0	91	68-118	10	30
o-Xylene	8260C	20.5	20.0	103	18.5	20.0	93	71-116	10	30
trans-1,2-Dichloroethene	8260C	19.5	20.0	98	18.1	20.0	90	73-114	9	30
trans-1,3-Dichloropropene	8260C	19.4	20.0	97	19.2	20.0	96	57-135	1	30



Semivolatile Organic Compounds by GC/MS

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340

SURROGATE RECOVERY SUMMARY
Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol
		10 - 109	10 - 102	10 - 88
TP-BCP-28-CL-10302020	R2010340-001	48	29	29
TP-BCP-36-01-1122020	R2010340-003	5 *	23	6 *
TP-BCP-36-01-1122020 RE	R2010340-003	6 *	23	6 *
TP-BCP-36-01-1122020 DL	R2010340-003	4 *	24	6 *
TP-BCP-09-01-1122020	R2010340-004	21	19	12
TP-BCP-09-01-1122020 DL	R2010340-004	20	20	13
MLS-BCP-17-02	R2010340-005	34	19	17
MLS-BCP-17-02 DL	R2010340-005	35	23	19
MLS-BCP-17-57	R2010340-007	23	21	25
MW-BCP-17-810	R2010340-008	29	25	27
MW-BCP-17-01	R2010340-009	59	33	36
Method Blank	RQ2013499-01	30	36	34
Lab Control Sample	RQ2013499-02	32	29	27
Duplicate Lab Control Sample	RQ2013499-03	31	9 *	1 *
Method Blank	RQ2014346-01	60	52	45
Lab Control Sample	RQ2014346-02	49	41	36
Duplicate Lab Control Sample	RQ2014346-03	49	43	40

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340

SURROGATE RECOVERY SUMMARY
Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Nitrobenzene-d5	Phenol-d6	Terphenyl-d14
		10 - 95	10 - 145	10 - 106
TP-BCP-28-CL-10302020	R2010340-001	27	31	51
TP-BCP-36-01-1122020	R2010340-003	21	9 *	34
TP-BCP-36-01-1122020 RE	R2010340-003	21	10	45
TP-BCP-36-01-1122020 DL	R2010340-003	23	11	44
TP-BCP-09-01-1122020	R2010340-004	16	16	25
TP-BCP-09-01-1122020 DL	R2010340-004	17	16	27
MLS-BCP-17-02	R2010340-005	17	19	31
MLS-BCP-17-02 DL	R2010340-005	22	22	37
MLS-BCP-17-57	R2010340-007	21	28	38
MW-BCP-17-810	R2010340-008	25	30	41
MW-BCP-17-01	R2010340-009	35	40	69
Method Blank	RQ2013499-01	35	35	41
Lab Control Sample	RQ2013499-02	27	28	33
Duplicate Lab Control Sample	RQ2013499-03	0 *	8 *	31
Method Blank	RQ2014346-01	44	49	83
Lab Control Sample	RQ2014346-02	35	39	57
Duplicate Lab Control Sample	RQ2014346-03	38	40	47

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013499-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	330 U	330	79	1	11/06/20 14:20	11/5/20	
2,3,4,6-Tetrachlorophenol	330 U	330	70	1	11/06/20 14:20	11/5/20	
2,4,5-Trichlorophenol	330 U	330	290	1	11/06/20 14:20	11/5/20	
2,4,6-Trichlorophenol	330 U	330	59	1	11/06/20 14:20	11/5/20	
2,4-Dichlorophenol	330 U	330	71	1	11/06/20 14:20	11/5/20	
2,4-Dimethylphenol	330 U	330	73	1	11/06/20 14:20	11/5/20	
2,4-Dinitrophenol	1700 U	1700	660	1	11/06/20 14:20	11/5/20	
2,4-Dinitrotoluene	330 U	330	140	1	11/06/20 14:20	11/5/20	
2,6-Dinitrotoluene	330 U	330	98	1	11/06/20 14:20	11/5/20	
2-Chloronaphthalene	330 U	330	80	1	11/06/20 14:20	11/5/20	
2-Chlorophenol	330 U	330	82	1	11/06/20 14:20	11/5/20	
2-Methylnaphthalene	330 U	330	73	1	11/06/20 14:20	11/5/20	
2-Methylphenol	330 U	330	72	1	11/06/20 14:20	11/5/20	
2-Nitroaniline	330 U	330	100	1	11/06/20 14:20	11/5/20	
2-Nitrophenol	330 U	330	97	1	11/06/20 14:20	11/5/20	
3,3'-Dichlorobenzidine	330 U	330	70	1	11/06/20 14:20	11/5/20	
3- and 4-Methylphenol Coelution	330 U	330	64	1	11/06/20 14:20	11/5/20	
3-Nitroaniline	330 U	330	71	1	11/06/20 14:20	11/5/20	
4,6-Dinitro-2-methylphenol	1700 U	1700	150	1	11/06/20 14:20	11/5/20	
4-Bromophenyl Phenyl Ether	330 U	330	130	1	11/06/20 14:20	11/5/20	
4-Chloro-3-methylphenol	330 U	330	73	1	11/06/20 14:20	11/5/20	
4-Chloroaniline	330 U	330	79	1	11/06/20 14:20	11/5/20	
4-Chlorophenyl Phenyl Ether	330 U	330	80	1	11/06/20 14:20	11/5/20	
4-Nitroaniline	330 U	330	71	1	11/06/20 14:20	11/5/20	
4-Nitrophenol	1700 U	1700	120	1	11/06/20 14:20	11/5/20	
Acenaphthene	330 U	330	75	1	11/06/20 14:20	11/5/20	
Acenaphthylene	330 U	330	88	1	11/06/20 14:20	11/5/20	
Acetophenone	330 U	330	76	1	11/06/20 14:20	11/5/20	
Anthracene	330 U	330	94	1	11/06/20 14:20	11/5/20	
Atrazine	330 U	330	140	1	11/06/20 14:20	11/5/20	
Benz(a)anthracene	330 U	330	99	1	11/06/20 14:20	11/5/20	
Benzaldehyde	330 U	330	66	1	11/06/20 14:20	11/5/20	
Benzo(a)pyrene	330 U	330	130	1	11/06/20 14:20	11/5/20	
Benzo(b)fluoranthene	330 U	330	120	1	11/06/20 14:20	11/5/20	
Benzo(g,h,i)perylene	330 U	330	88	1	11/06/20 14:20	11/5/20	
Benzo(k)fluoranthene	330 U	330	130	1	11/06/20 14:20	11/5/20	
Biphenyl	330 U	330	82	1	11/06/20 14:20	11/5/20	
2,2'-Oxybis(1-chloropropane)	330 U	330	140	1	11/06/20 14:20	11/5/20	
Bis(2-chloroethoxy)methane	330 U	330	90	1	11/06/20 14:20	11/5/20	
Bis(2-chloroethyl) Ether	330 U	330	87	1	11/06/20 14:20	11/5/20	
Bis(2-ethylhexyl) Phthalate	510 U	510	90	1	11/06/20 14:20	11/5/20	
Butyl Benzyl Phthalate	330 U	330	83	1	11/06/20 14:20	11/5/20	
Caprolactam	330 U	330	87	1	11/06/20 14:20	11/5/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013499-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	330 U	330	97	1	11/06/20 14:20	11/5/20	
Chrysene	330 U	330	130	1	11/06/20 14:20	11/5/20	
Di-n-butyl Phthalate	330 U	330	110	1	11/06/20 14:20	11/5/20	
Di-n-octyl Phthalate	330 U	330	99	1	11/06/20 14:20	11/5/20	
Dibenz(a,h)anthracene	330 U	330	100	1	11/06/20 14:20	11/5/20	
Dibenzofuran	330 U	330	66	1	11/06/20 14:20	11/5/20	
Diethyl Phthalate	330 U	330	71	1	11/06/20 14:20	11/5/20	
Dimethyl Phthalate	330 U	330	75	1	11/06/20 14:20	11/5/20	
Fluoranthene	330 U	330	130	1	11/06/20 14:20	11/5/20	
Fluorene	330 U	330	77	1	11/06/20 14:20	11/5/20	
Hexachlorobenzene	330 U	330	110	1	11/06/20 14:20	11/5/20	
Hexachlorobutadiene	330 U	330	81	1	11/06/20 14:20	11/5/20	
Hexachlorocyclopentadiene	330 U	330	73	1	11/06/20 14:20	11/5/20	
Hexachloroethane	330 U	330	86	1	11/06/20 14:20	11/5/20	
Indeno(1,2,3-cd)pyrene	330 U	330	120	1	11/06/20 14:20	11/5/20	
Isophorone	330 U	330	92	1	11/06/20 14:20	11/5/20	
N-Nitrosodi-n-propylamine	330 U	330	90	1	11/06/20 14:20	11/5/20	
N-Nitrosodiphenylamine	330 U	330	230	1	11/06/20 14:20	11/5/20	
Naphthalene	330 U	330	86	1	11/06/20 14:20	11/5/20	
Nitrobenzene	330 U	330	86	1	11/06/20 14:20	11/5/20	
Pentachlorophenol (PCP)	1700 U	1700	120	1	11/06/20 14:20	11/5/20	
Phenanthrene	330 U	330	98	1	11/06/20 14:20	11/5/20	
Phenol	330 U	330	79	1	11/06/20 14:20	11/5/20	
Pyrene	330 U	330	140	1	11/06/20 14:20	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	30	10 - 109	11/06/20 14:20	
2-Fluorobiphenyl	36	10 - 102	11/06/20 14:20	
2-Fluorophenol	34	10 - 88	11/06/20 14:20	
Nitrobenzene-d5	35	10 - 95	11/06/20 14:20	
Phenol-d6	35	10 - 145	11/06/20 14:20	
Terphenyl-d14	41	10 - 106	11/06/20 14:20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014346-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	330 U	330	79	1	11/24/20 18:47	11/20/20	
2,3,4,6-Tetrachlorophenol	330 U	330	70	1	11/24/20 18:47	11/20/20	
2,4,5-Trichlorophenol	330 U	330	290	1	11/24/20 18:47	11/20/20	
2,4,6-Trichlorophenol	330 U	330	59	1	11/24/20 18:47	11/20/20	
2,4-Dichlorophenol	330 U	330	71	1	11/24/20 18:47	11/20/20	
2,4-Dimethylphenol	330 U	330	73	1	11/24/20 18:47	11/20/20	
2,4-Dinitrophenol	1700 U	1700	660	1	11/24/20 18:47	11/20/20	
2,4-Dinitrotoluene	330 U	330	140	1	11/24/20 18:47	11/20/20	
2,6-Dinitrotoluene	330 U	330	97	1	11/24/20 18:47	11/20/20	
2-Chloronaphthalene	330 U	330	80	1	11/24/20 18:47	11/20/20	
2-Chlorophenol	330 U	330	82	1	11/24/20 18:47	11/20/20	
2-Methylnaphthalene	330 U	330	73	1	11/24/20 18:47	11/20/20	
2-Methylphenol	330 U	330	72	1	11/24/20 18:47	11/20/20	
2-Nitroaniline	330 U	330	99	1	11/24/20 18:47	11/20/20	
2-Nitrophenol	330 U	330	96	1	11/24/20 18:47	11/20/20	
3,3'-Dichlorobenzidine	330 U	330	70	1	11/24/20 18:47	11/20/20	
3- and 4-Methylphenol Coelution	330 U	330	64	1	11/24/20 18:47	11/20/20	
3-Nitroaniline	330 U	330	71	1	11/24/20 18:47	11/20/20	
4,6-Dinitro-2-methylphenol	1700 U	1700	150	1	11/24/20 18:47	11/20/20	
4-Bromophenyl Phenyl Ether	330 U	330	130	1	11/24/20 18:47	11/20/20	
4-Chloro-3-methylphenol	330 U	330	73	1	11/24/20 18:47	11/20/20	
4-Chloroaniline	330 U	330	79	1	11/24/20 18:47	11/20/20	
4-Chlorophenyl Phenyl Ether	330 U	330	80	1	11/24/20 18:47	11/20/20	
4-Nitroaniline	330 U	330	71	1	11/24/20 18:47	11/20/20	
4-Nitrophenol	1700 U	1700	120	1	11/24/20 18:47	11/20/20	
Acenaphthene	330 U	330	75	1	11/24/20 18:47	11/20/20	
Acenaphthylene	330 U	330	88	1	11/24/20 18:47	11/20/20	
Acetophenone	330 U	330	76	1	11/24/20 18:47	11/20/20	
Anthracene	330 U	330	93	1	11/24/20 18:47	11/20/20	
Atrazine	330 U	330	140	1	11/24/20 18:47	11/20/20	
Benz(a)anthracene	330 U	330	98	1	11/24/20 18:47	11/20/20	
Benzaldehyde	330 U	330	66	1	11/24/20 18:47	11/20/20	
Benzo(a)pyrene	330 U	330	130	1	11/24/20 18:47	11/20/20	
Benzo(b)fluoranthene	330 U	330	120	1	11/24/20 18:47	11/20/20	
Benzo(g,h,i)perylene	330 U	330	88	1	11/24/20 18:47	11/20/20	
Benzo(k)fluoranthene	330 U	330	130	1	11/24/20 18:47	11/20/20	
Biphenyl	330 U	330	82	1	11/24/20 18:47	11/20/20	
2,2'-Oxybis(1-chloropropane)	330 U	330	140	1	11/24/20 18:47	11/20/20	
Bis(2-chloroethoxy)methane	330 U	330	89	1	11/24/20 18:47	11/20/20	
Bis(2-chloroethyl) Ether	330 U	330	87	1	11/24/20 18:47	11/20/20	
Bis(2-ethylhexyl) Phthalate	500 U	500	89	1	11/24/20 18:47	11/20/20	
Butyl Benzyl Phthalate	330 U	330	83	1	11/24/20 18:47	11/20/20	
Caprolactam	330 U	330	87	1	11/24/20 18:47	11/20/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014346-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	330 U	330	96	1	11/24/20 18:47	11/20/20	
Chrysene	330 U	330	130	1	11/24/20 18:47	11/20/20	
Di-n-butyl Phthalate	330 U	330	110	1	11/24/20 18:47	11/20/20	
Di-n-octyl Phthalate	330 U	330	98	1	11/24/20 18:47	11/20/20	
Dibenz(a,h)anthracene	330 U	330	99	1	11/24/20 18:47	11/20/20	
Dibenzofuran	330 U	330	66	1	11/24/20 18:47	11/20/20	
Diethyl Phthalate	330 U	330	71	1	11/24/20 18:47	11/20/20	
Dimethyl Phthalate	330 U	330	75	1	11/24/20 18:47	11/20/20	
Fluoranthene	330 U	330	130	1	11/24/20 18:47	11/20/20	
Fluorene	330 U	330	77	1	11/24/20 18:47	11/20/20	
Hexachlorobenzene	330 U	330	110	1	11/24/20 18:47	11/20/20	
Hexachlorobutadiene	330 U	330	81	1	11/24/20 18:47	11/20/20	
Hexachlorocyclopentadiene	330 U	330	73	1	11/24/20 18:47	11/20/20	
Hexachloroethane	330 U	330	86	1	11/24/20 18:47	11/20/20	
Indeno(1,2,3-cd)pyrene	330 U	330	120	1	11/24/20 18:47	11/20/20	
Isophorone	330 U	330	91	1	11/24/20 18:47	11/20/20	
N-Nitrosodi-n-propylamine	330 U	330	89	1	11/24/20 18:47	11/20/20	
N-Nitrosodiphenylamine	330 U	330	230	1	11/24/20 18:47	11/20/20	
Naphthalene	330 U	330	86	1	11/24/20 18:47	11/20/20	
Nitrobenzene	330 U	330	86	1	11/24/20 18:47	11/20/20	
Pentachlorophenol (PCP)	1700 U	1700	120	1	11/24/20 18:47	11/20/20	
Phenanthrene	330 U	330	97	1	11/24/20 18:47	11/20/20	
Phenol	330 U	330	79	1	11/24/20 18:47	11/20/20	
Pyrene	330 U	330	140	1	11/24/20 18:47	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	60	10 - 109	11/24/20 18:47	
2-Fluorobiphenyl	52	10 - 102	11/24/20 18:47	
2-Fluorophenol	45	10 - 88	11/24/20 18:47	
Nitrobenzene-d5	44	10 - 95	11/24/20 18:47	
Phenol-d6	49	10 - 145	11/24/20 18:47	
Terphenyl-d14	83	10 - 106	11/24/20 18:47	

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/06/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2013499-02					Duplicate Lab Control Sample RQ2013499-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,2,4,5-Tetrachlorobenzene	8270D	614	1690	36	113 J	1670	7 *	10-115	135*	30
2,3,4,6-Tetrachlorophenol	8270D	580	1680	35	581	1660	35	29-100	<1	30
2,4,5-Trichlorophenol	8270D	507	1680	30	477	1660	29	29-97	3	30
2,4,6-Trichlorophenol	8270D	500	1680	30	370	1660	22 *	26-97	31*	30
2,4-Dichlorophenol	8270D	528	1680	31	86.8 J	1660	5 *	25-90	144*	30
2,4-Dimethylphenol	8270D	545	1680	32	141 J	1660	9 *	26-89	112*	30
2,4-Dinitrophenol	8270D	1700 U	1680	0 *	650 U	1660	0 *	10-128	NC	30
2,4-Dinitrotoluene	8270D	692	1680	41	681	1660	41	30-111	<1	30
2,6-Dinitrotoluene	8270D	659	1680	39	708	1660	43	28-105	10	30
2-Chloronaphthalene	8270D	537	1680	32	169 J	1660	10 *	21-88	105*	30
2-Chlorophenol	8270D	480	1680	29	81 U	1660	0 *	18-87	NC	30
2-Methylnaphthalene	8270D	515	1680	31	72 U	1660	0 *	21-83	NC	30
2-Methylphenol	8270D	504	1680	30	76.9 J	1660	5 *	22-86	143*	30
2-Nitroaniline	8270D	577	1680	34	595	1660	36	27-105	6	30
2-Nitrophenol	8270D	491	1680	29	95 U	1660	0 *	20-88	NC	30
3- and 4-Methylphenol Coelution	8270D	495	1680	30	148 J	1660	9 *	27-92	108*	30
3-Nitroaniline	8270D	533	1680	32	615	1660	37	27-98	14	30
4,6-Dinitro-2-methylphenol	8270D	377 J	1680	22	345 J	1660	21	11-96	5	30
4-Bromophenyl Phenyl Ether	8270D	672	1680	40	767	1660	46	25-96	14	30
4-Chloro-3-methylphenol	8270D	544	1680	32	522	1660	32	29-92	<1	30
4-Chloroaniline	8270D	381	1680	23	172 J	1660	10 *	21-72	79*	30
4-Chlorophenyl Phenyl Ether	8270D	582	1680	35	579	1660	35	25-92	<1	30
4-Nitroaniline	8270D	590	1680	35	604	1660	36	27-102	3	30
4-Nitrophenol	8270D	544 J	1680	32	481 J	1660	29	10-130	10	30
Acenaphthene	8270D	527	1680	31	380	1660	23 *	25-92	30	30
Acenaphthylene	8270D	570	1680	34	366	1660	22 *	27-93	43*	30
Acetophenone	8270D	827	3360	25	75 U	3310	0 *	23-87	NC	30
Anthracene	8270D	686	1680	41	717	1660	43	32-106	5	30
Benz(a)anthracene	8270D	720	1680	43	659	1660	40	33-109	7	30
Benzo(a)pyrene	8270D	908	1680	54	826	1660	50	34-115	8	30
Benzo(b)fluoranthene	8270D	730	1680	44	678	1660	41	31-107	7	30
Benzo(g,h,i)perylene	8270D	759	1680	45	709	1660	43	30-127	5	30
Benzo(k)fluoranthene	8270D	758	1680	45	711	1660	43	34-111	5	30

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/06/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2013499-02					Duplicate Lab Control Sample RQ2013499-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Biphenyl	8270D	473	1680	28	165 J	1660	10 *	26-88	95*	30
2,2'-Oxybis(1-chloropropane)	8270D	454	1680	27	130 U	1660	0 *	10-82	NC	30
Bis(2-chloroethoxy)methane	8270D	545	1680	32	88 U	1660	0 *	17-85	NC	30
Bis(2-chloroethyl) Ether	8270D	483	1680	29	86 U	1660	0 *	10-79	NC	30
Bis(2-ethylhexyl) Phthalate	8270D	812	1680	48	703	1660	42	31-115	13	30
Butyl Benzyl Phthalate	8270D	770	1680	46	693	1660	42	31-115	9	30
Caprolactam	8270D	608	1680	36	653	1660	39	28-99	8	30
Carbazole	8270D	763	1680	45	788	1660	48	23-129	6	30
Chrysene	8270D	767	1680	46	712	1660	43	34-108	7	30
Di-n-butyl Phthalate	8270D	853	1680	51	851	1660	51	33-114	<1	30
Di-n-octyl Phthalate	8270D	819	1680	49	735	1660	44	32-116	11	30
Dibenz(a,h)anthracene	8270D	780	1680	46	727	1660	44	23-122	4	30
Dibenzofuran	8270D	558	1680	33	485	1660	29	27-94	13	30
Diethyl Phthalate	8270D	622	1680	37	579	1660	35	26-101	6	30
Dimethyl Phthalate	8270D	659	1680	39	687	1660	41	27-98	5	30
Fluoranthene	8270D	801	1680	48	802	1660	48	34-111	<1	30
Fluorene	8270D	576	1680	34	578	1660	35	27-95	3	30
Hexachlorobenzene	8270D	716	1680	43	782	1660	47	30-104	9	30
Hexachlorobutadiene	8270D	534	1680	32	80 U	1660	0 *	10-142	NC	30
Hexachlorocyclopentadiene	8270D	335	1680	20	72 U	1660	0 *	10-133	NC	30
Hexachloroethane	8270D	443	1680	26	85 U	1660	0 *	10-129	NC	30
Indeno(1,2,3-cd)pyrene	8270D	774	1680	46	718	1660	43	33-121	7	30
Isophorone	8270D	442	1680	26	125 J	1660	8 *	21-79	106*	30
N-Nitrosodi-n-propylamine	8270D	465	1680	28	88 U	1660	0 *	15-78	NC	30
N-Nitrosodiphenylamine	8270D	709	1680	42	775	1660	47	29-108	11	30
Naphthalene	8270D	534	1680	32	85 U	1660	0 *	18-81	NC	30
Nitrobenzene	8270D	496	1680	30	85 U	1660	0 *	14-80	NC	30
Pentachlorophenol (PCP)	8270D	384 J	1680	23	367 J	1660	22	13-117	4	30
Phenanthrene	8270D	658	1680	39	679	1660	41	33-103	5	30
Phenol	8270D	498	1680	30	138 J	1660	8 *	10-144	116*	30
Pyrene	8270D	732	1680	44	687	1660	41	33-111	7	30

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/24/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2014346-02					Duplicate Lab Control Sample RQ2014346-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,2,4,5-Tetrachlorobenzene	8270D	1010	1670	60	1020	1690	61	10-115	2	30
2,3,4,6-Tetrachlorophenol	8270D	883	1660	53	877	1680	52	29-100	2	30
2,4,5-Trichlorophenol	8270D	755	1660	45	778	1680	46	29-97	2	30
2,4,6-Trichlorophenol	8270D	712	1660	43	740	1680	44	26-97	2	30
2,4-Dichlorophenol	8270D	667	1660	40	732	1680	44	25-90	10	30
2,4-Dimethylphenol	8270D	742	1660	45	763	1680	45	26-89	<1	30
2,4-Dinitrophenol	8270D	1700 U	1660	0 *	660 U	1680	0 *	10-128	NC	30
2,4-Dinitrotoluene	8270D	1010	1660	61	910	1680	54	30-111	12	30
2,6-Dinitrotoluene	8270D	994	1660	60	926	1680	55	28-105	9	30
2-Chloronaphthalene	8270D	763	1660	46	786	1680	47	21-88	2	30
2-Chlorophenol	8270D	641	1660	39	702	1680	42	18-87	7	30
2-Methylnaphthalene	8270D	702	1660	42	739	1680	44	21-83	5	30
2-Methylphenol	8270D	715	1660	43	750	1680	45	22-86	5	30
2-Nitroaniline	8270D	920	1660	55	862	1680	51	27-105	8	30
2-Nitrophenol	8270D	573	1660	35	692	1680	41	20-88	16	30
3- and 4-Methylphenol Coelution	8270D	740	1660	45	755	1680	45	27-92	<1	30
3-Nitroaniline	8270D	773	1660	47	681	1680	41	27-98	14	30
4,6-Dinitro-2-methylphenol	8270D	443 J	1660	27	584 J	1680	35	11-96	26	30
4-Bromophenyl Phenyl Ether	8270D	865	1660	52	839	1680	50	25-96	4	30
4-Chloro-3-methylphenol	8270D	748	1660	45	729	1680	43	29-92	5	30
4-Chloroaniline	8270D	636	1660	38	592	1680	35	21-72	8	30
4-Chlorophenyl Phenyl Ether	8270D	887	1660	53	808	1680	48	25-92	10	30
4-Nitroaniline	8270D	983	1660	59	858	1680	51	27-102	15	30
4-Nitrophenol	8270D	770 J	1660	46	733 J	1680	44	10-130	4	30
Acenaphthene	8270D	778	1660	47	773	1680	46	25-92	2	30
Acenaphthylene	8270D	834	1660	50	836	1680	50	27-93	<1	30
Acetophenone	8270D	1130	3320	34	1270	3360	38	23-87	11	30
Anthracene	8270D	947	1660	57	908	1680	54	32-106	5	30
Benz(a)anthracene	8270D	1040	1660	62	872	1680	52	33-109	18	30
Benzo(a)pyrene	8270D	1400	1660	84	1180	1680	70	34-115	18	30
Benzo(b)fluoranthene	8270D	1060	1660	64	900	1680	54	31-107	17	30
Benzo(g,h,i)perylene	8270D	1500	1660	91	1220	1680	73	30-127	22	30
Benzo(k)fluoranthene	8270D	1180	1660	71	981	1680	58	34-111	20	30

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/24/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2014346-02

Duplicate Lab Control Sample
RQ2014346-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Biphenyl	8270D	711	1660	43	746	1680	44	26-88	2	30
2,2'-Oxybis(1-chloropropane)	8270D	610	1660	37	703	1680	42	10-82	13	30
Bis(2-chloroethoxy)methane	8270D	708	1660	43	747	1680	44	17-85	2	30
Bis(2-chloroethyl) Ether	8270D	612	1660	37	713	1680	42	10-79	13	30
Bis(2-ethylhexyl) Phthalate	8270D	1170	1660	70	1010	1680	60	31-115	15	30
Butyl Benzyl Phthalate	8270D	1110	1660	67	953	1680	57	31-115	16	30
Caprolactam	8270D	763	1660	46	777	1680	46	28-99	<1	30
Carbazole	8270D	1140	1660	68	1010	1680	60	23-129	13	30
Chrysene	8270D	1080	1660	65	923	1680	55	34-108	17	30
Di-n-butyl Phthalate	8270D	1210	1660	73	1060	1680	63	33-114	15	30
Di-n-octyl Phthalate	8270D	1150	1660	70	1010	1680	60	32-116	15	30
Dibenz(a,h)anthracene	8270D	1150	1660	70	969	1680	58	23-122	19	30
Dibenzofuran	8270D	826	1660	50	801	1680	48	27-94	4	30
Diethyl Phthalate	8270D	908	1660	55	821	1680	49	26-101	12	30
Dimethyl Phthalate	8270D	922	1660	56	864	1680	51	27-98	9	30
Fluoranthene	8270D	1120	1660	67	982	1680	58	34-111	14	30
Fluorene	8270D	896	1660	54	828	1680	49	27-95	10	30
Hexachlorobenzene	8270D	894	1660	54	855	1680	51	30-104	6	30
Hexachlorobutadiene	8270D	629	1660	38	736	1680	44	10-142	15	30
Hexachlorocyclopentadiene	8270D	711	1660	43	798	1680	48	10-133	11	30
Hexachloroethane	8270D	516	1660	31	611	1680	36	10-129	15	30
Indeno(1,2,3-cd)pyrene	8270D	1130	1660	68	913	1680	54	33-121	23	30
Isophorone	8270D	596	1660	36	623	1680	37	21-79	3	30
N-Nitrosodi-n-propylamine	8270D	659	1660	40	692	1680	41	15-78	2	30
N-Nitrosodiphenylamine	8270D	935	1660	56	908	1680	54	29-108	4	30
Naphthalene	8270D	663	1660	40	731	1680	44	18-81	10	30
Nitrobenzene	8270D	645	1660	39	711	1680	42	14-80	7	30
Pentachlorophenol (PCP)	8270D	829 J	1660	50	942 J	1680	56	13-117	11	30
Phenanthrene	8270D	903	1660	54	864	1680	51	33-103	6	30
Phenol	8270D	678	1660	41	736	1680	44	10-144	7	30
Pyrene	8270D	1070	1660	64	920	1680	55	33-111	15	30

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	Nitrobenzene-d5	p-Terphenyl-d14
		10 - 115	10 - 130	10 - 130
TP-BCP-36-01-1122020	R2010340-003	69	84	81
TP-BCP-09-01-1122020	R2010340-004	65	87	70
MLS-BCP-17-02	R2010340-005	51	60	52
MLS-BCP-17-57	R2010340-007	64	65	67
Method Blank	RQ2013579-03	63	67	78
Lab Control Sample	RQ2013579-04	74	76	83
Duplicate Lab Control Sample	RQ2013579-05	62	68	80
Method Blank	RQ2013666-01	68	65	76
Lab Control Sample	RQ2013666-02	71	72	70
Duplicate Lab Control Sample	RQ2013666-03	70	70	75

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013579-03

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	67 U	67	35	1	11/11/20 14:10	11/6/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	63	10 - 115	11/11/20 14:10	
Nitrobenzene-d5	67	10 - 130	11/11/20 14:10	
p-Terphenyl-d14	78	10 - 130	11/11/20 14:10	

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013666-01

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	66 U	66	34	1	11/18/20 16:39	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	68	10 - 115	11/18/20 16:39	
Nitrobenzene-d5	65	10 - 130	11/18/20 16:39	
p-Terphenyl-d14	76	10 - 130	11/18/20 16:39	

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/11/20

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ2013579-04			RQ2013579-05				
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,4-Dioxane	8270D	70.7	203	35	45.0 J	200	22 *	24-101	44*	30

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/18/20

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ2013666-02			RQ2013666-03				
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,4-Dioxane	8270D	64.7 J	207	31	58.1 J	200	29	24-101	11	30



Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340

SURROGATE RECOVERY SUMMARY
Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Extraction Method: EPA 3541

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10 - 145	10 - 123
TP-BCP-36-01-1122020	R2010340-003	64	54
TP-BCP-09-01-1122020	R2010340-004	110	63
MLS-BCP-17-02	R2010340-005	121	37
MLS-BCP-17-57	R2010340-007	58	51
Method Blank	RQ2013661-01	54	49
Lab Control Sample	RQ2013661-02	60	55
Duplicate Lab Control Sample	RQ2013661-03	57	48

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013661-01

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
4,4'-DDE	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
4,4'-DDT	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
Aldrin	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
Dieldrin	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
Endosulfan I	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
Endosulfan II	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
Endosulfan Sulfate	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
Endrin	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
Endrin Aldehyde	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
Endrin Ketone	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
Heptachlor	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
Heptachlor Epoxide	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
Methoxychlor	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
Toxaphene	33 U	33	20	1	11/13/20 17:08	11/9/20	
alpha-BHC	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
alpha-Chlordane	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
beta-BHC	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
delta-BHC	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
gamma-BHC (Lindane)	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	
gamma-Chlordane	1.7 U	1.7	0.85	1	11/13/20 17:08	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	54	10 - 145	11/13/20 17:08	
Tetrachloro-m-xylene	49	10 - 123	11/13/20 17:08	

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/13/20

Duplicate Lab Control Sample Summary
Organochlorine Pesticides by Gas Chromatography

Units:ug/Kg
Basis:Dry

Lab Control Sample					Duplicate Lab Control Sample					
RQ2013661-02					RQ2013661-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
4,4'-DDD	8081B	4.12	6.61	62	3.41	6.77	50	33-149	19	30
4,4'-DDE	8081B	4.04	6.61	61	3.47	6.77	51	38-147	15	30
4,4'-DDT	8081B	3.52	6.61	53	3.21	6.77	47	37-146	9	30
Aldrin	8081B	3.83	6.61	58	2.84	6.77	42	25-146	30	30
Dieldrin	8081B	4.01	6.61	61	0.86 U	6.77	0 *	40-140	NC	30
Endosulfan I	8081B	3.91	6.61	59	0.86 U	6.77	0 *	35-116	NC	30
Endosulfan II	8081B	3.92	6.61	59	0.86 U	6.77	0 *	39-122	NC	30
Endosulfan Sulfate	8081B	3.93	6.61	59	2.34	6.77	35	31-132	51*	30
Endrin	8081B	4.08	6.61	62	0.86 U	6.77	0 *	40-144	NC	30
Endrin Aldehyde	8081B	3.53	6.61	53	0.86 U	6.77	0 *	10-109	NC	30
Endrin Ketone	8081B	4.03	6.61	61	0.86 U	6.77	0 *	38-122	NC	30
Heptachlor	8081B	3.55	6.61	54	3.09	6.77	46	34-142	14	30
Heptachlor Epoxide	8081B	4.01	6.61	61	2.65	6.77	39	37-113	41*	30
Methoxychlor	8081B	3.47	6.61	53	0.86 U	6.77	0 *	41-152	NC	30
alpha-BHC	8081B	4.06	6.61	61	3.48	6.77	51	28-145	15	30
alpha-Chlordane	8081B	3.94	6.61	60	3.56	6.77	53	37-114	10	30
beta-BHC	8081B	4.15	6.61	63	3.17	6.77	47	38-144	27	30
delta-BHC	8081B	4.34	6.61	66	3.42	6.77	50	30-153	24	30
gamma-BHC (Lindane)	8081B	4.03	6.61	61	3.02	6.77	45	32-145	29	30
gamma-Chlordane	8081B	4.29	6.61	65	3.34	6.77	49	34-123	25	30

ALS Group USA, Corp.
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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil
Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/3/20

Units: ug/Kg

Basis: Dry

Percent Solids: 76.2

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Endrin Ketone	6.3	6.8	9.1	29	J	5	11/16/20 17:04

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010340

Date Collected: NA

Date Received:

Sample Name: Lab Control Sample

Lab Code: RQ2013661-02

Units: ug/Kg

Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B

Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.84	4.12	4.12	<1		1	11/13/20 17:27
4,4'-DDE	0.84	4.04	4.33	7		1	11/13/20 17:27
4,4'-DDT	0.84	3.52	3.92	11		1	11/13/20 17:27
Aldrin	0.84	3.83	4.21	9		1	11/13/20 17:27
Dieldrin	0.84	4.01	4.27	6		1	11/13/20 17:27
Endosulfan I	0.84	3.91	4.20	7		1	11/13/20 17:27
Endosulfan II	0.84	3.92	4.24	8		1	11/13/20 17:27
Endosulfan Sulfate	0.84	3.93	4.17	6		1	11/13/20 17:27
Endrin	0.84	4.08	4.24	4		1	11/13/20 17:27
Endrin Aldehyde	0.84	3.53	3.79	7		1	11/13/20 17:27
Endrin Ketone	0.84	4.03	4.39	9		1	11/13/20 17:27
Heptachlor	0.84	3.55	3.95	11		1	11/13/20 17:27
Heptachlor Epoxide	0.84	4.01	4.41	10		1	11/13/20 17:27
Methoxychlor	0.84	3.47	3.77	8		1	11/13/20 17:27
alpha-BHC	0.84	4.06	4.45	9		1	11/13/20 17:27
alpha-Chlordane	0.84	3.94	4.16	5		1	11/13/20 17:27
beta-BHC	0.84	4.15	4.74	13		1	11/13/20 17:27
delta-BHC	0.84	4.34	4.80	10		1	11/13/20 17:27
gamma-BHC (Lindane)	0.84	4.03	4.15	3		1	11/13/20 17:27
gamma-Chlordane	0.84	4.29	4.31	<1		1	11/13/20 17:27

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010340

Date Collected: NA

Date Received:

Sample Name: Duplicate Lab Control Sample

Lab Code: RQ2013661-03

Units: ug/Kg

Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B

Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.86	3.41	3.66	7		1	11/17/20 23:53
4,4'-DDE	0.86	3.47	3.52	1		1	11/17/20 23:53
4,4'-DDT	0.86	3.21	3.44	7		1	11/17/20 23:53
Aldrin	0.86	2.84	3.07	8		1	11/17/20 23:53
Endosulfan Sulfate	0.86	2.34	2.62	11		1	11/17/20 23:53
Heptachlor	0.86	3.09	3.48	12		1	11/17/20 23:53
Heptachlor Epoxide	0.86	2.65	2.80	6		1	11/17/20 23:53
alpha-BHC	0.86	3.48	2.95	16		1	11/17/20 23:53
alpha-Chlordane	0.86	3.56	3.34	6		1	11/17/20 23:53
beta-BHC	0.86	3.17	3.66	14		1	11/17/20 23:53
delta-BHC	0.86	3.42	3.65	7		1	11/17/20 23:53
gamma-BHC (Lindane)	0.86	3.02	3.47	14		1	11/17/20 23:53
gamma-Chlordane	0.86	3.34	5.20	44		1	11/17/20 23:53

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Sample Name: Performance Evaluation
Lab Code: RQ2014155-04

Service Request: R2010340
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

8081B

Prep Method:

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDT	0.84	28	32	13		1	11/16/20 14:30
Endrin	0.84	16	17	6		1	11/16/20 14:30
Methoxychlor	0.84	59	63	7	E	1	11/16/20 14:30
alpha-BHC	0.84	3.4	3.5	3		1	11/16/20 14:30
beta-BHC	0.84	3.5	3.6	3		1	11/16/20 14:30
gamma-BHC (Lindane)	0.84	3.4	3.5	3		1	11/16/20 14:30

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Sample Name: Performance Evaluation
Lab Code: RQ2014212-04

Service Request: R2010340
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

8081B

Prep Method:

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDT	0.84	25	27	8		1	11/13/20 13:25
Endrin	0.84	14	15	7		1	11/13/20 13:25
Methoxychlor	0.84	52	55	6	E	1	11/13/20 13:25
alpha-BHC	0.84	3.0	3.2	6		1	11/13/20 13:25
beta-BHC	0.84	3.1	3.3	6		1	11/13/20 13:25
gamma-BHC (Lindane)	0.84	3.0	3.2	6		1	11/13/20 13:25

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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Extraction Method: EPA 3541

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		22 - 128	14 - 119
TP-BCP-36-01-1122020	R2010340-003	53	51
TP-BCP-09-01-1122020	R2010340-004	57	53
MLS-BCP-17-02	R2010340-005	38	35
MLS-BCP-17-57	R2010340-007	54	49
Method Blank	RQ2013661-01	58	60
Lab Control Sample	RQ2013661-04	71	68
Duplicate Lab Control Sample	RQ2013661-05	57	57

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013661-01

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	33 U	33	18	1	11/11/20 03:00	11/9/20	
Aroclor 1221	68 U	68	18	1	11/11/20 03:00	11/9/20	
Aroclor 1232	33 U	33	18	1	11/11/20 03:00	11/9/20	
Aroclor 1242	33 U	33	18	1	11/11/20 03:00	11/9/20	
Aroclor 1248	33 U	33	18	1	11/11/20 03:00	11/9/20	
Aroclor 1254	33 U	33	18	1	11/11/20 03:00	11/9/20	
Aroclor 1260	33 U	33	18	1	11/11/20 03:00	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	58	22 - 128	11/11/20 03:00	
Tetrachloro-m-xylene	60	14 - 119	11/11/20 03:00	

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/17/20

Duplicate Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Units:ug/Kg
Basis:Dry

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ2013661-04			RQ2013661-05				
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aroclor 1016	8082A	119	166	71	97.8	165	59	41-127	19	30
Aroclor 1260	8082A	128	166	77	102	165	62	37-127	22	30

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/3/20

Units: ug/Kg
Basis: Dry
Percent Solids: 76.2

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1254	26	43	58	30	J	1	11/11/20 04:00
Aroclor 1260	26	37	60	47	JP	1	11/11/20 04:00

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Sample Name: TP-BCP-09-01-1122020
Lab Code: R2010340-004

Service Request: R2010340
Date Collected: 11/02/20 13:10
Date Received: 11/3/20

Units: ug/Kg
Basis: Dry
Percent Solids: 84.3

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1248	21	56	67	18		1	11/11/20 04:19
Aroclor 1254	21	64	95	39		1	11/11/20 04:19
Aroclor 1260	21	90	140	43	P	1	11/11/20 04:19

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010340

Date Collected: NA

Date Received:

Sample Name: Lab Control Sample

Lab Code: RQ2013661-04

Units: ug/Kg

Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A

Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1016	17	119	127	7		1	11/17/20 16:02
Aroclor 1260	17	128	134	5		1	11/17/20 16:02

ALS Group USA, Corp.
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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received:

Sample Name: Duplicate Lab Control Sample
Lab Code: RQ2013661-05

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1016	17	97.8	111	13		1	11/11/20 03:40
Aroclor 1260	17	102	116	13		1	11/11/20 03:40

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic
		Acid 10 - 151
TP-BCP-36-01-1122020	R2010340-003	86
TP-BCP-09-01-1122020	R2010340-004	68
MLS-BCP-17-02	R2010340-005	53
MLS-BCP-17-57	R2010340-007	57
Method Blank	RQ2013660-03	60
Lab Control Sample	RQ2013660-04	74
Duplicate Lab Control Sample	RQ2013660-05	66
Method Blank	RQ2013888-03	56
Lab Control Sample	RQ2013888-04	62
Duplicate Lab Control Sample	RQ2013888-05	57

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013660-03

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	10 U	10	5.0	1	11/10/20 17:33	11/9/20	
2,4,5-TP	10 U	10	4.5	1	11/10/20 17:33	11/9/20	
2,4-D	10 U	10	6.5	1	11/10/20 17:33	11/9/20	
Dicamba	10 U	10	3.1	1	11/10/20 17:33	11/9/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	60	10 - 151	11/10/20 17:33	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013888-03

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	10 U	10	5.1	1	11/13/20 17:13	11/12/20	
2,4,5-TP	10 U	10	4.6	1	11/13/20 17:13	11/12/20	
2,4-D	10 U	10	6.6	1	11/13/20 17:13	11/12/20	
Dicamba	10 U	10	3.2	1	11/13/20 17:13	11/12/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	56	10 - 151	11/13/20 17:13	

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/10/20

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Units:ug/Kg
Basis:Dry

Lab Control Sample					Duplicate Lab Control Sample					
RQ2013660-04					RQ2013660-05					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2,4,5-T	8151A	30.0	49.9	60	31.0	50.4	61	19-127	3	30
2,4,5-TP	8151A	31.6	49.9	63	32.5	50.4	64	18-122	3	30
2,4-D	8151A	28.7	49.9	58	29.8	50.4	59	24-165	4	30
Dicamba	8151A	29.0	49.9	58	28.5	50.4	57	26-128	2	30

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/13/20

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2013888-04

Duplicate Lab Control Sample
RQ2013888-05

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2,4,5-T	8151A	25.4	50.1	51	25.1	50.3	50	19-127	1	30
2,4,5-TP	8151A	39.5	50.1	79	39.6	50.3	79	18-122	<1	30
2,4-D	8151A	29.2	50.1	58	28.6	50.3	57	24-165	2	30
Dicamba	8151A	23.3	50.1	47	22.8	50.3	45	26-128	2	30

ALS Group USA, Corp.
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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Service Request: R2010340
Date Collected: 11/02/20 09:20
Date Received: 11/3/20

Units: ug/Kg
Basis: Dry
Percent Solids: 76.2

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Dicamba	4.6	6.3	6.7	6	J	1	11/10/20 21:31

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: RQ2013660-04

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	5.0	30.0	44.2	38		1	11/10/20 17:53
2,4,5-TP	4.5	31.6	39.2	21		1	11/10/20 17:53
2,4-D	6.5	28.7	41.2	36		1	11/10/20 17:53
Dicamba	3.1	29.0	37.3	25		1	11/10/20 17:53

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received:

Sample Name: Duplicate Lab Control Sample
Lab Code: RQ2013660-05

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	5.1	31.0	44.0	35		1	11/10/20 18:13
2,4,5-TP	4.6	32.5	41.8	25		1	11/10/20 18:13
2,4-D	6.6	29.8	43.1	36		1	11/10/20 18:13
Dicamba	3.2	28.5	38.4	30		1	11/10/20 18:13

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dba ALS Environmental

Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: RQ2013888-04

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	5.1	25.4	40.7	46		1	11/13/20 17:33
2,4,5-TP	4.6	39.5	44.9	13		1	11/13/20 17:33
2,4-D	6.6	29.2	47.1	47		1	11/13/20 17:33
Dicamba	3.2	23.3	35.9	43		1	11/13/20 17:33

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Confirmation Results

Client: Inventum Engineering
Project: Riverview - BCP RI
Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received:

Sample Name: Duplicate Lab Control Sample
Lab Code: RQ2013888-05

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	5.1	25.1	40.7	47		1	11/13/20 17:53
2,4,5-TP	4.6	39.6	50.6	24		1	11/13/20 17:53
2,4-D	6.6	28.6	47.6	50		1	11/13/20 17:53
Dicamba	3.2	22.8	36.2	45		1	11/13/20 17:53



Metals

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: R2010340-MB

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	20 U	mg/Kg	20	12	1	11/12/20 20:53	11/09/20	
Antimony, Total	6010D	6.0 U	mg/Kg	6.0	0.6	1	11/12/20 20:53	11/09/20	
Arsenic, Total	6010D	1.0 U	mg/Kg	1.0	0.7	1	11/12/20 20:53	11/09/20	
Barium, Total	6010D	2.0 U	mg/Kg	2.0	1.5	1	11/12/20 20:53	11/09/20	
Beryllium, Total	6010D	0.30 U	mg/Kg	0.30	0.03	1	11/12/20 20:53	11/09/20	
Cadmium, Total	6010D	0.50 U	mg/Kg	0.50	0.24	1	11/12/20 20:53	11/09/20	
Calcium, Total	6010D	100 U	mg/Kg	100	40	1	11/12/20 20:53	11/09/20	
Chromium, Total	6010D	1.0 U	mg/Kg	1.0	0.4	1	11/12/20 20:53	11/09/20	
Cobalt, Total	6010D	5.0 U	mg/Kg	5.0	0.5	1	11/12/20 20:53	11/09/20	
Copper, Total	6010D	2.0 U	mg/Kg	2.0	0.7	1	11/12/20 20:53	11/09/20	
Iron, Total	6010D	20 U	mg/Kg	20	13	1	11/12/20 20:53	11/09/20	
Lead, Total	6010D	5.0 U	mg/Kg	5.0	0.4	1	11/12/20 20:53	11/09/20	
Magnesium, Total	6010D	100 U	mg/Kg	100	20	1	11/12/20 20:53	11/09/20	
Manganese, Total	6010D	2.0 U	mg/Kg	2.0	1.5	1	11/12/20 20:53	11/09/20	
Mercury, Total	7471B	0.033 U	mg/Kg	0.033	0.013	1	11/09/20 15:24	11/06/20	
Nickel, Total	6010D	4.0 U	mg/Kg	4.0	0.7	1	11/12/20 20:53	11/09/20	
Potassium, Total	6010D	200 U	mg/Kg	200	50	1	11/12/20 20:53	11/09/20	
Selenium, Total	6010D	0.7 J	mg/Kg	1.0	0.6	1	11/12/20 20:53	11/09/20	
Silver, Total	6010D	1.0 U	mg/Kg	1.0	0.09	1	11/12/20 20:53	11/09/20	
Sodium, Total	6010D	100 U	mg/Kg	100	60	1	11/12/20 20:53	11/09/20	
Thallium, Total	6010D	1.0 U	mg/Kg	1.0	0.7	1	11/12/20 20:53	11/09/20	
Vanadium, Total	6010D	5.0 U	mg/Kg	5.0	0.8	1	11/12/20 20:53	11/09/20	
Zinc, Total	6010D	2.0 U	mg/Kg	2.0	1.4	1	11/12/20 20:53	11/09/20	

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dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request:R2010340
Date Collected:11/02/20
Date Received:11/03/20
Date Analyzed:11/12/20

Duplicate Matrix Spike Summary
Inorganic Parameters

Sample Name: TP-BCP-36-01-1122020
Lab Code: R2010340-003

Units:mg/Kg
Basis:Dry

Matrix Spike R2010340-003MS						Duplicate Matrix Spike R2010340-003DMS					
Analyte Name	Method	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aluminum, Total	6010D	3410	2940	262	-183 #	2920	262	-190 #	75-125	<1	20
Antimony, Total	6010D	7.9 U	54.2	65.6	83	55.9	65.6	85	75-125	3	20
Arsenic, Total	6010D	12.1	17.2	5.2	98	15.2	5.2	60 *	75-125	12	20
Barium, Total	6010D	102	363	262	99	351	262	95	75-125	3	20
Beryllium, Total	6010D	0.67	7.14	6.56	99	7.10	6.56	98	75-125	<1	20
Cadmium, Total	6010D	0.59 J	7.18	6.56	100	6.90	6.56	96	75-125	4	20
Calcium, Total	6010D	4870	4080	260	-299 #	4080	260	-301 #	75-125	<1	20
Chromium, Total	6010D	21.8	37.9	26.2	61 *	36.1	26.2	54 *	75-125	5	20
Cobalt, Total	6010D	4.7 J	70.9	65.6	101	70.5	65.6	100	75-125	<1	20
Copper, Total	6010D	42.2	64.4	32.8	68 *	61.8	32.8	60 *	75-125	4	20
Iron, Total	6010D	12500	12700	130	189 #	8450	130	-3063 #	75-125	40*	20
Lead, Total	6010D	36.1	142	65.6	161 *	90.5	65.6	83	75-125	44*	20
Magnesium, Total	6010D	720	850	260	51 *	890	260	65 *	75-125	4	20
Manganese, Total	6010D	148	145	65.6	-4 *	121	65.6	-40 *	75-125	18	20
Nickel, Total	6010D	62.5	83.4	65.6	32 *	82.0	65.6	30 *	75-125	2	20
Potassium, Total	6010D	550	3030	2620	94	3030	2620	94	75-125	<1	20
Selenium, Total	6010D	1.3 BJ	117	133	87	117	133	87	75-125	<1	20
Silver, Total	6010D	1.3 U	6.4	6.6	97	6.3	6.6	96	75-125	<1	20
Sodium, Total	6010D	90 J	2680	2620	99	2650	2620	98	75-125	1	20
Thallium, Total	6010D	1.3 U	208	262	79	237	262	90	75-125	13	20
Vanadium, Total	6010D	48.0	119	65.6	108	111	65.6	96	75-125	6	20
Zinc, Total	6010D	85.0	134	65.6	74 *	125	65.6	60 *	75-125	7	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Analyzed: 11/09/20 - 11/12/20

Lab Control Sample Summary
Inorganic Parameters

Units:mg/Kg
Basis:Dry

Lab Control Sample
R2010340-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum, Total	6010D	194	200	97	80-120
Antimony, Total	6010D	46.4	50.0	93	80-120
Arsenic, Total	6010D	3.75	4.0	94	80-120
Barium, Total	6010D	201	200	100	80-120
Beryllium, Total	6010D	4.88	5.00	98	80-120
Cadmium, Total	6010D	4.99	5.00	100	80-120
Calcium, Total	6010D	202	200	101	80-120
Chromium, Total	6010D	20.3	20.0	101	80-120
Cobalt, Total	6010D	50.4	50.0	101	80-120
Copper, Total	6010D	24.7	25.0	99	80-120
Iron, Total	6010D	99.1	100	99	80-120
Lead, Total	6010D	50.0	50.0	100	80-120
Magnesium, Total	6010D	195	200	97	80-120
Manganese, Total	6010D	49.1	50.0	98	80-120
Mercury, Total	7471B	0.161	0.167	97	80-120
Nickel, Total	6010D	50.1	50.0	100	80-120
Potassium, Total	6010D	1880	2000	94	80-120
Selenium, Total	6010D	88.0	101	87	80-120
Silver, Total	6010D	4.75	5.0	95	80-120
Sodium, Total	6010D	1930	2000	96	80-120
Thallium, Total	6010D	182	200	91	80-120
Vanadium, Total	6010D	49.2	50.0	98	80-120
Zinc, Total	6010D	49.0	50.0	98	80-120



General Chemistry

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Analytical Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: R2010340-MB

Service Request: R2010340
Date Collected: NA
Date Received: NA

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.30 U	mg/Kg	0.30	0.17	1	11/12/20 11:51	11/11/20	

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dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20
Date Received: 11/03/20
Date Analyzed: 11/12/20
Date Extracted: 11/11/20

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name: TP-BCP-28-CL-10302020
Lab Code: R2010340-001
Analysis Method: 9012B
Prep Method: Method

Units: mg/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike		Result	Duplicate Matrix Spike		% Rec Limits	RPD	RPD Limit
			Spike Amount	% Rec		Spike Amount	% Rec			
Cyanide, Total	0.36 U	3.42	3.63	94	2.54	2.74	93	10-159	30	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project Riverview - BCP RI
Sample Matrix: Soil

Service Request: R2010340
Date Collected: 10/30/20
Date Received: 11/03/20
Date Analyzed: 11/10/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name: TP-BCP-28-CL-10302020
Lab Code: R2010340-001

Units: Percent
Basis: As Received

					Duplicate Sample R2010340- 001DUP			
Analyte Name	Analysis Method	MRL	MDL	Sample Result	Result	Average	RPD	RPD Limit
Total Solids	ALS SOP	-	-	80.8	80.9	80.8	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Inventum Engineering

Project: Riverview - BCP RI

Sample Matrix: Soil

Service Request: R2010340

Date Analyzed: 11/12/20

Lab Control Sample Summary

General Chemistry Parameters

Units:mg/Kg

Basis:Dry

Lab Control Sample

R2010340-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	9012B	2.87	3.00	96	85-115

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QA/QC Report

Client: Inventum Engineering

Project: Riverview - BCP RI

Sample Matrix: Soil

Service Request: R2010340

Date Analyzed: 11/12/20

Lab Control Sample Summary

General Chemistry Parameters

Units:mg/Kg

Basis:Dry

Lab Control Sample

R2010340-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	9012B	16.9	18.0	94	85-115



February 18, 2025

Service Request No:R2010907

Mr. Todd Waldrop
Inventum Engineering
481 Carlisle Drive
Herndon, VA 20170

Laboratory Results for: Riverview BCP RI

Dear Mr.Waldrop,

Enclosed are the results of the sample(s) submitted to our laboratory November 17, 2020
For your reference, these analyses have been assigned our service request number **R2010907**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7475. You may also contact me via email at Meghan.Pedro@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Meghan Pedro
Project Manager

ADDRESS

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dba ALS Environmental



Narrative Documents

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Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Received: 11/17/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Manual Integrations may have been used in the quantitation of the results in this report. Manual Integrations are readily identified in the raw data on the Quantitation Reports (Organics) by the automatic placement of an "m" next to the sample result. For Ion Chromatography, the manual integrations are identified by the automatic placement of "manipulated" or "manually integrated" in the upper left corner of the chromatogram (Hexavalent Chromium) or "M" by the result in the "Type" column (anions). The reason for the manual integration is noted on the "after" chromatogram, which is found with the original chromatogram and quantitation report. All integrations follow the lab SOP ADM-INT "Manual Integration."

Sample Receipt:

Ten soil samples were received for analysis at ALS Environmental on 11/17/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 12/01/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 12/01/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

2,4-Dinitrophenol has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. 2,4-Dinitrophenol was detected at 14% and 20% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form. The precision is also outside laboratory control limits.

Method 8270D LL, R2010907-004: The sample was diluted to elevate the reporting limit above the presence of non-target background components indicated on the chromatogram.

Method 8270D LL, R2010907-001: Sample(s) required dilution due to the dark oily nature of the extract. The reporting limits are adjusted to reflect the dilution.

Method 8270D, 12/11/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 12/11/2020: The control limits for matrix spike recovery of one or more of the spiked analytes is not applicable. The analysis of this sample required a dilution such that the added spike concentration was diluted outside of a useable level. Matrix spikes which have been diluted have been flagged with a "D". No further corrective action was required.

Method 8270D, 12/16/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Approved by _____

Date 02/18/2025



Method 8270D, 12/16/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8270D, R2010907-001, -003, -006: The control limits for one or more surrogates in the sample are not applicable. The analysis of the sample required a dilution, which resulted in a surrogate concentration below the Method Reporting Limit (MRL). No further corrective action was appropriate.

Method 8270D, 12/28/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Semivolatile GC:

Method 8081B, 12/17/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8081B, 708295: The Method Reporting Limit (MRL) was elevated due to the dark color of the matrix of the sample.

Method 8081B, 12/28/2020: The control limits were exceeded for analytes in the Continuing Calibration Verification (CCV). The QC failure was most likely due to the composition of the sample(s) immediately preceding the failing CCV. In order to protect the integrity of the instrument, no further corrective action was taken. Results should be considered estimated. Sample ran several times with the same result to the closing ccv.

Method 8081B, 708589: The control limits were exceeded for one or more surrogates due to suspected matrix interferences. Dark matrix of the sample is suspected of adversely affecting the recovery. No further corrective action was appropriate.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Subcontracted Analytical Parameters:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Method 8260C, 11/25/2020: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Method 8260C, 11/25/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 11/25/2020, R2010907-002,007,008,009,010: The recovery of one or more internal standards was outside control limits because of suspected matrix interference. The sample was re-extracted and reanalyzed, but produced similar results. No further corrective action was appropriate.

Method 8260C, R2010907-007,008: The control limits were exceeded for one or more surrogates due to matrix interferences. A re-extraction and reanalysis was performed, but produced similar results. No further corrective action was required. Freezer blk in soil fridge#09 had J level hit for PCE. Samples may also have J level hit due to contamination.

Approved by _____

Date 02/18/2025



Method 8260C, 11/24/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 11/24/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 11/24/2020, R2010907-002,005,007,008: The recovery of one or more internal standards was outside control limits because of suspected matrix interference. The sample was re-extracted and reanalyzed, but produced similar results. No further corrective action was appropriate.

Method 8260C, R2010907-007,008: The control limits were exceeded for one or more surrogates due to matrix interferences. A re-extraction and reanalysis was performed, but produced similar results. No further corrective action was required. Freezer blk in soil fridge#09 had J level hit for PCE. Samples may also have J level hit due to contamination.

Method 8260C, 11/28/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 11/28/2020, R2010907-009,010: The recovery of one or more internal standards was outside control limits because of suspected matrix interference. The sample was re-extracted and reanalyzed, but produced similar results. No further corrective action was appropriate.

Method 8260C, R2010907-009,010: The control limits were exceeded for one or more surrogates due to matrix interferences. A re-extraction and reanalysis was performed, but produced similar results. No further corrective action was required. Freezer blk in soil fridge#09 had J level hit for PCE. Samples may also have J level hit due to contamination.

Reports revised 2/18/25 to include 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene, this is the summary report and does not include any sub lab results.

Approved by Meghan Pedro

Date 02/18/2025

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP-BCP-22-01			Lab ID: R2010907-007			
Analyte	Results	Flag	MDL	MRL	Units	Method
1,1,2,2-Tetrachloroethane	1.9	J	0.74	8.4	ug/Kg	8260C
1,2,4-Trimethylbenzene	2.8	J	0.34	8.4	ug/Kg	8260C
1,2,4-Trimethylbenzene	4.6	J	0.38	9.5	ug/Kg	8260C
1,3,5-Trimethylbenzene	2.6	J	0.34	8.4	ug/Kg	8260C
1,3,5-Trimethylbenzene	4.8	J	0.38	9.5	ug/Kg	8260C
2-Methylnaphthalene	1200		130	580	ug/Kg	8270D
2-Methylnaphthalene	1300	DJ	380	1700	ug/Kg	8270D
Acenaphthene	560	J	140	580	ug/Kg	8270D
Acenaphthene	600	DJ	400	1700	ug/Kg	8270D
Acenaphthylene	730		160	580	ug/Kg	8270D
Acenaphthylene	740	DJ	460	1700	ug/Kg	8270D
Aluminum, Total	1060		14	23	mg/Kg	6010D
Anthracene	2200		170	580	ug/Kg	8270D
Anthracene	2300	D	490	1700	ug/Kg	8270D
Arsenic, Total	6.0		0.9	1.2	mg/Kg	6010D
Barium, Total	38.9		1.8	2.3	mg/Kg	6010D
Benz(a)anthracene	5400		180	580	ug/Kg	8270D
Benz(a)anthracene	5500	D	520	1700	ug/Kg	8270D
Benzene	0.74	J	0.34	8.4	ug/Kg	8260C
Benzene	1.4	J	0.38	9.5	ug/Kg	8260C
Benzo(a)pyrene	7500	E	220	580	ug/Kg	8270D
Benzo(a)pyrene	7800	D	640	1700	ug/Kg	8270D
Benzo(b)fluoranthene	7200	E	200	580	ug/Kg	8270D
Benzo(b)fluoranthene	7500	D	580	1700	ug/Kg	8270D
Benzo(g,h,i)perylene	5000		160	580	ug/Kg	8270D
Benzo(g,h,i)perylene	4800	D	460	1700	ug/Kg	8270D
Benzo(k)fluoranthene	2500		220	580	ug/Kg	8270D
Benzo(k)fluoranthene	2600	D	640	1700	ug/Kg	8270D
Beryllium, Total	2.20		0.04	0.35	mg/Kg	6010D
Biphenyl	240	J	150	580	ug/Kg	8270D
Calcium, Total	810		40	120	mg/Kg	6010D
Carbazole	1000		170	580	ug/Kg	8270D
Carbazole	1100	DJ	510	1700	ug/Kg	8270D
Chromium, Total	7.3		0.5	1.2	mg/Kg	6010D
Chrysene	5800		220	580	ug/Kg	8270D
Chrysene	5700	D	640	1700	ug/Kg	8270D
Cobalt, Total	5.0	J	0.6	5.8	mg/Kg	6010D
Copper, Total	23.3		0.8	2.3	mg/Kg	6010D
Cyanide, Total	0.57		0.17	0.28	mg/Kg	9012B
Cyclohexane	6.6	J	0.44	8.4	ug/Kg	8260C

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP-BCP-22-01			Lab ID: R2010907-007			
Analyte	Results	Flag	MDL	MRL	Units	Method
Cyclohexane	8.2	J	0.50	9.5	ug/Kg	8260C
Dibenz(a,h)anthracene	1100		180	580	ug/Kg	8270D
Dibenz(a,h)anthracene	1300	DJ	520	1700	ug/Kg	8270D
Dibenzofuran	1000		120	580	ug/Kg	8270D
Dibenzofuran	1100	DJ	350	1700	ug/Kg	8270D
Fluoranthene	8700	E	220	580	ug/Kg	8270D
Fluoranthene	9600	D	640	1700	ug/Kg	8270D
Fluorene	1300		140	580	ug/Kg	8270D
Fluorene	1400	DJ	410	1700	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	4400		200	580	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	5300	D	580	1700	ug/Kg	8270D
Iron, Total	3510		16	23	mg/Kg	6010D
Lead, Total	7.3		0.5	5.8	mg/Kg	6010D
m,p-Xylenes	1.8	J	0.62	17	ug/Kg	8260C
m,p-Xylenes	2.5	J	0.71	19	ug/Kg	8260C
Magnesium, Total	240		20	120	mg/Kg	6010D
Manganese, Total	37.5		1.8	2.3	mg/Kg	6010D
Mercury, Total	0.114		0.015	0.037	mg/Kg	7471B
Methylcyclohexane	12		0.52	8.4	ug/Kg	8260C
Methylcyclohexane	12		0.59	9.5	ug/Kg	8260C
Naphthalene	2100		150	580	ug/Kg	8270D
Naphthalene	2300	D	450	1700	ug/Kg	8270D
Nickel, Total	10.6		0.8	4.6	mg/Kg	6010D
o-Xylene	1.2	J	0.34	8.4	ug/Kg	8260C
o-Xylene	2.5	J	0.38	9.5	ug/Kg	8260C
Phenanthrene	6400	E	170	580	ug/Kg	8270D
Phenanthrene	7400	D	510	1700	ug/Kg	8270D
Potassium, Total	290		60	230	mg/Kg	6010D
Pyrene	8000	E	230	580	ug/Kg	8270D
Pyrene	8600	D	690	1700	ug/Kg	8270D
Sodium, Total	90	J	70	120	mg/Kg	6010D
Tetrachloroethene (PCE)	1.9	J	0.39	8.4	ug/Kg	8260C
Tetrachloroethene (PCE)	3.5	J	0.44	9.5	ug/Kg	8260C
Toluene	0.92	J	0.34	8.4	ug/Kg	8260C
Toluene	1.4	J	0.38	9.5	ug/Kg	8260C
Total Solids	84.4				Percent	ALS SOP
Vanadium, Total	14.4		0.9	5.8	mg/Kg	6010D
Zinc, Total	15.1		1.7	2.3	mg/Kg	6010D

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP-BCP-27-01			Lab ID: R2010907-009			
Analyte	Results	Flag	MDL	MRL	Units	Method
1,2,3-Trichlorobenzene	1.6	J	0.75	7.2	ug/Kg	8260C
1,2,4-Trichlorobenzene	1.1	J	0.61	7.2	ug/Kg	8260C
1,2,4-Trimethylbenzene	1.3	J	0.29	7.2	ug/Kg	8260C
1,2,4-Trimethylbenzene	0.75	J	0.30	7.5	ug/Kg	8260C
1,2-Dichlorobenzene	0.76	J	0.29	7.2	ug/Kg	8260C
1,3,5-Trimethylbenzene	1.6	J	0.29	7.2	ug/Kg	8260C
1,3,5-Trimethylbenzene	0.84	J	0.30	7.5	ug/Kg	8260C
1,3-Dichlorobenzene	0.72	J	0.29	7.2	ug/Kg	8260C
1,4-Dichlorobenzene	0.84	J	0.32	7.2	ug/Kg	8260C
2-Methylnaphthalene	1300		140	610	ug/Kg	8270D
2-Methylnaphthalene	1400	DJ	400	1800	ug/Kg	8270D
Acenaphthene	1200		140	610	ug/Kg	8270D
Acenaphthene	1200	DJ	410	1800	ug/Kg	8270D
Acenaphthylene	900		160	610	ug/Kg	8270D
Acenaphthylene	850	DJ	480	1800	ug/Kg	8270D
Aluminum, Total	5300		13	21	mg/Kg	6010D
Anthracene	2700		170	610	ug/Kg	8270D
Anthracene	2700	D	510	1800	ug/Kg	8270D
Arsenic, Total	6.5		0.8	1.1	mg/Kg	6010D
Barium, Total	97.7		1.6	2.1	mg/Kg	6010D
Benz(a)anthracene	9400	E	180	610	ug/Kg	8270D
Benz(a)anthracene	8900	D	540	1800	ug/Kg	8270D
Benzene	1.5	J	0.29	7.2	ug/Kg	8260C
Benzene	0.74	J	0.30	7.5	ug/Kg	8260C
Benzo(a)pyrene	14000	E	230	610	ug/Kg	8270D
Benzo(a)pyrene	14000	D	670	1800	ug/Kg	8270D
Benzo(b)fluoranthene	14000	E	210	610	ug/Kg	8270D
Benzo(b)fluoranthene	13000	D	610	1800	ug/Kg	8270D
Benzo(g,h,i)perylene	8200	E	160	610	ug/Kg	8270D
Benzo(g,h,i)perylene	9300	D	480	1800	ug/Kg	8270D
Benzo(k)fluoranthene	4500		230	610	ug/Kg	8270D
Benzo(k)fluoranthene	4500	D	670	1800	ug/Kg	8270D
Beryllium, Total	0.89		0.04	0.32	mg/Kg	6010D
Biphenyl	260	J	150	610	ug/Kg	8270D
Calcium, Total	15700		40	110	mg/Kg	6010D
Carbazole	1600		180	610	ug/Kg	8270D
Carbazole	1700	DJ	530	1800	ug/Kg	8270D
Chromium, Total	11.1		0.4	1.1	mg/Kg	6010D
Chrysene	10000	E	230	610	ug/Kg	8270D
Chrysene	10000	D	670	1800	ug/Kg	8270D

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP-BCP-27-01		Lab ID: R2010907-009				
Analyte	Results	Flag	MDL	MRL	Units	Method
Cobalt, Total	6.9		0.5	5.3	mg/Kg	6010D
Copper, Total	18.4		0.7	2.1	mg/Kg	6010D
Cyanide, Total	0.65		0.17	0.27	mg/Kg	9012B
Cyclohexane	2.9	J	0.38	7.2	ug/Kg	8260C
Cyclohexane	1.8	J	0.39	7.5	ug/Kg	8260C
Dibenz(a,h)anthracene	1700		180	610	ug/Kg	8270D
Dibenz(a,h)anthracene	2400	D	540	1800	ug/Kg	8270D
Dibenzofuran	1100		120	610	ug/Kg	8270D
Dibenzofuran	1200	DJ	360	1800	ug/Kg	8270D
Fluoranthene	14000	E	230	610	ug/Kg	8270D
Fluoranthene	15000	D	670	1800	ug/Kg	8270D
Fluorene	1300		140	610	ug/Kg	8270D
Fluorene	1300	DJ	420	1800	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	7100	E	210	610	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	10000	D	610	1800	ug/Kg	8270D
Iron, Total	11500		140	210	mg/Kg	6010D
Lead, Total	14.4		0.5	5.3	mg/Kg	6010D
m,p-Xylenes	0.75	J	0.54	14	ug/Kg	8260C
m,p-Xylenes	0.67	J	0.56	15	ug/Kg	8260C
Magnesium, Total	3690		20	110	mg/Kg	6010D
Manganese, Total	175		1.6	2.1	mg/Kg	6010D
Mercury, Total	0.100		0.016	0.039	mg/Kg	7471B
Methylcyclohexane	4.9	J	0.45	7.2	ug/Kg	8260C
Methylcyclohexane	3.5	J	0.47	7.5	ug/Kg	8260C
Naphthalene	3200		160	610	ug/Kg	8270D
Naphthalene	3400	D	470	1800	ug/Kg	8270D
Nickel, Total	14.4		0.8	4.2	mg/Kg	6010D
o-Xylene	0.55	J	0.29	7.2	ug/Kg	8260C
Phenanthrene	8800	E	180	610	ug/Kg	8270D
Phenanthrene	9900	D	530	1800	ug/Kg	8270D
Potassium, Total	950		60	210	mg/Kg	6010D
Pyrene	13000	E	240	610	ug/Kg	8270D
Pyrene	14000	D	720	1800	ug/Kg	8270D
Sodium, Total	110	J	60	110	mg/Kg	6010D
Tetrachloroethene (PCE)	5.4	J	0.34	7.2	ug/Kg	8260C
Tetrachloroethene (PCE)	1.8	J	0.35	7.5	ug/Kg	8260C
Toluene	0.78	J	0.29	7.2	ug/Kg	8260C
Toluene	0.56	J	0.30	7.5	ug/Kg	8260C
Total Solids	85.7				Percent	ALS SOP
Vanadium, Total	18.7		0.8	5.3	mg/Kg	6010D



SAMPLE DETECTION SUMMARY

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CLIENT ID: TP-BCP-27-01			Lab ID: R2010907-009			

Analyte	Results	Flag	MDL	MRL	Units	Method
Zinc, Total	38.4		1.5	2.1	mg/Kg	6010D

CLIENT ID: SS-BCP-16-06			Lab ID: R2010907-002			

Analyte	Results	Flag	MDL	MRL	Units	Method
1,2,4-Trimethylbenzene	0.62	J	0.26	6.4	ug/Kg	8260C
1,2,4-Trimethylbenzene	1.1	J	0.29	7.2	ug/Kg	8260C
1,3,5-Trimethylbenzene	0.48	J	0.26	6.4	ug/Kg	8260C
1,3,5-Trimethylbenzene	0.79	J	0.29	7.2	ug/Kg	8260C
Benzene	1.0	J	0.29	7.2	ug/Kg	8260C
Ethylbenzene	0.33	J	0.29	7.2	ug/Kg	8260C
m,p-Xylenes	1.3	J	0.54	14	ug/Kg	8260C
Methylcyclohexane	0.58	J	0.40	6.4	ug/Kg	8260C
Methylcyclohexane	0.50	J	0.45	7.2	ug/Kg	8260C
o-Xylene	0.30	J	0.26	6.4	ug/Kg	8260C
o-Xylene	0.88	J	0.29	7.2	ug/Kg	8260C
Tetrachloroethene (PCE)	0.62	J	0.30	6.4	ug/Kg	8260C
Tetrachloroethene (PCE)	0.60	J	0.34	7.2	ug/Kg	8260C
Toluene	0.92	J	0.29	7.2	ug/Kg	8260C
Total Solids	82.1				Percent	ALS SOP

CLIENT ID: TP-BCP-220-01			Lab ID: R2010907-008			

Analyte	Results	Flag	MDL	MRL	Units	Method
1,2,4-Trimethylbenzene	6.4	J	0.36	8.9	ug/Kg	8260C
1,2,4-Trimethylbenzene	4.9	J	0.37	9.2	ug/Kg	8260C
1,3,5-Trimethylbenzene	6.2	J	0.36	8.9	ug/Kg	8260C
1,3,5-Trimethylbenzene	4.9	J	0.37	9.2	ug/Kg	8260C
2-Methylnaphthalene	1800		110	500	ug/Kg	8270D
2-Methylnaphthalene	1900	D	330	1500	ug/Kg	8270D
4-Methyl-2-pentanone	1.0	J	0.41	8.9	ug/Kg	8260C
Acenaphthene	1100		120	500	ug/Kg	8270D
Acenaphthene	1200	DJ	340	1500	ug/Kg	8270D
Acenaphthylene	930		140	500	ug/Kg	8270D
Acenaphthylene	920	DJ	400	1500	ug/Kg	8270D
Acetone	19		8.4	8.9	ug/Kg	8260C
Aluminum, Total	898		15	23	mg/Kg	6010D
Anthracene	4000		140	500	ug/Kg	8270D
Anthracene	4400	D	420	1500	ug/Kg	8270D
Arsenic, Total	5.3		0.9	1.2	mg/Kg	6010D
Barium, Total	21.6		1.8	2.3	mg/Kg	6010D
Benz(a)anthracene	8500	E	150	500	ug/Kg	8270D
Benz(a)anthracene	8600	D	440	1500	ug/Kg	8270D

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP-BCP-220-01			Lab ID: R2010907-008			
Analyte	Results	Flag	MDL	MRL	Units	Method
Benzene	2.4	J	0.36	8.9	ug/Kg	8260C
Benzene	1.2	J	0.37	9.2	ug/Kg	8260C
Benzo(a)pyrene	12000	E	190	500	ug/Kg	8270D
Benzo(a)pyrene	12000	D	550	1500	ug/Kg	8270D
Benzo(b)fluoranthene	11000	E	170	500	ug/Kg	8270D
Benzo(b)fluoranthene	11000	D	500	1500	ug/Kg	8270D
Benzo(g,h,i)perylene	6500	E	140	500	ug/Kg	8270D
Benzo(g,h,i)perylene	7700	D	400	1500	ug/Kg	8270D
Benzo(k)fluoranthene	3700		190	500	ug/Kg	8270D
Benzo(k)fluoranthene	4000	D	550	1500	ug/Kg	8270D
Beryllium, Total	2.54		0.04	0.35	mg/Kg	6010D
Biphenyl	410	J	130	500	ug/Kg	8270D
Biphenyl	440	DJ	370	1500	ug/Kg	8270D
Calcium, Total	900		40	120	mg/Kg	6010D
Carbazole	2500		150	500	ug/Kg	8270D
Carbazole	2800	D	440	1500	ug/Kg	8270D
Chromium, Total	6.3		0.5	1.2	mg/Kg	6010D
Chrysene	8400	E	190	500	ug/Kg	8270D
Chrysene	8300	D	550	1500	ug/Kg	8270D
Cobalt, Total	5.2	J	0.6	5.8	mg/Kg	6010D
Copper, Total	15.0		0.8	2.3	mg/Kg	6010D
Cyanide, Total	0.27	J	0.17	0.29	mg/Kg	9012B
Cyclohexane	9.2		0.47	8.9	ug/Kg	8260C
Cyclohexane	9.3		0.48	9.2	ug/Kg	8260C
Dibenz(a,h)anthracene	1400		150	500	ug/Kg	8270D
Dibenz(a,h)anthracene	2000	D	450	1500	ug/Kg	8270D
Dibenzofuran	2200		99	500	ug/Kg	8270D
Dibenzofuran	2400	D	300	1500	ug/Kg	8270D
Ethylbenzene	0.76	J	0.36	8.9	ug/Kg	8260C
Fluoranthene	12000	E	190	500	ug/Kg	8270D
Fluoranthene	14000	D	550	1500	ug/Kg	8270D
Fluorene	3700		120	500	ug/Kg	8270D
Fluorene	4100	D	350	1500	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	5700	E	170	500	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	8400	D	500	1500	ug/Kg	8270D
Iron, Total	2260		16	23	mg/Kg	6010D
Lead, Total	5.0	J	0.5	5.8	mg/Kg	6010D
m,p-Xylenes	3.6	J	0.66	18	ug/Kg	8260C
m,p-Xylenes	2.2	J	0.69	18	ug/Kg	8260C
Magnesium, Total	250		20	120	mg/Kg	6010D

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP-BCP-220-01			Lab ID: R2010907-008			

Analyte	Results	Flag	MDL	MRL	Units	Method
Manganese, Total	44.1		1.8	2.3	mg/Kg	6010D
Mercury, Total	0.020	J	0.015	0.037	mg/Kg	7471B
Methylcyclohexane	18		0.56	8.9	ug/Kg	8260C
Methylcyclohexane	15		0.58	9.2	ug/Kg	8260C
Naphthalene	3700		130	500	ug/Kg	8270D
Naphthalene	4200	D	390	1500	ug/Kg	8270D
Nickel, Total	11.6		0.8	4.7	mg/Kg	6010D
o-Xylene	2.5	J	0.36	8.9	ug/Kg	8260C
o-Xylene	2.1	J	0.37	9.2	ug/Kg	8260C
Phenanthrene	11000	E	150	500	ug/Kg	8270D
Phenanthrene	15000	D	440	1500	ug/Kg	8270D
Potassium, Total	270		60	230	mg/Kg	6010D
Pyrene	12000	E	200	500	ug/Kg	8270D
Pyrene	13000	D	590	1500	ug/Kg	8270D
Sodium, Total	80	J	70	120	mg/Kg	6010D
Tetrachloroethene (PCE)	3.0	J	0.41	8.9	ug/Kg	8260C
Tetrachloroethene (PCE)	5.0	J	0.43	9.2	ug/Kg	8260C
Toluene	1.5	J	0.36	8.9	ug/Kg	8260C
Toluene	1.1	J	0.37	9.2	ug/Kg	8260C
Total Solids	85.6				Percent	ALS SOP
Vanadium, Total	14.5		0.9	5.8	mg/Kg	6010D
Zinc, Total	12.2		1.7	2.3	mg/Kg	6010D

CLIENT ID: TP-BCP-270-01			Lab ID: R2010907-010			

Analyte	Results	Flag	MDL	MRL	Units	Method
1,2,4-Trimethylbenzene	0.43	J	0.30	7.3	ug/Kg	8260C
1,2,4-Trimethylbenzene	1.2	J	0.31	7.6	ug/Kg	8260C
1,3,5-Trimethylbenzene	0.63	J	0.30	7.3	ug/Kg	8260C
1,3,5-Trimethylbenzene	1.3	J	0.31	7.6	ug/Kg	8260C
1,3-Dichlorobenzene	0.71	J	0.31	7.6	ug/Kg	8260C
2-Methylnaphthalene	1100		120	520	ug/Kg	8270D
2-Methylnaphthalene	1200	DJ	350	1600	ug/Kg	8270D
Acenaphthene	990		120	520	ug/Kg	8270D
Acenaphthene	1100	DJ	360	1600	ug/Kg	8270D
Acenaphthylene	760		140	520	ug/Kg	8270D
Acenaphthylene	760	DJ	420	1600	ug/Kg	8270D
Aluminum, Total	4660		14	23	mg/Kg	6010D
Anthracene	2400		150	520	ug/Kg	8270D
Anthracene	2600	D	440	1600	ug/Kg	8270D
Arsenic, Total	6.5		0.9	1.1	mg/Kg	6010D
Barium, Total	77.0		1.8	2.3	mg/Kg	6010D

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP-BCP-270-01			Lab ID: R2010907-010			
Analyte	Results	Flag	MDL	MRL	Units	Method
Benz(a)anthracene	8600	E	160	520	ug/Kg	8270D
Benz(a)anthracene	8700	D	470	1600	ug/Kg	8270D
Benzene	0.46	J	0.30	7.3	ug/Kg	8260C
Benzene	0.81	J	0.31	7.6	ug/Kg	8260C
Benzo(a)pyrene	13000	E	200	520	ug/Kg	8270D
Benzo(a)pyrene	14000	D	580	1600	ug/Kg	8270D
Benzo(b)fluoranthene	13000	E	180	520	ug/Kg	8270D
Benzo(b)fluoranthene	14000	D	530	1600	ug/Kg	8270D
Benzo(g,h,i)perylene	7500	E	140	520	ug/Kg	8270D
Benzo(g,h,i)perylene	9600	D	420	1600	ug/Kg	8270D
Benzo(k)fluoranthene	4700		200	520	ug/Kg	8270D
Benzo(k)fluoranthene	4500	D	580	1600	ug/Kg	8270D
Beryllium, Total	0.86		0.04	0.34	mg/Kg	6010D
Biphenyl	230	J	130	520	ug/Kg	8270D
Calcium, Total	7600		40	110	mg/Kg	6010D
Carbazole	1300		160	520	ug/Kg	8270D
Carbazole	1500	DJ	460	1600	ug/Kg	8270D
Chromium, Total	10.5		0.5	1.1	mg/Kg	6010D
Chrysene	9200	E	200	520	ug/Kg	8270D
Chrysene	9400	D	580	1600	ug/Kg	8270D
Cobalt, Total	6.7		0.6	5.7	mg/Kg	6010D
Copper, Total	21.0		0.8	2.3	mg/Kg	6010D
Cyanide, Total	0.41		0.19	0.33	mg/Kg	9012B
Cyclohexane	2.2	J	0.39	7.3	ug/Kg	8260C
Cyclohexane	2.5	J	0.40	7.6	ug/Kg	8260C
Dibenz(a,h)anthracene	1500		160	520	ug/Kg	8270D
Dibenz(a,h)anthracene	2400	D	470	1600	ug/Kg	8270D
Dibenzofuran	970		110	520	ug/Kg	8270D
Dibenzofuran	1100	DJ	310	1600	ug/Kg	8270D
Fluoranthene	12000	E	200	520	ug/Kg	8270D
Fluoranthene	14000	D	580	1600	ug/Kg	8270D
Fluorene	1100		130	520	ug/Kg	8270D
Fluorene	1200	DJ	370	1600	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	6500	E	180	520	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	10000	D	530	1600	ug/Kg	8270D
Iron, Total	10900		150	230	mg/Kg	6010D
Lead, Total	15.7		0.5	5.7	mg/Kg	6010D
m,p-Xylenes	0.92	J	0.56	15	ug/Kg	8260C
Magnesium, Total	2490		20	110	mg/Kg	6010D
Manganese, Total	150		1.8	2.3	mg/Kg	6010D

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP-BCP-270-01			Lab ID: R2010907-010			
Analyte	Results	Flag	MDL	MRL	Units	Method
Mercury, Total	0.092		0.015	0.038	mg/Kg	7471B
Methylcyclohexane	2.9	J	0.46	7.3	ug/Kg	8260C
Methylcyclohexane	3.3	J	0.47	7.6	ug/Kg	8260C
Naphthalene	2400		140	520	ug/Kg	8270D
Naphthalene	2800	D	410	1600	ug/Kg	8270D
Nickel, Total	13.6		0.8	4.6	mg/Kg	6010D
Phenanthrene	7600	E	160	520	ug/Kg	8270D
Phenanthrene	9300	D	460	1600	ug/Kg	8270D
Potassium, Total	820		60	230	mg/Kg	6010D
Pyrene	12000	E	210	520	ug/Kg	8270D
Pyrene	13000	D	620	1600	ug/Kg	8270D
Sodium, Total	110		60	110	mg/Kg	6010D
Tetrachloroethene (PCE)	1.7	J	0.34	7.3	ug/Kg	8260C
Tetrachloroethene (PCE)	3.6	J	0.35	7.6	ug/Kg	8260C
Toluene	0.40	J	0.30	7.3	ug/Kg	8260C
Toluene	0.58	J	0.31	7.6	ug/Kg	8260C
Total Solids	85.4				Percent	ALS SOP
Vanadium, Total	16.5		0.9	5.7	mg/Kg	6010D
Zinc, Total	40.0		1.7	2.3	mg/Kg	6010D

CLIENT ID: SS-BCP-17-02			Lab ID: R2010907-004			
Analyte	Results	Flag	MDL	MRL	Units	Method
2,4-Dimethylphenol	100	J	90	410	ug/Kg	8270D
2-Methylnaphthalene	2000		90	410	ug/Kg	8270D
2-Methylnaphthalene	2200	D	270	1200	ug/Kg	8270D
2-Methylphenol	94	J	89	410	ug/Kg	8270D
3- and 4-Methylphenol Coelution	120	J	79	410	ug/Kg	8270D
4,4'-DDD	25		11	21	ug/Kg	8081B
Acenaphthene	170	J	93	410	ug/Kg	8270D
Acenaphthylene	370	J	110	410	ug/Kg	8270D
Acenaphthylene	420	DJ	330	1200	ug/Kg	8270D
Aluminum, Total	1180		14	23	mg/Kg	6010D
Anthracene	620		120	410	ug/Kg	8270D
Anthracene	680	J	350	1200	ug/Kg	8270D
Arsenic, Total	12.0		0.9	1.2	mg/Kg	6010D
Barium, Total	91.7		1.8	2.3	mg/Kg	6010D
Benz(a)anthracene	2500		130	410	ug/Kg	8270D
Benz(a)anthracene	2600	D	370	1200	ug/Kg	8270D
Benzo(a)pyrene	3000		150	410	ug/Kg	8270D
Benzo(a)pyrene	3100	D	450	1200	ug/Kg	8270D
Benzo(b)fluoranthene	3700		140	410	ug/Kg	8270D

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: SS-BCP-17-02			Lab ID: R2010907-004			
Analyte	Results	Flag	MDL	MRL	Units	Method
Benzo(b)fluoranthene	3500	D	420	1200	ug/Kg	8270D
Benzo(g,h,i)perylene	1300		110	410	ug/Kg	8270D
Benzo(g,h,i)perylene	1900	D	330	1200	ug/Kg	8270D
Benzo(k)fluoranthene	1200		150	410	ug/Kg	8270D
Benzo(k)fluoranthene	1300	D	450	1200	ug/Kg	8270D
Beryllium, Total	1.39		0.04	0.35	mg/Kg	6010D
Biphenyl	260	J	110	410	ug/Kg	8270D
Calcium, Total	1290		40	120	mg/Kg	6010D
Carbazole	340	J	120	410	ug/Kg	8270D
Carbazole	370	DJ	360	1200	ug/Kg	8270D
Chromium, Total	8.2		0.5	1.2	mg/Kg	6010D
Chrysene	2800		150	410	ug/Kg	8270D
Chrysene	3000	D	450	1200	ug/Kg	8270D
Cobalt, Total	3.7	J	0.6	5.8	mg/Kg	6010D
Copper, Total	21.2		0.8	2.3	mg/Kg	6010D
Dibenz(a,h)anthracene	430		130	410	ug/Kg	8270D
Dibenz(a,h)anthracene	540	DJ	370	1200	ug/Kg	8270D
Dibenzofuran	660		81	410	ug/Kg	8270D
Dibenzofuran	750	J	250	1200	ug/Kg	8270D
Endrin Ketone	14	J	11	21	ug/Kg	8081B
Fluoranthene	4800	E	150	410	ug/Kg	8270D
Fluoranthene	5700	D	450	1200	ug/Kg	8270D
Fluorene	130	J	95	410	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	1600		140	410	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	2100	D	420	1200	ug/Kg	8270D
Iron, Total	6380		160	230	mg/Kg	6010D
Lead, Total	10.6		0.5	5.8	mg/Kg	6010D
Magnesium, Total	240		20	120	mg/Kg	6010D
Manganese, Total	34.5		1.8	2.3	mg/Kg	6010D
Mercury, Total	0.046		0.016	0.039	mg/Kg	7471B
Naphthalene	1500		110	410	ug/Kg	8270D
Naphthalene	1600	D	320	1200	ug/Kg	8270D
Nickel, Total	10.1		0.8	4.6	mg/Kg	6010D
Phenanthrene	3800		120	410	ug/Kg	8270D
Phenanthrene	4100	D	360	1200	ug/Kg	8270D
Potassium, Total	470		60	230	mg/Kg	6010D
Pyrene	4500	E	170	410	ug/Kg	8270D
Pyrene	4800	D	490	1200	ug/Kg	8270D
Sodium, Total	80	J	70	120	mg/Kg	6010D
Total Solids	82.8				Percent	ALS SOP

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: SS-BCP-17-02			Lab ID: R2010907-004			

Analyte	Results	Flag	MDL	MRL	Units	Method
Vanadium, Total	16.9		0.9	5.8	mg/Kg	6010D
Zinc, Total	18.9		1.7	2.3	mg/Kg	6010D

CLIENT ID: SS-BCP-16-02			Lab ID: R2010907-001			

Analyte	Results	Flag	MDL	MRL	Units	Method
2-Methylnaphthalene	6500		970	4400	ug/Kg	8270D
Acenaphthene	23000		1000	4400	ug/Kg	8270D
Acenaphthylene	5000		1200	4400	ug/Kg	8270D
Aluminum, Total	8960		14	23	mg/Kg	6010D
Anthracene	44000		1300	4400	ug/Kg	8270D
Anthracene	49000	DJ	31000	110000	ug/Kg	8270D
Aroclor 1260	27	J	22	42	ug/Kg	8082A
Arsenic, Total	5.6		0.9	1.1	mg/Kg	6010D
Barium, Total	83.0		1.8	2.3	mg/Kg	6010D
Benz(a)anthracene	190000	E	1400	4400	ug/Kg	8270D
Benz(a)anthracene	200000	D	33000	110000	ug/Kg	8270D
Benzo(a)pyrene	310000	E	1700	4400	ug/Kg	8270D
Benzo(a)pyrene	350000	D	41000	110000	ug/Kg	8270D
Benzo(b)fluoranthene	320000	E	1500	4400	ug/Kg	8270D
Benzo(b)fluoranthene	310000	D	38000	110000	ug/Kg	8270D
Benzo(g,h,i)perylene	120000	E	1200	4400	ug/Kg	8270D
Benzo(g,h,i)perylene	210000	D	30000	110000	ug/Kg	8270D
Benzo(k)fluoranthene	89000	E	1700	4400	ug/Kg	8270D
Benzo(k)fluoranthene	120000	D	41000	110000	ug/Kg	8270D
Beryllium, Total	0.87		0.04	0.34	mg/Kg	6010D
Biphenyl	1500	J	1100	4400	ug/Kg	8270D
Cadmium, Total	0.46	J	0.28	0.57	mg/Kg	6010D
Calcium, Total	17900		40	110	mg/Kg	6010D
Carbazole	26000		1300	4400	ug/Kg	8270D
Chromium, Total	17.6		0.5	1.1	mg/Kg	6010D
Chrysene	180000	E	1700	4400	ug/Kg	8270D
Chrysene	210000	D	41000	110000	ug/Kg	8270D
Cobalt, Total	7.9		0.6	5.7	mg/Kg	6010D
Copper, Total	43.4		0.8	2.3	mg/Kg	6010D
Dibenz(a,h)anthracene	33000		1400	4400	ug/Kg	8270D
Dibenz(a,h)anthracene	52000	DJ	33000	110000	ug/Kg	8270D
Dibenzofuran	12000		880	4400	ug/Kg	8270D
Endrin Ketone	16	JP	11	22	ug/Kg	8081B
Fluoranthene	180000	E	1700	4400	ug/Kg	8270D
Fluoranthene	270000	D	41000	110000	ug/Kg	8270D
Fluorene	20000		1100	4400	ug/Kg	8270D

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: SS-BCP-16-02			Lab ID: R2010907-001			

Analyte	Results	Flag	MDL	MRL	Units	Method
gamma-Chlordane	490	E	11	22	ug/Kg	8081B
gamma-Chlordane	15	JP	11	22	ug/Kg	8081B
Indeno(1,2,3-cd)pyrene	150000	E	1500	4400	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	240000	D	38000	110000	ug/Kg	8270D
Iron, Total	18900		150	230	mg/Kg	6010D
Lead, Total	29.9		0.5	5.7	mg/Kg	6010D
Magnesium, Total	6750		20	110	mg/Kg	6010D
Manganese, Total	338		1.8	2.3	mg/Kg	6010D
Mercury, Total	0.446		0.016	0.040	mg/Kg	7471B
Naphthalene	28000		1200	4400	ug/Kg	8270D
Nickel, Total	19.8		0.8	4.6	mg/Kg	6010D
Phenanthrene	120000	E	1300	4400	ug/Kg	8270D
Phenanthrene	170000	D	33000	110000	ug/Kg	8270D
Potassium, Total	1660		60	230	mg/Kg	6010D
Pyrene	210000	E	1800	4400	ug/Kg	8270D
Pyrene	260000	D	44000	110000	ug/Kg	8270D
Sodium, Total	110		60	110	mg/Kg	6010D
Total Solids	79.1				Percent	ALS SOP
Vanadium, Total	23.0		0.9	5.7	mg/Kg	6010D
Zinc, Total	94.8		1.7	2.3	mg/Kg	6010D

CLIENT ID: SS-BCP-16-024			Lab ID: R2010907-003			

Analyte	Results	Flag	MDL	MRL	Units	Method
2-Methylnaphthalene	9400		970	4400	ug/Kg	8270D
Acenaphthene	44000		1000	4400	ug/Kg	8270D
Acenaphthylene	8700		1200	4400	ug/Kg	8270D
Aluminum, Total	3220		15	25	mg/Kg	6010D
Anthracene	95000	E	1300	4400	ug/Kg	8270D
Anthracene	100000	J	62000	220000	ug/Kg	8270D
Arsenic, Total	7.1		0.9	1.2	mg/Kg	6010D
Barium, Total	56.3		1.9	2.5	mg/Kg	6010D
Benz(a)anthracene	370000	E	1300	4400	ug/Kg	8270D
Benz(a)anthracene	380000	D	65000	220000	ug/Kg	8270D
Benzo(a)pyrene	600000	E	1700	4400	ug/Kg	8270D
Benzo(a)pyrene	680000	D	81000	220000	ug/Kg	8270D
Benzo(b)fluoranthene	710000	E	1500	4400	ug/Kg	8270D
Benzo(b)fluoranthene	600000	D	74000	220000	ug/Kg	8270D
Benzo(g,h,i)perylene	260000	E	1200	4400	ug/Kg	8270D
Benzo(g,h,i)perylene	440000	D	59000	220000	ug/Kg	8270D
Benzo(k)fluoranthene	130000	E	1700	4400	ug/Kg	8270D
Benzo(k)fluoranthene	230000	D	81000	220000	ug/Kg	8270D

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: SS-BCP-16-024			Lab ID: R2010907-003			

Analyte	Results	Flag	MDL	MRL	Units	Method
Beryllium, Total	0.85		0.04	0.37	mg/Kg	6010D
Biphenyl	2300	J	1100	4400	ug/Kg	8270D
Bis(2-ethylhexyl) Phthalate	1400	J	1200	6700	ug/Kg	8270D
Cadmium, Total	0.88		0.30	0.62	mg/Kg	6010D
Calcium, Total	5960		40	120	mg/Kg	6010D
Carbazole	48000	E	1300	4400	ug/Kg	8270D
Chromium, Total	14.1		0.5	1.2	mg/Kg	6010D
Chrysene	310000	E	1700	4400	ug/Kg	8270D
Chrysene	370000	D	81000	220000	ug/Kg	8270D
Cobalt, Total	4.0	J	0.6	6.2	mg/Kg	6010D
Copper, Total	30.1		0.8	2.5	mg/Kg	6010D
Cyanide, Total	2.19		0.17	0.25	mg/Kg	9012B
Dibenz(a,h)anthracene	67000	E	1400	4400	ug/Kg	8270D
Dibenz(a,h)anthracene	100000	DJ	66000	220000	ug/Kg	8270D
Dibenzofuran	22000		880	4400	ug/Kg	8270D
Fluoranthene	280000	E	1700	4400	ug/Kg	8270D
Fluoranthene	520000	D	81000	220000	ug/Kg	8270D
Fluorene	40000		1100	4400	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	290000	E	1500	4400	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	480000	D	74000	220000	ug/Kg	8270D
Iron, Total	8400		170	250	mg/Kg	6010D
Lead, Total	46.2		0.5	6.2	mg/Kg	6010D
Magnesium, Total	2130		20	120	mg/Kg	6010D
Manganese, Total	172		1.9	2.5	mg/Kg	6010D
Mercury, Total	0.818		0.016	0.038	mg/Kg	7471B
Naphthalene	39000		1200	4400	ug/Kg	8270D
Nickel, Total	13.3		0.9	4.9	mg/Kg	6010D
Phenanthrene	200000	E	1300	4400	ug/Kg	8270D
Phenanthrene	320000	D	65000	220000	ug/Kg	8270D
Potassium, Total	710		70	250	mg/Kg	6010D
Pyrene	390000	E	1800	4400	ug/Kg	8270D
Pyrene	510000	D	88000	220000	ug/Kg	8270D
Selenium, Total	0.8	J	0.7	1.2	mg/Kg	6010D
Sodium, Total	110	J	70	120	mg/Kg	6010D
Total Solids	81.1				Percent	ALS SOP
Vanadium, Total	13.5		0.9	6.2	mg/Kg	6010D
Zinc, Total	80.6		1.8	2.5	mg/Kg	6010D

CLIENT ID: SS-BCP-17-024			Lab ID: R2010907-006			

Analyte	Results	Flag	MDL	MRL	Units	Method
2-Methylnaphthalene	3800	J	2400	11000	ug/Kg	8270D

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: SS-BCP-17-024			Lab ID: R2010907-006			
Analyte	Results	Flag	MDL	MRL	Units	Method
Acenaphthylene	12000		2900	11000	ug/Kg	8270D
Acenaphthylene	11000	DJ	5700	21000	ug/Kg	8270D
Aluminum, Total	826		14	22	mg/Kg	6010D
Anthracene	10000	J	3000	11000	ug/Kg	8270D
Anthracene	9700	DJ	6000	21000	ug/Kg	8270D
Arsenic, Total	7.8		0.8	1.1	mg/Kg	6010D
Barium, Total	57.8		1.7	2.2	mg/Kg	6010D
Benz(a)anthracene	32000		3200	11000	ug/Kg	8270D
Benz(a)anthracene	32000	D	6300	21000	ug/Kg	8270D
Benzo(a)pyrene	36000		3900	11000	ug/Kg	8270D
Benzo(a)pyrene	36000	D	7800	21000	ug/Kg	8270D
Benzo(b)fluoranthene	43000		3600	11000	ug/Kg	8270D
Benzo(b)fluoranthene	43000	D	7200	21000	ug/Kg	8270D
Benzo(g,h,i)perylene	20000		2900	11000	ug/Kg	8270D
Benzo(g,h,i)perylene	23000	D	5700	21000	ug/Kg	8270D
Benzo(k)fluoranthene	18000		3900	11000	ug/Kg	8270D
Benzo(k)fluoranthene	17000	DJ	7800	21000	ug/Kg	8270D
Beryllium, Total	1.05		0.04	0.33	mg/Kg	6010D
Calcium, Total	390		40	110	mg/Kg	6010D
Carbazole	18000		3100	11000	ug/Kg	8270D
Carbazole	18000	DJ	6200	21000	ug/Kg	8270D
Chromium, Total	6.6		0.4	1.1	mg/Kg	6010D
Chrysene	42000		3900	11000	ug/Kg	8270D
Chrysene	43000	D	7800	21000	ug/Kg	8270D
Cobalt, Total	4.7	J	0.6	5.5	mg/Kg	6010D
Copper, Total	14.8		0.7	2.2	mg/Kg	6010D
Cyanide, Total	0.21	J	0.17	0.26	mg/Kg	9012B
Dibenz(a,h)anthracene	6000	J	3200	11000	ug/Kg	8270D
Dibenz(a,h)anthracene	6500	DJ	6400	21000	ug/Kg	8270D
Dibenzofuran	7700	J	2200	11000	ug/Kg	8270D
Dibenzofuran	7600	DJ	4300	21000	ug/Kg	8270D
Fluoranthene	110000	E	3900	11000	ug/Kg	8270D
Fluoranthene	120000	D	7800	21000	ug/Kg	8270D
Fluorene	14000		2500	11000	ug/Kg	8270D
Fluorene	13000	DJ	5000	21000	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	25000		3600	11000	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	29000	D	7200	21000	ug/Kg	8270D
Iron, Total	5200		15	22	mg/Kg	6010D
Lead, Total	30.3		0.5	5.5	mg/Kg	6010D
Magnesium, Total	110	J	20	110	mg/Kg	6010D



SAMPLE DETECTION SUMMARY

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CLIENT ID: SS-BCP-17-024			Lab ID: R2010907-006			

Analyte	Results	Flag	MDL	MRL	Units	Method
Manganese, Total	17.0		1.7	2.2	mg/Kg	6010D
Mercury, Total	0.042		0.015	0.037	mg/Kg	7471B
Naphthalene	5800	J	2800	11000	ug/Kg	8270D
Naphthalene	6100	DJ	5500	21000	ug/Kg	8270D
Nickel, Total	10.3		0.8	4.4	mg/Kg	6010D
Phenanthrene	120000	E	3200	11000	ug/Kg	8270D
Phenanthrene	120000	D	6300	21000	ug/Kg	8270D
Potassium, Total	210	J	60	220	mg/Kg	6010D
Pyrene	85000		4300	11000	ug/Kg	8270D
Pyrene	85000	D	8500	21000	ug/Kg	8270D
Total Solids	85.7				Percent	ALS SOP
Vanadium, Total	15.1		0.8	5.5	mg/Kg	6010D
Zinc, Total	22.2		1.6	2.2	mg/Kg	6010D

CLIENT ID: SS-BCP-17-06			Lab ID: R2010907-005			

Analyte	Results	Flag	MDL	MRL	Units	Method
Acetone	31		11	11	ug/Kg	8260C
Cyclohexane	1.7	J	0.59	11	ug/Kg	8260C
m,p-Xylenes	0.97	J	0.83	22	ug/Kg	8260C
Methyl Acetate	4.6	J	1.9	11	ug/Kg	8260C
Methylcyclohexane	3.1	J	0.70	11	ug/Kg	8260C
o-Xylene	0.56	J	0.45	11	ug/Kg	8260C
Tetrachloroethene (PCE)	2.2	J	0.52	11	ug/Kg	8260C
Toluene	0.69	J	0.45	11	ug/Kg	8260C
Total Solids	74.5				Percent	ALS SOP



Sample Receipt Information

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com

Client: Inventum Engineering
Project: Riverview BCP RI

Service Request:R2010907

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2010907-001	SS-BCP-16-02	11/13/2020	11 2
R2010907-002	SS-BCP-16-06	11/13/2020	1130
R2010907-003	SS-BCP-16-024	11/13/2020	1140
R2010907-004	SS-BCP-17-02	11/13/2020	1410
R2010907-005	SS-BCP-17-06	11/13/2020	1430
R2010907-006	SS-BCP-17-024	11/13/2020	1440
R2010907-007	TP-BCP-22-01	11/16/2020	0830
R2010907-008	TP-BCP-220-01	11/16/2020	0830
R2010907-009	TP-BCP-27-01	11/16/2020	1130
R2010907-010	TP-BCP-270-01	11/16/2020	1130

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1555 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 2 OF 3 004180

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PAGE 2 OF 3

[illegible]



Cooler Receipt and Preservation Check Form

R2010907

5

Inventum Engineering
Riverview BCP RI



Project/Client Inventum

Folder Number _____

Cooler received on 11/17/2020

by: HE/6L

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <u>(N)</u>
2	Custody papers properly completed (ink, signed)?	Y <u>(N)</u>
3	Did all bottles arrive in good condition (unbroken)?	Y <u>(N)</u>
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	Y <u>(N)</u>

5a	Perchlorate samples have required headspace?	Y <u>(N)</u> <u>NA</u>
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y <u>(N)</u> <u>NA</u>
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore <u>5035set</u>	<u>NA</u>

8. Temperature Readings Date: 11/17/2020 Time: 16:05 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>2.1</u>	<u>1.8</u>	<u>4.6</u>	<u>2.9</u>	<u>0.9</u>		
Within 0-6°C?	Y <u>(N)</u>	Y <u>(N)</u>	Y <u>(N)</u>	Y <u>(N)</u>	Y <u>(N)</u>	Y <u>(N)</u>	Y <u>(N)</u>
If <0°C, were samples frozen?	Y <u>(N)</u>	Y <u>(N)</u>	Y <u>(N)</u>	Y <u>(N)</u>	Y <u>(N)</u>	Y <u>(N)</u>	Y <u>(N)</u>

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R002 by HE on 11/17/2020 at 16:18
5035 samples placed in storage location: F09 by GL on 11/17/2020 at 16:18 within 48 hours of sampling? Y (N)

Cooler Breakdown/Preservation Check**: Date: 11/18/2020 Time: 16:22 by: Sh

9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
10. Did all bottle labels and tags agree with custody papers? YES NO
11. Were correct containers used for the tests indicated? YES NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO N/A
13. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH	Yes No						
≤2		HNO ₃							
≤2		H ₂ SO ₄							
<4		NaHSO ₄							
5-9		For 608pest		No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522		If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃							
		ZnAcetate	- -						
		HCl	** **						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 08370-1SR, 08370-1TW

Explain all Discrepancies/ Other Comments:

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: sh

PC Secondary Review: Wp

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

ALS Environmental—Rochester Laboratory

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REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.	+	Correlation coefficient for MSA is <0.995.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).	N	Inorganics- Matrix spike recovery was outside laboratory limits.
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.	N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.	S	Concentration has been determined using Method of Standard Additions (MSA).
E	Organics- Concentration has exceeded the calibration range for that specific analysis.	W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.	P	Concentration >40% difference between the two GC columns.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.	C	Confirmed by GC/MS
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.	Q	DoD reports: indicates a pesticide/Aroclor is not confirmed ($\geq 100\%$ Difference between two GC columns).
#	Spike was diluted out.	X	See Case Narrative for discussion.
		MRL	Method Reporting Limit. Also known as:
		LOQ	Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
		MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
		LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
		ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Accreditations¹



NELAP States
Florida ID # E87674
New Hampshire ID # 2941
New York ID # 10145
Pennsylvania ID# 68-786
Texas ID#T104704581
Virginia #460167

Non-NELAP States
Connecticut ID #PH0556
Delaware Approved
Maine ID #NY01587
North Carolina #36701
North Carolina #676
Rhode Island LAO00333

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory. To verify NH accredited analytes, go to <https://www4.des.state.nh.us/CertifiedLabs/Certified-Method.aspx>.

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Inventum Engineering
Project: Riverview BCP RI

Service Request: R2010907

Non-Certified Analytes

Certifying Agency: New York Department of Health

Method	Matrix	Analyte
ALS SOP	Soil	Total Solids

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: Riverview BCP RI/

Service Request: R2010907

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001
Sample Matrix: Soil

Date Collected: 11/13/20
Date Received: 11/17/20

Analysis Method	Extracted/Digested By	Analyzed By
6010D	AKONZEL	KMCLAEN
7471B	AKONZEL	AKONZEL
8081B	KSERCU	BALLGEIER
8082A	KSERCU	JMISIUREWICZ
8151A	KSERCU	BALLGEIER
8270D	KSERCU	JMISIUREWICZ
ALS SOP		KAWONG
PFC/537M	MSESSIONS	CCONOVER

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001.R01
Sample Matrix: Soil

Date Collected: 11/13/20
Date Received: 11/17/20

Analysis Method	Extracted/Digested By	Analyzed By
8081B	KSERCU	BALLGEIER
8270D	KSERCU	JMISIUREWICZ

Sample Name: SS-BCP-16-06
Lab Code: R2010907-002
Sample Matrix: Soil

Date Collected: 11/13/20
Date Received: 11/17/20

Analysis Method	Extracted/Digested By	Analyzed By
8260C		FNAEGLER
ALS SOP		KAWONG

Sample Name: SS-BCP-16-06
Lab Code: R2010907-002.R01
Sample Matrix: Soil

Date Collected: 11/13/20
Date Received: 11/17/20

Analysis Method	Extracted/Digested By	Analyzed By
8260C		FNAEGLER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: Riverview BCP RI/

Service Request: R2010907

Sample Name: SS-BCP-16-024
Lab Code: R2010907-003
Sample Matrix: Soil

Date Collected: 11/13/20
Date Received: 11/17/20

Analysis Method

6010D

7471B

8270D

9012B

ALS SOP

Extracted/Digested By

AKONZEL

AKONZEL

KSERCU

GNITAJOUPPI

Analyzed By

KMCLAEN

AKONZEL

JMISIUREWICZ

GNITAJOUPPI

KAWONG

Sample Name: SS-BCP-16-024
Lab Code: R2010907-003.R01
Sample Matrix: Soil

Date Collected: 11/13/20
Date Received: 11/17/20

Analysis Method

8270D

Extracted/Digested By

KSERCU

Analyzed By

JMISIUREWICZ

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004
Sample Matrix: Soil

Date Collected: 11/13/20
Date Received: 11/17/20

Analysis Method

6010D

7471B

8081B

8082A

8151A

8270D

ALS SOP

PFC/537M

Extracted/Digested By

AKONZEL

AKONZEL

KSERCU

KSERCU

KSERCU

KSERCU

MSESSIONS

Analyzed By

KMCLAEN

AKONZEL

BALLGEIER

JMISIUREWICZ

BALLGEIER

JMISIUREWICZ

KAWONG

CCONOVER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: Riverview BCP RI/

Service Request: R2010907

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004.R01
Sample Matrix: Soil

Date Collected: 11/13/20
Date Received: 11/17/20

Analysis Method
8270D

Extracted/Digested By
KSERCU

Analyzed By
JMISIUREWICZ

Sample Name: SS-BCP-17-06
Lab Code: R2010907-005
Sample Matrix: Soil

Date Collected: 11/13/20
Date Received: 11/17/20

Analysis Method
8260C
ALS SOP

Extracted/Digested By

Analyzed By
FNAEGLER
KAWONG

Sample Name: SS-BCP-17-024
Lab Code: R2010907-006
Sample Matrix: Soil

Date Collected: 11/13/20
Date Received: 11/17/20

Analysis Method
6010D
7471B
8270D
9012B
ALS SOP

Extracted/Digested By
AKONZEL
AKONZEL
KSERCU
GNITAJOUPPI

Analyzed By
KMCLAEN
AKONZEL
JMISIUREWICZ
GNITAJOUPPI
KAWONG

Sample Name: SS-BCP-17-024
Lab Code: R2010907-006.R01
Sample Matrix: Soil

Date Collected: 11/13/20
Date Received: 11/17/20

Analysis Method
8270D

Extracted/Digested By
KSERCU

Analyzed By
JMISIUREWICZ

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: Riverview BCP RI/

Service Request: R2010907

Sample Name: TP-BCP-22-01
Lab Code: R2010907-007
Sample Matrix: Soil

Date Collected: 11/16/20
Date Received: 11/17/20

Analysis Method	Extracted/Digested By	Analyzed By
6010D	AKONZEL	KMCLAEN
7471B	AKONZEL	AKONZEL
8260C		FNAEGLER
8270D	KSERCU	JMISIUREWICZ
9012B	GNITAJOUPPI	GNITAJOUPPI
ALS SOP		KAWONG

Sample Name: TP-BCP-22-01
Lab Code: R2010907-007.R01
Sample Matrix: Soil

Date Collected: 11/16/20
Date Received: 11/17/20

Analysis Method	Extracted/Digested By	Analyzed By
8260C		FNAEGLER
8270D	KSERCU	JMISIUREWICZ

Sample Name: TP-BCP-220-01
Lab Code: R2010907-008
Sample Matrix: Soil

Date Collected: 11/16/20
Date Received: 11/17/20

Analysis Method	Extracted/Digested By	Analyzed By
6010D	AKONZEL	KMCLAEN
7471B	AKONZEL	AKONZEL
8260C		FNAEGLER
8270D	KSERCU	JMISIUREWICZ
9012B	GNITAJOUPPI	GNITAJOUPPI
ALS SOP		KAWONG

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: Riverview BCP RI/

Service Request: R2010907

Sample Name: TP-BCP-220-01
Lab Code: R2010907-008.R01
Sample Matrix: Soil

Date Collected: 11/16/20
Date Received: 11/17/20

Analysis Method

8260C
8270D

Extracted/Digested By

KSERCU

Analyzed By

FNAEGLER
JMISIUREWICZ

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009
Sample Matrix: Soil

Date Collected: 11/16/20
Date Received: 11/17/20

Analysis Method

6010D
7471B
8260C
8270D
9012B

Extracted/Digested By

AKONZEL
AKONZEL

KSERCU
GNITAJOUPPI

Analyzed By

KMCLAEN
AKONZEL
FNAEGLER
JMISIUREWICZ
GNITAJOUPPI

ALS SOP

KAWONG

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009.R01
Sample Matrix: Soil

Date Collected: 11/16/20
Date Received: 11/17/20

Analysis Method

8260C
8270D

Extracted/Digested By

KSERCU

Analyzed By

FNAEGLER
JMISIUREWICZ

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010
Sample Matrix: Soil

Date Collected: 11/16/20
Date Received: 11/17/20

Analysis Method

6010D
7471B
8260C

Extracted/Digested By

AKONZEL
AKONZEL

Analyzed By

KMCLAEN
AKONZEL
FNAEGLER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: Riverview BCP RI/

Service Request: R2010907

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010
Sample Matrix: Soil

Date Collected: 11/16/20
Date Received: 11/17/20

Analysis Method

8270D

9012B

ALS SOP

Extracted/Digested By

KSERCU

GNITAJOUPPI

Analyzed By

JMISIUREWICZ

GNITAJOUPPI

KAWONG

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010.R01
Sample Matrix: Soil

Date Collected: 11/16/20
Date Received: 11/17/20

Analysis Method

8260C

8270D

Extracted/Digested By

KSERCU

Analyzed By

FNAEGLER

JMISIUREWICZ



PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

INORGANIC

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C or 6010D	3005A/3010A
6020A or 6020B	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-N-2016 Amenable and Residual Cyanide	SM 4500-CN-G and SM 4500-CN-B,C-2016
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C or 6010D	3050B
6020A or 6020B	3050B
6010C or 6010D TCLP (1311) extract	3005A/3010A
6010C or 6010D SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

ORGANIC

Preparation Methods for Organic methods are listed in the header of the Results pages.

Regarding "Bulk/5035A":

For soil/solid samples submitted in soil jars for Volatiles analysis, the prep method is listed as "Bulk/5035A". The lab follows the closed-system EPA 5035A protocols once the sample is transferred to a sealed vial, but collection in bulk in soil jars does not follow the collection protocols listed in EPA 5035A. In accordance with the NYSDOH technical notice of October 2012, all results or reporting limits <200 ug/kg are to be considered estimated due to potential low bias.



Sample Results

ALS Environmental—Rochester Laboratory

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Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:30
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-06
Lab Code: R2010907-002

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
1,1,2,2-Tetrachloroethane	6.4 U	6.4	0.57	1.05	11/25/20 13:58	
1,1,2-Trichloroethane	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
1,1,2-Trichloro-1,2,2-trifluoroethane	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
1,1-Dichloroethane (1,1-DCA)	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
1,1-Dichloroethene (1,1-DCE)	6.4 U	6.4	0.38	1.05	11/25/20 13:58	
1,2,3-Trichlorobenzene	6.4 U	6.4	0.67	1.05	11/25/20 13:58	
1,2,4-Trichlorobenzene	6.4 U	6.4	0.54	1.05	11/25/20 13:58	
1,2,4-Trimethylbenzene	0.62 J	6.4	0.26	1.05	11/25/20 13:58	
1,2-Dibromo-3-chloropropane (DBCP)	6.4 U	6.4	0.96	1.05	11/25/20 13:58	
1,2-Dibromoethane	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
1,2-Dichlorobenzene	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
1,2-Dichloroethane	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
1,2-Dichloropropane	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
1,3,5-Trimethylbenzene	0.48 J	6.4	0.26	1.05	11/25/20 13:58	
1,3-Dichlorobenzene	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
1,4-Dichlorobenzene	6.4 U	6.4	0.29	1.05	11/25/20 13:58	
1,4-Dioxane	130 U	130	26	1.05	11/25/20 13:58	
2-Butanone (MEK)	6.4 U	6.4	2.6	1.05	11/25/20 13:58	
2-Hexanone	6.4 U	6.4	0.47	1.05	11/25/20 13:58	
4-Methyl-2-pentanone	6.4 U	6.4	0.30	1.05	11/25/20 13:58	
Acetone	6.4 U	6.4	6.1	1.05	11/25/20 13:58	
Benzene	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
Bromochloromethane	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
Bromodichloromethane	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
Bromoform	6.4 U	6.4	0.64	1.05	11/25/20 13:58	
Bromomethane	6.4 U	6.4	2.7	1.05	11/25/20 13:58	
Carbon Disulfide	6.4 U	6.4	0.38	1.05	11/25/20 13:58	
Carbon Tetrachloride	6.4 U	6.4	0.34	1.05	11/25/20 13:58	
Chlorobenzene	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
Chloroethane	6.4 U	6.4	0.53	1.05	11/25/20 13:58	
Chloroform	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
Chloromethane	6.4 U	6.4	1.8	1.05	11/25/20 13:58	
Cyclohexane	6.4 U	6.4	0.34	1.05	11/25/20 13:58	
Dibromochloromethane	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
Dichlorodifluoromethane (CFC 12)	6.4 U	6.4	0.43	1.05	11/25/20 13:58	
Dichloromethane	6.4 U	6.4	3.6	1.05	11/25/20 13:58	
Ethylbenzene	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
Isopropylbenzene (Cumene)	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
Methyl Acetate	6.4 U	6.4	1.1	1.05	11/25/20 13:58	
Methyl tert-Butyl Ether	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
Methylcyclohexane	0.58 J	6.4	0.40	1.05	11/25/20 13:58	
Styrene	6.4 U	6.4	0.26	1.05	11/25/20 13:58	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:30
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-06
Lab Code: R2010907-002

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.62 J	6.4	0.30	1.05	11/25/20 13:58	
Toluene	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
Trichloroethene (TCE)	6.4 U	6.4	0.29	1.05	11/25/20 13:58	
Trichlorofluoromethane (CFC 11)	6.4 U	6.4	0.34	1.05	11/25/20 13:58	
Vinyl Chloride	6.4 U	6.4	0.59	1.05	11/25/20 13:58	
cis-1,2-Dichloroethene	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
cis-1,3-Dichloropropene	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
m,p-Xylenes	13 U	13	0.48	1.05	11/25/20 13:58	
o-Xylene	0.30 J	6.4	0.26	1.05	11/25/20 13:58	
trans-1,2-Dichloroethene	6.4 U	6.4	0.26	1.05	11/25/20 13:58	
trans-1,3-Dichloropropene	6.4 U	6.4	0.26	1.05	11/25/20 13:58	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	66	31 - 154	11/25/20 13:58	
Dibromofluoromethane	97	63 - 138	11/25/20 13:58	
Toluene-d8	100	66 - 138	11/25/20 13:58	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:30
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-06
Lab Code: R2010907-002

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
1,1,2,2-Tetrachloroethane	7.2 U	7.2	0.64	1.18	11/24/20 17:43	
1,1,2-Trichloroethane	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
1,1,2-Trichloro-1,2,2-trifluoroethane	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
1,1-Dichloroethane (1,1-DCA)	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
1,1-Dichloroethene (1,1-DCE)	7.2 U	7.2	0.42	1.18	11/24/20 17:43	
1,2,3-Trichlorobenzene	7.2 U	7.2	0.75	1.18	11/24/20 17:43	
1,2,4-Trichlorobenzene	7.2 U	7.2	0.61	1.18	11/24/20 17:43	
1,2,4-Trimethylbenzene	1.1 J	7.2	0.29	1.18	11/24/20 17:43	
1,2-Dibromo-3-chloropropane (DBCP)	7.2 U	7.2	1.1	1.18	11/24/20 17:43	
1,2-Dibromoethane	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
1,2-Dichlorobenzene	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
1,2-Dichloroethane	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
1,2-Dichloropropane	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
1,3,5-Trimethylbenzene	0.79 J	7.2	0.29	1.18	11/24/20 17:43	
1,3-Dichlorobenzene	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
1,4-Dichlorobenzene	7.2 U	7.2	0.32	1.18	11/24/20 17:43	
1,4-Dioxane	140 U	140	29	1.18	11/24/20 17:43	
2-Butanone (MEK)	7.2 U	7.2	2.9	1.18	11/24/20 17:43	
2-Hexanone	7.2 U	7.2	0.52	1.18	11/24/20 17:43	
4-Methyl-2-pentanone	7.2 U	7.2	0.34	1.18	11/24/20 17:43	
Acetone	7.2 U	7.2	6.8	1.18	11/24/20 17:43	
Benzene	1.0 J	7.2	0.29	1.18	11/24/20 17:43	
Bromochloromethane	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
Bromodichloromethane	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
Bromoform	7.2 U	7.2	0.72	1.18	11/24/20 17:43	
Bromomethane	7.2 U	7.2	3.1	1.18	11/24/20 17:43	
Carbon Disulfide	7.2 U	7.2	0.42	1.18	11/24/20 17:43	
Carbon Tetrachloride	7.2 U	7.2	0.38	1.18	11/24/20 17:43	
Chlorobenzene	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
Chloroethane	7.2 U	7.2	0.59	1.18	11/24/20 17:43	
Chloroform	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
Chloromethane	7.2 U	7.2	2.1	1.18	11/24/20 17:43	
Cyclohexane	7.2 U	7.2	0.38	1.18	11/24/20 17:43	
Dibromochloromethane	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
Dichlorodifluoromethane (CFC 12)	7.2 U	7.2	0.48	1.18	11/24/20 17:43	
Dichloromethane	7.2 U	7.2	4.1	1.18	11/24/20 17:43	
Ethylbenzene	0.33 J	7.2	0.29	1.18	11/24/20 17:43	
Isopropylbenzene (Cumene)	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
Methyl Acetate	7.2 U	7.2	1.3	1.18	11/24/20 17:43	
Methyl tert-Butyl Ether	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
Methylcyclohexane	0.50 J	7.2	0.45	1.18	11/24/20 17:43	
Styrene	7.2 U	7.2	0.29	1.18	11/24/20 17:43	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:30
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-06
Lab Code: R2010907-002

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.60 J	7.2	0.34	1.18	11/24/20 17:43	
Toluene	0.92 J	7.2	0.29	1.18	11/24/20 17:43	
Trichloroethene (TCE)	7.2 U	7.2	0.32	1.18	11/24/20 17:43	
Trichlorofluoromethane (CFC 11)	7.2 U	7.2	0.38	1.18	11/24/20 17:43	
Vinyl Chloride	7.2 U	7.2	0.67	1.18	11/24/20 17:43	
cis-1,2-Dichloroethene	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
cis-1,3-Dichloropropene	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
m,p-Xylenes	1.3 J	14	0.54	1.18	11/24/20 17:43	
o-Xylene	0.88 J	7.2	0.29	1.18	11/24/20 17:43	
trans-1,2-Dichloroethene	7.2 U	7.2	0.29	1.18	11/24/20 17:43	
trans-1,3-Dichloropropene	7.2 U	7.2	0.29	1.18	11/24/20 17:43	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	71	31 - 154	11/24/20 17:43	
Dibromofluoromethane	98	63 - 138	11/24/20 17:43	
Toluene-d8	103	66 - 138	11/24/20 17:43	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:30
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-06
Lab Code: R2010907-005

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	11 U	11	0.45	1.67	11/24/20 18:07	
1,1,2,2-Tetrachloroethane	11 U	11	0.99	1.67	11/24/20 18:07	
1,1,2-Trichloroethane	11 U	11	0.45	1.67	11/24/20 18:07	
1,1,2-Trichloro-1,2,2-trifluoroethane	11 U	11	0.45	1.67	11/24/20 18:07	
1,1-Dichloroethane (1,1-DCA)	11 U	11	0.45	1.67	11/24/20 18:07	
1,1-Dichloroethene (1,1-DCE)	11 U	11	0.66	1.67	11/24/20 18:07	
1,2,3-Trichlorobenzene	11 U	11	1.2	1.67	11/24/20 18:07	
1,2,4-Trichlorobenzene	11 U	11	0.95	1.67	11/24/20 18:07	
1,2,4-Trimethylbenzene	11 U	11	0.45	1.67	11/24/20 18:07	
1,2-Dibromo-3-chloropropane (DBCP)	11 U	11	1.7	1.67	11/24/20 18:07	
1,2-Dibromoethane	11 U	11	0.45	1.67	11/24/20 18:07	
1,2-Dichlorobenzene	11 U	11	0.45	1.67	11/24/20 18:07	
1,2-Dichloroethane	11 U	11	0.45	1.67	11/24/20 18:07	
1,2-Dichloropropane	11 U	11	0.45	1.67	11/24/20 18:07	
1,3,5-Trimethylbenzene	11 U	11	0.45	1.67	11/24/20 18:07	
1,3-Dichlorobenzene	11 U	11	0.45	1.67	11/24/20 18:07	
1,4-Dichlorobenzene	11 U	11	0.50	1.67	11/24/20 18:07	
1,4-Dioxane	220 U	220	45	1.67	11/24/20 18:07	
2-Butanone (MEK)	11 U	11	4.5	1.67	11/24/20 18:07	
2-Hexanone	11 U	11	0.81	1.67	11/24/20 18:07	
4-Methyl-2-pentanone	11 U	11	0.52	1.67	11/24/20 18:07	
Acetone	31	11	11	1.67	11/24/20 18:07	
Benzene	11 U	11	0.45	1.67	11/24/20 18:07	
Bromochloromethane	11 U	11	0.45	1.67	11/24/20 18:07	
Bromodichloromethane	11 U	11	0.45	1.67	11/24/20 18:07	
Bromoform	11 U	11	1.2	1.67	11/24/20 18:07	
Bromomethane	11 U	11	4.8	1.67	11/24/20 18:07	
Carbon Disulfide	11 U	11	0.66	1.67	11/24/20 18:07	
Carbon Tetrachloride	11 U	11	0.59	1.67	11/24/20 18:07	
Chlorobenzene	11 U	11	0.45	1.67	11/24/20 18:07	
Chloroethane	11 U	11	0.92	1.67	11/24/20 18:07	
Chloroform	11 U	11	0.45	1.67	11/24/20 18:07	
Chloromethane	11 U	11	3.2	1.67	11/24/20 18:07	
Cyclohexane	1.7 J	11	0.59	1.67	11/24/20 18:07	
Dibromochloromethane	11 U	11	0.45	1.67	11/24/20 18:07	
Dichlorodifluoromethane (CFC 12)	11 U	11	0.74	1.67	11/24/20 18:07	
Dichloromethane	11 U	11	6.3	1.67	11/24/20 18:07	
Ethylbenzene	11 U	11	0.45	1.67	11/24/20 18:07	
Isopropylbenzene (Cumene)	11 U	11	0.45	1.67	11/24/20 18:07	
Methyl Acetate	4.6 J	11	1.9	1.67	11/24/20 18:07	
Methyl tert-Butyl Ether	11 U	11	0.45	1.67	11/24/20 18:07	
Methylcyclohexane	3.1 J	11	0.70	1.67	11/24/20 18:07	
Styrene	11 U	11	0.45	1.67	11/24/20 18:07	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:30
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-06
Lab Code: R2010907-005

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	2.2 J	11	0.52	1.67	11/24/20 18:07	
Toluene	0.69 J	11	0.45	1.67	11/24/20 18:07	
Trichloroethene (TCE)	11 U	11	0.50	1.67	11/24/20 18:07	
Trichlorofluoromethane (CFC 11)	11 U	11	0.59	1.67	11/24/20 18:07	
Vinyl Chloride	11 U	11	1.1	1.67	11/24/20 18:07	
cis-1,2-Dichloroethene	11 U	11	0.45	1.67	11/24/20 18:07	
cis-1,3-Dichloropropene	11 U	11	0.45	1.67	11/24/20 18:07	
m,p-Xylenes	0.97 J	22	0.83	1.67	11/24/20 18:07	
o-Xylene	0.56 J	11	0.45	1.67	11/24/20 18:07	
trans-1,2-Dichloroethene	11 U	11	0.45	1.67	11/24/20 18:07	
trans-1,3-Dichloropropene	11 U	11	0.45	1.67	11/24/20 18:07	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	36	31 - 154	11/24/20 18:07	
Dibromofluoromethane	111	63 - 138	11/24/20 18:07	
Toluene-d8	97	66 - 138	11/24/20 18:07	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-22-01
Lab Code: R2010907-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
1,1,2,2-Tetrachloroethane	1.9 J	8.4	0.74	1.41	11/24/20 18:30	
1,1,2-Trichloroethane	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
1,1,2-Trichloro-1,2,2-trifluoroethane	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
1,1-Dichloroethane (1,1-DCA)	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
1,1-Dichloroethene (1,1-DCE)	8.4 U	8.4	0.49	1.41	11/24/20 18:30	
1,2,3-Trichlorobenzene	8.4 U	8.4	0.87	1.41	11/24/20 18:30	
1,2,4-Trichlorobenzene	8.4 U	8.4	0.71	1.41	11/24/20 18:30	
1,2,4-Trimethylbenzene	2.8 J	8.4	0.34	1.41	11/24/20 18:30	
1,2-Dibromo-3-chloropropane (DBCP)	8.4 U	8.4	1.3	1.41	11/24/20 18:30	
1,2-Dibromoethane	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
1,2-Dichlorobenzene	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
1,2-Dichloroethane	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
1,2-Dichloropropane	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
1,3,5-Trimethylbenzene	2.6 J	8.4	0.34	1.41	11/24/20 18:30	
1,3-Dichlorobenzene	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
1,4-Dichlorobenzene	8.4 U	8.4	0.37	1.41	11/24/20 18:30	
1,4-Dioxane	170 U	170	34	1.41	11/24/20 18:30	
2-Butanone (MEK)	8.4 U	8.4	3.4	1.41	11/24/20 18:30	
2-Hexanone	8.4 U	8.4	0.61	1.41	11/24/20 18:30	
4-Methyl-2-pentanone	8.4 U	8.4	0.39	1.41	11/24/20 18:30	
Acetone	8.4 U	8.4	7.9	1.41	11/24/20 18:30	
Benzene	0.74 J	8.4	0.34	1.41	11/24/20 18:30	
Bromochloromethane	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
Bromodichloromethane	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
Bromoform	8.4 U	8.4	0.84	1.41	11/24/20 18:30	
Bromomethane	8.4 U	8.4	3.6	1.41	11/24/20 18:30	
Carbon Disulfide	8.4 U	8.4	0.49	1.41	11/24/20 18:30	
Carbon Tetrachloride	8.4 U	8.4	0.44	1.41	11/24/20 18:30	
Chlorobenzene	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
Chloroethane	8.4 U	8.4	0.69	1.41	11/24/20 18:30	
Chloroform	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
Chloromethane	8.4 U	8.4	2.4	1.41	11/24/20 18:30	
Cyclohexane	6.6 J	8.4	0.44	1.41	11/24/20 18:30	
Dibromochloromethane	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
Dichlorodifluoromethane (CFC 12)	8.4 U	8.4	0.56	1.41	11/24/20 18:30	
Dichloromethane	8.4 U	8.4	4.7	1.41	11/24/20 18:30	
Ethylbenzene	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
Isopropylbenzene (Cumene)	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
Methyl Acetate	8.4 U	8.4	1.5	1.41	11/24/20 18:30	
Methyl tert-Butyl Ether	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
Methylcyclohexane	12	8.4	0.52	1.41	11/24/20 18:30	
Styrene	8.4 U	8.4	0.34	1.41	11/24/20 18:30	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-22-01
Lab Code: R2010907-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	1.9 J	8.4	0.39	1.41	11/24/20 18:30	
Toluene	0.92 J	8.4	0.34	1.41	11/24/20 18:30	
Trichloroethene (TCE)	8.4 U	8.4	0.37	1.41	11/24/20 18:30	
Trichlorofluoromethane (CFC 11)	8.4 U	8.4	0.44	1.41	11/24/20 18:30	
Vinyl Chloride	8.4 U	8.4	0.77	1.41	11/24/20 18:30	
cis-1,2-Dichloroethene	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
cis-1,3-Dichloropropene	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
m,p-Xylenes	1.8 J	17	0.62	1.41	11/24/20 18:30	
o-Xylene	1.2 J	8.4	0.34	1.41	11/24/20 18:30	
trans-1,2-Dichloroethene	8.4 U	8.4	0.34	1.41	11/24/20 18:30	
trans-1,3-Dichloropropene	8.4 U	8.4	0.34	1.41	11/24/20 18:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	27 *	31 - 154	11/24/20 18:30	*
Dibromofluoromethane	124	63 - 138	11/24/20 18:30	
Toluene-d8	96	66 - 138	11/24/20 18:30	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-22-01
Lab Code: R2010907-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
1,1,2,2-Tetrachloroethane	9.5 U	9.5	0.84	1.6	11/25/20 14:21	
1,1,2-Trichloroethane	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
1,1-Dichloroethane (1,1-DCA)	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
1,1-Dichloroethene (1,1-DCE)	9.5 U	9.5	0.55	1.6	11/25/20 14:21	
1,2,3-Trichlorobenzene	9.5 U	9.5	0.99	1.6	11/25/20 14:21	
1,2,4-Trichlorobenzene	9.5 U	9.5	0.80	1.6	11/25/20 14:21	
1,2,4-Trimethylbenzene	4.6 J	9.5	0.38	1.6	11/25/20 14:21	
1,2-Dibromo-3-chloropropane (DBCP)	9.5 U	9.5	1.5	1.6	11/25/20 14:21	
1,2-Dibromoethane	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
1,2-Dichlorobenzene	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
1,2-Dichloroethane	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
1,2-Dichloropropane	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
1,3,5-Trimethylbenzene	4.8 J	9.5	0.38	1.6	11/25/20 14:21	
1,3-Dichlorobenzene	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
1,4-Dichlorobenzene	9.5 U	9.5	0.42	1.6	11/25/20 14:21	
1,4-Dioxane	190 U	190	38	1.6	11/25/20 14:21	
2-Butanone (MEK)	9.5 U	9.5	3.8	1.6	11/25/20 14:21	
2-Hexanone	9.5 U	9.5	0.69	1.6	11/25/20 14:21	
4-Methyl-2-pentanone	9.5 U	9.5	0.44	1.6	11/25/20 14:21	
Acetone	9.5 U	9.5	9.0	1.6	11/25/20 14:21	
Benzene	1.4 J	9.5	0.38	1.6	11/25/20 14:21	
Bromochloromethane	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
Bromodichloromethane	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
Bromoform	9.5 U	9.5	0.95	1.6	11/25/20 14:21	
Bromomethane	9.5 U	9.5	4.0	1.6	11/25/20 14:21	
Carbon Disulfide	9.5 U	9.5	0.55	1.6	11/25/20 14:21	
Carbon Tetrachloride	9.5 U	9.5	0.50	1.6	11/25/20 14:21	
Chlorobenzene	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
Chloroethane	9.5 U	9.5	0.78	1.6	11/25/20 14:21	
Chloroform	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
Chloromethane	9.5 U	9.5	2.7	1.6	11/25/20 14:21	
Cyclohexane	8.2 J	9.5	0.50	1.6	11/25/20 14:21	
Dibromochloromethane	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
Dichlorodifluoromethane (CFC 12)	9.5 U	9.5	0.63	1.6	11/25/20 14:21	
Dichloromethane	9.5 U	9.5	5.4	1.6	11/25/20 14:21	
Ethylbenzene	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
Isopropylbenzene (Cumene)	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
Methyl Acetate	9.5 U	9.5	1.6	1.6	11/25/20 14:21	
Methyl tert-Butyl Ether	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
Methylcyclohexane	12	9.5	0.59	1.6	11/25/20 14:21	
Styrene	9.5 U	9.5	0.38	1.6	11/25/20 14:21	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-22-01
Lab Code: R2010907-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	3.5 J	9.5	0.44	1.6	11/25/20 14:21	
Toluene	1.4 J	9.5	0.38	1.6	11/25/20 14:21	
Trichloroethene (TCE)	9.5 U	9.5	0.42	1.6	11/25/20 14:21	
Trichlorofluoromethane (CFC 11)	9.5 U	9.5	0.50	1.6	11/25/20 14:21	
Vinyl Chloride	9.5 U	9.5	0.88	1.6	11/25/20 14:21	
cis-1,2-Dichloroethene	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
cis-1,3-Dichloropropene	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
m,p-Xylenes	2.5 J	19	0.71	1.6	11/25/20 14:21	
o-Xylene	2.5 J	9.5	0.38	1.6	11/25/20 14:21	
trans-1,2-Dichloroethene	9.5 U	9.5	0.38	1.6	11/25/20 14:21	
trans-1,3-Dichloropropene	9.5 U	9.5	0.38	1.6	11/25/20 14:21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	24 *	31 - 154	11/25/20 14:21	*
Dibromofluoromethane	129	63 - 138	11/25/20 14:21	
Toluene-d8	102	66 - 138	11/25/20 14:21	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-220-01
Lab Code: R2010907-008

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
1,1,2,2-Tetrachloroethane	8.9 U	8.9	0.79	1.52	11/24/20 18:53	
1,1,2-Trichloroethane	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
1,1,2-Trichloro-1,2,2-trifluoroethane	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
1,1-Dichloroethane (1,1-DCA)	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
1,1-Dichloroethene (1,1-DCE)	8.9 U	8.9	0.52	1.52	11/24/20 18:53	
1,2,3-Trichlorobenzene	8.9 U	8.9	0.93	1.52	11/24/20 18:53	
1,2,4-Trichlorobenzene	8.9 U	8.9	0.75	1.52	11/24/20 18:53	
1,2,4-Trimethylbenzene	6.4 J	8.9	0.36	1.52	11/24/20 18:53	
1,2-Dibromo-3-chloropropane (DBCP)	8.9 U	8.9	1.4	1.52	11/24/20 18:53	
1,2-Dibromoethane	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
1,2-Dichlorobenzene	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
1,2-Dichloroethane	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
1,2-Dichloropropane	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
1,3,5-Trimethylbenzene	6.2 J	8.9	0.36	1.52	11/24/20 18:53	
1,3-Dichlorobenzene	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
1,4-Dichlorobenzene	8.9 U	8.9	0.40	1.52	11/24/20 18:53	
1,4-Dioxane	180 U	180	36	1.52	11/24/20 18:53	
2-Butanone (MEK)	8.9 U	8.9	3.6	1.52	11/24/20 18:53	
2-Hexanone	8.9 U	8.9	0.64	1.52	11/24/20 18:53	
4-Methyl-2-pentanone	1.0 J	8.9	0.41	1.52	11/24/20 18:53	
Acetone	19	8.9	8.4	1.52	11/24/20 18:53	
Benzene	2.4 J	8.9	0.36	1.52	11/24/20 18:53	
Bromochloromethane	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
Bromodichloromethane	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
Bromoform	8.9 U	8.9	0.89	1.52	11/24/20 18:53	
Bromomethane	8.9 U	8.9	3.8	1.52	11/24/20 18:53	
Carbon Disulfide	8.9 U	8.9	0.52	1.52	11/24/20 18:53	
Carbon Tetrachloride	8.9 U	8.9	0.47	1.52	11/24/20 18:53	
Chlorobenzene	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
Chloroethane	8.9 U	8.9	0.73	1.52	11/24/20 18:53	
Chloroform	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
Chloromethane	8.9 U	8.9	2.5	1.52	11/24/20 18:53	
Cyclohexane	9.2	8.9	0.47	1.52	11/24/20 18:53	
Dibromochloromethane	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
Dichlorodifluoromethane (CFC 12)	8.9 U	8.9	0.59	1.52	11/24/20 18:53	
Dichloromethane	8.9 U	8.9	5.0	1.52	11/24/20 18:53	
Ethylbenzene	0.76 J	8.9	0.36	1.52	11/24/20 18:53	
Isopropylbenzene (Cumene)	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
Methyl Acetate	8.9 U	8.9	1.5	1.52	11/24/20 18:53	
Methyl tert-Butyl Ether	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
Methylcyclohexane	18	8.9	0.56	1.52	11/24/20 18:53	
Styrene	8.9 U	8.9	0.36	1.52	11/24/20 18:53	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-220-01
Lab Code: R2010907-008

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	3.0 J	8.9	0.41	1.52	11/24/20 18:53	
Toluene	1.5 J	8.9	0.36	1.52	11/24/20 18:53	
Trichloroethene (TCE)	8.9 U	8.9	0.40	1.52	11/24/20 18:53	
Trichlorofluoromethane (CFC 11)	8.9 U	8.9	0.47	1.52	11/24/20 18:53	
Vinyl Chloride	8.9 U	8.9	0.82	1.52	11/24/20 18:53	
cis-1,2-Dichloroethene	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
cis-1,3-Dichloropropene	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
m,p-Xylenes	3.6 J	18	0.66	1.52	11/24/20 18:53	
o-Xylene	2.5 J	8.9	0.36	1.52	11/24/20 18:53	
trans-1,2-Dichloroethene	8.9 U	8.9	0.36	1.52	11/24/20 18:53	
trans-1,3-Dichloropropene	8.9 U	8.9	0.36	1.52	11/24/20 18:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	22 *	31 - 154	11/24/20 18:53	*
Dibromofluoromethane	141 *	63 - 138	11/24/20 18:53	*
Toluene-d8	112	66 - 138	11/24/20 18:53	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-220-01
Lab Code: R2010907-008

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
1,1,2,2-Tetrachloroethane	9.2 U	9.2	0.82	1.58	11/25/20 14:45	
1,1,2-Trichloroethane	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
1,1-Dichloroethane (1,1-DCA)	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
1,1-Dichloroethene (1,1-DCE)	9.2 U	9.2	0.54	1.58	11/25/20 14:45	
1,2,3-Trichlorobenzene	9.2 U	9.2	0.96	1.58	11/25/20 14:45	
1,2,4-Trichlorobenzene	9.2 U	9.2	0.78	1.58	11/25/20 14:45	
1,2,4-Trimethylbenzene	4.9 J	9.2	0.37	1.58	11/25/20 14:45	
1,2-Dibromo-3-chloropropane (DBCP)	9.2 U	9.2	1.4	1.58	11/25/20 14:45	
1,2-Dibromoethane	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
1,2-Dichlorobenzene	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
1,2-Dichloroethane	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
1,2-Dichloropropane	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
1,3,5-Trimethylbenzene	4.9 J	9.2	0.37	1.58	11/25/20 14:45	
1,3-Dichlorobenzene	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
1,4-Dichlorobenzene	9.2 U	9.2	0.41	1.58	11/25/20 14:45	
1,4-Dioxane	180 U	180	37	1.58	11/25/20 14:45	
2-Butanone (MEK)	9.2 U	9.2	3.7	1.58	11/25/20 14:45	
2-Hexanone	9.2 U	9.2	0.67	1.58	11/25/20 14:45	
4-Methyl-2-pentanone	9.2 U	9.2	0.43	1.58	11/25/20 14:45	
Acetone	9.2 U	9.2	8.7	1.58	11/25/20 14:45	
Benzene	1.2 J	9.2	0.37	1.58	11/25/20 14:45	
Bromochloromethane	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
Bromodichloromethane	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
Bromoform	9.2 U	9.2	0.93	1.58	11/25/20 14:45	
Bromomethane	9.2 U	9.2	3.9	1.58	11/25/20 14:45	
Carbon Disulfide	9.2 U	9.2	0.54	1.58	11/25/20 14:45	
Carbon Tetrachloride	9.2 U	9.2	0.48	1.58	11/25/20 14:45	
Chlorobenzene	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
Chloroethane	9.2 U	9.2	0.76	1.58	11/25/20 14:45	
Chloroform	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
Chloromethane	9.2 U	9.2	2.6	1.58	11/25/20 14:45	
Cyclohexane	9.3	9.2	0.48	1.58	11/25/20 14:45	
Dibromochloromethane	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
Dichlorodifluoromethane (CFC 12)	9.2 U	9.2	0.61	1.58	11/25/20 14:45	
Dichloromethane	9.2 U	9.2	5.2	1.58	11/25/20 14:45	
Ethylbenzene	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
Isopropylbenzene (Cumene)	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
Methyl Acetate	9.2 U	9.2	1.6	1.58	11/25/20 14:45	
Methyl tert-Butyl Ether	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
Methylcyclohexane	15	9.2	0.58	1.58	11/25/20 14:45	
Styrene	9.2 U	9.2	0.37	1.58	11/25/20 14:45	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-220-01
Lab Code: R2010907-008

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 J	9.2	0.43	1.58	11/25/20 14:45	
Toluene	1.1 J	9.2	0.37	1.58	11/25/20 14:45	
Trichloroethene (TCE)	9.2 U	9.2	0.41	1.58	11/25/20 14:45	
Trichlorofluoromethane (CFC 11)	9.2 U	9.2	0.48	1.58	11/25/20 14:45	
Vinyl Chloride	9.2 U	9.2	0.85	1.58	11/25/20 14:45	
cis-1,2-Dichloroethene	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
cis-1,3-Dichloropropene	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
m,p-Xylenes	2.2 J	18	0.69	1.58	11/25/20 14:45	
o-Xylene	2.1 J	9.2	0.37	1.58	11/25/20 14:45	
trans-1,2-Dichloroethene	9.2 U	9.2	0.37	1.58	11/25/20 14:45	
trans-1,3-Dichloropropene	9.2 U	9.2	0.37	1.58	11/25/20 14:45	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	22 *	31 - 154	11/25/20 14:45	*
Dibromofluoromethane	139 *	63 - 138	11/25/20 14:45	*
Toluene-d8	108	66 - 138	11/25/20 14:45	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
1,1,2,2-Tetrachloroethane	7.2 U	7.2	0.64	1.23	11/28/20 12:41	
1,1,2-Trichloroethane	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
1,1,2-Trichloro-1,2,2-trifluoroethane	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
1,1-Dichloroethane (1,1-DCA)	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
1,1-Dichloroethene (1,1-DCE)	7.2 U	7.2	0.42	1.23	11/28/20 12:41	
1,2,3-Trichlorobenzene	1.6 J	7.2	0.75	1.23	11/28/20 12:41	
1,2,4-Trichlorobenzene	1.1 J	7.2	0.61	1.23	11/28/20 12:41	
1,2,4-Trimethylbenzene	1.3 J	7.2	0.29	1.23	11/28/20 12:41	
1,2-Dibromo-3-chloropropane (DBCP)	7.2 U	7.2	1.1	1.23	11/28/20 12:41	
1,2-Dibromoethane	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
1,2-Dichlorobenzene	0.76 J	7.2	0.29	1.23	11/28/20 12:41	
1,2-Dichloroethane	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
1,2-Dichloropropane	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
1,3,5-Trimethylbenzene	1.6 J	7.2	0.29	1.23	11/28/20 12:41	
1,3-Dichlorobenzene	0.72 J	7.2	0.29	1.23	11/28/20 12:41	
1,4-Dichlorobenzene	0.84 J	7.2	0.32	1.23	11/28/20 12:41	
1,4-Dioxane	140 U	140	29	1.23	11/28/20 12:41	
2-Butanone (MEK)	7.2 U	7.2	2.9	1.23	11/28/20 12:41	
2-Hexanone	7.2 U	7.2	0.52	1.23	11/28/20 12:41	
4-Methyl-2-pentanone	7.2 U	7.2	0.34	1.23	11/28/20 12:41	
Acetone	7.2 U	7.2	6.8	1.23	11/28/20 12:41	
Benzene	1.5 J	7.2	0.29	1.23	11/28/20 12:41	
Bromochloromethane	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
Bromodichloromethane	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
Bromoform	7.2 U	7.2	0.72	1.23	11/28/20 12:41	
Bromomethane	7.2 U	7.2	3.1	1.23	11/28/20 12:41	
Carbon Disulfide	7.2 U	7.2	0.42	1.23	11/28/20 12:41	
Carbon Tetrachloride	7.2 U	7.2	0.38	1.23	11/28/20 12:41	
Chlorobenzene	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
Chloroethane	7.2 U	7.2	0.59	1.23	11/28/20 12:41	
Chloroform	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
Chloromethane	7.2 U	7.2	2.1	1.23	11/28/20 12:41	
Cyclohexane	2.9 J	7.2	0.38	1.23	11/28/20 12:41	
Dibromochloromethane	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
Dichlorodifluoromethane (CFC 12)	7.2 U	7.2	0.48	1.23	11/28/20 12:41	
Dichloromethane	7.2 U	7.2	4.1	1.23	11/28/20 12:41	
Ethylbenzene	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
Isopropylbenzene (Cumene)	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
Methyl Acetate	7.2 U	7.2	1.3	1.23	11/28/20 12:41	
Methyl tert-Butyl Ether	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
Methylcyclohexane	4.9 J	7.2	0.45	1.23	11/28/20 12:41	
Styrene	7.2 U	7.2	0.29	1.23	11/28/20 12:41	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.4 J	7.2	0.34	1.23	11/28/20 12:41	
Toluene	0.78 J	7.2	0.29	1.23	11/28/20 12:41	
Trichloroethene (TCE)	7.2 U	7.2	0.32	1.23	11/28/20 12:41	
Trichlorofluoromethane (CFC 11)	7.2 U	7.2	0.38	1.23	11/28/20 12:41	
Vinyl Chloride	7.2 U	7.2	0.67	1.23	11/28/20 12:41	
cis-1,2-Dichloroethene	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
cis-1,3-Dichloropropene	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
m,p-Xylenes	0.75 J	14	0.54	1.23	11/28/20 12:41	
o-Xylene	0.55 J	7.2	0.29	1.23	11/28/20 12:41	
trans-1,2-Dichloroethene	7.2 U	7.2	0.29	1.23	11/28/20 12:41	
trans-1,3-Dichloropropene	7.2 U	7.2	0.29	1.23	11/28/20 12:41	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	30 *	31 - 154	11/28/20 12:41	*
Dibromofluoromethane	120	63 - 138	11/28/20 12:41	
Toluene-d8	106	66 - 138	11/28/20 12:41	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
1,1,2,2-Tetrachloroethane	7.5 U	7.5	0.66	1.28	11/25/20 15:08	
1,1,2-Trichloroethane	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
1,1,2-Trichloro-1,2,2-trifluoroethane	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
1,1-Dichloroethane (1,1-DCA)	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
1,1-Dichloroethene (1,1-DCE)	7.5 U	7.5	0.44	1.28	11/25/20 15:08	
1,2,3-Trichlorobenzene	7.5 U	7.5	0.78	1.28	11/25/20 15:08	
1,2,4-Trichlorobenzene	7.5 U	7.5	0.63	1.28	11/25/20 15:08	
1,2,4-Trimethylbenzene	0.75 J	7.5	0.30	1.28	11/25/20 15:08	
1,2-Dibromo-3-chloropropane (DBCP)	7.5 U	7.5	1.2	1.28	11/25/20 15:08	
1,2-Dibromoethane	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
1,2-Dichlorobenzene	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
1,2-Dichloroethane	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
1,2-Dichloropropane	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
1,3,5-Trimethylbenzene	0.84 J	7.5	0.30	1.28	11/25/20 15:08	
1,3-Dichlorobenzene	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
1,4-Dichlorobenzene	7.5 U	7.5	0.33	1.28	11/25/20 15:08	
1,4-Dioxane	150 U	150	30	1.28	11/25/20 15:08	
2-Butanone (MEK)	7.5 U	7.5	3.0	1.28	11/25/20 15:08	
2-Hexanone	7.5 U	7.5	0.54	1.28	11/25/20 15:08	
4-Methyl-2-pentanone	7.5 U	7.5	0.35	1.28	11/25/20 15:08	
Acetone	7.5 U	7.5	7.1	1.28	11/25/20 15:08	
Benzene	0.74 J	7.5	0.30	1.28	11/25/20 15:08	
Bromochloromethane	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
Bromodichloromethane	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
Bromoform	7.5 U	7.5	0.75	1.28	11/25/20 15:08	
Bromomethane	7.5 U	7.5	3.2	1.28	11/25/20 15:08	
Carbon Disulfide	7.5 U	7.5	0.44	1.28	11/25/20 15:08	
Carbon Tetrachloride	7.5 U	7.5	0.39	1.28	11/25/20 15:08	
Chlorobenzene	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
Chloroethane	7.5 U	7.5	0.62	1.28	11/25/20 15:08	
Chloroform	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
Chloromethane	7.5 U	7.5	2.1	1.28	11/25/20 15:08	
Cyclohexane	1.8 J	7.5	0.39	1.28	11/25/20 15:08	
Dibromochloromethane	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
Dichlorodifluoromethane (CFC 12)	7.5 U	7.5	0.50	1.28	11/25/20 15:08	
Dichloromethane	7.5 U	7.5	4.2	1.28	11/25/20 15:08	
Ethylbenzene	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
Isopropylbenzene (Cumene)	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
Methyl Acetate	7.5 U	7.5	1.3	1.28	11/25/20 15:08	
Methyl tert-Butyl Ether	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
Methylcyclohexane	3.5 J	7.5	0.47	1.28	11/25/20 15:08	
Styrene	7.5 U	7.5	0.30	1.28	11/25/20 15:08	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	1.8 J	7.5	0.35	1.28	11/25/20 15:08	
Toluene	0.56 J	7.5	0.30	1.28	11/25/20 15:08	
Trichloroethene (TCE)	7.5 U	7.5	0.33	1.28	11/25/20 15:08	
Trichlorofluoromethane (CFC 11)	7.5 U	7.5	0.39	1.28	11/25/20 15:08	
Vinyl Chloride	7.5 U	7.5	0.69	1.28	11/25/20 15:08	
cis-1,2-Dichloroethene	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
cis-1,3-Dichloropropene	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
m,p-Xylenes	0.67 J	15	0.56	1.28	11/25/20 15:08	
o-Xylene	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
trans-1,2-Dichloroethene	7.5 U	7.5	0.30	1.28	11/25/20 15:08	
trans-1,3-Dichloropropene	7.5 U	7.5	0.30	1.28	11/25/20 15:08	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	32	31 - 154	11/25/20 15:08	
Dibromofluoromethane	110	63 - 138	11/25/20 15:08	
Toluene-d8	109	66 - 138	11/25/20 15:08	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
1,1,2,2-Tetrachloroethane	7.3 U	7.3	0.65	1.25	11/25/20 15:31	
1,1,2-Trichloroethane	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
1,1,2-Trichloro-1,2,2-trifluoroethane	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
1,1-Dichloroethane (1,1-DCA)	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
1,1-Dichloroethene (1,1-DCE)	7.3 U	7.3	0.43	1.25	11/25/20 15:31	
1,2,3-Trichlorobenzene	7.3 U	7.3	0.77	1.25	11/25/20 15:31	
1,2,4-Trichlorobenzene	7.3 U	7.3	0.62	1.25	11/25/20 15:31	
1,2,4-Trimethylbenzene	0.43 J	7.3	0.30	1.25	11/25/20 15:31	
1,2-Dibromo-3-chloropropane (DBCP)	7.3 U	7.3	1.1	1.25	11/25/20 15:31	
1,2-Dibromoethane	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
1,2-Dichlorobenzene	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
1,2-Dichloroethane	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
1,2-Dichloropropane	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
1,3,5-Trimethylbenzene	0.63 J	7.3	0.30	1.25	11/25/20 15:31	
1,3-Dichlorobenzene	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
1,4-Dichlorobenzene	7.3 U	7.3	0.33	1.25	11/25/20 15:31	
1,4-Dioxane	150 U	150	30	1.25	11/25/20 15:31	
2-Butanone (MEK)	7.3 U	7.3	3.0	1.25	11/25/20 15:31	
2-Hexanone	7.3 U	7.3	0.53	1.25	11/25/20 15:31	
4-Methyl-2-pentanone	7.3 U	7.3	0.34	1.25	11/25/20 15:31	
Acetone	7.3 U	7.3	6.9	1.25	11/25/20 15:31	
Benzene	0.46 J	7.3	0.30	1.25	11/25/20 15:31	
Bromochloromethane	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
Bromodichloromethane	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
Bromoform	7.3 U	7.3	0.74	1.25	11/25/20 15:31	
Bromomethane	7.3 U	7.3	3.1	1.25	11/25/20 15:31	
Carbon Disulfide	7.3 U	7.3	0.43	1.25	11/25/20 15:31	
Carbon Tetrachloride	7.3 U	7.3	0.39	1.25	11/25/20 15:31	
Chlorobenzene	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
Chloroethane	7.3 U	7.3	0.61	1.25	11/25/20 15:31	
Chloroform	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
Chloromethane	7.3 U	7.3	2.1	1.25	11/25/20 15:31	
Cyclohexane	2.2 J	7.3	0.39	1.25	11/25/20 15:31	
Dibromochloromethane	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
Dichlorodifluoromethane (CFC 12)	7.3 U	7.3	0.49	1.25	11/25/20 15:31	
Dichloromethane	7.3 U	7.3	4.1	1.25	11/25/20 15:31	
Ethylbenzene	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
Isopropylbenzene (Cumene)	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
Methyl Acetate	7.3 U	7.3	1.3	1.25	11/25/20 15:31	
Methyl tert-Butyl Ether	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
Methylcyclohexane	2.9 J	7.3	0.46	1.25	11/25/20 15:31	
Styrene	7.3 U	7.3	0.30	1.25	11/25/20 15:31	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	1.7 J	7.3	0.34	1.25	11/25/20 15:31	
Toluene	0.40 J	7.3	0.30	1.25	11/25/20 15:31	
Trichloroethene (TCE)	7.3 U	7.3	0.33	1.25	11/25/20 15:31	
Trichlorofluoromethane (CFC 11)	7.3 U	7.3	0.39	1.25	11/25/20 15:31	
Vinyl Chloride	7.3 U	7.3	0.68	1.25	11/25/20 15:31	
cis-1,2-Dichloroethene	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
cis-1,3-Dichloropropene	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
m,p-Xylenes	15 U	15	0.55	1.25	11/25/20 15:31	
o-Xylene	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
trans-1,2-Dichloroethene	7.3 U	7.3	0.30	1.25	11/25/20 15:31	
trans-1,3-Dichloropropene	7.3 U	7.3	0.30	1.25	11/25/20 15:31	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	33	31 - 154	11/25/20 15:31	
Dibromofluoromethane	111	63 - 138	11/25/20 15:31	
Toluene-d8	112	66 - 138	11/25/20 15:31	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
1,1,2,2-Tetrachloroethane	7.6 U	7.6	0.67	1.29	11/28/20 13:04	
1,1,2-Trichloroethane	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
1,1,2-Trichloro-1,2,2-trifluoroethane	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
1,1-Dichloroethane (1,1-DCA)	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
1,1-Dichloroethene (1,1-DCE)	7.6 U	7.6	0.44	1.29	11/28/20 13:04	
1,2,3-Trichlorobenzene	7.6 U	7.6	0.79	1.29	11/28/20 13:04	
1,2,4-Trichlorobenzene	7.6 U	7.6	0.64	1.29	11/28/20 13:04	
1,2,4-Trimethylbenzene	1.2 J	7.6	0.31	1.29	11/28/20 13:04	
1,2-Dibromo-3-chloropropane (DBCP)	7.6 U	7.6	1.2	1.29	11/28/20 13:04	
1,2-Dibromoethane	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
1,2-Dichlorobenzene	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
1,2-Dichloroethane	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
1,2-Dichloropropane	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
1,3,5-Trimethylbenzene	1.3 J	7.6	0.31	1.29	11/28/20 13:04	
1,3-Dichlorobenzene	0.71 J	7.6	0.31	1.29	11/28/20 13:04	
1,4-Dichlorobenzene	7.6 U	7.6	0.34	1.29	11/28/20 13:04	
1,4-Dioxane	150 U	150	31	1.29	11/28/20 13:04	
2-Butanone (MEK)	7.6 U	7.6	3.1	1.29	11/28/20 13:04	
2-Hexanone	7.6 U	7.6	0.55	1.29	11/28/20 13:04	
4-Methyl-2-pentanone	7.6 U	7.6	0.35	1.29	11/28/20 13:04	
Acetone	7.6 U	7.6	7.1	1.29	11/28/20 13:04	
Benzene	0.81 J	7.6	0.31	1.29	11/28/20 13:04	
Bromochloromethane	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
Bromodichloromethane	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
Bromoform	7.6 U	7.6	0.76	1.29	11/28/20 13:04	
Bromomethane	7.6 U	7.6	3.2	1.29	11/28/20 13:04	
Carbon Disulfide	7.6 U	7.6	0.44	1.29	11/28/20 13:04	
Carbon Tetrachloride	7.6 U	7.6	0.40	1.29	11/28/20 13:04	
Chlorobenzene	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
Chloroethane	7.6 U	7.6	0.62	1.29	11/28/20 13:04	
Chloroform	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
Chloromethane	7.6 U	7.6	2.2	1.29	11/28/20 13:04	
Cyclohexane	2.5 J	7.6	0.40	1.29	11/28/20 13:04	
Dibromochloromethane	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
Dichlorodifluoromethane (CFC 12)	7.6 U	7.6	0.50	1.29	11/28/20 13:04	
Dichloromethane	7.6 U	7.6	4.3	1.29	11/28/20 13:04	
Ethylbenzene	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
Isopropylbenzene (Cumene)	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
Methyl Acetate	7.6 U	7.6	1.3	1.29	11/28/20 13:04	
Methyl tert-Butyl Ether	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
Methylcyclohexane	3.3 J	7.6	0.47	1.29	11/28/20 13:04	
Styrene	7.6 U	7.6	0.31	1.29	11/28/20 13:04	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	3.6 J	7.6	0.35	1.29	11/28/20 13:04	
Toluene	0.58 J	7.6	0.31	1.29	11/28/20 13:04	
Trichloroethene (TCE)	7.6 U	7.6	0.34	1.29	11/28/20 13:04	
Trichlorofluoromethane (CFC 11)	7.6 U	7.6	0.40	1.29	11/28/20 13:04	
Vinyl Chloride	7.6 U	7.6	0.70	1.29	11/28/20 13:04	
cis-1,2-Dichloroethene	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
cis-1,3-Dichloropropene	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
m,p-Xylenes	0.92 J	15	0.56	1.29	11/28/20 13:04	
o-Xylene	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
trans-1,2-Dichloroethene	7.6 U	7.6	0.31	1.29	11/28/20 13:04	
trans-1,3-Dichloropropene	7.6 U	7.6	0.31	1.29	11/28/20 13:04	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	27 *	31 - 154	11/28/20 13:04	*
Dibromofluoromethane	114	63 - 138	11/28/20 13:04	
Toluene-d8	101	66 - 138	11/28/20 13:04	



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	4400 U	4400	1100	10	12/12/20 00:24	11/20/20	
2,3,4,6-Tetrachlorophenol	4400 U	4400	930	10	12/12/20 00:24	11/20/20	
2,4,5-Trichlorophenol	4400 U	4400	3800	10	12/12/20 00:24	11/20/20	
2,4,6-Trichlorophenol	4400 U	4400	790	10	12/12/20 00:24	11/20/20	
2,4-Dichlorophenol	4400 U	4400	950	10	12/12/20 00:24	11/20/20	
2,4-Dimethylphenol	4400 U	4400	970	10	12/12/20 00:24	11/20/20	
2,4-Dinitrophenol	23000 U	23000	8800	10	12/12/20 00:24	11/20/20	
2,4-Dinitrotoluene	4400 U	4400	1800	10	12/12/20 00:24	11/20/20	
2,6-Dinitrotoluene	4400 U	4400	1300	10	12/12/20 00:24	11/20/20	
2-Chloronaphthalene	4400 U	4400	1100	10	12/12/20 00:24	11/20/20	
2-Chlorophenol	4400 U	4400	1100	10	12/12/20 00:24	11/20/20	
2-Methylnaphthalene	6500	4400	970	10	12/12/20 00:24	11/20/20	
2-Methylphenol	4400 U	4400	960	10	12/12/20 00:24	11/20/20	
2-Nitroaniline	4400 U	4400	1400	10	12/12/20 00:24	11/20/20	
2-Nitrophenol	4400 U	4400	1300	10	12/12/20 00:24	11/20/20	
3,3'-Dichlorobenzidine	4400 U	4400	930	10	12/12/20 00:24	11/20/20	
3- and 4-Methylphenol Coelution	4400 U	4400	850	10	12/12/20 00:24	11/20/20	
3-Nitroaniline	4400 U	4400	950	10	12/12/20 00:24	11/20/20	
4,6-Dinitro-2-methylphenol	23000 U	23000	1900	10	12/12/20 00:24	11/20/20	
4-Bromophenyl Phenyl Ether	4400 U	4400	1700	10	12/12/20 00:24	11/20/20	
4-Chloro-3-methylphenol	4400 U	4400	970	10	12/12/20 00:24	11/20/20	
4-Chloroaniline	4400 U	4400	1100	10	12/12/20 00:24	11/20/20	
4-Chlorophenyl Phenyl Ether	4400 U	4400	1100	10	12/12/20 00:24	11/20/20	
4-Nitroaniline	4400 U	4400	950	10	12/12/20 00:24	11/20/20	
4-Nitrophenol	23000 U	23000	1500	10	12/12/20 00:24	11/20/20	
Acenaphthene	23000	4400	1000	10	12/12/20 00:24	11/20/20	
Acenaphthylene	5000	4400	1200	10	12/12/20 00:24	11/20/20	
Acetophenone	4400 U	4400	1100	10	12/12/20 00:24	11/20/20	
Anthracene	44000	4400	1300	10	12/12/20 00:24	11/20/20	
Atrazine	4400 U	4400	1800	10	12/12/20 00:24	11/20/20	
Benz(a)anthracene	190000 E	4400	1400	10	12/12/20 00:24	11/20/20	
Benzaldehyde	4400 U	4400	880	10	12/12/20 00:24	11/20/20	
Benzo(a)pyrene	310000 E	4400	1700	10	12/12/20 00:24	11/20/20	
Benzo(b)fluoranthene	320000 E	4400	1500	10	12/12/20 00:24	11/20/20	
Benzo(g,h,i)perylene	120000 E	4400	1200	10	12/12/20 00:24	11/20/20	
Benzo(k)fluoranthene	89000 E	4400	1700	10	12/12/20 00:24	11/20/20	
Biphenyl	1500 J	4400	1100	10	12/12/20 00:24	11/20/20	
2,2'-Oxybis(1-chloropropane)	4400 U	4400	1800	10	12/12/20 00:24	11/20/20	
Bis(2-chloroethoxy)methane	4400 U	4400	1200	10	12/12/20 00:24	11/20/20	
Bis(2-chloroethyl) Ether	4400 U	4400	1200	10	12/12/20 00:24	11/20/20	
Bis(2-ethylhexyl) Phthalate	6700 U	6700	1200	10	12/12/20 00:24	11/20/20	
Butyl Benzyl Phthalate	4400 U	4400	1200	10	12/12/20 00:24	11/20/20	
Caprolactam	4400 U	4400	1200	10	12/12/20 00:24	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	26000	4400	1300	10	12/12/20 00:24	11/20/20	
Chrysene	180000 E	4400	1700	10	12/12/20 00:24	11/20/20	
Di-n-butyl Phthalate	4400 U	4400	1400	10	12/12/20 00:24	11/20/20	
Di-n-octyl Phthalate	4400 U	4400	1400	10	12/12/20 00:24	11/20/20	
Dibenz(a,h)anthracene	33000	4400	1400	10	12/12/20 00:24	11/20/20	
Dibenzofuran	12000	4400	880	10	12/12/20 00:24	11/20/20	
Diethyl Phthalate	4400 U	4400	950	10	12/12/20 00:24	11/20/20	
Dimethyl Phthalate	4400 U	4400	1000	10	12/12/20 00:24	11/20/20	
Fluoranthene	180000 E	4400	1700	10	12/12/20 00:24	11/20/20	
Fluorene	20000	4400	1100	10	12/12/20 00:24	11/20/20	
Hexachlorobenzene	4400 U	4400	1400	10	12/12/20 00:24	11/20/20	
Hexachlorobutadiene	4400 U	4400	1100	10	12/12/20 00:24	11/20/20	
Hexachlorocyclopentadiene	4400 U	4400	970	10	12/12/20 00:24	11/20/20	
Hexachloroethane	4400 U	4400	1200	10	12/12/20 00:24	11/20/20	
Indeno(1,2,3-cd)pyrene	150000 E	4400	1500	10	12/12/20 00:24	11/20/20	
Isophorone	4400 U	4400	1300	10	12/12/20 00:24	11/20/20	
N-Nitrosodi-n-propylamine	4400 U	4400	1200	10	12/12/20 00:24	11/20/20	
N-Nitrosodiphenylamine	4400 U	4400	3000	10	12/12/20 00:24	11/20/20	
Naphthalene	28000	4400	1200	10	12/12/20 00:24	11/20/20	
Nitrobenzene	4400 U	4400	1200	10	12/12/20 00:24	11/20/20	
Pentachlorophenol (PCP)	23000 U	23000	1500	10	12/12/20 00:24	11/20/20	
Phenanthrene	120000 E	4400	1300	10	12/12/20 00:24	11/20/20	
Phenol	4400 U	4400	1100	10	12/12/20 00:24	11/20/20	
Pyrene	210000 E	4400	1800	10	12/12/20 00:24	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	52	10 - 109	12/12/20 00:24	
2-Fluorobiphenyl	54	10 - 102	12/12/20 00:24	
2-Fluorophenol	46	10 - 88	12/12/20 00:24	
Nitrobenzene-d5	54	10 - 95	12/12/20 00:24	
Phenol-d6	55	10 - 145	12/12/20 00:24	
Terphenyl-d14	72	10 - 106	12/12/20 00:24	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	110000 U	110000	27000	250	12/16/20 19:28	11/20/20	
2,3,4,6-Tetrachlorophenol	110000 U	110000	24000	250	12/16/20 19:28	11/20/20	
2,4,5-Trichlorophenol	110000 U	110000	95000	250	12/16/20 19:28	11/20/20	
2,4,6-Trichlorophenol	110000 U	110000	20000	250	12/16/20 19:28	11/20/20	
2,4-Dichlorophenol	110000 U	110000	24000	250	12/16/20 19:28	11/20/20	
2,4-Dimethylphenol	110000 U	110000	25000	250	12/16/20 19:28	11/20/20	
2,4-Dinitrophenol	570000 U	570000	220000	250	12/16/20 19:28	11/20/20	
2,4-Dinitrotoluene	110000 U	110000	44000	250	12/16/20 19:28	11/20/20	
2,6-Dinitrotoluene	110000 U	110000	33000	250	12/16/20 19:28	11/20/20	
2-Chloronaphthalene	110000 U	110000	27000	250	12/16/20 19:28	11/20/20	
2-Chlorophenol	110000 U	110000	28000	250	12/16/20 19:28	11/20/20	
2-Methylnaphthalene	110000 U	110000	25000	250	12/16/20 19:28	11/20/20	
2-Methylphenol	110000 U	110000	24000	250	12/16/20 19:28	11/20/20	
2-Nitroaniline	110000 U	110000	33000	250	12/16/20 19:28	11/20/20	
2-Nitrophenol	110000 U	110000	32000	250	12/16/20 19:28	11/20/20	
3,3'-Dichlorobenzidine	110000 U	110000	24000	250	12/16/20 19:28	11/20/20	
3- and 4-Methylphenol Coelution	110000 U	110000	22000	250	12/16/20 19:28	11/20/20	
3-Nitroaniline	110000 U	110000	24000	250	12/16/20 19:28	11/20/20	
4,6-Dinitro-2-methylphenol	570000 U	570000	48000	250	12/16/20 19:28	11/20/20	
4-Bromophenyl Phenyl Ether	110000 U	110000	41000	250	12/16/20 19:28	11/20/20	
4-Chloro-3-methylphenol	110000 U	110000	25000	250	12/16/20 19:28	11/20/20	
4-Chloroaniline	110000 U	110000	27000	250	12/16/20 19:28	11/20/20	
4-Chlorophenyl Phenyl Ether	110000 U	110000	27000	250	12/16/20 19:28	11/20/20	
4-Nitroaniline	110000 U	110000	24000	250	12/16/20 19:28	11/20/20	
4-Nitrophenol	570000 U	570000	38000	250	12/16/20 19:28	11/20/20	
Acenaphthene	110000 U	110000	25000	250	12/16/20 19:28	11/20/20	
Acenaphthylene	110000 U	110000	30000	250	12/16/20 19:28	11/20/20	
Acetophenone	110000 U	110000	26000	250	12/16/20 19:28	11/20/20	
Anthracene	49000 DJ	110000	31000	250	12/16/20 19:28	11/20/20	
Atrazine	110000 U	110000	44000	250	12/16/20 19:28	11/20/20	
Benz(a)anthracene	200000 D	110000	33000	250	12/16/20 19:28	11/20/20	
Benzaldehyde	110000 U	110000	22000	250	12/16/20 19:28	11/20/20	
Benzo(a)pyrene	350000 D	110000	41000	250	12/16/20 19:28	11/20/20	
Benzo(b)fluoranthene	310000 D	110000	38000	250	12/16/20 19:28	11/20/20	
Benzo(g,h,i)perylene	210000 D	110000	30000	250	12/16/20 19:28	11/20/20	
Benzo(k)fluoranthene	120000 D	110000	41000	250	12/16/20 19:28	11/20/20	
Biphenyl	110000 U	110000	28000	250	12/16/20 19:28	11/20/20	
2,2'-Oxybis(1-chloropropane)	110000 U	110000	44000	250	12/16/20 19:28	11/20/20	
Bis(2-chloroethoxy)methane	110000 U	110000	30000	250	12/16/20 19:28	11/20/20	
Bis(2-chloroethyl) Ether	110000 U	110000	29000	250	12/16/20 19:28	11/20/20	
Bis(2-ethylhexyl) Phthalate	170000 U	170000	30000	250	12/16/20 19:28	11/20/20	
Butyl Benzyl Phthalate	110000 U	110000	28000	250	12/16/20 19:28	11/20/20	
Caprolactam	110000 U	110000	29000	250	12/16/20 19:28	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	110000 U	110000	32000	250	12/16/20 19:28	11/20/20	
Chrysene	210000 D	110000	41000	250	12/16/20 19:28	11/20/20	
Di-n-butyl Phthalate	110000 U	110000	34000	250	12/16/20 19:28	11/20/20	
Di-n-octyl Phthalate	110000 U	110000	33000	250	12/16/20 19:28	11/20/20	
Dibenz(a,h)anthracene	52000 DJ	110000	33000	250	12/16/20 19:28	11/20/20	
Dibenzofuran	110000 U	110000	22000	250	12/16/20 19:28	11/20/20	
Diethyl Phthalate	110000 U	110000	24000	250	12/16/20 19:28	11/20/20	
Dimethyl Phthalate	110000 U	110000	25000	250	12/16/20 19:28	11/20/20	
Fluoranthene	270000 D	110000	41000	250	12/16/20 19:28	11/20/20	
Fluorene	110000 U	110000	26000	250	12/16/20 19:28	11/20/20	
Hexachlorobenzene	110000 U	110000	34000	250	12/16/20 19:28	11/20/20	
Hexachlorobutadiene	110000 U	110000	27000	250	12/16/20 19:28	11/20/20	
Hexachlorocyclopentadiene	110000 U	110000	25000	250	12/16/20 19:28	11/20/20	
Hexachloroethane	110000 U	110000	29000	250	12/16/20 19:28	11/20/20	
Indeno(1,2,3-cd)pyrene	240000 D	110000	38000	250	12/16/20 19:28	11/20/20	
Isophorone	110000 U	110000	31000	250	12/16/20 19:28	11/20/20	
N-Nitrosodi-n-propylamine	110000 U	110000	30000	250	12/16/20 19:28	11/20/20	
N-Nitrosodiphenylamine	110000 U	110000	75000	250	12/16/20 19:28	11/20/20	
Naphthalene	110000 U	110000	29000	250	12/16/20 19:28	11/20/20	
Nitrobenzene	110000 U	110000	29000	250	12/16/20 19:28	11/20/20	
Pentachlorophenol (PCP)	570000 U	570000	38000	250	12/16/20 19:28	11/20/20	
Phenanthrene	170000 D	110000	33000	250	12/16/20 19:28	11/20/20	
Phenol	110000 U	110000	27000	250	12/16/20 19:28	11/20/20	
Pyrene	260000 D	110000	44000	250	12/16/20 19:28	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	0 *	10 - 109	12/16/20 19:28	D
2-Fluorobiphenyl	0 *	10 - 102	12/16/20 19:28	D
2-Fluorophenol	0 *	10 - 88	12/16/20 19:28	D
Nitrobenzene-d5	0 *	10 - 95	12/16/20 19:28	D
Phenol-d6	0 *	10 - 145	12/16/20 19:28	D
Terphenyl-d14	0 *	10 - 106	12/16/20 19:28	D

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:40
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-024
Lab Code: R2010907-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	4400 U	4400	1100	10	12/12/20 01:48	11/20/20	
2,3,4,6-Tetrachlorophenol	4400 U	4400	930	10	12/12/20 01:48	11/20/20	
2,4,5-Trichlorophenol	4400 U	4400	3800	10	12/12/20 01:48	11/20/20	
2,4,6-Trichlorophenol	4400 U	4400	780	10	12/12/20 01:48	11/20/20	
2,4-Dichlorophenol	4400 U	4400	940	10	12/12/20 01:48	11/20/20	
2,4-Dimethylphenol	4400 U	4400	970	10	12/12/20 01:48	11/20/20	
2,4-Dinitrophenol	23000 U	23000	8800	10	12/12/20 01:48	11/20/20	
2,4-Dinitrotoluene	4400 U	4400	1800	10	12/12/20 01:48	11/20/20	
2,6-Dinitrotoluene	4400 U	4400	1300	10	12/12/20 01:48	11/20/20	
2-Chloronaphthalene	4400 U	4400	1100	10	12/12/20 01:48	11/20/20	
2-Chlorophenol	4400 U	4400	1100	10	12/12/20 01:48	11/20/20	
2-Methylnaphthalene	9400	4400	970	10	12/12/20 01:48	11/20/20	
2-Methylphenol	4400 U	4400	960	10	12/12/20 01:48	11/20/20	
2-Nitroaniline	4400 U	4400	1400	10	12/12/20 01:48	11/20/20	
2-Nitrophenol	4400 U	4400	1300	10	12/12/20 01:48	11/20/20	
3,3'-Dichlorobenzidine	4400 U	4400	930	10	12/12/20 01:48	11/20/20	
3- and 4-Methylphenol Coelution	4400 U	4400	850	10	12/12/20 01:48	11/20/20	
3-Nitroaniline	4400 U	4400	940	10	12/12/20 01:48	11/20/20	
4,6-Dinitro-2-methylphenol	23000 U	23000	1900	10	12/12/20 01:48	11/20/20	
4-Bromophenyl Phenyl Ether	4400 U	4400	1700	10	12/12/20 01:48	11/20/20	
4-Chloro-3-methylphenol	4400 U	4400	970	10	12/12/20 01:48	11/20/20	
4-Chloroaniline	4400 U	4400	1100	10	12/12/20 01:48	11/20/20	
4-Chlorophenyl Phenyl Ether	4400 U	4400	1100	10	12/12/20 01:48	11/20/20	
4-Nitroaniline	4400 U	4400	940	10	12/12/20 01:48	11/20/20	
4-Nitrophenol	23000 U	23000	1500	10	12/12/20 01:48	11/20/20	
Acenaphthene	44000	4400	1000	10	12/12/20 01:48	11/20/20	
Acenaphthylene	8700	4400	1200	10	12/12/20 01:48	11/20/20	
Acetophenone	4400 U	4400	1100	10	12/12/20 01:48	11/20/20	
Anthracene	95000 E	4400	1300	10	12/12/20 01:48	11/20/20	
Atrazine	4400 U	4400	1800	10	12/12/20 01:48	11/20/20	
Benz(a)anthracene	370000 E	4400	1300	10	12/12/20 01:48	11/20/20	
Benzaldehyde	4400 U	4400	880	10	12/12/20 01:48	11/20/20	
Benzo(a)pyrene	600000 E	4400	1700	10	12/12/20 01:48	11/20/20	
Benzo(b)fluoranthene	710000 E	4400	1500	10	12/12/20 01:48	11/20/20	
Benzo(g,h,i)perylene	260000 E	4400	1200	10	12/12/20 01:48	11/20/20	
Benzo(k)fluoranthene	130000 E	4400	1700	10	12/12/20 01:48	11/20/20	
Biphenyl	2300 J	4400	1100	10	12/12/20 01:48	11/20/20	
2,2'-Oxybis(1-chloropropane)	4400 U	4400	1800	10	12/12/20 01:48	11/20/20	
Bis(2-chloroethoxy)methane	4400 U	4400	1200	10	12/12/20 01:48	11/20/20	
Bis(2-chloroethyl) Ether	4400 U	4400	1200	10	12/12/20 01:48	11/20/20	
Bis(2-ethylhexyl) Phthalate	1400 J	6700	1200	10	12/12/20 01:48	11/20/20	
Butyl Benzyl Phthalate	4400 U	4400	1100	10	12/12/20 01:48	11/20/20	
Caprolactam	4400 U	4400	1200	10	12/12/20 01:48	11/20/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:40
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-024
Lab Code: R2010907-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	48000 E	4400	1300	10	12/12/20 01:48	11/20/20	
Chrysene	310000 E	4400	1700	10	12/12/20 01:48	11/20/20	
Di-n-butyl Phthalate	4400 U	4400	1400	10	12/12/20 01:48	11/20/20	
Di-n-octyl Phthalate	4400 U	4400	1300	10	12/12/20 01:48	11/20/20	
Dibenz(a,h)anthracene	67000 E	4400	1400	10	12/12/20 01:48	11/20/20	
Dibenzofuran	22000	4400	880	10	12/12/20 01:48	11/20/20	
Diethyl Phthalate	4400 U	4400	940	10	12/12/20 01:48	11/20/20	
Dimethyl Phthalate	4400 U	4400	1000	10	12/12/20 01:48	11/20/20	
Fluoranthene	280000 E	4400	1700	10	12/12/20 01:48	11/20/20	
Fluorene	40000	4400	1100	10	12/12/20 01:48	11/20/20	
Hexachlorobenzene	4400 U	4400	1400	10	12/12/20 01:48	11/20/20	
Hexachlorobutadiene	4400 U	4400	1100	10	12/12/20 01:48	11/20/20	
Hexachlorocyclopentadiene	4400 U	4400	970	10	12/12/20 01:48	11/20/20	
Hexachloroethane	4400 U	4400	1200	10	12/12/20 01:48	11/20/20	
Indeno(1,2,3-cd)pyrene	290000 E	4400	1500	10	12/12/20 01:48	11/20/20	
Isophorone	4400 U	4400	1300	10	12/12/20 01:48	11/20/20	
N-Nitrosodi-n-propylamine	4400 U	4400	1200	10	12/12/20 01:48	11/20/20	
N-Nitrosodiphenylamine	4400 U	4400	3000	10	12/12/20 01:48	11/20/20	
Naphthalene	39000	4400	1200	10	12/12/20 01:48	11/20/20	
Nitrobenzene	4400 U	4400	1200	10	12/12/20 01:48	11/20/20	
Pentachlorophenol (PCP)	23000 U	23000	1500	10	12/12/20 01:48	11/20/20	
Phenanthrene	200000 E	4400	1300	10	12/12/20 01:48	11/20/20	
Phenol	4400 U	4400	1100	10	12/12/20 01:48	11/20/20	
Pyrene	390000 E	4400	1800	10	12/12/20 01:48	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	42	10 - 109	12/12/20 01:48	
2-Fluorobiphenyl	39	10 - 102	12/12/20 01:48	
2-Fluorophenol	28	10 - 88	12/12/20 01:48	
Nitrobenzene-d5	37	10 - 95	12/12/20 01:48	
Phenol-d6	35	10 - 145	12/12/20 01:48	
Terphenyl-d14	68	10 - 106	12/12/20 01:48	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:40
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-024
Lab Code: R2010907-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	220000 U	220000	53000	500	12/16/20 19:56	11/20/20	
2,3,4,6-Tetrachlorophenol	220000 U	220000	47000	500	12/16/20 19:56	11/20/20	
2,4,5-Trichlorophenol	220000 U	220000	190000	500	12/16/20 19:56	11/20/20	
2,4,6-Trichlorophenol	220000 U	220000	39000	500	12/16/20 19:56	11/20/20	
2,4-Dichlorophenol	220000 U	220000	47000	500	12/16/20 19:56	11/20/20	
2,4-Dimethylphenol	220000 U	220000	49000	500	12/16/20 19:56	11/20/20	
2,4-Dinitrophenol	1100000 U	1100000	440000	500	12/16/20 19:56	11/20/20	
2,4-Dinitrotoluene	220000 U	220000	88000	500	12/16/20 19:56	11/20/20	
2,6-Dinitrotoluene	220000 U	220000	65000	500	12/16/20 19:56	11/20/20	
2-Chloronaphthalene	220000 U	220000	53000	500	12/16/20 19:56	11/20/20	
2-Chlorophenol	220000 U	220000	55000	500	12/16/20 19:56	11/20/20	
2-Methylnaphthalene	220000 U	220000	49000	500	12/16/20 19:56	11/20/20	
2-Methylphenol	220000 U	220000	48000	500	12/16/20 19:56	11/20/20	
2-Nitroaniline	220000 U	220000	66000	500	12/16/20 19:56	11/20/20	
2-Nitrophenol	220000 U	220000	64000	500	12/16/20 19:56	11/20/20	
3,3'-Dichlorobenzidine	220000 U	220000	47000	500	12/16/20 19:56	11/20/20	
3- and 4-Methylphenol Coelution	220000 U	220000	43000	500	12/16/20 19:56	11/20/20	
3-Nitroaniline	220000 U	220000	47000	500	12/16/20 19:56	11/20/20	
4,6-Dinitro-2-methylphenol	1100000 U	1100000	94000	500	12/16/20 19:56	11/20/20	
4-Bromophenyl Phenyl Ether	220000 U	220000	81000	500	12/16/20 19:56	11/20/20	
4-Chloro-3-methylphenol	220000 U	220000	49000	500	12/16/20 19:56	11/20/20	
4-Chloroaniline	220000 U	220000	53000	500	12/16/20 19:56	11/20/20	
4-Chlorophenyl Phenyl Ether	220000 U	220000	53000	500	12/16/20 19:56	11/20/20	
4-Nitroaniline	220000 U	220000	47000	500	12/16/20 19:56	11/20/20	
4-Nitrophenol	1100000 U	1100000	74000	500	12/16/20 19:56	11/20/20	
Acenaphthene	220000 U	220000	50000	500	12/16/20 19:56	11/20/20	
Acenaphthylene	220000 U	220000	59000	500	12/16/20 19:56	11/20/20	
Acetophenone	220000 U	220000	51000	500	12/16/20 19:56	11/20/20	
Anthracene	100000 J	220000	62000	500	12/16/20 19:56	11/20/20	
Atrazine	220000 U	220000	88000	500	12/16/20 19:56	11/20/20	
Benz(a)anthracene	380000 D	220000	65000	500	12/16/20 19:56	11/20/20	
Benzaldehyde	220000 U	220000	44000	500	12/16/20 19:56	11/20/20	
Benzo(a)pyrene	680000 D	220000	81000	500	12/16/20 19:56	11/20/20	
Benzo(b)fluoranthene	600000 D	220000	74000	500	12/16/20 19:56	11/20/20	
Benzo(g,h,i)perylene	440000 D	220000	59000	500	12/16/20 19:56	11/20/20	
Benzo(k)fluoranthene	230000 D	220000	81000	500	12/16/20 19:56	11/20/20	
Biphenyl	220000 U	220000	55000	500	12/16/20 19:56	11/20/20	
2,2'-Oxybis(1-chloropropane)	220000 U	220000	88000	500	12/16/20 19:56	11/20/20	
Bis(2-chloroethoxy)methane	220000 U	220000	59000	500	12/16/20 19:56	11/20/20	
Bis(2-chloroethyl) Ether	220000 U	220000	58000	500	12/16/20 19:56	11/20/20	
Bis(2-ethylhexyl) Phthalate	330000 U	330000	59000	500	12/16/20 19:56	11/20/20	
Butyl Benzyl Phthalate	220000 U	220000	55000	500	12/16/20 19:56	11/20/20	
Caprolactam	220000 U	220000	58000	500	12/16/20 19:56	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:40
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-024
Lab Code: R2010907-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	220000 U	220000	64000	500	12/16/20 19:56	11/20/20	
Chrysene	370000 D	220000	81000	500	12/16/20 19:56	11/20/20	
Di-n-butyl Phthalate	220000 U	220000	67000	500	12/16/20 19:56	11/20/20	
Di-n-octyl Phthalate	220000 U	220000	65000	500	12/16/20 19:56	11/20/20	
Dibenz(a,h)anthracene	100000 DJ	220000	66000	500	12/16/20 19:56	11/20/20	
Dibenzofuran	220000 U	220000	44000	500	12/16/20 19:56	11/20/20	
Diethyl Phthalate	220000 U	220000	47000	500	12/16/20 19:56	11/20/20	
Dimethyl Phthalate	220000 U	220000	50000	500	12/16/20 19:56	11/20/20	
Fluoranthene	520000 D	220000	81000	500	12/16/20 19:56	11/20/20	
Fluorene	220000 U	220000	51000	500	12/16/20 19:56	11/20/20	
Hexachlorobenzene	220000 U	220000	67000	500	12/16/20 19:56	11/20/20	
Hexachlorobutadiene	220000 U	220000	54000	500	12/16/20 19:56	11/20/20	
Hexachlorocyclopentadiene	220000 U	220000	49000	500	12/16/20 19:56	11/20/20	
Hexachloroethane	220000 U	220000	57000	500	12/16/20 19:56	11/20/20	
Indeno(1,2,3-cd)pyrene	480000 D	220000	74000	500	12/16/20 19:56	11/20/20	
Isophorone	220000 U	220000	61000	500	12/16/20 19:56	11/20/20	
N-Nitrosodi-n-propylamine	220000 U	220000	59000	500	12/16/20 19:56	11/20/20	
N-Nitrosodiphenylamine	220000 U	220000	150000	500	12/16/20 19:56	11/20/20	
Naphthalene	220000 U	220000	57000	500	12/16/20 19:56	11/20/20	
Nitrobenzene	220000 U	220000	57000	500	12/16/20 19:56	11/20/20	
Pentachlorophenol (PCP)	1100000 U	1100000	74000	500	12/16/20 19:56	11/20/20	
Phenanthrene	320000 D	220000	65000	500	12/16/20 19:56	11/20/20	
Phenol	220000 U	220000	53000	500	12/16/20 19:56	11/20/20	
Pyrene	510000 D	220000	88000	500	12/16/20 19:56	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	0 *	10 - 109	12/16/20 19:56	D
2-Fluorobiphenyl	0 *	10 - 102	12/16/20 19:56	D
2-Fluorophenol	0 *	10 - 88	12/16/20 19:56	D
Nitrobenzene-d5	0 *	10 - 95	12/16/20 19:56	D
Phenol-d6	0 *	10 - 145	12/16/20 19:56	D
Terphenyl-d14	0 *	10 - 106	12/16/20 19:56	D

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:10
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	410 U	410	98	1	12/08/20 02:04	11/20/20	
2,3,4,6-Tetrachlorophenol	410 U	410	86	1	12/08/20 02:04	11/20/20	
2,4,5-Trichlorophenol	410 U	410	350	1	12/08/20 02:04	11/20/20	
2,4,6-Trichlorophenol	410 U	410	73	1	12/08/20 02:04	11/20/20	
2,4-Dichlorophenol	410 U	410	88	1	12/08/20 02:04	11/20/20	
2,4-Dimethylphenol	100 J	410	90	1	12/08/20 02:04	11/20/20	
2,4-Dinitrophenol	2100 U	2100	810	1	12/08/20 02:04	11/20/20	
2,4-Dinitrotoluene	410 U	410	170	1	12/08/20 02:04	11/20/20	
2,6-Dinitrotoluene	410 U	410	120	1	12/08/20 02:04	11/20/20	
2-Chloronaphthalene	410 U	410	99	1	12/08/20 02:04	11/20/20	
2-Chlorophenol	410 U	410	110	1	12/08/20 02:04	11/20/20	
2-Methylnaphthalene	2000	410	90	1	12/08/20 02:04	11/20/20	
2-Methylphenol	94 J	410	89	1	12/08/20 02:04	11/20/20	
2-Nitroaniline	410 U	410	130	1	12/08/20 02:04	11/20/20	
2-Nitrophenol	410 U	410	120	1	12/08/20 02:04	11/20/20	
3,3'-Dichlorobenzidine	410 U	410	86	1	12/08/20 02:04	11/20/20	
3- and 4-Methylphenol Coelution	120 J	410	79	1	12/08/20 02:04	11/20/20	
3-Nitroaniline	410 U	410	88	1	12/08/20 02:04	11/20/20	
4,6-Dinitro-2-methylphenol	2100 U	2100	180	1	12/08/20 02:04	11/20/20	
4-Bromophenyl Phenyl Ether	410 U	410	150	1	12/08/20 02:04	11/20/20	
4-Chloro-3-methylphenol	410 U	410	90	1	12/08/20 02:04	11/20/20	
4-Chloroaniline	410 U	410	98	1	12/08/20 02:04	11/20/20	
4-Chlorophenyl Phenyl Ether	410 U	410	99	1	12/08/20 02:04	11/20/20	
4-Nitroaniline	410 U	410	88	1	12/08/20 02:04	11/20/20	
4-Nitrophenol	2100 U	2100	140	1	12/08/20 02:04	11/20/20	
Acenaphthene	170 J	410	93	1	12/08/20 02:04	11/20/20	
Acenaphthylene	370 J	410	110	1	12/08/20 02:04	11/20/20	
Acetophenone	410 U	410	94	1	12/08/20 02:04	11/20/20	
Anthracene	620	410	120	1	12/08/20 02:04	11/20/20	
Atrazine	410 U	410	170	1	12/08/20 02:04	11/20/20	
Benz(a)anthracene	2500	410	130	1	12/08/20 02:04	11/20/20	
Benzaldehyde	410 U	410	81	1	12/08/20 02:04	11/20/20	
Benzo(a)pyrene	3000	410	150	1	12/08/20 02:04	11/20/20	
Benzo(b)fluoranthene	3700	410	140	1	12/08/20 02:04	11/20/20	
Benzo(g,h,i)perylene	1300	410	110	1	12/08/20 02:04	11/20/20	
Benzo(k)fluoranthene	1200	410	150	1	12/08/20 02:04	11/20/20	
Biphenyl	260 J	410	110	1	12/08/20 02:04	11/20/20	
2,2'-Oxybis(1-chloropropane)	410 U	410	170	1	12/08/20 02:04	11/20/20	
Bis(2-chloroethoxy)methane	410 U	410	110	1	12/08/20 02:04	11/20/20	
Bis(2-chloroethyl) Ether	410 U	410	110	1	12/08/20 02:04	11/20/20	
Bis(2-ethylhexyl) Phthalate	620 U	620	110	1	12/08/20 02:04	11/20/20	
Butyl Benzyl Phthalate	410 U	410	110	1	12/08/20 02:04	11/20/20	
Caprolactam	410 U	410	110	1	12/08/20 02:04	11/20/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:10
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	340 J	410	120	1	12/08/20 02:04	11/20/20	
Chrysene	2800	410	150	1	12/08/20 02:04	11/20/20	
Di-n-butyl Phthalate	410 U	410	130	1	12/08/20 02:04	11/20/20	
Di-n-octyl Phthalate	410 U	410	130	1	12/08/20 02:04	11/20/20	
Dibenz(a,h)anthracene	430	410	130	1	12/08/20 02:04	11/20/20	
Dibenzofuran	660	410	81	1	12/08/20 02:04	11/20/20	
Diethyl Phthalate	410 U	410	88	1	12/08/20 02:04	11/20/20	
Dimethyl Phthalate	410 U	410	93	1	12/08/20 02:04	11/20/20	
Fluoranthene	4800 E	410	150	1	12/08/20 02:04	11/20/20	
Fluorene	130 J	410	95	1	12/08/20 02:04	11/20/20	
Hexachlorobenzene	410 U	410	130	1	12/08/20 02:04	11/20/20	
Hexachlorobutadiene	410 U	410	100	1	12/08/20 02:04	11/20/20	
Hexachlorocyclopentadiene	410 U	410	90	1	12/08/20 02:04	11/20/20	
Hexachloroethane	410 U	410	110	1	12/08/20 02:04	11/20/20	
Indeno(1,2,3-cd)pyrene	1600	410	140	1	12/08/20 02:04	11/20/20	
Isophorone	410 U	410	120	1	12/08/20 02:04	11/20/20	
N-Nitrosodi-n-propylamine	410 U	410	110	1	12/08/20 02:04	11/20/20	
N-Nitrosodiphenylamine	410 U	410	280	1	12/08/20 02:04	11/20/20	
Naphthalene	1500	410	110	1	12/08/20 02:04	11/20/20	
Nitrobenzene	410 U	410	110	1	12/08/20 02:04	11/20/20	
Pentachlorophenol (PCP)	2100 U	2100	140	1	12/08/20 02:04	11/20/20	
Phenanthrene	3800	410	120	1	12/08/20 02:04	11/20/20	
Phenol	410 U	410	98	1	12/08/20 02:04	11/20/20	
Pyrene	4500 E	410	170	1	12/08/20 02:04	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	37	10 - 109	12/08/20 02:04	
2-Fluorobiphenyl	26	10 - 102	12/08/20 02:04	
2-Fluorophenol	24	10 - 88	12/08/20 02:04	
Nitrobenzene-d5	26	10 - 95	12/08/20 02:04	
Phenol-d6	27	10 - 145	12/08/20 02:04	
Terphenyl-d14	38	10 - 106	12/08/20 02:04	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:10
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	1200 U	1200	300	3	12/11/20 23:00	11/20/20	
2,3,4,6-Tetrachlorophenol	1200 U	1200	260	3	12/11/20 23:00	11/20/20	
2,4,5-Trichlorophenol	1200 U	1200	1100	3	12/11/20 23:00	11/20/20	
2,4,6-Trichlorophenol	1200 U	1200	220	3	12/11/20 23:00	11/20/20	
2,4-Dichlorophenol	1200 U	1200	270	3	12/11/20 23:00	11/20/20	
2,4-Dimethylphenol	1200 U	1200	270	3	12/11/20 23:00	11/20/20	
2,4-Dinitrophenol	6300 U	6300	2500	3	12/11/20 23:00	11/20/20	
2,4-Dinitrotoluene	1200 U	1200	490	3	12/11/20 23:00	11/20/20	
2,6-Dinitrotoluene	1200 U	1200	360	3	12/11/20 23:00	11/20/20	
2-Chloronaphthalene	1200 U	1200	300	3	12/11/20 23:00	11/20/20	
2-Chlorophenol	1200 U	1200	310	3	12/11/20 23:00	11/20/20	
2-Methylnaphthalene	2200 D	1200	270	3	12/11/20 23:00	11/20/20	
2-Methylphenol	1200 U	1200	270	3	12/11/20 23:00	11/20/20	
2-Nitroaniline	1200 U	1200	370	3	12/11/20 23:00	11/20/20	
2-Nitrophenol	1200 U	1200	360	3	12/11/20 23:00	11/20/20	
3,3'-Dichlorobenzidine	1200 U	1200	260	3	12/11/20 23:00	11/20/20	
3- and 4-Methylphenol Coelution	1200 U	1200	240	3	12/11/20 23:00	11/20/20	
3-Nitroaniline	1200 U	1200	270	3	12/11/20 23:00	11/20/20	
4,6-Dinitro-2-methylphenol	6300 U	6300	530	3	12/11/20 23:00	11/20/20	
4-Bromophenyl Phenyl Ether	1200 U	1200	450	3	12/11/20 23:00	11/20/20	
4-Chloro-3-methylphenol	1200 U	1200	270	3	12/11/20 23:00	11/20/20	
4-Chloroaniline	1200 U	1200	300	3	12/11/20 23:00	11/20/20	
4-Chlorophenyl Phenyl Ether	1200 U	1200	300	3	12/11/20 23:00	11/20/20	
4-Nitroaniline	1200 U	1200	270	3	12/11/20 23:00	11/20/20	
4-Nitrophenol	6300 U	6300	420	3	12/11/20 23:00	11/20/20	
Acenaphthene	1200 U	1200	280	3	12/11/20 23:00	11/20/20	
Acenaphthylene	420 DJ	1200	330	3	12/11/20 23:00	11/20/20	
Acetophenone	1200 U	1200	290	3	12/11/20 23:00	11/20/20	
Anthracene	680 J	1200	350	3	12/11/20 23:00	11/20/20	
Atrazine	1200 U	1200	490	3	12/11/20 23:00	11/20/20	
Benz(a)anthracene	2600 D	1200	370	3	12/11/20 23:00	11/20/20	
Benzaldehyde	1200 U	1200	250	3	12/11/20 23:00	11/20/20	
Benzo(a)pyrene	3100 D	1200	450	3	12/11/20 23:00	11/20/20	
Benzo(b)fluoranthene	3500 D	1200	420	3	12/11/20 23:00	11/20/20	
Benzo(g,h,i)perylene	1900 D	1200	330	3	12/11/20 23:00	11/20/20	
Benzo(k)fluoranthene	1300 D	1200	450	3	12/11/20 23:00	11/20/20	
Biphenyl	1200 U	1200	310	3	12/11/20 23:00	11/20/20	
2,2'-Oxybis(1-chloropropane)	1200 U	1200	490	3	12/11/20 23:00	11/20/20	
Bis(2-chloroethoxy)methane	1200 U	1200	330	3	12/11/20 23:00	11/20/20	
Bis(2-chloroethyl) Ether	1200 U	1200	330	3	12/11/20 23:00	11/20/20	
Bis(2-ethylhexyl) Phthalate	1900 U	1900	330	3	12/11/20 23:00	11/20/20	
Butyl Benzyl Phthalate	1200 U	1200	310	3	12/11/20 23:00	11/20/20	
Caprolactam	1200 U	1200	330	3	12/11/20 23:00	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:10
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	370 DJ	1200	360	3	12/11/20 23:00	11/20/20	
Chrysene	3000 D	1200	450	3	12/11/20 23:00	11/20/20	
Di-n-butyl Phthalate	1200 U	1200	380	3	12/11/20 23:00	11/20/20	
Di-n-octyl Phthalate	1200 U	1200	370	3	12/11/20 23:00	11/20/20	
Dibenz(a,h)anthracene	540 DJ	1200	370	3	12/11/20 23:00	11/20/20	
Dibenzofuran	750 J	1200	250	3	12/11/20 23:00	11/20/20	
Diethyl Phthalate	1200 U	1200	270	3	12/11/20 23:00	11/20/20	
Dimethyl Phthalate	1200 U	1200	280	3	12/11/20 23:00	11/20/20	
Fluoranthene	5700 D	1200	450	3	12/11/20 23:00	11/20/20	
Fluorene	1200 U	1200	290	3	12/11/20 23:00	11/20/20	
Hexachlorobenzene	1200 U	1200	380	3	12/11/20 23:00	11/20/20	
Hexachlorobutadiene	1200 U	1200	300	3	12/11/20 23:00	11/20/20	
Hexachlorocyclopentadiene	1200 U	1200	270	3	12/11/20 23:00	11/20/20	
Hexachloroethane	1200 U	1200	320	3	12/11/20 23:00	11/20/20	
Indeno(1,2,3-cd)pyrene	2100 D	1200	420	3	12/11/20 23:00	11/20/20	
Isophorone	1200 U	1200	340	3	12/11/20 23:00	11/20/20	
N-Nitrosodi-n-propylamine	1200 U	1200	330	3	12/11/20 23:00	11/20/20	
N-Nitrosodiphenylamine	1200 U	1200	830	3	12/11/20 23:00	11/20/20	
Naphthalene	1600 D	1200	320	3	12/11/20 23:00	11/20/20	
Nitrobenzene	1200 U	1200	320	3	12/11/20 23:00	11/20/20	
Pentachlorophenol (PCP)	6300 U	6300	420	3	12/11/20 23:00	11/20/20	
Phenanthrene	4100 D	1200	360	3	12/11/20 23:00	11/20/20	
Phenol	1200 U	1200	300	3	12/11/20 23:00	11/20/20	
Pyrene	4800 D	1200	490	3	12/11/20 23:00	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	36	10 - 109	12/11/20 23:00	
2-Fluorobiphenyl	27	10 - 102	12/11/20 23:00	
2-Fluorophenol	26	10 - 88	12/11/20 23:00	
Nitrobenzene-d5	26	10 - 95	12/11/20 23:00	
Phenol-d6	29	10 - 145	12/11/20 23:00	
Terphenyl-d14	40	10 - 106	12/11/20 23:00	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:40
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-024
Lab Code: R2010907-006

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	11000 U	11000	2600	25	12/16/20 20:25	11/20/20	
2,3,4,6-Tetrachlorophenol	11000 U	11000	2300	25	12/16/20 20:25	11/20/20	
2,4,5-Trichlorophenol	11000 U	11000	9100	25	12/16/20 20:25	11/20/20	
2,4,6-Trichlorophenol	11000 U	11000	1900	25	12/16/20 20:25	11/20/20	
2,4-Dichlorophenol	11000 U	11000	2300	25	12/16/20 20:25	11/20/20	
2,4-Dimethylphenol	11000 U	11000	2400	25	12/16/20 20:25	11/20/20	
2,4-Dinitrophenol	55000 U	55000	22000	25	12/16/20 20:25	11/20/20	
2,4-Dinitrotoluene	11000 U	11000	4300	25	12/16/20 20:25	11/20/20	
2,6-Dinitrotoluene	11000 U	11000	3200	25	12/16/20 20:25	11/20/20	
2-Chloronaphthalene	11000 U	11000	2600	25	12/16/20 20:25	11/20/20	
2-Chlorophenol	11000 U	11000	2700	25	12/16/20 20:25	11/20/20	
2-Methylnaphthalene	3800 J	11000	2400	25	12/16/20 20:25	11/20/20	
2-Methylphenol	11000 U	11000	2300	25	12/16/20 20:25	11/20/20	
2-Nitroaniline	11000 U	11000	3200	25	12/16/20 20:25	11/20/20	
2-Nitrophenol	11000 U	11000	3100	25	12/16/20 20:25	11/20/20	
3,3'-Dichlorobenzidine	11000 U	11000	2300	25	12/16/20 20:25	11/20/20	
3- and 4-Methylphenol Coelution	11000 U	11000	2100	25	12/16/20 20:25	11/20/20	
3-Nitroaniline	11000 U	11000	2300	25	12/16/20 20:25	11/20/20	
4,6-Dinitro-2-methylphenol	55000 U	55000	4600	25	12/16/20 20:25	11/20/20	
4-Bromophenyl Phenyl Ether	11000 U	11000	3900	25	12/16/20 20:25	11/20/20	
4-Chloro-3-methylphenol	11000 U	11000	2400	25	12/16/20 20:25	11/20/20	
4-Chloroaniline	11000 U	11000	2600	25	12/16/20 20:25	11/20/20	
4-Chlorophenyl Phenyl Ether	11000 U	11000	2600	25	12/16/20 20:25	11/20/20	
4-Nitroaniline	11000 U	11000	2300	25	12/16/20 20:25	11/20/20	
4-Nitrophenol	55000 U	55000	3600	25	12/16/20 20:25	11/20/20	
Acenaphthene	11000 U	11000	2400	25	12/16/20 20:25	11/20/20	
Acenaphthylene	12000	11000	2900	25	12/16/20 20:25	11/20/20	
Acetophenone	11000 U	11000	2500	25	12/16/20 20:25	11/20/20	
Anthracene	10000 J	11000	3000	25	12/16/20 20:25	11/20/20	
Atrazine	11000 U	11000	4300	25	12/16/20 20:25	11/20/20	
Benz(a)anthracene	32000	11000	3200	25	12/16/20 20:25	11/20/20	
Benzaldehyde	11000 U	11000	2200	25	12/16/20 20:25	11/20/20	
Benzo(a)pyrene	36000	11000	3900	25	12/16/20 20:25	11/20/20	
Benzo(b)fluoranthene	43000	11000	3600	25	12/16/20 20:25	11/20/20	
Benzo(g,h,i)perylene	20000	11000	2900	25	12/16/20 20:25	11/20/20	
Benzo(k)fluoranthene	18000	11000	3900	25	12/16/20 20:25	11/20/20	
Biphenyl	11000 U	11000	2700	25	12/16/20 20:25	11/20/20	
2,2'-Oxybis(1-chloropropane)	11000 U	11000	4300	25	12/16/20 20:25	11/20/20	
Bis(2-chloroethoxy)methane	11000 U	11000	2900	25	12/16/20 20:25	11/20/20	
Bis(2-chloroethyl) Ether	11000 U	11000	2800	25	12/16/20 20:25	11/20/20	
Bis(2-ethylhexyl) Phthalate	16000 U	16000	2900	25	12/16/20 20:25	11/20/20	
Butyl Benzyl Phthalate	11000 U	11000	2700	25	12/16/20 20:25	11/20/20	
Caprolactam	11000 U	11000	2800	25	12/16/20 20:25	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:40
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-024
Lab Code: R2010907-006

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	18000	11000	3100	25	12/16/20 20:25	11/20/20	
Chrysene	42000	11000	3900	25	12/16/20 20:25	11/20/20	
Di-n-butyl Phthalate	11000 U	11000	3300	25	12/16/20 20:25	11/20/20	
Di-n-octyl Phthalate	11000 U	11000	3200	25	12/16/20 20:25	11/20/20	
Dibenz(a,h)anthracene	6000 J	11000	3200	25	12/16/20 20:25	11/20/20	
Dibenzofuran	7700 J	11000	2200	25	12/16/20 20:25	11/20/20	
Diethyl Phthalate	11000 U	11000	2300	25	12/16/20 20:25	11/20/20	
Dimethyl Phthalate	11000 U	11000	2400	25	12/16/20 20:25	11/20/20	
Fluoranthene	110000 E	11000	3900	25	12/16/20 20:25	11/20/20	
Fluorene	14000	11000	2500	25	12/16/20 20:25	11/20/20	
Hexachlorobenzene	11000 U	11000	3300	25	12/16/20 20:25	11/20/20	
Hexachlorobutadiene	11000 U	11000	2600	25	12/16/20 20:25	11/20/20	
Hexachlorocyclopentadiene	11000 U	11000	2400	25	12/16/20 20:25	11/20/20	
Hexachloroethane	11000 U	11000	2800	25	12/16/20 20:25	11/20/20	
Indeno(1,2,3-cd)pyrene	25000	11000	3600	25	12/16/20 20:25	11/20/20	
Isophorone	11000 U	11000	3000	25	12/16/20 20:25	11/20/20	
N-Nitrosodi-n-propylamine	11000 U	11000	2900	25	12/16/20 20:25	11/20/20	
N-Nitrosodiphenylamine	11000 U	11000	7200	25	12/16/20 20:25	11/20/20	
Naphthalene	5800 J	11000	2800	25	12/16/20 20:25	11/20/20	
Nitrobenzene	11000 U	11000	2800	25	12/16/20 20:25	11/20/20	
Pentachlorophenol (PCP)	55000 U	55000	3600	25	12/16/20 20:25	11/20/20	
Phenanthrene	120000 E	11000	3200	25	12/16/20 20:25	11/20/20	
Phenol	11000 U	11000	2600	25	12/16/20 20:25	11/20/20	
Pyrene	85000	11000	4300	25	12/16/20 20:25	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	0 *	10 - 109	12/16/20 20:25	D
2-Fluorobiphenyl	0 *	10 - 102	12/16/20 20:25	D
2-Fluorophenol	0 *	10 - 88	12/16/20 20:25	D
Nitrobenzene-d5	0 *	10 - 95	12/16/20 20:25	D
Phenol-d6	0 *	10 - 145	12/16/20 20:25	D
Terphenyl-d14	0 *	10 - 106	12/16/20 20:25	D

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:40
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-024
Lab Code: R2010907-006

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	21000 U	21000	5100	50	12/28/20 12:14	11/20/20	
2,3,4,6-Tetrachlorophenol	21000 U	21000	4500	50	12/28/20 12:14	11/20/20	
2,4,5-Trichlorophenol	21000 U	21000	19000	50	12/28/20 12:14	11/20/20	
2,4,6-Trichlorophenol	21000 U	21000	3800	50	12/28/20 12:14	11/20/20	
2,4-Dichlorophenol	21000 U	21000	4600	50	12/28/20 12:14	11/20/20	
2,4-Dimethylphenol	21000 U	21000	4700	50	12/28/20 12:14	11/20/20	
2,4-Dinitrophenol	110000 U	110000	43000	50	12/28/20 12:14	11/20/20	
2,4-Dinitrotoluene	21000 U	21000	8500	50	12/28/20 12:14	11/20/20	
2,6-Dinitrotoluene	21000 U	21000	6300	50	12/28/20 12:14	11/20/20	
2-Chloronaphthalene	21000 U	21000	5200	50	12/28/20 12:14	11/20/20	
2-Chlorophenol	21000 U	21000	5300	50	12/28/20 12:14	11/20/20	
2-Methylnaphthalene	21000 U	21000	4700	50	12/28/20 12:14	11/20/20	
2-Methylphenol	21000 U	21000	4600	50	12/28/20 12:14	11/20/20	
2-Nitroaniline	21000 U	21000	6400	50	12/28/20 12:14	11/20/20	
2-Nitrophenol	21000 U	21000	6200	50	12/28/20 12:14	11/20/20	
3,3'-Dichlorobenzidine	21000 U	21000	4500	50	12/28/20 12:14	11/20/20	
3- and 4-Methylphenol Coelution	21000 U	21000	4100	50	12/28/20 12:14	11/20/20	
3-Nitroaniline	21000 U	21000	4600	50	12/28/20 12:14	11/20/20	
4,6-Dinitro-2-methylphenol	110000 U	110000	9100	50	12/28/20 12:14	11/20/20	
4-Bromophenyl Phenyl Ether	21000 U	21000	7800	50	12/28/20 12:14	11/20/20	
4-Chloro-3-methylphenol	21000 U	21000	4700	50	12/28/20 12:14	11/20/20	
4-Chloroaniline	21000 U	21000	5100	50	12/28/20 12:14	11/20/20	
4-Chlorophenyl Phenyl Ether	21000 U	21000	5200	50	12/28/20 12:14	11/20/20	
4-Nitroaniline	21000 U	21000	4600	50	12/28/20 12:14	11/20/20	
4-Nitrophenol	110000 U	110000	7200	50	12/28/20 12:14	11/20/20	
Acenaphthene	21000 U	21000	4800	50	12/28/20 12:14	11/20/20	
Acenaphthylene	11000 DJ	21000	5700	50	12/28/20 12:14	11/20/20	
Acetophenone	21000 U	21000	4900	50	12/28/20 12:14	11/20/20	
Anthracene	9700 DJ	21000	6000	50	12/28/20 12:14	11/20/20	
Atrazine	21000 U	21000	8500	50	12/28/20 12:14	11/20/20	
Benz(a)anthracene	32000 D	21000	6300	50	12/28/20 12:14	11/20/20	
Benzaldehyde	21000 U	21000	4300	50	12/28/20 12:14	11/20/20	
Benzo(a)pyrene	36000 D	21000	7800	50	12/28/20 12:14	11/20/20	
Benzo(b)fluoranthene	43000 D	21000	7200	50	12/28/20 12:14	11/20/20	
Benzo(g,h,i)perylene	23000 D	21000	5700	50	12/28/20 12:14	11/20/20	
Benzo(k)fluoranthene	17000 DJ	21000	7800	50	12/28/20 12:14	11/20/20	
Biphenyl	21000 U	21000	5300	50	12/28/20 12:14	11/20/20	
2,2'-Oxybis(1-chloropropane)	21000 U	21000	8500	50	12/28/20 12:14	11/20/20	
Bis(2-chloroethoxy)methane	21000 U	21000	5700	50	12/28/20 12:14	11/20/20	
Bis(2-chloroethyl) Ether	21000 U	21000	5600	50	12/28/20 12:14	11/20/20	
Bis(2-ethylhexyl) Phthalate	32000 U	32000	5700	50	12/28/20 12:14	11/20/20	
Butyl Benzyl Phthalate	21000 U	21000	5400	50	12/28/20 12:14	11/20/20	
Caprolactam	21000 U	21000	5600	50	12/28/20 12:14	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:40
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-024
Lab Code: R2010907-006

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	18000 DJ	21000	6200	50	12/28/20 12:14	11/20/20	
Chrysene	43000 D	21000	7800	50	12/28/20 12:14	11/20/20	
Di-n-butyl Phthalate	21000 U	21000	6500	50	12/28/20 12:14	11/20/20	
Di-n-octyl Phthalate	21000 U	21000	6300	50	12/28/20 12:14	11/20/20	
Dibenz(a,h)anthracene	6500 DJ	21000	6400	50	12/28/20 12:14	11/20/20	
Dibenzofuran	7600 DJ	21000	4300	50	12/28/20 12:14	11/20/20	
Diethyl Phthalate	21000 U	21000	4600	50	12/28/20 12:14	11/20/20	
Dimethyl Phthalate	21000 U	21000	4800	50	12/28/20 12:14	11/20/20	
Fluoranthene	120000 D	21000	7800	50	12/28/20 12:14	11/20/20	
Fluorene	13000 DJ	21000	5000	50	12/28/20 12:14	11/20/20	
Hexachlorobenzene	21000 U	21000	6500	50	12/28/20 12:14	11/20/20	
Hexachlorobutadiene	21000 U	21000	5200	50	12/28/20 12:14	11/20/20	
Hexachlorocyclopentadiene	21000 U	21000	4700	50	12/28/20 12:14	11/20/20	
Hexachloroethane	21000 U	21000	5500	50	12/28/20 12:14	11/20/20	
Indeno(1,2,3-cd)pyrene	29000 D	21000	7200	50	12/28/20 12:14	11/20/20	
Isophorone	21000 U	21000	5900	50	12/28/20 12:14	11/20/20	
N-Nitrosodi-n-propylamine	21000 U	21000	5700	50	12/28/20 12:14	11/20/20	
N-Nitrosodiphenylamine	21000 U	21000	15000	50	12/28/20 12:14	11/20/20	
Naphthalene	6100 DJ	21000	5500	50	12/28/20 12:14	11/20/20	
Nitrobenzene	21000 U	21000	5500	50	12/28/20 12:14	11/20/20	
Pentachlorophenol (PCP)	110000 U	110000	7200	50	12/28/20 12:14	11/20/20	
Phenanthrene	120000 D	21000	6300	50	12/28/20 12:14	11/20/20	
Phenol	21000 U	21000	5100	50	12/28/20 12:14	11/20/20	
Pyrene	85000 D	21000	8500	50	12/28/20 12:14	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	0 *	10 - 109	12/28/20 12:14	D
2-Fluorobiphenyl	0 *	10 - 102	12/28/20 12:14	D
2-Fluorophenol	0 *	10 - 88	12/28/20 12:14	D
Nitrobenzene-d5	0 *	10 - 95	12/28/20 12:14	D
Phenol-d6	0 *	10 - 145	12/28/20 12:14	D
Terphenyl-d14	0 *	10 - 106	12/28/20 12:14	D

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-22-01
Lab Code: R2010907-007

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	580 U	580	140	1	12/01/20 17:33	11/23/20	
2,3,4,6-Tetrachlorophenol	580 U	580	130	1	12/01/20 17:33	11/23/20	
2,4,5-Trichlorophenol	580 U	580	500	1	12/01/20 17:33	11/23/20	
2,4,6-Trichlorophenol	580 U	580	110	1	12/01/20 17:33	11/23/20	
2,4-Dichlorophenol	580 U	580	130	1	12/01/20 17:33	11/23/20	
2,4-Dimethylphenol	580 U	580	130	1	12/01/20 17:33	11/23/20	
2,4-Dinitrophenol	3000 U	3000	1200	1	12/01/20 17:33	11/23/20	
2,4-Dinitrotoluene	580 U	580	230	1	12/01/20 17:33	11/23/20	
2,6-Dinitrotoluene	580 U	580	170	1	12/01/20 17:33	11/23/20	
2-Chloronaphthalene	580 U	580	140	1	12/01/20 17:33	11/23/20	
2-Chlorophenol	580 U	580	150	1	12/01/20 17:33	11/23/20	
2-Methylnaphthalene	1200	580	130	1	12/01/20 17:33	11/23/20	
2-Methylphenol	580 U	580	130	1	12/01/20 17:33	11/23/20	
2-Nitroaniline	580 U	580	180	1	12/01/20 17:33	11/23/20	
2-Nitrophenol	580 U	580	170	1	12/01/20 17:33	11/23/20	
3,3'-Dichlorobenzidine	580 U	580	130	1	12/01/20 17:33	11/23/20	
3- and 4-Methylphenol Coelution	580 U	580	120	1	12/01/20 17:33	11/23/20	
3-Nitroaniline	580 U	580	130	1	12/01/20 17:33	11/23/20	
4,6-Dinitro-2-methylphenol	3000 U	3000	250	1	12/01/20 17:33	11/23/20	
4-Bromophenyl Phenyl Ether	580 U	580	220	1	12/01/20 17:33	11/23/20	
4-Chloro-3-methylphenol	580 U	580	130	1	12/01/20 17:33	11/23/20	
4-Chloroaniline	580 U	580	140	1	12/01/20 17:33	11/23/20	
4-Chlorophenyl Phenyl Ether	580 U	580	140	1	12/01/20 17:33	11/23/20	
4-Nitroaniline	580 U	580	130	1	12/01/20 17:33	11/23/20	
4-Nitrophenol	3000 U	3000	200	1	12/01/20 17:33	11/23/20	
Acenaphthene	560 J	580	140	1	12/01/20 17:33	11/23/20	
Acenaphthylene	730	580	160	1	12/01/20 17:33	11/23/20	
Acetophenone	580 U	580	140	1	12/01/20 17:33	11/23/20	
Anthracene	2200	580	170	1	12/01/20 17:33	11/23/20	
Atrazine	580 U	580	230	1	12/01/20 17:33	11/23/20	
Benz(a)anthracene	5400	580	180	1	12/01/20 17:33	11/23/20	
Benzaldehyde	580 U	580	120	1	12/01/20 17:33	11/23/20	
Benzo(a)pyrene	7500 E	580	220	1	12/01/20 17:33	11/23/20	
Benzo(b)fluoranthene	7200 E	580	200	1	12/01/20 17:33	11/23/20	
Benzo(g,h,i)perylene	5000	580	160	1	12/01/20 17:33	11/23/20	
Benzo(k)fluoranthene	2500	580	220	1	12/01/20 17:33	11/23/20	
Biphenyl	240 J	580	150	1	12/01/20 17:33	11/23/20	
2,2'-Oxybis(1-chloropropane)	580 U	580	230	1	12/01/20 17:33	11/23/20	
Bis(2-chloroethoxy)methane	580 U	580	160	1	12/01/20 17:33	11/23/20	
Bis(2-chloroethyl) Ether	580 U	580	160	1	12/01/20 17:33	11/23/20	
Bis(2-ethylhexyl) Phthalate	880 U	880	160	1	12/01/20 17:33	11/23/20	
Butyl Benzyl Phthalate	580 U	580	150	1	12/01/20 17:33	11/23/20	
Caprolactam	580 U	580	160	1	12/01/20 17:33	11/23/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-22-01
Lab Code: R2010907-007

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	1000	580	170	1	12/01/20 17:33	11/23/20	
Chrysene	5800	580	220	1	12/01/20 17:33	11/23/20	
Di-n-butyl Phthalate	580 U	580	180	1	12/01/20 17:33	11/23/20	
Di-n-octyl Phthalate	580 U	580	180	1	12/01/20 17:33	11/23/20	
Dibenz(a,h)anthracene	1100	580	180	1	12/01/20 17:33	11/23/20	
Dibenzofuran	1000	580	120	1	12/01/20 17:33	11/23/20	
Diethyl Phthalate	580 U	580	130	1	12/01/20 17:33	11/23/20	
Dimethyl Phthalate	580 U	580	140	1	12/01/20 17:33	11/23/20	
Fluoranthene	8700 E	580	220	1	12/01/20 17:33	11/23/20	
Fluorene	1300	580	140	1	12/01/20 17:33	11/23/20	
Hexachlorobenzene	580 U	580	180	1	12/01/20 17:33	11/23/20	
Hexachlorobutadiene	580 U	580	150	1	12/01/20 17:33	11/23/20	
Hexachlorocyclopentadiene	580 U	580	130	1	12/01/20 17:33	11/23/20	
Hexachloroethane	580 U	580	150	1	12/01/20 17:33	11/23/20	
Indeno(1,2,3-cd)pyrene	4400	580	200	1	12/01/20 17:33	11/23/20	
Isophorone	580 U	580	160	1	12/01/20 17:33	11/23/20	
N-Nitrosodi-n-propylamine	580 U	580	160	1	12/01/20 17:33	11/23/20	
N-Nitrosodiphenylamine	580 U	580	390	1	12/01/20 17:33	11/23/20	
Naphthalene	2100	580	150	1	12/01/20 17:33	11/23/20	
Nitrobenzene	580 U	580	150	1	12/01/20 17:33	11/23/20	
Pentachlorophenol (PCP)	3000 U	3000	200	1	12/01/20 17:33	11/23/20	
Phenanthrene	6400 E	580	170	1	12/01/20 17:33	11/23/20	
Phenol	580 U	580	140	1	12/01/20 17:33	11/23/20	
Pyrene	8000 E	580	230	1	12/01/20 17:33	11/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	36	10 - 109	12/01/20 17:33	
2-Fluorobiphenyl	25	10 - 102	12/01/20 17:33	
2-Fluorophenol	21	10 - 88	12/01/20 17:33	
Nitrobenzene-d5	23	10 - 95	12/01/20 17:33	
Phenol-d6	24	10 - 145	12/01/20 17:33	
Terphenyl-d14	33	10 - 106	12/01/20 17:33	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-22-01
Lab Code: R2010907-007

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	1700 U	1700	420	3	12/11/20 14:52	11/23/20	
2,3,4,6-Tetrachlorophenol	1700 U	1700	370	3	12/11/20 14:52	11/23/20	
2,4,5-Trichlorophenol	1700 U	1700	1500	3	12/11/20 14:52	11/23/20	
2,4,6-Trichlorophenol	1700 U	1700	310	3	12/11/20 14:52	11/23/20	
2,4-Dichlorophenol	1700 U	1700	370	3	12/11/20 14:52	11/23/20	
2,4-Dimethylphenol	1700 U	1700	380	3	12/11/20 14:52	11/23/20	
2,4-Dinitrophenol	9000 U	9000	3500	3	12/11/20 14:52	11/23/20	
2,4-Dinitrotoluene	1700 U	1700	690	3	12/11/20 14:52	11/23/20	
2,6-Dinitrotoluene	1700 U	1700	510	3	12/11/20 14:52	11/23/20	
2-Chloronaphthalene	1700 U	1700	420	3	12/11/20 14:52	11/23/20	
2-Chlorophenol	1700 U	1700	430	3	12/11/20 14:52	11/23/20	
2-Methylnaphthalene	1300 DJ	1700	380	3	12/11/20 14:52	11/23/20	
2-Methylphenol	1700 U	1700	380	3	12/11/20 14:52	11/23/20	
2-Nitroaniline	1700 U	1700	520	3	12/11/20 14:52	11/23/20	
2-Nitrophenol	1700 U	1700	510	3	12/11/20 14:52	11/23/20	
3,3'-Dichlorobenzidine	1700 U	1700	370	3	12/11/20 14:52	11/23/20	
3- and 4-Methylphenol Coelution	1700 U	1700	340	3	12/11/20 14:52	11/23/20	
3-Nitroaniline	1700 U	1700	370	3	12/11/20 14:52	11/23/20	
4,6-Dinitro-2-methylphenol	9000 U	9000	740	3	12/11/20 14:52	11/23/20	
4-Bromophenyl Phenyl Ether	1700 U	1700	640	3	12/11/20 14:52	11/23/20	
4-Chloro-3-methylphenol	1700 U	1700	380	3	12/11/20 14:52	11/23/20	
4-Chloroaniline	1700 U	1700	420	3	12/11/20 14:52	11/23/20	
4-Chlorophenyl Phenyl Ether	1700 U	1700	420	3	12/11/20 14:52	11/23/20	
4-Nitroaniline	1700 U	1700	370	3	12/11/20 14:52	11/23/20	
4-Nitrophenol	9000 U	9000	580	3	12/11/20 14:52	11/23/20	
Acenaphthene	600 DJ	1700	400	3	12/11/20 14:52	11/23/20	
Acenaphthylene	740 DJ	1700	460	3	12/11/20 14:52	11/23/20	
Acetophenone	1700 U	1700	400	3	12/11/20 14:52	11/23/20	
Anthracene	2300 D	1700	490	3	12/11/20 14:52	11/23/20	
Atrazine	1700 U	1700	690	3	12/11/20 14:52	11/23/20	
Benz(a)anthracene	5500 D	1700	520	3	12/11/20 14:52	11/23/20	
Benzaldehyde	1700 U	1700	350	3	12/11/20 14:52	11/23/20	
Benzo(a)pyrene	7800 D	1700	640	3	12/11/20 14:52	11/23/20	
Benzo(b)fluoranthene	7500 D	1700	580	3	12/11/20 14:52	11/23/20	
Benzo(g,h,i)perylene	4800 D	1700	460	3	12/11/20 14:52	11/23/20	
Benzo(k)fluoranthene	2600 D	1700	640	3	12/11/20 14:52	11/23/20	
Biphenyl	1700 U	1700	430	3	12/11/20 14:52	11/23/20	
2,2'-Oxybis(1-chloropropane)	1700 U	1700	690	3	12/11/20 14:52	11/23/20	
Bis(2-chloroethoxy)methane	1700 U	1700	470	3	12/11/20 14:52	11/23/20	
Bis(2-chloroethyl) Ether	1700 U	1700	460	3	12/11/20 14:52	11/23/20	
Bis(2-ethylhexyl) Phthalate	2600 U	2600	470	3	12/11/20 14:52	11/23/20	
Butyl Benzyl Phthalate	1700 U	1700	440	3	12/11/20 14:52	11/23/20	
Caprolactam	1700 U	1700	460	3	12/11/20 14:52	11/23/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-22-01
Lab Code: R2010907-007

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	1100 DJ	1700	510	3	12/11/20 14:52	11/23/20	
Chrysene	5700 D	1700	640	3	12/11/20 14:52	11/23/20	
Di-n-butyl Phthalate	1700 U	1700	530	3	12/11/20 14:52	11/23/20	
Di-n-octyl Phthalate	1700 U	1700	520	3	12/11/20 14:52	11/23/20	
Dibenz(a,h)anthracene	1300 DJ	1700	520	3	12/11/20 14:52	11/23/20	
Dibenzofuran	1100 DJ	1700	350	3	12/11/20 14:52	11/23/20	
Diethyl Phthalate	1700 U	1700	370	3	12/11/20 14:52	11/23/20	
Dimethyl Phthalate	1700 U	1700	400	3	12/11/20 14:52	11/23/20	
Fluoranthene	9600 D	1700	640	3	12/11/20 14:52	11/23/20	
Fluorene	1400 DJ	1700	410	3	12/11/20 14:52	11/23/20	
Hexachlorobenzene	1700 U	1700	530	3	12/11/20 14:52	11/23/20	
Hexachlorobutadiene	1700 U	1700	430	3	12/11/20 14:52	11/23/20	
Hexachlorocyclopentadiene	1700 U	1700	380	3	12/11/20 14:52	11/23/20	
Hexachloroethane	1700 U	1700	450	3	12/11/20 14:52	11/23/20	
Indeno(1,2,3-cd)pyrene	5300 D	1700	580	3	12/11/20 14:52	11/23/20	
Isophorone	1700 U	1700	480	3	12/11/20 14:52	11/23/20	
N-Nitrosodi-n-propylamine	1700 U	1700	470	3	12/11/20 14:52	11/23/20	
N-Nitrosodiphenylamine	1700 U	1700	1200	3	12/11/20 14:52	11/23/20	
Naphthalene	2300 D	1700	450	3	12/11/20 14:52	11/23/20	
Nitrobenzene	1700 U	1700	450	3	12/11/20 14:52	11/23/20	
Pentachlorophenol (PCP)	9000 U	9000	580	3	12/11/20 14:52	11/23/20	
Phenanthrene	7400 D	1700	510	3	12/11/20 14:52	11/23/20	
Phenol	1700 U	1700	420	3	12/11/20 14:52	11/23/20	
Pyrene	8600 D	1700	690	3	12/11/20 14:52	11/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	35	10 - 109	12/11/20 14:52	
2-Fluorobiphenyl	28	10 - 102	12/11/20 14:52	
2-Fluorophenol	24	10 - 88	12/11/20 14:52	
Nitrobenzene-d5	27	10 - 95	12/11/20 14:52	
Phenol-d6	27	10 - 145	12/11/20 14:52	
Terphenyl-d14	39	10 - 106	12/11/20 14:52	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-220-01
Lab Code: R2010907-008

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	500 U	500	120	1	12/01/20 18:03	11/23/20	
2,3,4,6-Tetrachlorophenol	500 U	500	110	1	12/01/20 18:03	11/23/20	
2,4,5-Trichlorophenol	500 U	500	430	1	12/01/20 18:03	11/23/20	
2,4,6-Trichlorophenol	500 U	500	88	1	12/01/20 18:03	11/23/20	
2,4-Dichlorophenol	500 U	500	110	1	12/01/20 18:03	11/23/20	
2,4-Dimethylphenol	500 U	500	110	1	12/01/20 18:03	11/23/20	
2,4-Dinitrophenol	2600 U	2600	990	1	12/01/20 18:03	11/23/20	
2,4-Dinitrotoluene	500 U	500	200	1	12/01/20 18:03	11/23/20	
2,6-Dinitrotoluene	500 U	500	150	1	12/01/20 18:03	11/23/20	
2-Chloronaphthalene	500 U	500	120	1	12/01/20 18:03	11/23/20	
2-Chlorophenol	500 U	500	130	1	12/01/20 18:03	11/23/20	
2-Methylnaphthalene	1800	500	110	1	12/01/20 18:03	11/23/20	
2-Methylphenol	500 U	500	110	1	12/01/20 18:03	11/23/20	
2-Nitroaniline	500 U	500	150	1	12/01/20 18:03	11/23/20	
2-Nitrophenol	500 U	500	150	1	12/01/20 18:03	11/23/20	
3,3'-Dichlorobenzidine	500 U	500	110	1	12/01/20 18:03	11/23/20	
3- and 4-Methylphenol Coelution	500 U	500	96	1	12/01/20 18:03	11/23/20	
3-Nitroaniline	500 U	500	110	1	12/01/20 18:03	11/23/20	
4,6-Dinitro-2-methylphenol	2600 U	2600	220	1	12/01/20 18:03	11/23/20	
4-Bromophenyl Phenyl Ether	500 U	500	190	1	12/01/20 18:03	11/23/20	
4-Chloro-3-methylphenol	500 U	500	110	1	12/01/20 18:03	11/23/20	
4-Chloroaniline	500 U	500	120	1	12/01/20 18:03	11/23/20	
4-Chlorophenyl Phenyl Ether	500 U	500	120	1	12/01/20 18:03	11/23/20	
4-Nitroaniline	500 U	500	110	1	12/01/20 18:03	11/23/20	
4-Nitrophenol	2600 U	2600	170	1	12/01/20 18:03	11/23/20	
Acenaphthene	1100	500	120	1	12/01/20 18:03	11/23/20	
Acenaphthylene	930	500	140	1	12/01/20 18:03	11/23/20	
Acetophenone	500 U	500	120	1	12/01/20 18:03	11/23/20	
Anthracene	4000	500	140	1	12/01/20 18:03	11/23/20	
Atrazine	500 U	500	200	1	12/01/20 18:03	11/23/20	
Benz(a)anthracene	8500 E	500	150	1	12/01/20 18:03	11/23/20	
Benzaldehyde	500 U	500	99	1	12/01/20 18:03	11/23/20	
Benzo(a)pyrene	12000 E	500	190	1	12/01/20 18:03	11/23/20	
Benzo(b)fluoranthene	11000 E	500	170	1	12/01/20 18:03	11/23/20	
Benzo(g,h,i)perylene	6500 E	500	140	1	12/01/20 18:03	11/23/20	
Benzo(k)fluoranthene	3700	500	190	1	12/01/20 18:03	11/23/20	
Biphenyl	410 J	500	130	1	12/01/20 18:03	11/23/20	
2,2'-Oxybis(1-chloropropane)	500 U	500	200	1	12/01/20 18:03	11/23/20	
Bis(2-chloroethoxy)methane	500 U	500	140	1	12/01/20 18:03	11/23/20	
Bis(2-chloroethyl) Ether	500 U	500	130	1	12/01/20 18:03	11/23/20	
Bis(2-ethylhexyl) Phthalate	760 U	760	140	1	12/01/20 18:03	11/23/20	
Butyl Benzyl Phthalate	500 U	500	130	1	12/01/20 18:03	11/23/20	
Caprolactam	500 U	500	130	1	12/01/20 18:03	11/23/20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-220-01
Lab Code: R2010907-008

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	2500	500	150	1	12/01/20 18:03	11/23/20	
Chrysene	8400 E	500	190	1	12/01/20 18:03	11/23/20	
Di-n-butyl Phthalate	500 U	500	160	1	12/01/20 18:03	11/23/20	
Di-n-octyl Phthalate	500 U	500	150	1	12/01/20 18:03	11/23/20	
Dibenz(a,h)anthracene	1400	500	150	1	12/01/20 18:03	11/23/20	
Dibenzofuran	2200	500	99	1	12/01/20 18:03	11/23/20	
Diethyl Phthalate	500 U	500	110	1	12/01/20 18:03	11/23/20	
Dimethyl Phthalate	500 U	500	120	1	12/01/20 18:03	11/23/20	
Fluoranthene	12000 E	500	190	1	12/01/20 18:03	11/23/20	
Fluorene	3700	500	120	1	12/01/20 18:03	11/23/20	
Hexachlorobenzene	500 U	500	160	1	12/01/20 18:03	11/23/20	
Hexachlorobutadiene	500 U	500	130	1	12/01/20 18:03	11/23/20	
Hexachlorocyclopentadiene	500 U	500	110	1	12/01/20 18:03	11/23/20	
Hexachloroethane	500 U	500	130	1	12/01/20 18:03	11/23/20	
Indeno(1,2,3-cd)pyrene	5700 E	500	170	1	12/01/20 18:03	11/23/20	
Isophorone	500 U	500	140	1	12/01/20 18:03	11/23/20	
N-Nitrosodi-n-propylamine	500 U	500	140	1	12/01/20 18:03	11/23/20	
N-Nitrosodiphenylamine	500 U	500	340	1	12/01/20 18:03	11/23/20	
Naphthalene	3700	500	130	1	12/01/20 18:03	11/23/20	
Nitrobenzene	500 U	500	130	1	12/01/20 18:03	11/23/20	
Pentachlorophenol (PCP)	2600 U	2600	170	1	12/01/20 18:03	11/23/20	
Phenanthrene	11000 E	500	150	1	12/01/20 18:03	11/23/20	
Phenol	500 U	500	120	1	12/01/20 18:03	11/23/20	
Pyrene	12000 E	500	200	1	12/01/20 18:03	11/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	40	10 - 109	12/01/20 18:03	
2-Fluorobiphenyl	29	10 - 102	12/01/20 18:03	
2-Fluorophenol	25	10 - 88	12/01/20 18:03	
Nitrobenzene-d5	26	10 - 95	12/01/20 18:03	
Phenol-d6	28	10 - 145	12/01/20 18:03	
Terphenyl-d14	38	10 - 106	12/01/20 18:03	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-220-01
Lab Code: R2010907-008

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	1500 U	1500	360	3	12/11/20 15:21	11/23/20	
2,3,4,6-Tetrachlorophenol	1500 U	1500	320	3	12/11/20 15:21	11/23/20	
2,4,5-Trichlorophenol	1500 U	1500	1300	3	12/11/20 15:21	11/23/20	
2,4,6-Trichlorophenol	1500 U	1500	270	3	12/11/20 15:21	11/23/20	
2,4-Dichlorophenol	1500 U	1500	320	3	12/11/20 15:21	11/23/20	
2,4-Dimethylphenol	1500 U	1500	330	3	12/11/20 15:21	11/23/20	
2,4-Dinitrophenol	7700 U	7700	3000	3	12/11/20 15:21	11/23/20	
2,4-Dinitrotoluene	1500 U	1500	590	3	12/11/20 15:21	11/23/20	
2,6-Dinitrotoluene	1500 U	1500	440	3	12/11/20 15:21	11/23/20	
2-Chloronaphthalene	1500 U	1500	360	3	12/11/20 15:21	11/23/20	
2-Chlorophenol	1500 U	1500	370	3	12/11/20 15:21	11/23/20	
2-Methylnaphthalene	1900 D	1500	330	3	12/11/20 15:21	11/23/20	
2-Methylphenol	1500 U	1500	330	3	12/11/20 15:21	11/23/20	
2-Nitroaniline	1500 U	1500	450	3	12/11/20 15:21	11/23/20	
2-Nitrophenol	1500 U	1500	440	3	12/11/20 15:21	11/23/20	
3,3'-Dichlorobenzidine	1500 U	1500	320	3	12/11/20 15:21	11/23/20	
3- and 4-Methylphenol Coelution	1500 U	1500	290	3	12/11/20 15:21	11/23/20	
3-Nitroaniline	1500 U	1500	320	3	12/11/20 15:21	11/23/20	
4,6-Dinitro-2-methylphenol	7700 U	7700	640	3	12/11/20 15:21	11/23/20	
4-Bromophenyl Phenyl Ether	1500 U	1500	550	3	12/11/20 15:21	11/23/20	
4-Chloro-3-methylphenol	1500 U	1500	330	3	12/11/20 15:21	11/23/20	
4-Chloroaniline	1500 U	1500	360	3	12/11/20 15:21	11/23/20	
4-Chlorophenyl Phenyl Ether	1500 U	1500	360	3	12/11/20 15:21	11/23/20	
4-Nitroaniline	1500 U	1500	320	3	12/11/20 15:21	11/23/20	
4-Nitrophenol	7700 U	7700	500	3	12/11/20 15:21	11/23/20	
Acenaphthene	1200 DJ	1500	340	3	12/11/20 15:21	11/23/20	
Acenaphthylene	920 DJ	1500	400	3	12/11/20 15:21	11/23/20	
Acetophenone	1500 U	1500	340	3	12/11/20 15:21	11/23/20	
Anthracene	4400 D	1500	420	3	12/11/20 15:21	11/23/20	
Atrazine	1500 U	1500	590	3	12/11/20 15:21	11/23/20	
Benz(a)anthracene	8600 D	1500	440	3	12/11/20 15:21	11/23/20	
Benzaldehyde	1500 U	1500	300	3	12/11/20 15:21	11/23/20	
Benzo(a)pyrene	12000 D	1500	550	3	12/11/20 15:21	11/23/20	
Benzo(b)fluoranthene	11000 D	1500	500	3	12/11/20 15:21	11/23/20	
Benzo(g,h,i)perylene	7700 D	1500	400	3	12/11/20 15:21	11/23/20	
Benzo(k)fluoranthene	4000 D	1500	550	3	12/11/20 15:21	11/23/20	
Biphenyl	440 DJ	1500	370	3	12/11/20 15:21	11/23/20	
2,2'-Oxybis(1-chloropropane)	1500 U	1500	590	3	12/11/20 15:21	11/23/20	
Bis(2-chloroethoxy)methane	1500 U	1500	400	3	12/11/20 15:21	11/23/20	
Bis(2-chloroethyl) Ether	1500 U	1500	390	3	12/11/20 15:21	11/23/20	
Bis(2-ethylhexyl) Phthalate	2300 U	2300	400	3	12/11/20 15:21	11/23/20	
Butyl Benzyl Phthalate	1500 U	1500	380	3	12/11/20 15:21	11/23/20	
Caprolactam	1500 U	1500	390	3	12/11/20 15:21	11/23/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-220-01
Lab Code: R2010907-008

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	2800 D	1500	440	3	12/11/20 15:21	11/23/20	
Chrysene	8300 D	1500	550	3	12/11/20 15:21	11/23/20	
Di-n-butyl Phthalate	1500 U	1500	460	3	12/11/20 15:21	11/23/20	
Di-n-octyl Phthalate	1500 U	1500	440	3	12/11/20 15:21	11/23/20	
Dibenz(a,h)anthracene	2000 D	1500	450	3	12/11/20 15:21	11/23/20	
Dibenzofuran	2400 D	1500	300	3	12/11/20 15:21	11/23/20	
Diethyl Phthalate	1500 U	1500	320	3	12/11/20 15:21	11/23/20	
Dimethyl Phthalate	1500 U	1500	340	3	12/11/20 15:21	11/23/20	
Fluoranthene	14000 D	1500	550	3	12/11/20 15:21	11/23/20	
Fluorene	4100 D	1500	350	3	12/11/20 15:21	11/23/20	
Hexachlorobenzene	1500 U	1500	460	3	12/11/20 15:21	11/23/20	
Hexachlorobutadiene	1500 U	1500	370	3	12/11/20 15:21	11/23/20	
Hexachlorocyclopentadiene	1500 U	1500	330	3	12/11/20 15:21	11/23/20	
Hexachloroethane	1500 U	1500	390	3	12/11/20 15:21	11/23/20	
Indeno(1,2,3-cd)pyrene	8400 D	1500	500	3	12/11/20 15:21	11/23/20	
Isophorone	1500 U	1500	410	3	12/11/20 15:21	11/23/20	
N-Nitrosodi-n-propylamine	1500 U	1500	400	3	12/11/20 15:21	11/23/20	
N-Nitrosodiphenylamine	1500 U	1500	1000	3	12/11/20 15:21	11/23/20	
Naphthalene	4200 D	1500	390	3	12/11/20 15:21	11/23/20	
Nitrobenzene	1500 U	1500	390	3	12/11/20 15:21	11/23/20	
Pentachlorophenol (PCP)	7700 U	7700	500	3	12/11/20 15:21	11/23/20	
Phenanthrene	15000 D	1500	440	3	12/11/20 15:21	11/23/20	
Phenol	1500 U	1500	360	3	12/11/20 15:21	11/23/20	
Pyrene	13000 D	1500	590	3	12/11/20 15:21	11/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	41	10 - 109	12/11/20 15:21	
2-Fluorobiphenyl	32	10 - 102	12/11/20 15:21	
2-Fluorophenol	27	10 - 88	12/11/20 15:21	
Nitrobenzene-d5	31	10 - 95	12/11/20 15:21	
Phenol-d6	30	10 - 145	12/11/20 15:21	
Terphenyl-d14	44	10 - 106	12/11/20 15:21	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	610 U	610	150	1	12/01/20 18:32	11/23/20	
2,3,4,6-Tetrachlorophenol	610 U	610	130	1	12/01/20 18:32	11/23/20	
2,4,5-Trichlorophenol	610 U	610	520	1	12/01/20 18:32	11/23/20	
2,4,6-Trichlorophenol	610 U	610	110	1	12/01/20 18:32	11/23/20	
2,4-Dichlorophenol	610 U	610	130	1	12/01/20 18:32	11/23/20	
2,4-Dimethylphenol	610 U	610	140	1	12/01/20 18:32	11/23/20	
2,4-Dinitrophenol	3100 U	3100	1200	1	12/01/20 18:32	11/23/20	
2,4-Dinitrotoluene	610 U	610	240	1	12/01/20 18:32	11/23/20	
2,6-Dinitrotoluene	610 U	610	180	1	12/01/20 18:32	11/23/20	
2-Chloronaphthalene	610 U	610	150	1	12/01/20 18:32	11/23/20	
2-Chlorophenol	610 U	610	150	1	12/01/20 18:32	11/23/20	
2-Methylnaphthalene	1300	610	140	1	12/01/20 18:32	11/23/20	
2-Methylphenol	610 U	610	140	1	12/01/20 18:32	11/23/20	
2-Nitroaniline	610 U	610	180	1	12/01/20 18:32	11/23/20	
2-Nitrophenol	610 U	610	180	1	12/01/20 18:32	11/23/20	
3,3'-Dichlorobenzidine	610 U	610	130	1	12/01/20 18:32	11/23/20	
3- and 4-Methylphenol Coelution	610 U	610	120	1	12/01/20 18:32	11/23/20	
3-Nitroaniline	610 U	610	130	1	12/01/20 18:32	11/23/20	
4,6-Dinitro-2-methylphenol	3100 U	3100	260	1	12/01/20 18:32	11/23/20	
4-Bromophenyl Phenyl Ether	610 U	610	230	1	12/01/20 18:32	11/23/20	
4-Chloro-3-methylphenol	610 U	610	140	1	12/01/20 18:32	11/23/20	
4-Chloroaniline	610 U	610	150	1	12/01/20 18:32	11/23/20	
4-Chlorophenyl Phenyl Ether	610 U	610	150	1	12/01/20 18:32	11/23/20	
4-Nitroaniline	610 U	610	130	1	12/01/20 18:32	11/23/20	
4-Nitrophenol	3100 U	3100	210	1	12/01/20 18:32	11/23/20	
Acenaphthene	1200	610	140	1	12/01/20 18:32	11/23/20	
Acenaphthylene	900	610	160	1	12/01/20 18:32	11/23/20	
Acetophenone	610 U	610	140	1	12/01/20 18:32	11/23/20	
Anthracene	2700	610	170	1	12/01/20 18:32	11/23/20	
Atrazine	610 U	610	240	1	12/01/20 18:32	11/23/20	
Benz(a)anthracene	9400 E	610	180	1	12/01/20 18:32	11/23/20	
Benzaldehyde	610 U	610	120	1	12/01/20 18:32	11/23/20	
Benzo(a)pyrene	14000 E	610	230	1	12/01/20 18:32	11/23/20	
Benzo(b)fluoranthene	14000 E	610	210	1	12/01/20 18:32	11/23/20	
Benzo(g,h,i)perylene	8200 E	610	160	1	12/01/20 18:32	11/23/20	
Benzo(k)fluoranthene	4500	610	230	1	12/01/20 18:32	11/23/20	
Biphenyl	260 J	610	150	1	12/01/20 18:32	11/23/20	
2,2'-Oxybis(1-chloropropane)	610 U	610	240	1	12/01/20 18:32	11/23/20	
Bis(2-chloroethoxy)methane	610 U	610	170	1	12/01/20 18:32	11/23/20	
Bis(2-chloroethyl) Ether	610 U	610	160	1	12/01/20 18:32	11/23/20	
Bis(2-ethylhexyl) Phthalate	920 U	920	170	1	12/01/20 18:32	11/23/20	
Butyl Benzyl Phthalate	610 U	610	160	1	12/01/20 18:32	11/23/20	
Caprolactam	610 U	610	160	1	12/01/20 18:32	11/23/20	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	1600	610	180	1	12/01/20 18:32	11/23/20	
Chrysene	10000 E	610	230	1	12/01/20 18:32	11/23/20	
Di-n-butyl Phthalate	610 U	610	190	1	12/01/20 18:32	11/23/20	
Di-n-octyl Phthalate	610 U	610	180	1	12/01/20 18:32	11/23/20	
Dibenz(a,h)anthracene	1700	610	180	1	12/01/20 18:32	11/23/20	
Dibenzofuran	1100	610	120	1	12/01/20 18:32	11/23/20	
Diethyl Phthalate	610 U	610	130	1	12/01/20 18:32	11/23/20	
Dimethyl Phthalate	610 U	610	140	1	12/01/20 18:32	11/23/20	
Fluoranthene	14000 E	610	230	1	12/01/20 18:32	11/23/20	
Fluorene	1300	610	140	1	12/01/20 18:32	11/23/20	
Hexachlorobenzene	610 U	610	190	1	12/01/20 18:32	11/23/20	
Hexachlorobutadiene	610 U	610	150	1	12/01/20 18:32	11/23/20	
Hexachlorocyclopentadiene	610 U	610	140	1	12/01/20 18:32	11/23/20	
Hexachloroethane	610 U	610	160	1	12/01/20 18:32	11/23/20	
Indeno(1,2,3-cd)pyrene	7100 E	610	210	1	12/01/20 18:32	11/23/20	
Isophorone	610 U	610	170	1	12/01/20 18:32	11/23/20	
N-Nitrosodi-n-propylamine	610 U	610	170	1	12/01/20 18:32	11/23/20	
N-Nitrosodiphenylamine	610 U	610	410	1	12/01/20 18:32	11/23/20	
Naphthalene	3200	610	160	1	12/01/20 18:32	11/23/20	
Nitrobenzene	610 U	610	160	1	12/01/20 18:32	11/23/20	
Pentachlorophenol (PCP)	3100 U	3100	210	1	12/01/20 18:32	11/23/20	
Phenanthrene	8800 E	610	180	1	12/01/20 18:32	11/23/20	
Phenol	610 U	610	150	1	12/01/20 18:32	11/23/20	
Pyrene	13000 E	610	240	1	12/01/20 18:32	11/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	35	10 - 109	12/01/20 18:32	
2-Fluorobiphenyl	34	10 - 102	12/01/20 18:32	
2-Fluorophenol	29	10 - 88	12/01/20 18:32	
Nitrobenzene-d5	33	10 - 95	12/01/20 18:32	
Phenol-d6	32	10 - 145	12/01/20 18:32	
Terphenyl-d14	37	10 - 106	12/01/20 18:32	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	1800 U	1800	430	3	12/11/20 15:50	11/23/20	
2,3,4,6-Tetrachlorophenol	1800 U	1800	380	3	12/11/20 15:50	11/23/20	
2,4,5-Trichlorophenol	1800 U	1800	1600	3	12/11/20 15:50	11/23/20	
2,4,6-Trichlorophenol	1800 U	1800	320	3	12/11/20 15:50	11/23/20	
2,4-Dichlorophenol	1800 U	1800	390	3	12/11/20 15:50	11/23/20	
2,4-Dimethylphenol	1800 U	1800	400	3	12/11/20 15:50	11/23/20	
2,4-Dinitrophenol	9400 U	9400	3600	3	12/11/20 15:50	11/23/20	
2,4-Dinitrotoluene	1800 U	1800	720	3	12/11/20 15:50	11/23/20	
2,6-Dinitrotoluene	1800 U	1800	530	3	12/11/20 15:50	11/23/20	
2-Chloronaphthalene	1800 U	1800	440	3	12/11/20 15:50	11/23/20	
2-Chlorophenol	1800 U	1800	450	3	12/11/20 15:50	11/23/20	
2-Methylnaphthalene	1400 DJ	1800	400	3	12/11/20 15:50	11/23/20	
2-Methylphenol	1800 U	1800	400	3	12/11/20 15:50	11/23/20	
2-Nitroaniline	1800 U	1800	540	3	12/11/20 15:50	11/23/20	
2-Nitrophenol	1800 U	1800	530	3	12/11/20 15:50	11/23/20	
3,3'-Dichlorobenzidine	1800 U	1800	380	3	12/11/20 15:50	11/23/20	
3- and 4-Methylphenol Coelution	1800 U	1800	350	3	12/11/20 15:50	11/23/20	
3-Nitroaniline	1800 U	1800	390	3	12/11/20 15:50	11/23/20	
4,6-Dinitro-2-methylphenol	9400 U	9400	780	3	12/11/20 15:50	11/23/20	
4-Bromophenyl Phenyl Ether	1800 U	1800	670	3	12/11/20 15:50	11/23/20	
4-Chloro-3-methylphenol	1800 U	1800	400	3	12/11/20 15:50	11/23/20	
4-Chloroaniline	1800 U	1800	430	3	12/11/20 15:50	11/23/20	
4-Chlorophenyl Phenyl Ether	1800 U	1800	440	3	12/11/20 15:50	11/23/20	
4-Nitroaniline	1800 U	1800	390	3	12/11/20 15:50	11/23/20	
4-Nitrophenol	9400 U	9400	610	3	12/11/20 15:50	11/23/20	
Acenaphthene	1200 DJ	1800	410	3	12/11/20 15:50	11/23/20	
Acenaphthylene	850 DJ	1800	480	3	12/11/20 15:50	11/23/20	
Acetophenone	1800 U	1800	420	3	12/11/20 15:50	11/23/20	
Anthracene	2700 D	1800	510	3	12/11/20 15:50	11/23/20	
Atrazine	1800 U	1800	720	3	12/11/20 15:50	11/23/20	
Benz(a)anthracene	8900 D	1800	540	3	12/11/20 15:50	11/23/20	
Benzaldehyde	1800 U	1800	360	3	12/11/20 15:50	11/23/20	
Benzo(a)pyrene	14000 D	1800	670	3	12/11/20 15:50	11/23/20	
Benzo(b)fluoranthene	13000 D	1800	610	3	12/11/20 15:50	11/23/20	
Benzo(g,h,i)perylene	9300 D	1800	480	3	12/11/20 15:50	11/23/20	
Benzo(k)fluoranthene	4500 D	1800	670	3	12/11/20 15:50	11/23/20	
Biphenyl	1800 U	1800	450	3	12/11/20 15:50	11/23/20	
2,2'-Oxybis(1-chloropropane)	1800 U	1800	720	3	12/11/20 15:50	11/23/20	
Bis(2-chloroethoxy)methane	1800 U	1800	490	3	12/11/20 15:50	11/23/20	
Bis(2-chloroethyl) Ether	1800 U	1800	480	3	12/11/20 15:50	11/23/20	
Bis(2-ethylhexyl) Phthalate	2800 U	2800	490	3	12/11/20 15:50	11/23/20	
Butyl Benzyl Phthalate	1800 U	1800	460	3	12/11/20 15:50	11/23/20	
Caprolactam	1800 U	1800	480	3	12/11/20 15:50	11/23/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	1700 DJ	1800	530	3	12/11/20 15:50	11/23/20	
Chrysene	10000 D	1800	670	3	12/11/20 15:50	11/23/20	
Di-n-butyl Phthalate	1800 U	1800	560	3	12/11/20 15:50	11/23/20	
Di-n-octyl Phthalate	1800 U	1800	540	3	12/11/20 15:50	11/23/20	
Dibenz(a,h)anthracene	2400 D	1800	540	3	12/11/20 15:50	11/23/20	
Dibenzofuran	1200 DJ	1800	360	3	12/11/20 15:50	11/23/20	
Diethyl Phthalate	1800 U	1800	390	3	12/11/20 15:50	11/23/20	
Dimethyl Phthalate	1800 U	1800	410	3	12/11/20 15:50	11/23/20	
Fluoranthene	15000 D	1800	670	3	12/11/20 15:50	11/23/20	
Fluorene	1300 DJ	1800	420	3	12/11/20 15:50	11/23/20	
Hexachlorobenzene	1800 U	1800	560	3	12/11/20 15:50	11/23/20	
Hexachlorobutadiene	1800 U	1800	450	3	12/11/20 15:50	11/23/20	
Hexachlorocyclopentadiene	1800 U	1800	400	3	12/11/20 15:50	11/23/20	
Hexachloroethane	1800 U	1800	470	3	12/11/20 15:50	11/23/20	
Indeno(1,2,3-cd)pyrene	10000 D	1800	610	3	12/11/20 15:50	11/23/20	
Isophorone	1800 U	1800	500	3	12/11/20 15:50	11/23/20	
N-Nitrosodi-n-propylamine	1800 U	1800	490	3	12/11/20 15:50	11/23/20	
N-Nitrosodiphenylamine	1800 U	1800	1300	3	12/11/20 15:50	11/23/20	
Naphthalene	3400 D	1800	470	3	12/11/20 15:50	11/23/20	
Nitrobenzene	1800 U	1800	470	3	12/11/20 15:50	11/23/20	
Pentachlorophenol (PCP)	9400 U	9400	610	3	12/11/20 15:50	11/23/20	
Phenanthrene	9900 D	1800	530	3	12/11/20 15:50	11/23/20	
Phenol	1800 U	1800	430	3	12/11/20 15:50	11/23/20	
Pyrene	14000 D	1800	720	3	12/11/20 15:50	11/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	35	10 - 109	12/11/20 15:50	
2-Fluorobiphenyl	36	10 - 102	12/11/20 15:50	
2-Fluorophenol	29	10 - 88	12/11/20 15:50	
Nitrobenzene-d5	36	10 - 95	12/11/20 15:50	
Phenol-d6	34	10 - 145	12/11/20 15:50	
Terphenyl-d14	41	10 - 106	12/11/20 15:50	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	520 U	520	130	1	12/01/20 19:01	11/23/20	
2,3,4,6-Tetrachlorophenol	520 U	520	110	1	12/01/20 19:01	11/23/20	
2,4,5-Trichlorophenol	520 U	520	450	1	12/01/20 19:01	11/23/20	
2,4,6-Trichlorophenol	520 U	520	92	1	12/01/20 19:01	11/23/20	
2,4-Dichlorophenol	520 U	520	120	1	12/01/20 19:01	11/23/20	
2,4-Dimethylphenol	520 U	520	120	1	12/01/20 19:01	11/23/20	
2,4-Dinitrophenol	2700 U	2700	1100	1	12/01/20 19:01	11/23/20	
2,4-Dinitrotoluene	520 U	520	210	1	12/01/20 19:01	11/23/20	
2,6-Dinitrotoluene	520 U	520	160	1	12/01/20 19:01	11/23/20	
2-Chloronaphthalene	520 U	520	130	1	12/01/20 19:01	11/23/20	
2-Chlorophenol	520 U	520	130	1	12/01/20 19:01	11/23/20	
2-Methylnaphthalene	1100	520	120	1	12/01/20 19:01	11/23/20	
2-Methylphenol	520 U	520	120	1	12/01/20 19:01	11/23/20	
2-Nitroaniline	520 U	520	160	1	12/01/20 19:01	11/23/20	
2-Nitrophenol	520 U	520	160	1	12/01/20 19:01	11/23/20	
3,3'-Dichlorobenzidine	520 U	520	110	1	12/01/20 19:01	11/23/20	
3- and 4-Methylphenol Coelution	520 U	520	100	1	12/01/20 19:01	11/23/20	
3-Nitroaniline	520 U	520	120	1	12/01/20 19:01	11/23/20	
4,6-Dinitro-2-methylphenol	2700 U	2700	230	1	12/01/20 19:01	11/23/20	
4-Bromophenyl Phenyl Ether	520 U	520	200	1	12/01/20 19:01	11/23/20	
4-Chloro-3-methylphenol	520 U	520	120	1	12/01/20 19:01	11/23/20	
4-Chloroaniline	520 U	520	130	1	12/01/20 19:01	11/23/20	
4-Chlorophenyl Phenyl Ether	520 U	520	130	1	12/01/20 19:01	11/23/20	
4-Nitroaniline	520 U	520	120	1	12/01/20 19:01	11/23/20	
4-Nitrophenol	2700 U	2700	180	1	12/01/20 19:01	11/23/20	
Acenaphthene	990	520	120	1	12/01/20 19:01	11/23/20	
Acenaphthylene	760	520	140	1	12/01/20 19:01	11/23/20	
Acetophenone	520 U	520	120	1	12/01/20 19:01	11/23/20	
Anthracene	2400	520	150	1	12/01/20 19:01	11/23/20	
Atrazine	520 U	520	210	1	12/01/20 19:01	11/23/20	
Benz(a)anthracene	8600 E	520	160	1	12/01/20 19:01	11/23/20	
Benzaldehyde	520 U	520	110	1	12/01/20 19:01	11/23/20	
Benzo(a)pyrene	13000 E	520	200	1	12/01/20 19:01	11/23/20	
Benzo(b)fluoranthene	13000 E	520	180	1	12/01/20 19:01	11/23/20	
Benzo(g,h,i)perylene	7500 E	520	140	1	12/01/20 19:01	11/23/20	
Benzo(k)fluoranthene	4700	520	200	1	12/01/20 19:01	11/23/20	
Biphenyl	230 J	520	130	1	12/01/20 19:01	11/23/20	
2,2'-Oxybis(1-chloropropane)	520 U	520	210	1	12/01/20 19:01	11/23/20	
Bis(2-chloroethoxy)methane	520 U	520	140	1	12/01/20 19:01	11/23/20	
Bis(2-chloroethyl) Ether	520 U	520	140	1	12/01/20 19:01	11/23/20	
Bis(2-ethylhexyl) Phthalate	790 U	790	140	1	12/01/20 19:01	11/23/20	
Butyl Benzyl Phthalate	520 U	520	130	1	12/01/20 19:01	11/23/20	
Caprolactam	520 U	520	140	1	12/01/20 19:01	11/23/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	1300	520	160	1	12/01/20 19:01	11/23/20	
Chrysene	9200 E	520	200	1	12/01/20 19:01	11/23/20	
Di-n-butyl Phthalate	520 U	520	160	1	12/01/20 19:01	11/23/20	
Di-n-octyl Phthalate	520 U	520	160	1	12/01/20 19:01	11/23/20	
Dibenz(a,h)anthracene	1500	520	160	1	12/01/20 19:01	11/23/20	
Dibenzofuran	970	520	110	1	12/01/20 19:01	11/23/20	
Diethyl Phthalate	520 U	520	120	1	12/01/20 19:01	11/23/20	
Dimethyl Phthalate	520 U	520	120	1	12/01/20 19:01	11/23/20	
Fluoranthene	12000 E	520	200	1	12/01/20 19:01	11/23/20	
Fluorene	1100	520	130	1	12/01/20 19:01	11/23/20	
Hexachlorobenzene	520 U	520	160	1	12/01/20 19:01	11/23/20	
Hexachlorobutadiene	520 U	520	130	1	12/01/20 19:01	11/23/20	
Hexachlorocyclopentadiene	520 U	520	120	1	12/01/20 19:01	11/23/20	
Hexachloroethane	520 U	520	140	1	12/01/20 19:01	11/23/20	
Indeno(1,2,3-cd)pyrene	6500 E	520	180	1	12/01/20 19:01	11/23/20	
Isophorone	520 U	520	150	1	12/01/20 19:01	11/23/20	
N-Nitrosodi-n-propylamine	520 U	520	140	1	12/01/20 19:01	11/23/20	
N-Nitrosodiphenylamine	520 U	520	350	1	12/01/20 19:01	11/23/20	
Naphthalene	2400	520	140	1	12/01/20 19:01	11/23/20	
Nitrobenzene	520 U	520	140	1	12/01/20 19:01	11/23/20	
Pentachlorophenol (PCP)	2700 U	2700	180	1	12/01/20 19:01	11/23/20	
Phenanthrene	7600 E	520	160	1	12/01/20 19:01	11/23/20	
Phenol	520 U	520	130	1	12/01/20 19:01	11/23/20	
Pyrene	12000 E	520	210	1	12/01/20 19:01	11/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	40	10 - 109	12/01/20 19:01	
2-Fluorobiphenyl	29	10 - 102	12/01/20 19:01	
2-Fluorophenol	25	10 - 88	12/01/20 19:01	
Nitrobenzene-d5	27	10 - 95	12/01/20 19:01	
Phenol-d6	28	10 - 145	12/01/20 19:01	
Terphenyl-d14	38	10 - 106	12/01/20 19:01	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	1600 U	1600	380	3	12/11/20 16:19	11/23/20	
2,3,4,6-Tetrachlorophenol	1600 U	1600	330	3	12/11/20 16:19	11/23/20	
2,4,5-Trichlorophenol	1600 U	1600	1400	3	12/11/20 16:19	11/23/20	
2,4,6-Trichlorophenol	1600 U	1600	280	3	12/11/20 16:19	11/23/20	
2,4-Dichlorophenol	1600 U	1600	340	3	12/11/20 16:19	11/23/20	
2,4-Dimethylphenol	1600 U	1600	350	3	12/11/20 16:19	11/23/20	
2,4-Dinitrophenol	8100 U	8100	3100	3	12/11/20 16:19	11/23/20	
2,4-Dinitrotoluene	1600 U	1600	620	3	12/11/20 16:19	11/23/20	
2,6-Dinitrotoluene	1600 U	1600	460	3	12/11/20 16:19	11/23/20	
2-Chloronaphthalene	1600 U	1600	380	3	12/11/20 16:19	11/23/20	
2-Chlorophenol	1600 U	1600	390	3	12/11/20 16:19	11/23/20	
2-Methylnaphthalene	1200 DJ	1600	350	3	12/11/20 16:19	11/23/20	
2-Methylphenol	1600 U	1600	340	3	12/11/20 16:19	11/23/20	
2-Nitroaniline	1600 U	1600	470	3	12/11/20 16:19	11/23/20	
2-Nitrophenol	1600 U	1600	460	3	12/11/20 16:19	11/23/20	
3,3'-Dichlorobenzidine	1600 U	1600	330	3	12/11/20 16:19	11/23/20	
3- and 4-Methylphenol Coelution	1600 U	1600	300	3	12/11/20 16:19	11/23/20	
3-Nitroaniline	1600 U	1600	340	3	12/11/20 16:19	11/23/20	
4,6-Dinitro-2-methylphenol	8100 U	8100	670	3	12/11/20 16:19	11/23/20	
4-Bromophenyl Phenyl Ether	1600 U	1600	580	3	12/11/20 16:19	11/23/20	
4-Chloro-3-methylphenol	1600 U	1600	350	3	12/11/20 16:19	11/23/20	
4-Chloroaniline	1600 U	1600	380	3	12/11/20 16:19	11/23/20	
4-Chlorophenyl Phenyl Ether	1600 U	1600	380	3	12/11/20 16:19	11/23/20	
4-Nitroaniline	1600 U	1600	340	3	12/11/20 16:19	11/23/20	
4-Nitrophenol	8100 U	8100	530	3	12/11/20 16:19	11/23/20	
Acenaphthene	1100 DJ	1600	360	3	12/11/20 16:19	11/23/20	
Acenaphthylene	760 DJ	1600	420	3	12/11/20 16:19	11/23/20	
Acetophenone	1600 U	1600	360	3	12/11/20 16:19	11/23/20	
Anthracene	2600 D	1600	440	3	12/11/20 16:19	11/23/20	
Atrazine	1600 U	1600	620	3	12/11/20 16:19	11/23/20	
Benz(a)anthracene	8700 D	1600	470	3	12/11/20 16:19	11/23/20	
Benzaldehyde	1600 U	1600	310	3	12/11/20 16:19	11/23/20	
Benzo(a)pyrene	14000 D	1600	580	3	12/11/20 16:19	11/23/20	
Benzo(b)fluoranthene	14000 D	1600	530	3	12/11/20 16:19	11/23/20	
Benzo(g,h,i)perylene	9600 D	1600	420	3	12/11/20 16:19	11/23/20	
Benzo(k)fluoranthene	4500 D	1600	580	3	12/11/20 16:19	11/23/20	
Biphenyl	1600 U	1600	390	3	12/11/20 16:19	11/23/20	
2,2'-Oxybis(1-chloropropane)	1600 U	1600	620	3	12/11/20 16:19	11/23/20	
Bis(2-chloroethoxy)methane	1600 U	1600	420	3	12/11/20 16:19	11/23/20	
Bis(2-chloroethyl) Ether	1600 U	1600	410	3	12/11/20 16:19	11/23/20	
Bis(2-ethylhexyl) Phthalate	2400 U	2400	420	3	12/11/20 16:19	11/23/20	
Butyl Benzyl Phthalate	1600 U	1600	390	3	12/11/20 16:19	11/23/20	
Caprolactam	1600 U	1600	410	3	12/11/20 16:19	11/23/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	1500 DJ	1600	460	3	12/11/20 16:19	11/23/20	
Chrysene	9400 D	1600	580	3	12/11/20 16:19	11/23/20	
Di-n-butyl Phthalate	1600 U	1600	480	3	12/11/20 16:19	11/23/20	
Di-n-octyl Phthalate	1600 U	1600	470	3	12/11/20 16:19	11/23/20	
Dibenz(a,h)anthracene	2400 D	1600	470	3	12/11/20 16:19	11/23/20	
Dibenzofuran	1100 DJ	1600	310	3	12/11/20 16:19	11/23/20	
Diethyl Phthalate	1600 U	1600	340	3	12/11/20 16:19	11/23/20	
Dimethyl Phthalate	1600 U	1600	360	3	12/11/20 16:19	11/23/20	
Fluoranthene	14000 D	1600	580	3	12/11/20 16:19	11/23/20	
Fluorene	1200 DJ	1600	370	3	12/11/20 16:19	11/23/20	
Hexachlorobenzene	1600 U	1600	480	3	12/11/20 16:19	11/23/20	
Hexachlorobutadiene	1600 U	1600	390	3	12/11/20 16:19	11/23/20	
Hexachlorocyclopentadiene	1600 U	1600	350	3	12/11/20 16:19	11/23/20	
Hexachloroethane	1600 U	1600	410	3	12/11/20 16:19	11/23/20	
Indeno(1,2,3-cd)pyrene	10000 D	1600	530	3	12/11/20 16:19	11/23/20	
Isophorone	1600 U	1600	430	3	12/11/20 16:19	11/23/20	
N-Nitrosodi-n-propylamine	1600 U	1600	420	3	12/11/20 16:19	11/23/20	
N-Nitrosodiphenylamine	1600 U	1600	1100	3	12/11/20 16:19	11/23/20	
Naphthalene	2800 D	1600	410	3	12/11/20 16:19	11/23/20	
Nitrobenzene	1600 U	1600	410	3	12/11/20 16:19	11/23/20	
Pentachlorophenol (PCP)	8100 U	8100	530	3	12/11/20 16:19	11/23/20	
Phenanthrene	9300 D	1600	460	3	12/11/20 16:19	11/23/20	
Phenol	1600 U	1600	380	3	12/11/20 16:19	11/23/20	
Pyrene	13000 D	1600	620	3	12/11/20 16:19	11/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	41	10 - 109	12/11/20 16:19	
2-Fluorobiphenyl	33	10 - 102	12/11/20 16:19	
2-Fluorophenol	28	10 - 88	12/11/20 16:19	
Nitrobenzene-d5	31	10 - 95	12/11/20 16:19	
Phenol-d6	32	10 - 145	12/11/20 16:19	
Terphenyl-d14	45	10 - 106	12/11/20 16:19	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	970 U	970	500	10	12/03/20 19:43	11/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	60	10 - 115	12/03/20 19:43	
Nitrobenzene-d5	101	10 - 130	12/03/20 19:43	
p-Terphenyl-d14	118	10 - 130	12/03/20 19:43	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:10
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	190 U	190	95	2	12/03/20 20:12	11/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	56	10 - 115	12/03/20 20:12	
Nitrobenzene-d5	54	10 - 130	12/03/20 20:12	
p-Terphenyl-d14	59	10 - 130	12/03/20 20:12	



Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	22 U	22	11	10	12/17/20 03:38	11/20/20	
4,4'-DDE	22 U	22	11	10	12/17/20 03:38	11/20/20	
4,4'-DDT	22 U	22	11	10	12/17/20 03:38	11/20/20	
Aldrin	22 U	22	11	10	12/17/20 03:38	11/20/20	
Dieldrin	22 U	22	11	10	12/17/20 03:38	11/20/20	
Endosulfan I	22 U	22	11	10	12/17/20 03:38	11/20/20	
Endosulfan II	22 U	22	11	10	12/17/20 03:38	11/20/20	
Endosulfan Sulfate	22 U	22	11	10	12/17/20 03:38	11/20/20	
Endrin	22 U	22	11	10	12/17/20 03:38	11/20/20	
Endrin Aldehyde	22 U	22	11	10	12/17/20 03:38	11/20/20	
Endrin Ketone	16 JP	22	11	10	12/17/20 03:38	11/20/20	
Heptachlor	22 U	22	11	10	12/17/20 03:38	11/20/20	
Heptachlor Epoxide	22 U	22	11	10	12/17/20 03:38	11/20/20	
Methoxychlor	22 U	22	11	10	12/17/20 03:38	11/20/20	
Toxaphene	420 U	420	250	10	12/17/20 03:38	11/20/20	
alpha-BHC	22 U	22	11	10	12/17/20 03:38	11/20/20	
alpha-Chlordane	22 U	22	11	10	12/17/20 03:38	11/20/20	
beta-BHC	22 U	22	11	10	12/17/20 03:38	11/20/20	
delta-BHC	22 U	22	11	10	12/17/20 03:38	11/20/20	
gamma-BHC (Lindane)	22 U	22	11	10	12/17/20 03:38	11/20/20	
gamma-Chlordane	490 E	22	11	10	12/17/20 03:38	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	58	10 - 145	12/17/20 03:38	
Tetrachloro-m-xylene	48	10 - 123	12/17/20 03:38	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	22 U	22	11	10	12/28/20 22:03	11/20/20	
4,4'-DDE	22 U	22	11	10	12/28/20 22:03	11/20/20	
4,4'-DDT	22 U	22	11	10	12/28/20 22:03	11/20/20	
Aldrin	22 U	22	11	10	12/28/20 22:03	11/20/20	
Dieldrin	22 U	22	11	10	12/28/20 22:03	11/20/20	
Endosulfan I	22 U	22	11	10	12/28/20 22:03	11/20/20	
Endosulfan II	22 U	22	11	10	12/28/20 22:03	11/20/20	
Endosulfan Sulfate	22 U	22	11	10	12/28/20 22:03	11/20/20	
Endrin	22 U	22	11	10	12/28/20 22:03	11/20/20	
Endrin Aldehyde	22 U	22	11	10	12/28/20 22:03	11/20/20	
Endrin Ketone	22 U	22	11	10	12/28/20 22:03	11/20/20	
Heptachlor	22 U	22	11	10	12/28/20 22:03	11/20/20	
Heptachlor Epoxide	22 U	22	11	10	12/28/20 22:03	11/20/20	
Methoxychlor	22 U	22	11	10	12/28/20 22:03	11/20/20	
Toxaphene	420 U	420	250	10	12/28/20 22:03	11/20/20	
alpha-BHC	22 U	22	11	10	12/28/20 22:03	11/20/20	
alpha-Chlordane	22 U	22	11	10	12/28/20 22:03	11/20/20	
beta-BHC	22 U	22	11	10	12/28/20 22:03	11/20/20	
delta-BHC	22 U	22	11	10	12/28/20 22:03	11/20/20	
gamma-BHC (Lindane)	22 U	22	11	10	12/28/20 22:03	11/20/20	
gamma-Chlordane	15 JP	22	11	10	12/28/20 22:03	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	99	10 - 145	12/28/20 22:03	
Tetrachloro-m-xylene	39	10 - 123	12/28/20 22:03	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:10
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	25	21	11	10	12/17/20 03:57	11/20/20	
4,4'-DDE	21 U	21	11	10	12/17/20 03:57	11/20/20	
4,4'-DDT	21 U	21	11	10	12/17/20 03:57	11/20/20	
Aldrin	21 U	21	11	10	12/17/20 03:57	11/20/20	
Dieldrin	21 U	21	11	10	12/17/20 03:57	11/20/20	
Endosulfan I	21 U	21	11	10	12/17/20 03:57	11/20/20	
Endosulfan II	21 PU	21	11	10	12/17/20 03:57	11/20/20	
Endosulfan Sulfate	21 U	21	11	10	12/17/20 03:57	11/20/20	
Endrin	21 U	21	11	10	12/17/20 03:57	11/20/20	
Endrin Aldehyde	21 U	21	11	10	12/17/20 03:57	11/20/20	
Endrin Ketone	14 J	21	11	10	12/17/20 03:57	11/20/20	
Heptachlor	21 U	21	11	10	12/17/20 03:57	11/20/20	
Heptachlor Epoxide	21 U	21	11	10	12/17/20 03:57	11/20/20	
Methoxychlor	21 U	21	11	10	12/17/20 03:57	11/20/20	
Toxaphene	410 U	410	240	10	12/17/20 03:57	11/20/20	
alpha-BHC	21 U	21	11	10	12/17/20 03:57	11/20/20	
alpha-Chlordane	21 U	21	11	10	12/17/20 03:57	11/20/20	
beta-BHC	21 U	21	11	10	12/17/20 03:57	11/20/20	
delta-BHC	21 U	21	11	10	12/17/20 03:57	11/20/20	
gamma-BHC (Lindane)	21 U	21	11	10	12/17/20 03:57	11/20/20	
gamma-Chlordane	21 U	21	11	10	12/17/20 03:57	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	117	10 - 145	12/17/20 03:57	
Tetrachloro-m-xylene	95	10 - 123	12/17/20 03:57	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	42 U	42	22	1	12/30/20 11:38	11/20/20	
Aroclor 1221	86 U	86	22	1	12/30/20 11:38	11/20/20	
Aroclor 1232	42 U	42	22	1	12/30/20 11:38	11/20/20	
Aroclor 1242	42 U	42	22	1	12/30/20 11:38	11/20/20	
Aroclor 1248	42 U	42	22	1	12/30/20 11:38	11/20/20	
Aroclor 1254	42 U	42	22	1	12/30/20 11:38	11/20/20	
Aroclor 1260	27 J	42	22	1	12/30/20 11:38	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	41	22 - 128	12/30/20 11:38	
Tetrachloro-m-xylene	40	14 - 119	12/30/20 11:38	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:10
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	41 U	41	22	1	12/29/20 00:57	11/20/20	
Aroclor 1221	83 U	83	22	1	12/29/20 00:57	11/20/20	
Aroclor 1232	41 U	41	22	1	12/29/20 00:57	11/20/20	
Aroclor 1242	41 U	41	22	1	12/29/20 00:57	11/20/20	
Aroclor 1248	41 U	41	22	1	12/29/20 00:57	11/20/20	
Aroclor 1254	41 U	41	22	1	12/29/20 00:57	11/20/20	
Aroclor 1260	41 U	41	22	1	12/29/20 00:57	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	50	22 - 128	12/29/20 00:57	
Tetrachloro-m-xylene	48	14 - 119	12/29/20 00:57	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	13 U	13	6.4	1	11/30/20 20:52	11/25/20	
2,4,5-TP	13 U	13	5.8	1	11/30/20 20:52	11/25/20	
2,4-D	13 U	13	8.3	1	11/30/20 20:52	11/25/20	
Dicamba	13 U	13	4.0	1	11/30/20 20:52	11/25/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	100	10 - 151	11/30/20 20:52	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:10
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	12 U	12	6.0	1	11/30/20 21:12	11/25/20	
2,4,5-TP	12 U	12	5.4	1	11/30/20 21:12	11/25/20	
2,4-D	12 U	12	7.8	1	11/30/20 21:12	11/25/20	
Dicamba	12 U	12	3.8	1	11/30/20 21:12	11/25/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	71	10 - 151	11/30/20 21:12	



Metals

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	8960	mg/Kg	23	14	1	11/23/20 20:38	11/20/20	
Antimony, Total	6010D	6.9 U	mg/Kg	6.9	0.7	1	11/23/20 20:38	11/20/20	
Arsenic, Total	6010D	5.6	mg/Kg	1.1	0.9	1	11/23/20 20:38	11/20/20	
Barium, Total	6010D	83.0	mg/Kg	2.3	1.8	1	11/23/20 20:38	11/20/20	
Beryllium, Total	6010D	0.87	mg/Kg	0.34	0.04	1	11/23/20 20:38	11/20/20	
Cadmium, Total	6010D	0.46 J	mg/Kg	0.57	0.28	1	11/23/20 20:38	11/20/20	
Calcium, Total	6010D	17900	mg/Kg	110	40	1	11/23/20 20:38	11/20/20	
Chromium, Total	6010D	17.6	mg/Kg	1.1	0.5	1	11/23/20 20:38	11/20/20	
Cobalt, Total	6010D	7.9	mg/Kg	5.7	0.6	1	11/23/20 20:38	11/20/20	
Copper, Total	6010D	43.4	mg/Kg	2.3	0.8	1	11/23/20 20:38	11/20/20	
Iron, Total	6010D	18900	mg/Kg	230	150	10	11/23/20 22:03	11/20/20	
Lead, Total	6010D	29.9	mg/Kg	5.7	0.5	1	11/23/20 20:38	11/20/20	
Magnesium, Total	6010D	6750	mg/Kg	110	20	1	11/23/20 20:38	11/20/20	
Manganese, Total	6010D	338	mg/Kg	2.3	1.8	1	11/23/20 20:38	11/20/20	
Mercury, Total	7471B	0.446	mg/Kg	0.040	0.016	1	11/25/20 13:06	11/24/20	
Nickel, Total	6010D	19.8	mg/Kg	4.6	0.8	1	11/23/20 20:38	11/20/20	
Potassium, Total	6010D	1660	mg/Kg	230	60	1	11/23/20 20:38	11/20/20	
Selenium, Total	6010D	1.1 U	mg/Kg	1.1	0.7	1	11/23/20 20:38	11/20/20	
Silver, Total	6010D	1.1 U	mg/Kg	1.1	0.2	1	11/23/20 20:38	11/20/20	
Sodium, Total	6010D	110	mg/Kg	110	60	1	11/23/20 20:38	11/20/20	
Thallium, Total	6010D	1.1 U	mg/Kg	1.1	0.8	1	11/23/20 20:38	11/20/20	
Vanadium, Total	6010D	23.0	mg/Kg	5.7	0.9	1	11/23/20 20:38	11/20/20	
Zinc, Total	6010D	94.8	mg/Kg	2.3	1.7	1	11/23/20 20:38	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:40
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-16-024
Lab Code: R2010907-003

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	3220	mg/Kg	25	15	1	11/23/20 20:42	11/20/20	
Antimony, Total	6010D	7.4 U	mg/Kg	7.4	0.7	1	11/23/20 20:42	11/20/20	
Arsenic, Total	6010D	7.1	mg/Kg	1.2	0.9	1	11/23/20 20:42	11/20/20	
Barium, Total	6010D	56.3	mg/Kg	2.5	1.9	1	11/23/20 20:42	11/20/20	
Beryllium, Total	6010D	0.85	mg/Kg	0.37	0.04	1	11/23/20 20:42	11/20/20	
Cadmium, Total	6010D	0.88	mg/Kg	0.62	0.30	1	11/23/20 20:42	11/20/20	
Calcium, Total	6010D	5960	mg/Kg	120	40	1	11/23/20 20:42	11/20/20	
Chromium, Total	6010D	14.1	mg/Kg	1.2	0.5	1	11/23/20 20:42	11/20/20	
Cobalt, Total	6010D	4.0 J	mg/Kg	6.2	0.6	1	11/23/20 20:42	11/20/20	
Copper, Total	6010D	30.1	mg/Kg	2.5	0.8	1	11/23/20 20:42	11/20/20	
Iron, Total	6010D	8400	mg/Kg	250	170	10	11/23/20 22:13	11/20/20	
Lead, Total	6010D	46.2	mg/Kg	6.2	0.5	1	11/23/20 20:42	11/20/20	
Magnesium, Total	6010D	2130	mg/Kg	120	20	1	11/23/20 20:42	11/20/20	
Manganese, Total	6010D	172	mg/Kg	2.5	1.9	1	11/23/20 20:42	11/20/20	
Mercury, Total	7471B	0.818	mg/Kg	0.038	0.016	1	11/25/20 13:09	11/24/20	
Nickel, Total	6010D	13.3	mg/Kg	4.9	0.9	1	11/23/20 20:42	11/20/20	
Potassium, Total	6010D	710	mg/Kg	250	70	1	11/23/20 20:42	11/20/20	
Selenium, Total	6010D	0.8 J	mg/Kg	1.2	0.7	1	11/23/20 20:42	11/20/20	
Silver, Total	6010D	1.2 U	mg/Kg	1.2	0.2	1	11/23/20 20:42	11/20/20	
Sodium, Total	6010D	110 J	mg/Kg	120	70	1	11/23/20 20:42	11/20/20	
Thallium, Total	6010D	1.2 U	mg/Kg	1.2	0.9	1	11/23/20 20:42	11/20/20	
Vanadium, Total	6010D	13.5	mg/Kg	6.2	0.9	1	11/23/20 20:42	11/20/20	
Zinc, Total	6010D	80.6	mg/Kg	2.5	1.8	1	11/23/20 20:42	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:10
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	1180	mg/Kg	23	14	1	11/23/20 20:45	11/20/20	
Antimony, Total	6010D	7.0 U	mg/Kg	7.0	0.7	1	11/23/20 20:45	11/20/20	
Arsenic, Total	6010D	12.0	mg/Kg	1.2	0.9	1	11/23/20 20:45	11/20/20	
Barium, Total	6010D	91.7	mg/Kg	2.3	1.8	1	11/23/20 20:45	11/20/20	
Beryllium, Total	6010D	1.39	mg/Kg	0.35	0.04	1	11/23/20 20:45	11/20/20	
Cadmium, Total	6010D	0.58 U	mg/Kg	0.58	0.28	1	11/23/20 20:45	11/20/20	
Calcium, Total	6010D	1290	mg/Kg	120	40	1	11/23/20 20:45	11/20/20	
Chromium, Total	6010D	8.2	mg/Kg	1.2	0.5	1	11/23/20 20:45	11/20/20	
Cobalt, Total	6010D	3.7 J	mg/Kg	5.8	0.6	1	11/23/20 20:45	11/20/20	
Copper, Total	6010D	21.2	mg/Kg	2.3	0.8	1	11/23/20 20:45	11/20/20	
Iron, Total	6010D	6380	mg/Kg	230	160	10	11/23/20 22:16	11/20/20	
Lead, Total	6010D	10.6	mg/Kg	5.8	0.5	1	11/23/20 20:45	11/20/20	
Magnesium, Total	6010D	240	mg/Kg	120	20	1	11/23/20 20:45	11/20/20	
Manganese, Total	6010D	34.5	mg/Kg	2.3	1.8	1	11/23/20 20:45	11/20/20	
Mercury, Total	7471B	0.046	mg/Kg	0.039	0.016	1	11/25/20 13:11	11/24/20	
Nickel, Total	6010D	10.1	mg/Kg	4.6	0.8	1	11/23/20 20:45	11/20/20	
Potassium, Total	6010D	470	mg/Kg	230	60	1	11/23/20 20:45	11/20/20	
Selenium, Total	6010D	12 U	mg/Kg	12	7	10	11/23/20 22:16	11/20/20	
Silver, Total	6010D	1.2 U	mg/Kg	1.2	0.2	1	11/23/20 20:45	11/20/20	
Sodium, Total	6010D	80 J	mg/Kg	120	70	1	11/23/20 20:45	11/20/20	
Thallium, Total	6010D	1.2 U	mg/Kg	1.2	0.8	1	11/23/20 20:45	11/20/20	
Vanadium, Total	6010D	16.9	mg/Kg	5.8	0.9	1	11/23/20 20:45	11/20/20	
Zinc, Total	6010D	18.9	mg/Kg	2.3	1.7	1	11/23/20 20:45	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:40
Date Received: 11/17/20 16:00

Sample Name: SS-BCP-17-024
Lab Code: R2010907-006

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	826	mg/Kg	22	14	1	11/23/20 20:55	11/20/20	
Antimony, Total	6010D	6.6 U	mg/Kg	6.6	0.6	1	11/23/20 20:55	11/20/20	
Arsenic, Total	6010D	7.8	mg/Kg	1.1	0.8	1	11/23/20 20:55	11/20/20	
Barium, Total	6010D	57.8	mg/Kg	2.2	1.7	1	11/23/20 20:55	11/20/20	
Beryllium, Total	6010D	1.05	mg/Kg	0.33	0.04	1	11/23/20 20:55	11/20/20	
Cadmium, Total	6010D	0.55 U	mg/Kg	0.55	0.27	1	11/23/20 20:55	11/20/20	
Calcium, Total	6010D	390	mg/Kg	110	40	1	11/23/20 20:55	11/20/20	
Chromium, Total	6010D	6.6	mg/Kg	1.1	0.4	1	11/23/20 20:55	11/20/20	
Cobalt, Total	6010D	4.7 J	mg/Kg	5.5	0.6	1	11/23/20 20:55	11/20/20	
Copper, Total	6010D	14.8	mg/Kg	2.2	0.7	1	11/23/20 20:55	11/20/20	
Iron, Total	6010D	5200	mg/Kg	22	15	1	11/23/20 20:55	11/20/20	
Lead, Total	6010D	30.3	mg/Kg	5.5	0.5	1	11/23/20 20:55	11/20/20	
Magnesium, Total	6010D	110 J	mg/Kg	110	20	1	11/23/20 20:55	11/20/20	
Manganese, Total	6010D	17.0	mg/Kg	2.2	1.7	1	11/23/20 20:55	11/20/20	
Mercury, Total	7471B	0.042	mg/Kg	0.037	0.015	1	11/25/20 13:14	11/24/20	
Nickel, Total	6010D	10.3	mg/Kg	4.4	0.8	1	11/23/20 20:55	11/20/20	
Potassium, Total	6010D	210 J	mg/Kg	220	60	1	11/23/20 20:55	11/20/20	
Selenium, Total	6010D	1.1 U	mg/Kg	1.1	0.6	1	11/23/20 20:55	11/20/20	
Silver, Total	6010D	1.1 U	mg/Kg	1.1	0.1	1	11/23/20 20:55	11/20/20	
Sodium, Total	6010D	110 U	mg/Kg	110	60	1	11/23/20 20:55	11/20/20	
Thallium, Total	6010D	1.1 U	mg/Kg	1.1	0.8	1	11/23/20 20:55	11/20/20	
Vanadium, Total	6010D	15.1	mg/Kg	5.5	0.8	1	11/23/20 20:55	11/20/20	
Zinc, Total	6010D	22.2	mg/Kg	2.2	1.6	1	11/23/20 20:55	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-22-01
Lab Code: R2010907-007

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	1060	mg/Kg	23	14	1	11/23/20 20:58	11/20/20	
Antimony, Total	6010D	7.0 U	mg/Kg	7.0	0.7	1	11/23/20 20:58	11/20/20	
Arsenic, Total	6010D	6.0	mg/Kg	1.2	0.9	1	11/23/20 20:58	11/20/20	
Barium, Total	6010D	38.9	mg/Kg	2.3	1.8	1	11/23/20 20:58	11/20/20	
Beryllium, Total	6010D	2.20	mg/Kg	0.35	0.04	1	11/23/20 20:58	11/20/20	
Cadmium, Total	6010D	0.58 U	mg/Kg	0.58	0.28	1	11/23/20 20:58	11/20/20	
Calcium, Total	6010D	810	mg/Kg	120	40	1	11/23/20 20:58	11/20/20	
Chromium, Total	6010D	7.3	mg/Kg	1.2	0.5	1	11/23/20 20:58	11/20/20	
Cobalt, Total	6010D	5.0 J	mg/Kg	5.8	0.6	1	11/23/20 20:58	11/20/20	
Copper, Total	6010D	23.3	mg/Kg	2.3	0.8	1	11/23/20 20:58	11/20/20	
Iron, Total	6010D	3510	mg/Kg	23	16	1	11/23/20 20:58	11/20/20	
Lead, Total	6010D	7.3	mg/Kg	5.8	0.5	1	11/23/20 20:58	11/20/20	
Magnesium, Total	6010D	240	mg/Kg	120	20	1	11/23/20 20:58	11/20/20	
Manganese, Total	6010D	37.5	mg/Kg	2.3	1.8	1	11/23/20 20:58	11/20/20	
Mercury, Total	7471B	0.114	mg/Kg	0.037	0.015	1	11/25/20 13:17	11/24/20	
Nickel, Total	6010D	10.6	mg/Kg	4.6	0.8	1	11/23/20 20:58	11/20/20	
Potassium, Total	6010D	290	mg/Kg	230	60	1	11/23/20 20:58	11/20/20	
Selenium, Total	6010D	1.2 U	mg/Kg	1.2	0.7	1	11/23/20 20:58	11/20/20	
Silver, Total	6010D	1.2 U	mg/Kg	1.2	0.2	1	11/23/20 20:58	11/20/20	
Sodium, Total	6010D	90 J	mg/Kg	120	70	1	11/23/20 20:58	11/20/20	
Thallium, Total	6010D	1.2 U	mg/Kg	1.2	0.8	1	11/23/20 20:58	11/20/20	
Vanadium, Total	6010D	14.4	mg/Kg	5.8	0.9	1	11/23/20 20:58	11/20/20	
Zinc, Total	6010D	15.1	mg/Kg	2.3	1.7	1	11/23/20 20:58	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-220-01
Lab Code: R2010907-008

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	898	mg/Kg	23	15	1	11/23/20 21:01	11/20/20	
Antimony, Total	6010D	7.0 U	mg/Kg	7.0	0.7	1	11/23/20 21:01	11/20/20	
Arsenic, Total	6010D	5.3	mg/Kg	1.2	0.9	1	11/23/20 21:01	11/20/20	
Barium, Total	6010D	21.6	mg/Kg	2.3	1.8	1	11/23/20 21:01	11/20/20	
Beryllium, Total	6010D	2.54	mg/Kg	0.35	0.04	1	11/23/20 21:01	11/20/20	
Cadmium, Total	6010D	0.58 U	mg/Kg	0.58	0.29	1	11/23/20 21:01	11/20/20	
Calcium, Total	6010D	900	mg/Kg	120	40	1	11/23/20 21:01	11/20/20	
Chromium, Total	6010D	6.3	mg/Kg	1.2	0.5	1	11/23/20 21:01	11/20/20	
Cobalt, Total	6010D	5.2 J	mg/Kg	5.8	0.6	1	11/23/20 21:01	11/20/20	
Copper, Total	6010D	15.0	mg/Kg	2.3	0.8	1	11/23/20 21:01	11/20/20	
Iron, Total	6010D	2260	mg/Kg	23	16	1	11/23/20 21:01	11/20/20	
Lead, Total	6010D	5.0 J	mg/Kg	5.8	0.5	1	11/23/20 21:01	11/20/20	
Magnesium, Total	6010D	250	mg/Kg	120	20	1	11/23/20 21:01	11/20/20	
Manganese, Total	6010D	44.1	mg/Kg	2.3	1.8	1	11/23/20 21:01	11/20/20	
Mercury, Total	7471B	0.020 J	mg/Kg	0.037	0.015	1	11/25/20 13:19	11/24/20	
Nickel, Total	6010D	11.6	mg/Kg	4.7	0.8	1	11/23/20 21:01	11/20/20	
Potassium, Total	6010D	270	mg/Kg	230	60	1	11/23/20 21:01	11/20/20	
Selenium, Total	6010D	1.2 U	mg/Kg	1.2	0.7	1	11/23/20 21:01	11/20/20	
Silver, Total	6010D	1.2 U	mg/Kg	1.2	0.2	1	11/23/20 21:01	11/20/20	
Sodium, Total	6010D	80 J	mg/Kg	120	70	1	11/23/20 21:01	11/20/20	
Thallium, Total	6010D	1.2 U	mg/Kg	1.2	0.8	1	11/23/20 21:01	11/20/20	
Vanadium, Total	6010D	14.5	mg/Kg	5.8	0.9	1	11/23/20 21:01	11/20/20	
Zinc, Total	6010D	12.2	mg/Kg	2.3	1.7	1	11/23/20 21:01	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	5300	mg/Kg	21	13	1	11/23/20 21:04	11/20/20	
Antimony, Total	6010D	6.4 U	mg/Kg	6.4	0.6	1	11/23/20 21:04	11/20/20	
Arsenic, Total	6010D	6.5	mg/Kg	1.1	0.8	1	11/23/20 21:04	11/20/20	
Barium, Total	6010D	97.7	mg/Kg	2.1	1.6	1	11/23/20 21:04	11/20/20	
Beryllium, Total	6010D	0.89	mg/Kg	0.32	0.04	1	11/23/20 21:04	11/20/20	
Cadmium, Total	6010D	0.53 U	mg/Kg	0.53	0.26	1	11/23/20 21:04	11/20/20	
Calcium, Total	6010D	15700	mg/Kg	110	40	1	11/23/20 21:04	11/20/20	
Chromium, Total	6010D	11.1	mg/Kg	1.1	0.4	1	11/23/20 21:04	11/20/20	
Cobalt, Total	6010D	6.9	mg/Kg	5.3	0.5	1	11/23/20 21:04	11/20/20	
Copper, Total	6010D	18.4	mg/Kg	2.1	0.7	1	11/23/20 21:04	11/20/20	
Iron, Total	6010D	11500	mg/Kg	210	140	10	11/23/20 22:29	11/20/20	
Lead, Total	6010D	14.4	mg/Kg	5.3	0.5	1	11/23/20 21:04	11/20/20	
Magnesium, Total	6010D	3690	mg/Kg	110	20	1	11/23/20 21:04	11/20/20	
Manganese, Total	6010D	175	mg/Kg	2.1	1.6	1	11/23/20 21:04	11/20/20	
Mercury, Total	7471B	0.100	mg/Kg	0.039	0.016	1	11/25/20 13:22	11/24/20	
Nickel, Total	6010D	14.4	mg/Kg	4.2	0.8	1	11/23/20 21:04	11/20/20	
Potassium, Total	6010D	950	mg/Kg	210	60	1	11/23/20 21:04	11/20/20	
Selenium, Total	6010D	1.1 U	mg/Kg	1.1	0.6	1	11/23/20 21:04	11/20/20	
Silver, Total	6010D	1.1 U	mg/Kg	1.1	0.1	1	11/23/20 21:04	11/20/20	
Sodium, Total	6010D	110 J	mg/Kg	110	60	1	11/23/20 21:04	11/20/20	
Thallium, Total	6010D	1.1 U	mg/Kg	1.1	0.7	1	11/23/20 21:04	11/20/20	
Vanadium, Total	6010D	18.7	mg/Kg	5.3	0.8	1	11/23/20 21:04	11/20/20	
Zinc, Total	6010D	38.4	mg/Kg	2.1	1.5	1	11/23/20 21:04	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	4660	mg/Kg	23	14	1	11/23/20 21:08	11/20/20	
Antimony, Total	6010D	6.9 U	mg/Kg	6.9	0.7	1	11/23/20 21:08	11/20/20	
Arsenic, Total	6010D	6.5	mg/Kg	1.1	0.9	1	11/23/20 21:08	11/20/20	
Barium, Total	6010D	77.0	mg/Kg	2.3	1.8	1	11/23/20 21:08	11/20/20	
Beryllium, Total	6010D	0.86	mg/Kg	0.34	0.04	1	11/23/20 21:08	11/20/20	
Cadmium, Total	6010D	0.57 U	mg/Kg	0.57	0.28	1	11/23/20 21:08	11/20/20	
Calcium, Total	6010D	7600	mg/Kg	110	40	1	11/23/20 21:08	11/20/20	
Chromium, Total	6010D	10.5	mg/Kg	1.1	0.5	1	11/23/20 21:08	11/20/20	
Cobalt, Total	6010D	6.7	mg/Kg	5.7	0.6	1	11/23/20 21:08	11/20/20	
Copper, Total	6010D	21.0	mg/Kg	2.3	0.8	1	11/23/20 21:08	11/20/20	
Iron, Total	6010D	10900	mg/Kg	230	150	10	11/23/20 22:32	11/20/20	
Lead, Total	6010D	15.7	mg/Kg	5.7	0.5	1	11/23/20 21:08	11/20/20	
Magnesium, Total	6010D	2490	mg/Kg	110	20	1	11/23/20 21:08	11/20/20	
Manganese, Total	6010D	150	mg/Kg	2.3	1.8	1	11/23/20 21:08	11/20/20	
Mercury, Total	7471B	0.092	mg/Kg	0.038	0.015	1	11/25/20 13:24	11/24/20	
Nickel, Total	6010D	13.6	mg/Kg	4.6	0.8	1	11/23/20 21:08	11/20/20	
Potassium, Total	6010D	820	mg/Kg	230	60	1	11/23/20 21:08	11/20/20	
Selenium, Total	6010D	1.1 U	mg/Kg	1.1	0.7	1	11/23/20 21:08	11/20/20	
Silver, Total	6010D	1.1 U	mg/Kg	1.1	0.2	1	11/23/20 21:08	11/20/20	
Sodium, Total	6010D	110	mg/Kg	110	60	1	11/23/20 21:08	11/20/20	
Thallium, Total	6010D	1.1 U	mg/Kg	1.1	0.8	1	11/23/20 21:08	11/20/20	
Vanadium, Total	6010D	16.5	mg/Kg	5.7	0.9	1	11/23/20 21:08	11/20/20	
Zinc, Total	6010D	40.0	mg/Kg	2.3	1.7	1	11/23/20 21:08	11/20/20	



General Chemistry

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20 16:00

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	79.1	Percent	-	-	1	11/28/20 06:45	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: SS-BCP-16-06
Lab Code: R2010907-002

Service Request: R2010907
Date Collected: 11/13/20 11:30
Date Received: 11/17/20 16:00

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	82.1	Percent	-	-	1	12/01/20 06:00	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: SS-BCP-16-024
Lab Code: R2010907-003

Service Request: R2010907
Date Collected: 11/13/20 11:40
Date Received: 11/17/20 16:00

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	2.19	mg/Kg	0.25	0.17	1	11/25/20 10:46	11/24/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: SS-BCP-16-024
Lab Code: R2010907-003

Service Request: R2010907
Date Collected: 11/13/20 11:40
Date Received: 11/17/20 16:00

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	81.1	Percent	-	-	1	11/28/20 06:45	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004

Service Request: R2010907
Date Collected: 11/13/20 14:10
Date Received: 11/17/20 16:00

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	82.8	Percent	-	-	1	11/28/20 06:45	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: SS-BCP-17-06
Lab Code: R2010907-005

Service Request: R2010907
Date Collected: 11/13/20 14:30
Date Received: 11/17/20 16:00

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	74.5	Percent	-	-	1	12/01/20 06:00	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: SS-BCP-17-024
Lab Code: R2010907-006

Service Request: R2010907
Date Collected: 11/13/20 14:40
Date Received: 11/17/20 16:00

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.21 J	mg/Kg	0.26	0.17	1	11/25/20 10:47	11/24/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: SS-BCP-17-024
Lab Code: R2010907-006

Service Request: R2010907
Date Collected: 11/13/20 14:40
Date Received: 11/17/20 16:00

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	85.7	Percent	-	-	1	11/28/20 06:45	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-22-01
Lab Code: R2010907-007

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.57	mg/Kg	0.28	0.17	1	11/25/20 10:49	11/24/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-22-01
Lab Code: R2010907-007

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	84.4	Percent	-	-	1	11/28/20 06:45	NA	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-220-01
Lab Code: R2010907-008

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.27 J	mg/Kg	0.29	0.17	1	11/25/20 10:50	11/24/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-220-01
Lab Code: R2010907-008

Service Request: R2010907
Date Collected: 11/16/20 08:30
Date Received: 11/17/20 16:00

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	85.6	Percent	-	-	1	11/28/20 06:45	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.65	mg/Kg	0.27	0.17	1	11/25/20 10:51	11/24/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	85.7	Percent	-	-	1	11/28/20 06:45	NA	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.41	mg/Kg	0.33	0.19	1	11/25/20 10:56	11/24/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: TP-BCP-270-01
Lab Code: R2010907-010

Service Request: R2010907
Date Collected: 11/16/20 11:30
Date Received: 11/17/20 16:00

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	85.4	Percent	-	-	1	11/28/20 06:45	NA	



QC Summary Forms

ALS Environmental—Rochester Laboratory

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Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5035A

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		31 - 154	63 - 138	66 - 138
SS-BCP-16-06	R2010907-002	66	97	100
SS-BCP-16-06 DL	R2010907-002	71	98	103
SS-BCP-17-06	R2010907-005	36	111	97
TP-BCP-22-01	R2010907-007	27 *	124	96
TP-BCP-22-01 RE	R2010907-007	24 *	129	102
TP-BCP-220-01	R2010907-008	22 *	141 *	112
TP-BCP-220-01 RE	R2010907-008	22 *	139 *	108
TP-BCP-27-01	R2010907-009	30 *	120	106
TP-BCP-27-01 DL	R2010907-009	32	110	109
TP-BCP-270-01	R2010907-010	33	111	112
TP-BCP-270-01 RE	R2010907-010	27 *	114	101
Lab Control Sample	RQ2014538-03	96	104	100
Method Blank	RQ2014538-04	89	98	101
Lab Control Sample	RQ2014615-03	93	101	100
Method Blank	RQ2014615-04	91	97	103
Lab Control Sample	RQ2014680-03	94	100	98
Duplicate Lab Control Sample	RQ2014680-04	95	102	101
Method Blank	RQ2014680-05	91	102	103

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014538-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	11/24/20 10:44	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.44	1	11/24/20 10:44	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	11/24/20 10:44	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	11/24/20 10:44	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	11/24/20 10:44	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.29	1	11/24/20 10:44	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.52	1	11/24/20 10:44	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.42	1	11/24/20 10:44	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	11/24/20 10:44	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.75	1	11/24/20 10:44	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	11/24/20 10:44	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	11/24/20 10:44	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	11/24/20 10:44	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	11/24/20 10:44	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	11/24/20 10:44	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	11/24/20 10:44	
1,4-Dichlorobenzene	5.0 U	5.0	0.22	1	11/24/20 10:44	
1,4-Dioxane	100 U	100	20	1	11/24/20 10:44	
2-Butanone (MEK)	5.0 U	5.0	2.0	1	11/24/20 10:44	
2-Hexanone	5.0 U	5.0	0.36	1	11/24/20 10:44	
4-Methyl-2-pentanone	5.0 U	5.0	0.23	1	11/24/20 10:44	
Acetone	5.0 U	5.0	4.7	1	11/24/20 10:44	
Benzene	5.0 U	5.0	0.20	1	11/24/20 10:44	
Bromochloromethane	5.0 U	5.0	0.20	1	11/24/20 10:44	
Bromodichloromethane	5.0 U	5.0	0.20	1	11/24/20 10:44	
Bromoform	5.0 U	5.0	0.50	1	11/24/20 10:44	
Bromomethane	5.0 U	5.0	2.1	1	11/24/20 10:44	
Carbon Disulfide	5.0 U	5.0	0.29	1	11/24/20 10:44	
Carbon Tetrachloride	5.0 U	5.0	0.26	1	11/24/20 10:44	
Chlorobenzene	5.0 U	5.0	0.20	1	11/24/20 10:44	
Chloroethane	5.0 U	5.0	0.41	1	11/24/20 10:44	
Chloroform	5.0 U	5.0	0.20	1	11/24/20 10:44	
Chloromethane	5.0 U	5.0	1.4	1	11/24/20 10:44	
Cyclohexane	5.0 U	5.0	0.26	1	11/24/20 10:44	
Dibromochloromethane	5.0 U	5.0	0.20	1	11/24/20 10:44	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.33	1	11/24/20 10:44	
Dichloromethane	5.0 U	5.0	2.8	1	11/24/20 10:44	
Ethylbenzene	5.0 U	5.0	0.20	1	11/24/20 10:44	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	11/24/20 10:44	
Methyl Acetate	5.0 U	5.0	0.84	1	11/24/20 10:44	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	11/24/20 10:44	
Methylcyclohexane	5.0 U	5.0	0.31	1	11/24/20 10:44	
Styrene	5.0 U	5.0	0.20	1	11/24/20 10:44	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014538-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.23	1	11/24/20 10:44	
Toluene	5.0 U	5.0	0.20	1	11/24/20 10:44	
Trichloroethene (TCE)	5.0 U	5.0	0.22	1	11/24/20 10:44	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.26	1	11/24/20 10:44	
Vinyl Chloride	5.0 U	5.0	0.46	1	11/24/20 10:44	
cis-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/24/20 10:44	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/24/20 10:44	
m,p-Xylenes	10 U	10	0.37	1	11/24/20 10:44	
o-Xylene	5.0 U	5.0	0.20	1	11/24/20 10:44	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/24/20 10:44	
trans-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/24/20 10:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	31 - 154	11/24/20 10:44	
Dibromofluoromethane	98	63 - 138	11/24/20 10:44	
Toluene-d8	101	66 - 138	11/24/20 10:44	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014615-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	11/25/20 11:16	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.44	1	11/25/20 11:16	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	11/25/20 11:16	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	11/25/20 11:16	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	11/25/20 11:16	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.29	1	11/25/20 11:16	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.52	1	11/25/20 11:16	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.42	1	11/25/20 11:16	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	11/25/20 11:16	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.75	1	11/25/20 11:16	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	11/25/20 11:16	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	11/25/20 11:16	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	11/25/20 11:16	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	11/25/20 11:16	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	11/25/20 11:16	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	11/25/20 11:16	
1,4-Dichlorobenzene	5.0 U	5.0	0.22	1	11/25/20 11:16	
1,4-Dioxane	100 U	100	20	1	11/25/20 11:16	
2-Butanone (MEK)	5.0 U	5.0	2.0	1	11/25/20 11:16	
2-Hexanone	5.0 U	5.0	0.36	1	11/25/20 11:16	
4-Methyl-2-pentanone	5.0 U	5.0	0.23	1	11/25/20 11:16	
Acetone	5.0 U	5.0	4.7	1	11/25/20 11:16	
Benzene	5.0 U	5.0	0.20	1	11/25/20 11:16	
Bromochloromethane	5.0 U	5.0	0.20	1	11/25/20 11:16	
Bromodichloromethane	5.0 U	5.0	0.20	1	11/25/20 11:16	
Bromoform	5.0 U	5.0	0.50	1	11/25/20 11:16	
Bromomethane	5.0 U	5.0	2.1	1	11/25/20 11:16	
Carbon Disulfide	5.0 U	5.0	0.29	1	11/25/20 11:16	
Carbon Tetrachloride	5.0 U	5.0	0.26	1	11/25/20 11:16	
Chlorobenzene	5.0 U	5.0	0.20	1	11/25/20 11:16	
Chloroethane	5.0 U	5.0	0.41	1	11/25/20 11:16	
Chloroform	5.0 U	5.0	0.20	1	11/25/20 11:16	
Chloromethane	5.0 U	5.0	1.4	1	11/25/20 11:16	
Cyclohexane	5.0 U	5.0	0.26	1	11/25/20 11:16	
Dibromochloromethane	5.0 U	5.0	0.20	1	11/25/20 11:16	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.33	1	11/25/20 11:16	
Dichloromethane	5.0 U	5.0	2.8	1	11/25/20 11:16	
Ethylbenzene	5.0 U	5.0	0.20	1	11/25/20 11:16	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	11/25/20 11:16	
Methyl Acetate	5.0 U	5.0	0.84	1	11/25/20 11:16	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	11/25/20 11:16	
Methylcyclohexane	5.0 U	5.0	0.31	1	11/25/20 11:16	
Styrene	5.0 U	5.0	0.20	1	11/25/20 11:16	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014615-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.23	1	11/25/20 11:16	
Toluene	5.0 U	5.0	0.20	1	11/25/20 11:16	
Trichloroethene (TCE)	5.0 U	5.0	0.22	1	11/25/20 11:16	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.26	1	11/25/20 11:16	
Vinyl Chloride	5.0 U	5.0	0.46	1	11/25/20 11:16	
cis-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/25/20 11:16	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/25/20 11:16	
m,p-Xylenes	10 U	10	0.37	1	11/25/20 11:16	
o-Xylene	5.0 U	5.0	0.20	1	11/25/20 11:16	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/25/20 11:16	
trans-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/25/20 11:16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	31 - 154	11/25/20 11:16	
Dibromofluoromethane	97	63 - 138	11/25/20 11:16	
Toluene-d8	103	66 - 138	11/25/20 11:16	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014680-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	11/28/20 12:11	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.44	1	11/28/20 12:11	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	11/28/20 12:11	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	11/28/20 12:11	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	11/28/20 12:11	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.29	1	11/28/20 12:11	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.52	1	11/28/20 12:11	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.42	1	11/28/20 12:11	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	11/28/20 12:11	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.75	1	11/28/20 12:11	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	11/28/20 12:11	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	11/28/20 12:11	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	11/28/20 12:11	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	11/28/20 12:11	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	11/28/20 12:11	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	11/28/20 12:11	
1,4-Dichlorobenzene	5.0 U	5.0	0.22	1	11/28/20 12:11	
1,4-Dioxane	100 U	100	20	1	11/28/20 12:11	
2-Butanone (MEK)	5.0 U	5.0	2.0	1	11/28/20 12:11	
2-Hexanone	5.0 U	5.0	0.36	1	11/28/20 12:11	
4-Methyl-2-pentanone	5.0 U	5.0	0.23	1	11/28/20 12:11	
Acetone	5.0 U	5.0	4.7	1	11/28/20 12:11	
Benzene	5.0 U	5.0	0.20	1	11/28/20 12:11	
Bromochloromethane	5.0 U	5.0	0.20	1	11/28/20 12:11	
Bromodichloromethane	5.0 U	5.0	0.20	1	11/28/20 12:11	
Bromoform	5.0 U	5.0	0.50	1	11/28/20 12:11	
Bromomethane	5.0 U	5.0	2.1	1	11/28/20 12:11	
Carbon Disulfide	5.0 U	5.0	0.29	1	11/28/20 12:11	
Carbon Tetrachloride	5.0 U	5.0	0.26	1	11/28/20 12:11	
Chlorobenzene	5.0 U	5.0	0.20	1	11/28/20 12:11	
Chloroethane	5.0 U	5.0	0.41	1	11/28/20 12:11	
Chloroform	5.0 U	5.0	0.20	1	11/28/20 12:11	
Chloromethane	5.0 U	5.0	1.4	1	11/28/20 12:11	
Cyclohexane	5.0 U	5.0	0.26	1	11/28/20 12:11	
Dibromochloromethane	5.0 U	5.0	0.20	1	11/28/20 12:11	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.33	1	11/28/20 12:11	
Dichloromethane	5.0 U	5.0	2.8	1	11/28/20 12:11	
Ethylbenzene	5.0 U	5.0	0.20	1	11/28/20 12:11	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	11/28/20 12:11	
Methyl Acetate	5.0 U	5.0	0.84	1	11/28/20 12:11	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	11/28/20 12:11	
Methylcyclohexane	5.0 U	5.0	0.31	1	11/28/20 12:11	
Styrene	5.0 U	5.0	0.20	1	11/28/20 12:11	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014680-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.23	1	11/28/20 12:11	
Toluene	5.0 U	5.0	0.20	1	11/28/20 12:11	
Trichloroethene (TCE)	5.0 U	5.0	0.22	1	11/28/20 12:11	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.26	1	11/28/20 12:11	
Vinyl Chloride	5.0 U	5.0	0.46	1	11/28/20 12:11	
cis-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/28/20 12:11	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/28/20 12:11	
m,p-Xylenes	10 U	10	0.37	1	11/28/20 12:11	
o-Xylene	5.0 U	5.0	0.20	1	11/28/20 12:11	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	11/28/20 12:11	
trans-1,3-Dichloropropene	5.0 U	5.0	0.20	1	11/28/20 12:11	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	31 - 154	11/28/20 12:11	
Dibromofluoromethane	102	63 - 138	11/28/20 12:11	
Toluene-d8	103	66 - 138	11/28/20 12:11	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 11/24/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2014538-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	18.9	20.0	95	68-123
1,1,2,2-Tetrachloroethane	8260C	19.8	20.0	99	78-121
1,1,2-Trichloroethane	8260C	18.5	20.0	93	84-117
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	19.8	20.0	99	54-121
1,1-Dichloroethane (1,1-DCA)	8260C	19.0	20.0	95	76-123
1,1-Dichloroethene (1,1-DCE)	8260C	22.0	20.0	110	65-115
1,2,3-Trichlorobenzene	8260C	20.2	20.0	101	60-128
1,2,4-Trichlorobenzene	8260C	20.3	20.0	102	62-130
1,2,4-Trimethylbenzene	8260C	20.2	20.0	101	67-121
1,2-Dibromo-3-chloropropane (DBCP)	8260C	19.6	20.0	98	54-135
1,2-Dibromoethane	8260C	19.1	20.0	95	77-117
1,2-Dichlorobenzene	8260C	19.6	20.0	98	75-116
1,2-Dichloroethane	8260C	18.5	20.0	92	74-116
1,2-Dichloropropane	8260C	18.7	20.0	93	79-112
1,3,5-Trimethylbenzene	8260C	19.5	20.0	97	66-122
1,3-Dichlorobenzene	8260C	19.4	20.0	97	72-118
1,4-Dichlorobenzene	8260C	18.2	20.0	91	72-117
1,4-Dioxane	8260C	356	400	89	59-147
2-Butanone (MEK)	8260C	17.2	20.0	86	67-129
2-Hexanone	8260C	18.4	20.0	92	68-118
4-Methyl-2-pentanone	8260C	19.5	20.0	97	64-123
Acetone	8260C	12.7	20.0	63	32-154
Benzene	8260C	18.8	20.0	94	77-114
Bromochloromethane	8260C	18.6	20.0	93	78-117
Bromodichloromethane	8260C	17.7	20.0	88	72-118
Bromoform	8260C	19.9	20.0	100	55-134
Bromomethane	8260C	23.6	20.0	118	10-150
Carbon Disulfide	8260C	18.8	20.0	94	44-139
Carbon Tetrachloride	8260C	18.8	20.0	94	51-123
Chlorobenzene	8260C	18.8	20.0	94	79-115
Chloroethane	8260C	17.7	20.0	88	10-140
Chloroform	8260C	18.9	20.0	94	76-115
Chloromethane	8260C	20.7	20.0	104	10-131

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 11/24/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2014538-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyclohexane	8260C	18.3	20.0	91	67-122
Dibromochloromethane	8260C	20.8	20.0	104	68-121
Dichlorodifluoromethane (CFC 12)	8260C	22.4	20.0	112	51-144
Dichloromethane	8260C	17.6	20.0	88	72-118
Ethylbenzene	8260C	18.9	20.0	94	64-118
Isopropylbenzene (Cumene)	8260C	18.9	20.0	94	60-123
Methyl Acetate	8260C	21.2	20.0	106	31-122
Methyl tert-Butyl Ether	8260C	20.2	20.0	101	76-118
Methylcyclohexane	8260C	19.2	20.0	96	70-124
Styrene	8260C	19.1	20.0	95	74-117
Tetrachloroethene (PCE)	8260C	18.6	20.0	93	58-124
Toluene	8260C	18.4	20.0	92	72-116
Trichloroethene (TCE)	8260C	18.8	20.0	94	69-118
Trichlorofluoromethane (CFC 11)	8260C	19.9	20.0	99	52-127
Vinyl Chloride	8260C	19.3	20.0	97	59-153
cis-1,2-Dichloroethene	8260C	19.1	20.0	96	79-113
cis-1,3-Dichloropropene	8260C	19.5	20.0	98	66-117
m,p-Xylenes	8260C	38.3	40.0	96	68-118
o-Xylene	8260C	19.5	20.0	98	71-116
trans-1,2-Dichloroethene	8260C	20.9	20.0	105	73-114
trans-1,3-Dichloropropene	8260C	21.2	20.0	106	57-135

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dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 11/25/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2014615-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	22.0	20.0	110	68-123
1,1,2,2-Tetrachloroethane	8260C	21.7	20.0	108	78-121
1,1,2-Trichloroethane	8260C	21.2	20.0	106	84-117
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	23.0	20.0	115	54-121
1,1-Dichloroethane (1,1-DCA)	8260C	22.2	20.0	111	76-123
1,1-Dichloroethene (1,1-DCE)	8260C	26.1	20.0	131 *	65-115
1,2,3-Trichlorobenzene	8260C	21.0	20.0	105	60-128
1,2,4-Trichlorobenzene	8260C	21.7	20.0	108	62-130
1,2,4-Trimethylbenzene	8260C	22.5	20.0	112	67-121
1,2-Dibromo-3-chloropropane (DBCP)	8260C	22.9	20.0	114	54-135
1,2-Dibromoethane	8260C	21.5	20.0	108	77-117
1,2-Dichlorobenzene	8260C	21.2	20.0	106	75-116
1,2-Dichloroethane	8260C	20.5	20.0	103	74-116
1,2-Dichloropropane	8260C	20.8	20.0	104	79-112
1,3,5-Trimethylbenzene	8260C	22.2	20.0	111	66-122
1,3-Dichlorobenzene	8260C	21.7	20.0	108	72-118
1,4-Dichlorobenzene	8260C	20.9	20.0	105	72-117
1,4-Dioxane	8260C	376	400	94	59-147
2-Butanone (MEK)	8260C	19.0	20.0	95	67-129
2-Hexanone	8260C	21.4	20.0	107	68-118
4-Methyl-2-pentanone	8260C	22.0	20.0	110	64-123
Acetone	8260C	14.0	20.0	70	32-154
Benzene	8260C	21.4	20.0	107	77-114
Bromochloromethane	8260C	20.9	20.0	104	78-117
Bromodichloromethane	8260C	20.3	20.0	102	72-118
Bromoform	8260C	23.4	20.0	117	55-134
Bromomethane	8260C	26.0	20.0	130	10-150
Carbon Disulfide	8260C	22.4	20.0	112	44-139
Carbon Tetrachloride	8260C	21.7	20.0	108	51-123
Chlorobenzene	8260C	21.0	20.0	105	79-115
Chloroethane	8260C	22.2	20.0	111	10-140
Chloroform	8260C	21.2	20.0	106	76-115
Chloromethane	8260C	23.6	20.0	118	10-131

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 11/25/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2014615-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyclohexane	8260C	20.2	20.0	101	67-122
Dibromochloromethane	8260C	24.3	20.0	121	68-121
Dichlorodifluoromethane (CFC 12)	8260C	25.5	20.0	127	51-144
Dichloromethane	8260C	20.5	20.0	103	72-118
Ethylbenzene	8260C	22.2	20.0	111	64-118
Isopropylbenzene (Cumene)	8260C	22.0	20.0	110	60-123
Methyl Acetate	8260C	22.5	20.0	112	31-122
Methyl tert-Butyl Ether	8260C	22.5	20.0	113	76-118
Methylcyclohexane	8260C	21.7	20.0	109	70-124
Styrene	8260C	21.1	20.0	106	74-117
Tetrachloroethene (PCE)	8260C	22.1	20.0	111	58-124
Toluene	8260C	20.9	20.0	104	72-116
Trichloroethene (TCE)	8260C	20.9	20.0	105	69-118
Trichlorofluoromethane (CFC 11)	8260C	20.2	20.0	101	52-127
Vinyl Chloride	8260C	22.8	20.0	114	59-153
cis-1,2-Dichloroethene	8260C	22.2	20.0	111	79-113
cis-1,3-Dichloropropene	8260C	22.7	20.0	113	66-117
m,p-Xylenes	8260C	43.7	40.0	109	68-118
o-Xylene	8260C	22.3	20.0	112	71-116
trans-1,2-Dichloroethene	8260C	24.3	20.0	122 *	73-114
trans-1,3-Dichloropropene	8260C	23.4	20.0	117	57-135

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 11/28/20

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2014680-03					Duplicate Lab Control Sample RQ2014680-04					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	8260C	19.9	20.0	99	19.7	20.0	99	68-123	<1	30
1,1,2,2-Tetrachloroethane	8260C	20.0	20.0	100	19.9	20.0	99	78-121	1	30
1,1,2-Trichloroethane	8260C	19.4	20.0	97	19.8	20.0	99	84-117	2	30
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	19.9	20.0	100	18.8	20.0	94	54-121	6	30
1,1-Dichloroethane (1,1-DCA)	8260C	20.1	20.0	100	20.0	20.0	100	76-123	<1	30
1,1-Dichloroethene (1,1-DCE)	8260C	22.3	20.0	111	22.5	20.0	112	65-115	<1	30
1,2,3-Trichlorobenzene	8260C	20.0	20.0	100	16.7	20.0	84	60-128	17	30
1,2,4-Trichlorobenzene	8260C	20.5	20.0	103	19.9	20.0	100	62-130	3	30
1,2,4-Trimethylbenzene	8260C	20.1	20.0	101	20.0	20.0	100	67-121	<1	30
1,2-Dibromo-3-chloropropane (DBCP)	8260C	20.9	20.0	105	21.0	20.0	105	54-135	<1	30
1,2-Dibromoethane	8260C	20.5	20.0	103	19.8	20.0	99	77-117	4	30
1,2-Dichlorobenzene	8260C	19.9	20.0	100	19.4	20.0	97	75-116	3	30
1,2-Dichloroethane	8260C	18.7	20.0	94	19.3	20.0	97	74-116	3	30
1,2-Dichloropropane	8260C	19.6	20.0	98	19.6	20.0	98	79-112	<1	30
1,3,5-Trimethylbenzene	8260C	20.0	20.0	100	19.7	20.0	99	66-122	1	30
1,3-Dichlorobenzene	8260C	19.7	20.0	98	19.2	20.0	96	72-118	2	30
1,4-Dichlorobenzene	8260C	18.8	20.0	94	18.9	20.0	95	72-117	1	30
1,4-Dioxane	8260C	363	400	91	293	400	73	59-147	22	30
2-Butanone (MEK)	8260C	19.2	20.0	96	18.5	20.0	92	67-129	4	30
2-Hexanone	8260C	20.9	20.0	105	19.9	20.0	100	68-118	5	30
4-Methyl-2-pentanone	8260C	20.6	20.0	103	21.2	20.0	106	64-123	3	30
Acetone	8260C	13.2	20.0	66	13.5	20.0	67	32-154	2	30
Benzene	8260C	19.5	20.0	97	19.3	20.0	96	77-114	1	30
Bromochloromethane	8260C	19.6	20.0	98	19.8	20.0	99	78-117	1	30
Bromodichloromethane	8260C	19.2	20.0	96	19.5	20.0	98	72-118	2	30
Bromoform	8260C	22.3	20.0	111	21.9	20.0	110	55-134	<1	30
Bromomethane	8260C	19.7	20.0	99	20.5	20.0	102	10-150	3	30
Carbon Disulfide	8260C	20.5	20.0	102	20.2	20.0	101	44-139	<1	30
Carbon Tetrachloride	8260C	19.6	20.0	98	18.9	20.0	95	51-123	3	30
Chlorobenzene	8260C	19.4	20.0	97	19.1	20.0	96	79-115	1	30
Chloroethane	8260C	20.5	20.0	102	20.8	20.0	104	10-140	2	30
Chloroform	8260C	19.5	20.0	98	19.7	20.0	98	76-115	<1	30

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 11/28/20

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample					Duplicate Lab Control Sample					
RQ2014680-03					RQ2014680-04					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Chloromethane	8260C	22.3	20.0	112	21.3	20.0	106	10-131	6	30
Cyclohexane	8260C	19.9	20.0	100	19.7	20.0	98	67-122	2	30
Dibromochloromethane	8260C	22.8	20.0	114	22.7	20.0	114	68-121	<1	30
Dichlorodifluoromethane (CFC 12)	8260C	22.9	20.0	114	22.1	20.0	111	51-144	3	30
Dichloromethane	8260C	18.6	20.0	93	18.5	20.0	92	72-118	1	30
Ethylbenzene	8260C	19.6	20.0	98	19.5	20.0	98	64-118	<1	30
Isopropylbenzene (Cumene)	8260C	19.6	20.0	98	19.2	20.0	96	60-123	2	30
Methyl Acetate	8260C	22.9	20.0	115	23.4	20.0	117	31-122	2	30
Methyl tert-Butyl Ether	8260C	20.8	20.0	104	21.2	20.0	106	76-118	2	30
Methylcyclohexane	8260C	20.8	20.0	104	20.0	20.0	100	70-124	4	30
Styrene	8260C	19.3	20.0	97	19.3	20.0	96	74-117	1	30
Tetrachloroethene (PCE)	8260C	19.3	20.0	96	18.3	20.0	92	58-124	4	30
Toluene	8260C	19.1	20.0	96	19.2	20.0	96	72-116	<1	30
Trichloroethene (TCE)	8260C	19.3	20.0	97	19.0	20.0	95	69-118	2	30
Trichlorofluoromethane (CFC 11)	8260C	22.3	20.0	112	17.6	20.0	88	52-127	24	30
Vinyl Chloride	8260C	21.2	20.0	106	20.3	20.0	102	59-153	4	30
cis-1,2-Dichloroethene	8260C	20.3	20.0	101	19.8	20.0	99	79-113	2	30
cis-1,3-Dichloropropene	8260C	20.5	20.0	103	20.9	20.0	105	66-117	2	30
m,p-Xylenes	8260C	39.4	40.0	98	38.5	40.0	96	68-118	2	30
o-Xylene	8260C	20.3	20.0	101	19.8	20.0	99	71-116	2	30
trans-1,2-Dichloroethene	8260C	22.1	20.0	110	21.4	20.0	107	73-114	3	30
trans-1,3-Dichloropropene	8260C	22.0	20.0	110	22.5	20.0	113	57-135	3	30



Semivolatile Organic Compounds by GC/MS

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907

SURROGATE RECOVERY SUMMARY
Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol
		10 - 109	10 - 102	10 - 88
SS-BCP-16-02	R2010907-001	52	54	46
SS-BCP-16-02 DL	R2010907-001	0 D *	0 D *	0 D *
SS-BCP-16-024	R2010907-003	42	39	28
SS-BCP-16-024 DL	R2010907-003	0 D *	0 D *	0 D *
SS-BCP-17-02	R2010907-004	37	26	24
SS-BCP-17-02 DL	R2010907-004	36	27	26
SS-BCP-17-024	R2010907-006	0 *	0 *	0 *
SS-BCP-17-024 DL	R2010907-006	0 D *	0 D *	0 D *
TP-BCP-22-01	R2010907-007	36	25	21
TP-BCP-22-01 DL	R2010907-007	35	28	24
TP-BCP-220-01	R2010907-008	40	29	25
TP-BCP-220-01 DL	R2010907-008	41	32	27
TP-BCP-27-01	R2010907-009	35	34	29
TP-BCP-27-01 DL	R2010907-009	35	36	29
TP-BCP-270-01	R2010907-010	40	29	25
TP-BCP-270-01 DL	R2010907-010	41	33	28
Method Blank	RQ2014346-01	60	52	45
Lab Control Sample	RQ2014346-02	49	41	36
Duplicate Lab Control Sample	RQ2014346-03	49	43	40
SS-BCP-16-02 MS	RQ2014346-04	45	38	26
SS-BCP-16-02 DMS	RQ2014346-05	41	41	35
Method Blank	RQ2014429-01	41	42	41
Lab Control Sample	RQ2014429-02	33	32	32
Duplicate Lab Control Sample	RQ2014429-03	43	42	42

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907

SURROGATE RECOVERY SUMMARY
Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Nitrobenzene-d5	Phenol-d6	Terphenyl-d14
		10 - 95	10 - 145	10 - 106
SS-BCP-16-02	R2010907-001	54	55	72
SS-BCP-16-02 DL	R2010907-001	0 D *	0 D *	0 D *
SS-BCP-16-024	R2010907-003	37	35	68
SS-BCP-16-024 DL	R2010907-003	0 D *	0 D *	0 D *
SS-BCP-17-02	R2010907-004	26	27	38
SS-BCP-17-02 DL	R2010907-004	26	29	40
SS-BCP-17-024	R2010907-006	0 *	0 *	0 *
SS-BCP-17-024 DL	R2010907-006	0 D *	0 D *	0 D *
TP-BCP-22-01	R2010907-007	23	24	33
TP-BCP-22-01 DL	R2010907-007	27	27	39
TP-BCP-220-01	R2010907-008	26	28	38
TP-BCP-220-01 DL	R2010907-008	31	30	44
TP-BCP-27-01	R2010907-009	33	32	37
TP-BCP-27-01 DL	R2010907-009	36	34	41
TP-BCP-270-01	R2010907-010	27	28	38
TP-BCP-270-01 DL	R2010907-010	31	32	45
Method Blank	RQ2014346-01	44	49	83
Lab Control Sample	RQ2014346-02	35	39	57
Duplicate Lab Control Sample	RQ2014346-03	38	40	47
SS-BCP-16-02 MS	RQ2014346-04	32	35	61
SS-BCP-16-02 DMS	RQ2014346-05	35	38	56
Method Blank	RQ2014429-01	41	41	39
Lab Control Sample	RQ2014429-02	31	33	33
Duplicate Lab Control Sample	RQ2014429-03	40	43	43

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20
Date Received: 11/17/20
Date Analyzed: 12/12/20
Date Extracted: 11/20/20

Duplicate Matrix Spike Summary
Semivolatile Organic Compounds by GC/MS

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001
Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry

Analyte Name	Matrix Spike RQ2014346-04				Duplicate Matrix Spike RQ2014346-05				% Rec Limits	RPD	RPD Limit
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec				
1,2,4,5-Tetrachlorobenzene	4200 U	1240 DJ	2150	58	1280 DJ	2190	58	10-115	<1	30	
2,3,4,6-Tetrachlorophenol	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-123	NC	30	
2,4,5-Trichlorophenol	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	12-109	NC	30	
2,4,6-Trichlorophenol	4200 U	855 DJ	2140	40	896 DJ	2180	41	13-149	2	30	
2,4-Dichlorophenol	4200 U	4200 DU	2140	0 *	1040 DJ	2180	48	16-98	NC	30	
2,4-Dimethylphenol	4200 U	1710 DJ	2140	80	4300 DU	2180	0 *	10-98	NC	30	
2,4-Dinitrophenol	22000 U	22000 DU	2140	0 *	22000 DU	2180	0 *	10-129	NC	30	
2,4-Dinitrotoluene	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-124	NC	30	
2,6-Dinitrotoluene	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	13-112	NC	30	
2-Chloronaphthalene	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-94	NC	30	
2-Chlorophenol	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	14-99	NC	30	
2-Methylnaphthalene	6500	21900 D	2140	719 *	5070 D	2180	-65 *	10-90	240*	30	
2-Methylphenol	4200 U	1920 DJ	2140	90 *	950 DJ	2180	44	10-86	69*	30	
2-Nitroaniline	4200 U	4200 DU	2140	0 *	1390 DJ	2180	64	10-109	NC	30	
2-Nitrophenol	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-90	NC	30	
3,3'-Dichlorobenzidine	4200 U	4200 DU	2140	0 *	962 DJ	2180	44	10-118	NC	30	
3- and 4-Methylphenol Coelution	4200 U	3840 DJ	2140	180 *	1060 DJ	2180	49	11-101	114*	30	
3-Nitroaniline	4200 U	1120 DJ	2140	52	1190 DJ	2180	54	10-104	4	30	
4,6-Dinitro-2-methylphenol	22000 U	22000 DU	2140	0 *	22000 DU	2180	0 *	10-123	NC	30	
4-Bromophenyl Phenyl Ether	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-99	NC	30	
4-Chloro-3-methylphenol	4200 U	1040 DJ	2140	49	1120 DJ	2180	51	10-108	4	30	
4-Chloroaniline	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-91	NC	30	
4-Chlorophenyl Phenyl Ether	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-95	NC	30	
4-Nitroaniline	4200 U	4200 DU	2140	0 *	1790 DJ	2180	82	10-137	NC	30	
4-Nitrophenol	22000 U	22000 DU	2140	0 *	22000 DU	2180	0 *	10-130	NC	30	
Acenaphthene	23000	25400 D	2140	98 #	13700 D	2180	-443 #	10-100	314*	30	
Acenaphthylene	5000	22800 D	2140	830 *	4430 D	2180	-27 *	10-102	213*	30	
Acetophenone	4200 U	1200 DJ	4270	28	1480 DJ	4360	34	12-99	19	30	
Anthracene	44000	66000 DE	2140	1009 #	29500 D	2180	-686 #	10-129	1050*	30	
Atrazine	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	15-133	NC	30	
Benz(a)anthracene	190000 E	167000 DE	2140	-1233 #	103000 DE	2180	-4127 #	10-122	108*	30	
Benzaldehyde	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-103	NC	30	

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20
Date Received: 11/17/20
Date Analyzed: 12/12/20
Date Extracted: 11/20/20

Duplicate Matrix Spike Summary
Semivolatile Organic Compounds by GC/MS

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001
Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry

Analyte Name	Matrix Spike RQ2014346-04				Duplicate Matrix Spike RQ2014346-05				% Rec Limits	RPD	RPD Limit
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec				
Benzo(a)pyrene	310000 E	260000 DE	2140	-2408 #	166000 DE	2180	-6676 #	10-122	94*	30	
Benzo(b)fluoranthene	320000 E	270000 DE	2140	-2131 #	164000 DE	2180	-6942 #	10-112	106*	30	
Benzo(g,h,i)perylene	120000 E	103000 DE	2140	-673 #	70200 DE	2180	-2144 #	10-136	104*	30	
Benzo(k)fluoranthene	89000 E	74200 DE	2140	-678 #	45300 DE	2180	-1989 #	10-112	98*	30	
Biphenyl	1500 J	6490 D	2140	231 *	1990 DJ	2180	20	10-99	168*	30	
2,2'-Oxybis(1-chloropropane)	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-87	NC	30	
Bis(2-chloroethoxy)methane	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	16-93	NC	30	
Bis(2-chloroethyl) Ether	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-79	NC	30	
Bis(2-ethylhexyl) Phthalate	6400 U	2020 DJ	2140	94	2210 DJ	2180	101	10-116	7	30	
Butyl Benzyl Phthalate	4200 U	1360 DJ	2140	64	1380 DJ	2180	63	10-128	2	30	
Caprolactam	4200 U	1360 DJ	2140	64	1260 DJ	2180	58	10-112	10	30	
Carbazole	26000	36000 D	2140	446 #	15500 D	2180	-503 #	10-138	3330*	30	
Chrysene	180000 E	157000 DE	2140	-1287 #	103000 DE	2180	-3749 #	10-113	98*	30	
Di-n-butyl Phthalate	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-119	NC	30	
Di-n-octyl Phthalate	4200 U	1680 DJ	2140	79	1780 DJ	2180	82	10-121	4	30	
Dibenz(a,h)anthracene	33000	28900 D	2140	-201 #	20900 D	2180	-564 #	10-130	95*	30	
Dibenzofuran	12000	32300 D	2140	972 #	8360 D	2180	-148 #	10-102	272*	30	
Diethyl Phthalate	4200 U	1080 DJ	2140	50	1160 DJ	2180	53	10-101	6	30	
Dimethyl Phthalate	4200 U	1110 DJ	2140	52	1180 DJ	2180	54	10-113	4	30	
Fluoranthene	180000 E	190000 DE	2140	248 #	119000 DE	2180	-3012 #	10-125	236*	30	
Fluorene	20000	50000 DE	2140	1412 #	12800 D	2180	-323 #	10-109	319*	30	
Hexachlorobenzene	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-106	NC	30	
Hexachlorobutadiene	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-142	NC	30	
Hexachlorocyclopentadiene	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-133	NC	30	
Hexachloroethane	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-129	NC	30	
Indeno(1,2,3-cd)pyrene	150000 E	130000 DE	2140	-1000 #	87000 DE	2180	-2951 #	10-124	99*	30	
Isophorone	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-81	NC	30	

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20
Date Received: 11/17/20
Date Analyzed: 12/12/20
Date Extracted: 11/20/20

Duplicate Matrix Spike Summary
Semivolatile Organic Compounds by GC/MS

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001
Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry

Analyte Name	Matrix Spike RQ2014346-04				Duplicate Matrix Spike RQ2014346-05				% Rec Limits	RPD	RPD Limit
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec				
N-Nitrosodi-n-propylamine	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-76	NC	30	
N-Nitrosodiphenylamine	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-114	NC	30	
Naphthalene	28000	91200 DE	2140	2951 #	16800 D	2180	-521 #	10-89	286*	30	
Nitrobenzene	4200 U	4200 DU	2140	0 *	4300 DU	2180	0 *	10-77	NC	30	
Pentachlorophenol (PCP)	22000 U	22000 DU	2140	0 *	22000 DU	2180	0 *	10-118	NC	30	
Phenanthrene	120000 E	165000 DE	2140	1938 #	78400 DE	2180	-2085 #	10-137	5473*	30	
Phenol	4200 U	3400 DJ	2140	159 *	4300 DU	2180	0 *	10-144	NC	30	
Pyrene	210000 E	213000 DE	2140	-54 #	133000 DE	2180	-3737 #	10-118	194*	30	

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014346-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	330 U	330	79	1	11/24/20 18:47	11/20/20	
2,3,4,6-Tetrachlorophenol	330 U	330	70	1	11/24/20 18:47	11/20/20	
2,4,5-Trichlorophenol	330 U	330	290	1	11/24/20 18:47	11/20/20	
2,4,6-Trichlorophenol	330 U	330	59	1	11/24/20 18:47	11/20/20	
2,4-Dichlorophenol	330 U	330	71	1	11/24/20 18:47	11/20/20	
2,4-Dimethylphenol	330 U	330	73	1	11/24/20 18:47	11/20/20	
2,4-Dinitrophenol	1700 U	1700	660	1	11/24/20 18:47	11/20/20	
2,4-Dinitrotoluene	330 U	330	140	1	11/24/20 18:47	11/20/20	
2,6-Dinitrotoluene	330 U	330	97	1	11/24/20 18:47	11/20/20	
2-Chloronaphthalene	330 U	330	80	1	11/24/20 18:47	11/20/20	
2-Chlorophenol	330 U	330	82	1	11/24/20 18:47	11/20/20	
2-Methylnaphthalene	330 U	330	73	1	11/24/20 18:47	11/20/20	
2-Methylphenol	330 U	330	72	1	11/24/20 18:47	11/20/20	
2-Nitroaniline	330 U	330	99	1	11/24/20 18:47	11/20/20	
2-Nitrophenol	330 U	330	96	1	11/24/20 18:47	11/20/20	
3,3'-Dichlorobenzidine	330 U	330	70	1	11/24/20 18:47	11/20/20	
3- and 4-Methylphenol Coelution	330 U	330	64	1	11/24/20 18:47	11/20/20	
3-Nitroaniline	330 U	330	71	1	11/24/20 18:47	11/20/20	
4,6-Dinitro-2-methylphenol	1700 U	1700	150	1	11/24/20 18:47	11/20/20	
4-Bromophenyl Phenyl Ether	330 U	330	130	1	11/24/20 18:47	11/20/20	
4-Chloro-3-methylphenol	330 U	330	73	1	11/24/20 18:47	11/20/20	
4-Chloroaniline	330 U	330	79	1	11/24/20 18:47	11/20/20	
4-Chlorophenyl Phenyl Ether	330 U	330	80	1	11/24/20 18:47	11/20/20	
4-Nitroaniline	330 U	330	71	1	11/24/20 18:47	11/20/20	
4-Nitrophenol	1700 U	1700	120	1	11/24/20 18:47	11/20/20	
Acenaphthene	330 U	330	75	1	11/24/20 18:47	11/20/20	
Acenaphthylene	330 U	330	88	1	11/24/20 18:47	11/20/20	
Acetophenone	330 U	330	76	1	11/24/20 18:47	11/20/20	
Anthracene	330 U	330	93	1	11/24/20 18:47	11/20/20	
Atrazine	330 U	330	140	1	11/24/20 18:47	11/20/20	
Benz(a)anthracene	330 U	330	98	1	11/24/20 18:47	11/20/20	
Benzaldehyde	330 U	330	66	1	11/24/20 18:47	11/20/20	
Benzo(a)pyrene	330 U	330	130	1	11/24/20 18:47	11/20/20	
Benzo(b)fluoranthene	330 U	330	120	1	11/24/20 18:47	11/20/20	
Benzo(g,h,i)perylene	330 U	330	88	1	11/24/20 18:47	11/20/20	
Benzo(k)fluoranthene	330 U	330	130	1	11/24/20 18:47	11/20/20	
Biphenyl	330 U	330	82	1	11/24/20 18:47	11/20/20	
2,2'-Oxybis(1-chloropropane)	330 U	330	140	1	11/24/20 18:47	11/20/20	
Bis(2-chloroethoxy)methane	330 U	330	89	1	11/24/20 18:47	11/20/20	
Bis(2-chloroethyl) Ether	330 U	330	87	1	11/24/20 18:47	11/20/20	
Bis(2-ethylhexyl) Phthalate	500 U	500	89	1	11/24/20 18:47	11/20/20	
Butyl Benzyl Phthalate	330 U	330	83	1	11/24/20 18:47	11/20/20	
Caprolactam	330 U	330	87	1	11/24/20 18:47	11/20/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014346-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	330 U	330	96	1	11/24/20 18:47	11/20/20	
Chrysene	330 U	330	130	1	11/24/20 18:47	11/20/20	
Di-n-butyl Phthalate	330 U	330	110	1	11/24/20 18:47	11/20/20	
Di-n-octyl Phthalate	330 U	330	98	1	11/24/20 18:47	11/20/20	
Dibenz(a,h)anthracene	330 U	330	99	1	11/24/20 18:47	11/20/20	
Dibenzofuran	330 U	330	66	1	11/24/20 18:47	11/20/20	
Diethyl Phthalate	330 U	330	71	1	11/24/20 18:47	11/20/20	
Dimethyl Phthalate	330 U	330	75	1	11/24/20 18:47	11/20/20	
Fluoranthene	330 U	330	130	1	11/24/20 18:47	11/20/20	
Fluorene	330 U	330	77	1	11/24/20 18:47	11/20/20	
Hexachlorobenzene	330 U	330	110	1	11/24/20 18:47	11/20/20	
Hexachlorobutadiene	330 U	330	81	1	11/24/20 18:47	11/20/20	
Hexachlorocyclopentadiene	330 U	330	73	1	11/24/20 18:47	11/20/20	
Hexachloroethane	330 U	330	86	1	11/24/20 18:47	11/20/20	
Indeno(1,2,3-cd)pyrene	330 U	330	120	1	11/24/20 18:47	11/20/20	
Isophorone	330 U	330	91	1	11/24/20 18:47	11/20/20	
N-Nitrosodi-n-propylamine	330 U	330	89	1	11/24/20 18:47	11/20/20	
N-Nitrosodiphenylamine	330 U	330	230	1	11/24/20 18:47	11/20/20	
Naphthalene	330 U	330	86	1	11/24/20 18:47	11/20/20	
Nitrobenzene	330 U	330	86	1	11/24/20 18:47	11/20/20	
Pentachlorophenol (PCP)	1700 U	1700	120	1	11/24/20 18:47	11/20/20	
Phenanthrene	330 U	330	97	1	11/24/20 18:47	11/20/20	
Phenol	330 U	330	79	1	11/24/20 18:47	11/20/20	
Pyrene	330 U	330	140	1	11/24/20 18:47	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	60	10 - 109	11/24/20 18:47	
2-Fluorobiphenyl	52	10 - 102	11/24/20 18:47	
2-Fluorophenol	45	10 - 88	11/24/20 18:47	
Nitrobenzene-d5	44	10 - 95	11/24/20 18:47	
Phenol-d6	49	10 - 145	11/24/20 18:47	
Terphenyl-d14	83	10 - 106	11/24/20 18:47	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014429-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	330 U	330	79	1	12/01/20 16:07	11/23/20	
2,3,4,6-Tetrachlorophenol	330 U	330	70	1	12/01/20 16:07	11/23/20	
2,4,5-Trichlorophenol	330 U	330	290	1	12/01/20 16:07	11/23/20	
2,4,6-Trichlorophenol	330 U	330	59	1	12/01/20 16:07	11/23/20	
2,4-Dichlorophenol	330 U	330	71	1	12/01/20 16:07	11/23/20	
2,4-Dimethylphenol	330 U	330	73	1	12/01/20 16:07	11/23/20	
2,4-Dinitrophenol	1700 U	1700	660	1	12/01/20 16:07	11/23/20	
2,4-Dinitrotoluene	330 U	330	140	1	12/01/20 16:07	11/23/20	
2,6-Dinitrotoluene	330 U	330	98	1	12/01/20 16:07	11/23/20	
2-Chloronaphthalene	330 U	330	80	1	12/01/20 16:07	11/23/20	
2-Chlorophenol	330 U	330	82	1	12/01/20 16:07	11/23/20	
2-Methylnaphthalene	330 U	330	73	1	12/01/20 16:07	11/23/20	
2-Methylphenol	330 U	330	72	1	12/01/20 16:07	11/23/20	
2-Nitroaniline	330 U	330	100	1	12/01/20 16:07	11/23/20	
2-Nitrophenol	330 U	330	97	1	12/01/20 16:07	11/23/20	
3,3'-Dichlorobenzidine	330 U	330	70	1	12/01/20 16:07	11/23/20	
3- and 4-Methylphenol Coelution	330 U	330	64	1	12/01/20 16:07	11/23/20	
3-Nitroaniline	330 U	330	71	1	12/01/20 16:07	11/23/20	
4,6-Dinitro-2-methylphenol	1700 U	1700	150	1	12/01/20 16:07	11/23/20	
4-Bromophenyl Phenyl Ether	330 U	330	130	1	12/01/20 16:07	11/23/20	
4-Chloro-3-methylphenol	330 U	330	73	1	12/01/20 16:07	11/23/20	
4-Chloroaniline	330 U	330	79	1	12/01/20 16:07	11/23/20	
4-Chlorophenyl Phenyl Ether	330 U	330	80	1	12/01/20 16:07	11/23/20	
4-Nitroaniline	330 U	330	71	1	12/01/20 16:07	11/23/20	
4-Nitrophenol	1700 U	1700	120	1	12/01/20 16:07	11/23/20	
Acenaphthene	330 U	330	75	1	12/01/20 16:07	11/23/20	
Acenaphthylene	330 U	330	88	1	12/01/20 16:07	11/23/20	
Acetophenone	330 U	330	76	1	12/01/20 16:07	11/23/20	
Anthracene	330 U	330	93	1	12/01/20 16:07	11/23/20	
Atrazine	330 U	330	140	1	12/01/20 16:07	11/23/20	
Benz(a)anthracene	330 U	330	99	1	12/01/20 16:07	11/23/20	
Benzaldehyde	330 U	330	66	1	12/01/20 16:07	11/23/20	
Benzo(a)pyrene	330 U	330	130	1	12/01/20 16:07	11/23/20	
Benzo(b)fluoranthene	330 U	330	120	1	12/01/20 16:07	11/23/20	
Benzo(g,h,i)perylene	330 U	330	88	1	12/01/20 16:07	11/23/20	
Benzo(k)fluoranthene	330 U	330	130	1	12/01/20 16:07	11/23/20	
Biphenyl	330 U	330	82	1	12/01/20 16:07	11/23/20	
2,2'-Oxybis(1-chloropropane)	330 U	330	140	1	12/01/20 16:07	11/23/20	
Bis(2-chloroethoxy)methane	330 U	330	89	1	12/01/20 16:07	11/23/20	
Bis(2-chloroethyl) Ether	330 U	330	87	1	12/01/20 16:07	11/23/20	
Bis(2-ethylhexyl) Phthalate	510 U	510	89	1	12/01/20 16:07	11/23/20	
Butyl Benzyl Phthalate	330 U	330	83	1	12/01/20 16:07	11/23/20	
Caprolactam	330 U	330	87	1	12/01/20 16:07	11/23/20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014429-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	330 U	330	97	1	12/01/20 16:07	11/23/20	
Chrysene	330 U	330	130	1	12/01/20 16:07	11/23/20	
Di-n-butyl Phthalate	330 U	330	110	1	12/01/20 16:07	11/23/20	
Di-n-octyl Phthalate	330 U	330	99	1	12/01/20 16:07	11/23/20	
Dibenz(a,h)anthracene	330 U	330	100	1	12/01/20 16:07	11/23/20	
Dibenzofuran	330 U	330	66	1	12/01/20 16:07	11/23/20	
Diethyl Phthalate	330 U	330	71	1	12/01/20 16:07	11/23/20	
Dimethyl Phthalate	330 U	330	75	1	12/01/20 16:07	11/23/20	
Fluoranthene	330 U	330	130	1	12/01/20 16:07	11/23/20	
Fluorene	330 U	330	77	1	12/01/20 16:07	11/23/20	
Hexachlorobenzene	330 U	330	110	1	12/01/20 16:07	11/23/20	
Hexachlorobutadiene	330 U	330	81	1	12/01/20 16:07	11/23/20	
Hexachlorocyclopentadiene	330 U	330	73	1	12/01/20 16:07	11/23/20	
Hexachloroethane	330 U	330	86	1	12/01/20 16:07	11/23/20	
Indeno(1,2,3-cd)pyrene	330 U	330	120	1	12/01/20 16:07	11/23/20	
Isophorone	330 U	330	91	1	12/01/20 16:07	11/23/20	
N-Nitrosodi-n-propylamine	330 U	330	89	1	12/01/20 16:07	11/23/20	
N-Nitrosodiphenylamine	330 U	330	230	1	12/01/20 16:07	11/23/20	
Naphthalene	330 U	330	86	1	12/01/20 16:07	11/23/20	
Nitrobenzene	330 U	330	86	1	12/01/20 16:07	11/23/20	
Pentachlorophenol (PCP)	1700 U	1700	120	1	12/01/20 16:07	11/23/20	
Phenanthrene	330 U	330	98	1	12/01/20 16:07	11/23/20	
Phenol	330 U	330	79	1	12/01/20 16:07	11/23/20	
Pyrene	330 U	330	140	1	12/01/20 16:07	11/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	41	10 - 109	12/01/20 16:07	
2-Fluorobiphenyl	42	10 - 102	12/01/20 16:07	
2-Fluorophenol	41	10 - 88	12/01/20 16:07	
Nitrobenzene-d5	41	10 - 95	12/01/20 16:07	
Phenol-d6	41	10 - 145	12/01/20 16:07	
Terphenyl-d14	39	10 - 106	12/01/20 16:07	

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 11/24/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2014346-02

Duplicate Lab Control Sample
RQ2014346-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,2,4,5-Tetrachlorobenzene	8270D	1010	1670	60	1020	1690	61	10-115	2	30
2,3,4,6-Tetrachlorophenol	8270D	883	1660	53	877	1680	52	29-100	2	30
2,4,5-Trichlorophenol	8270D	755	1660	45	778	1680	46	29-97	2	30
2,4,6-Trichlorophenol	8270D	712	1660	43	740	1680	44	26-97	2	30
2,4-Dichlorophenol	8270D	667	1660	40	732	1680	44	25-90	10	30
2,4-Dimethylphenol	8270D	742	1660	45	763	1680	45	26-89	<1	30
2,4-Dinitrophenol	8270D	1700 U	1660	0 *	660 U	1680	0 *	10-128	NC	30
2,4-Dinitrotoluene	8270D	1010	1660	61	910	1680	54	30-111	12	30
2,6-Dinitrotoluene	8270D	994	1660	60	926	1680	55	28-105	9	30
2-Chloronaphthalene	8270D	763	1660	46	786	1680	47	21-88	2	30
2-Chlorophenol	8270D	641	1660	39	702	1680	42	18-87	7	30
2-Methylnaphthalene	8270D	702	1660	42	739	1680	44	21-83	5	30
2-Methylphenol	8270D	715	1660	43	750	1680	45	22-86	5	30
2-Nitroaniline	8270D	920	1660	55	862	1680	51	27-105	8	30
2-Nitrophenol	8270D	573	1660	35	692	1680	41	20-88	16	30
3- and 4-Methylphenol Coelution	8270D	740	1660	45	755	1680	45	27-92	<1	30
3-Nitroaniline	8270D	773	1660	47	681	1680	41	27-98	14	30
4,6-Dinitro-2-methylphenol	8270D	443 J	1660	27	584 J	1680	35	11-96	26	30
4-Bromophenyl Phenyl Ether	8270D	865	1660	52	839	1680	50	25-96	4	30
4-Chloro-3-methylphenol	8270D	748	1660	45	729	1680	43	29-92	5	30
4-Chloroaniline	8270D	636	1660	38	592	1680	35	21-72	8	30
4-Chlorophenyl Phenyl Ether	8270D	887	1660	53	808	1680	48	25-92	10	30
4-Nitroaniline	8270D	983	1660	59	858	1680	51	27-102	15	30
4-Nitrophenol	8270D	770 J	1660	46	733 J	1680	44	10-130	4	30
Acenaphthene	8270D	778	1660	47	773	1680	46	25-92	2	30
Acenaphthylene	8270D	834	1660	50	836	1680	50	27-93	<1	30
Acetophenone	8270D	1130	3320	34	1270	3360	38	23-87	11	30
Anthracene	8270D	947	1660	57	908	1680	54	32-106	5	30
Benz(a)anthracene	8270D	1040	1660	62	872	1680	52	33-109	18	30
Benzo(a)pyrene	8270D	1400	1660	84	1180	1680	70	34-115	18	30
Benzo(b)fluoranthene	8270D	1060	1660	64	900	1680	54	31-107	17	30
Benzo(g,h,i)perylene	8270D	1500	1660	91	1220	1680	73	30-127	22	30
Benzo(k)fluoranthene	8270D	1180	1660	71	981	1680	58	34-111	20	30

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Superset Reference:20-0000571447 rev 00

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 11/24/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2014346-02

Duplicate Lab Control Sample
RQ2014346-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Biphenyl	8270D	711	1660	43	746	1680	44	26-88	2	30
2,2'-Oxybis(1-chloropropane)	8270D	610	1660	37	703	1680	42	10-82	13	30
Bis(2-chloroethoxy)methane	8270D	708	1660	43	747	1680	44	17-85	2	30
Bis(2-chloroethyl) Ether	8270D	612	1660	37	713	1680	42	10-79	13	30
Bis(2-ethylhexyl) Phthalate	8270D	1170	1660	70	1010	1680	60	31-115	15	30
Butyl Benzyl Phthalate	8270D	1110	1660	67	953	1680	57	31-115	16	30
Caprolactam	8270D	763	1660	46	777	1680	46	28-99	<1	30
Carbazole	8270D	1140	1660	68	1010	1680	60	23-129	13	30
Chrysene	8270D	1080	1660	65	923	1680	55	34-108	17	30
Di-n-butyl Phthalate	8270D	1210	1660	73	1060	1680	63	33-114	15	30
Di-n-octyl Phthalate	8270D	1150	1660	70	1010	1680	60	32-116	15	30
Dibenz(a,h)anthracene	8270D	1150	1660	70	969	1680	58	23-122	19	30
Dibenzofuran	8270D	826	1660	50	801	1680	48	27-94	4	30
Diethyl Phthalate	8270D	908	1660	55	821	1680	49	26-101	12	30
Dimethyl Phthalate	8270D	922	1660	56	864	1680	51	27-98	9	30
Fluoranthene	8270D	1120	1660	67	982	1680	58	34-111	14	30
Fluorene	8270D	896	1660	54	828	1680	49	27-95	10	30
Hexachlorobenzene	8270D	894	1660	54	855	1680	51	30-104	6	30
Hexachlorobutadiene	8270D	629	1660	38	736	1680	44	10-142	15	30
Hexachlorocyclopentadiene	8270D	711	1660	43	798	1680	48	10-133	11	30
Hexachloroethane	8270D	516	1660	31	611	1680	36	10-129	15	30
Indeno(1,2,3-cd)pyrene	8270D	1130	1660	68	913	1680	54	33-121	23	30
Isophorone	8270D	596	1660	36	623	1680	37	21-79	3	30
N-Nitrosodi-n-propylamine	8270D	659	1660	40	692	1680	41	15-78	2	30
N-Nitrosodiphenylamine	8270D	935	1660	56	908	1680	54	29-108	4	30
Naphthalene	8270D	663	1660	40	731	1680	44	18-81	10	30
Nitrobenzene	8270D	645	1660	39	711	1680	42	14-80	7	30
Pentachlorophenol (PCP)	8270D	829 J	1660	50	942 J	1680	56	13-117	11	30
Phenanthrene	8270D	903	1660	54	864	1680	51	33-103	6	30
Phenol	8270D	678	1660	41	736	1680	44	10-144	7	30
Pyrene	8270D	1070	1660	64	920	1680	55	33-111	15	30

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 12/01/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2014429-02

Duplicate Lab Control Sample
RQ2014429-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,2,4,5-Tetrachlorobenzene	8270D	784	1670	47	1050	1680	62	10-115	28	30
2,3,4,6-Tetrachlorophenol	8270D	608	1660	37	772	1670	46	29-100	22	30
2,4,5-Trichlorophenol	8270D	572	1660	34	719	1670	43	29-97	23	30
2,4,6-Trichlorophenol	8270D	550	1660	33	738	1670	44	26-97	29	30
2,4-Dichlorophenol	8270D	570	1660	34	750	1670	45	25-90	28	30
2,4-Dimethylphenol	8270D	580	1660	35	769	1670	46	26-89	27	30
2,4-Dinitrophenol	8270D	1700 U	1660	0 *	660 U	1670	0 *	10-128	NC	30
2,4-Dinitrotoluene	8270D	702	1660	42	924	1670	55	30-111	27	30
2,6-Dinitrotoluene	8270D	719	1660	43	940	1670	56	28-105	26	30
2-Chloronaphthalene	8270D	608	1660	37	791	1670	47	21-88	24	30
2-Chlorophenol	8270D	548	1660	33	699	1670	42	18-87	24	30
2-Methylnaphthalene	8270D	593	1660	36	779	1670	47	21-83	27	30
2-Methylphenol	8270D	585	1660	35	771	1670	46	22-86	27	30
2-Nitroaniline	8270D	639	1660	38	836	1670	50	27-105	27	30
2-Nitrophenol	8270D	540	1660	32	701	1670	42	20-88	27	30
3- and 4-Methylphenol Coelution	8270D	588	1660	35	778	1670	47	27-92	29	30
3-Nitroaniline	8270D	500	1660	30	658	1670	39	27-98	26	30
4,6-Dinitro-2-methylphenol	8270D	345 J	1660	21	530 J	1670	32	11-96	42*	30
4-Bromophenyl Phenyl Ether	8270D	688	1660	41	861	1670	52	25-96	24	30
4-Chloro-3-methylphenol	8270D	575	1660	35	753	1670	45	29-92	25	30
4-Chloroaniline	8270D	358	1660	22	497	1670	30	21-72	31*	30
4-Chlorophenyl Phenyl Ether	8270D	620	1660	37	806	1670	48	25-92	26	30
4-Nitroaniline	8270D	643	1660	39	843	1670	51	27-102	27	30
4-Nitrophenol	8270D	473 J	1660	28	655 J	1670	39	10-130	33*	30
Acenaphthene	8270D	607	1660	36	791	1670	47	25-92	27	30
Acenaphthylene	8270D	663	1660	40	855	1670	51	27-93	24	30
Acetophenone	8270D	977	3330	29	1290	3340	39	23-87	29	30
Anthracene	8270D	715	1660	43	940	1670	56	32-106	26	30
Benz(a)anthracene	8270D	707	1660	42	919	1670	55	33-109	27	30
Benzo(a)pyrene	8270D	941	1660	57	1230	1670	74	34-115	26	30
Benzo(b)fluoranthene	8270D	712	1660	43	924	1670	55	31-107	24	30
Benzo(g,h,i)perylene	8270D	973	1660	58	1270	1670	76	30-127	27	30
Benzo(k)fluoranthene	8270D	792	1660	48	1010	1670	61	34-111	24	30

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Superset Reference:20-0000571447 rev 00

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 12/01/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2014429-02

Duplicate Lab Control Sample
RQ2014429-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Biphenyl	8270D	561	1660	34	759	1670	45	26-88	28	30
2,2'-Oxybis(1-chloropropane)	8270D	564	1660	34	733	1670	44	10-82	26	30
Bis(2-chloroethoxy)methane	8270D	594	1660	36	768	1670	46	17-85	24	30
Bis(2-chloroethyl) Ether	8270D	559	1660	34	730	1670	44	10-79	26	30
Bis(2-ethylhexyl) Phthalate	8270D	831	1660	50	1100	1670	66	31-115	28	30
Butyl Benzyl Phthalate	8270D	774	1660	46	1040	1670	63	31-115	31*	30
Caprolactam	8270D	618	1660	37	860	1670	52	28-99	34*	30
Carbazole	8270D	804	1660	48	1040	1670	62	23-129	25	30
Chrysene	8270D	742	1660	45	977	1670	59	34-108	27	30
Di-n-butyl Phthalate	8270D	845	1660	51	1100	1670	66	33-114	26	30
Di-n-octyl Phthalate	8270D	879	1660	53	1130	1670	68	32-116	25	30
Dibenz(a,h)anthracene	8270D	749	1660	45	973	1670	58	23-122	25	30
Dibenzofuran	8270D	631	1660	38	824	1670	49	27-94	25	30
Diethyl Phthalate	8270D	601	1660	36	809	1670	48	26-101	29	30
Dimethyl Phthalate	8270D	671	1660	40	860	1670	52	27-98	26	30
Fluoranthene	8270D	785	1660	47	1010	1670	60	34-111	24	30
Fluorene	8270D	654	1660	39	848	1670	51	27-95	27	30
Hexachlorobenzene	8270D	685	1660	41	901	1670	54	30-104	27	30
Hexachlorobutadiene	8270D	560	1660	34	730	1670	44	10-142	26	30
Hexachlorocyclopentadiene	8270D	187 J	1660	11	273 J	1670	16	10-133	37*	30
Hexachloroethane	8270D	485	1660	29	636	1670	38	10-129	27	30
Indeno(1,2,3-cd)pyrene	8270D	772	1660	46	987	1670	59	33-121	25	30
Isophorone	8270D	483	1660	29	628	1670	38	21-79	27	30
N-Nitrosodi-n-propylamine	8270D	544	1660	33	719	1670	43	15-78	26	30
N-Nitrosodiphenylamine	8270D	747	1660	45	943	1670	57	29-108	24	30
Naphthalene	8270D	592	1660	36	787	1670	47	18-81	27	30
Nitrobenzene	8270D	572	1660	34	733	1670	44	14-80	26	30
Pentachlorophenol (PCP)	8270D	520 J	1660	31	676 J	1670	40	13-117	25	30
Phenanthrene	8270D	671	1660	40	892	1670	53	33-103	28	30
Phenol	8270D	571	1660	34	743	1670	45	10-144	28	30
Pyrene	8270D	758	1660	46	1010	1670	61	33-111	28	30

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	Nitrobenzene-d5	p-Terphenyl-d14
		10 - 115	10 - 130	10 - 130
SS-BCP-16-02	R2010907-001	60	101	118
SS-BCP-17-02	R2010907-004	56	54	59
Method Blank	RQ2014439-01	45	40	67
Lab Control Sample	RQ2014439-02	79	74	81
Duplicate Lab Control Sample	RQ2014439-03	81	74	81

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014439-01

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	68 U	68	35	1	11/25/20 18:23	11/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	45	10 - 115	11/25/20 18:23	
Nitrobenzene-d5	40	10 - 130	11/25/20 18:23	
p-Terphenyl-d14	67	10 - 130	11/25/20 18:23	

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907**Date Analyzed:** 11/25/20

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Units:ug/Kg**Basis:**Dry

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ2014439-02			RQ2014439-03				
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,4-Dioxane	8270D	192	205	94	176	206	86	24-101	9	30



Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907

SURROGATE RECOVERY SUMMARY
Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Extraction Method: EPA 3541

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10 - 145	10 - 123
SS-BCP-16-02	R2010907-001	58	48
SS-BCP-16-02 RE	R2010907-001	99	39
SS-BCP-17-02	R2010907-004	117	95
Method Blank	RQ2014353-01	80	79
Method Blank	RQ2014353-01	78	81
Lab Control Sample	RQ2014353-02	80	77
Lab Control Sample	RQ2014353-02	80	79
Duplicate Lab Control Sample	RQ2014353-03	89	84
Duplicate Lab Control Sample	RQ2014353-03	84	83

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014353-01

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
4,4'-DDE	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
4,4'-DDT	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
Aldrin	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
Dieldrin	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
Endosulfan I	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
Endosulfan II	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
Endosulfan Sulfate	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
Endrin	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
Endrin Aldehyde	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
Endrin Ketone	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
Heptachlor	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
Heptachlor Epoxide	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
Methoxychlor	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
Toxaphene	33 U	33	19	1	12/16/20 23:51	11/20/20	
alpha-BHC	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
alpha-Chlordane	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
beta-BHC	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
delta-BHC	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
gamma-BHC (Lindane)	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	
gamma-Chlordane	1.7 U	1.7	0.84	1	12/16/20 23:51	11/20/20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014353-01

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	77	10 - 145	12/16/20 23:51	
Tetrachloro-m-xylene	76	10 - 123	12/16/20 23:51	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014353-01

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
4,4'-DDE	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
4,4'-DDT	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
Aldrin	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
Dieldrin	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
Endosulfan I	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
Endosulfan II	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
Endosulfan Sulfate	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
Endrin	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
Endrin Aldehyde	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
Endrin Ketone	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
Heptachlor	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
Heptachlor Epoxide	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
Methoxychlor	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
Toxaphene	33 U	33	19	1	12/28/20 20:47	11/20/20	
alpha-BHC	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
alpha-Chlordane	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
beta-BHC	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
delta-BHC	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
gamma-BHC (Lindane)	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	
gamma-Chlordane	1.7 U	1.7	0.84	1	12/28/20 20:47	11/20/20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014353-01

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	78	10 - 145	12/28/20 20:47	
Tetrachloro-m-xylene	81	10 - 123	12/28/20 20:47	

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 12/28/20

Duplicate Lab Control Sample Summary
Organochlorine Pesticides by Gas Chromatography

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2014353-02					Duplicate Lab Control Sample RQ2014353-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
4,4'-DDD	8081B	5.46	6.62	83	5.79	6.56	88	33-149	6	30
4,4'-DDE	8081B	5.75	6.62	87	6.24	6.56	95	38-147	8	30
4,4'-DDT	8081B	5.58	6.62	84	5.95	6.56	91	37-146	6	30
Aldrin	8081B	5.65	6.62	85	6.05	6.56	92	25-146	7	30
Dieldrin	8081B	5.84	6.62	88	6.20	6.56	95	40-140	6	30
Endosulfan I	8081B	5.61	6.62	85	5.96	6.56	91	35-116	6	30
Endosulfan II	8081B	5.65	6.62	85	5.97	6.56	91	39-122	6	30
Endosulfan Sulfate	8081B	5.35	6.62	81	5.61	6.56	85	31-132	5	30
Endrin	8081B	5.79	6.62	87	6.20	6.56	95	40-144	7	30
Endrin Aldehyde	8081B	3.89	6.62	59	4.63	6.56	71	10-109	17	30
Endrin Ketone	8081B	5.69	6.62	86	6.04	6.56	92	38-122	6	30
Heptachlor	8081B	5.51	6.62	83	5.88	6.56	90	34-142	6	30
Heptachlor Epoxide	8081B	5.64	6.62	85	5.98	6.56	91	37-113	6	30
Methoxychlor	8081B	5.31	6.62	80	5.69	6.56	87	41-152	7	30
alpha-BHC	8081B	5.66	6.62	86	6.00	6.56	92	28-145	6	30
alpha-Chlordane	8081B	5.56	6.62	84	5.90	6.56	90	37-114	6	30
beta-BHC	8081B	5.65	6.62	85	6.01	6.56	92	38-144	6	30
delta-BHC	8081B	5.96	6.62	90	6.29	6.56	96	30-153	5	30
gamma-BHC (Lindane)	8081B	5.62	6.62	85	5.95	6.56	91	32-145	6	30
gamma-Chlordane	8081B	5.60	6.62	85	6.02	6.56	92	34-123	7	30

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Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Units: ug/Kg
Basis: Dry
Percent Solids: 79.1

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-Chlordane	11	15	30	67	JP	10	12/28/20 22:03
Endrin Ketone	11	16	31	64	JP	10	12/17/20 03:38
gamma-Chlordane	11	490	11	191	E	10	12/17/20 03:38

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Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:10
Date Received: 11/17/20

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004

Units: ug/Kg
Basis: Dry
Percent Solids: 82.8

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	11	25	35	33		10	12/17/20 03:57
Endrin Ketone	11	14	28	67	J	10	12/17/20 03:57

ALS Group USA, Corp.
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Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Service Request: R2010907

Date Collected: NA

Date Received:

Sample Name: Lab Control Sample

Lab Code: RQ2014353-02

Units: ug/Kg

Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B

Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.84	5.46	5.57	2		1	12/28/20 21:06
4,4'-DDE	0.84	5.75	5.86	2		1	12/28/20 21:06
4,4'-DDT	0.84	5.58	5.79	4		1	12/28/20 21:06
Aldrin	0.84	5.65	5.90	4		1	12/28/20 21:06
Dieldrin	0.84	5.84	6.06	4		1	12/28/20 21:06
Endosulfan I	0.84	5.61	5.86	4		1	12/28/20 21:06
Endosulfan II	0.84	5.65	5.76	2		1	12/28/20 21:06
Endosulfan Sulfate	0.84	5.35	5.50	3		1	12/28/20 21:06
Endrin	0.84	5.79	5.91	2		1	12/28/20 21:06
Endrin Aldehyde	0.84	3.89	3.93	1		1	12/28/20 21:06
Endrin Ketone	0.84	5.69	5.72	<1		1	12/28/20 21:06
Heptachlor	0.84	5.51	5.88	6		1	12/28/20 21:06
Heptachlor Epoxide	0.84	5.64	5.94	5		1	12/28/20 21:06
Methoxychlor	0.84	5.31	5.55	4		1	12/28/20 21:06
alpha-BHC	0.84	5.66	5.75	2		1	12/28/20 21:06
alpha-Chlordane	0.84	5.56	5.69	2		1	12/28/20 21:06
beta-BHC	0.84	5.65	5.99	6		1	12/28/20 21:06
delta-BHC	0.84	5.96	6.08	2		1	12/28/20 21:06
gamma-BHC (Lindane)	0.84	5.62	5.78	3		1	12/28/20 21:06
gamma-Chlordane	0.84	5.60	5.89	5		1	12/28/20 21:06
4,4'-DDD	0.84	5.45	5.58	2		1	12/17/20 00:10
4,4'-DDE	0.84	5.71	5.85	2		1	12/17/20 00:10
4,4'-DDT	0.84	5.70	5.97	5		1	12/17/20 00:10
Aldrin	0.84	5.52	5.92	7		1	12/17/20 00:10
Dieldrin	0.84	5.73	5.81	1		1	12/17/20 00:10
Endosulfan I	0.84	5.45	5.76	6		1	12/17/20 00:10
Endosulfan II	0.84	5.61	5.86	4		1	12/17/20 00:10
Endosulfan Sulfate	0.84	5.49	5.74	4		1	12/17/20 00:10

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Confirmation Results

Endrin	0.84	5.76	6.02	4	1	12/17/20 00:10
Endrin Aldehyde	0.84	5.07	5.14	1	1	12/17/20 00:10
Endrin Ketone	0.84	5.69	5.81	2	1	12/17/20 00:10
Heptachlor	0.84	5.33	5.92	10	1	12/17/20 00:10
Heptachlor Epoxide	0.84	5.55	5.95	7	1	12/17/20 00:10
Methoxychlor	0.84	5.48	5.64	3	1	12/17/20 00:10
alpha-BHC	0.84	5.46	5.77	6	1	12/17/20 00:10
alpha-Chlordane	0.84	5.46	5.69	4	1	12/17/20 00:10
beta-BHC	0.84	5.57	5.94	6	1	12/17/20 00:10
delta-BHC	0.84	5.80	6.00	3	1	12/17/20 00:10
gamma-BHC (Lindane)	0.84	5.46	5.70	4	1	12/17/20 00:10
gamma-Chlordane	0.84	5.92	16.6	95	1	12/17/20 00:10

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Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received:

Sample Name: Duplicate Lab Control Sample
Lab Code: RQ2014353-03

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081B
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.84	5.79	5.95	3		1	12/28/20 21:25
4,4'-DDE	0.84	6.24	6.36	2		1	12/28/20 21:25
4,4'-DDT	0.84	5.95	6.23	5		1	12/28/20 21:25
Aldrin	0.84	6.05	6.31	4		1	12/28/20 21:25
Dieldrin	0.84	6.20	6.48	4		1	12/28/20 21:25
Endosulfan I	0.84	5.96	6.29	5		1	12/28/20 21:25
Endosulfan II	0.84	5.97	6.16	3		1	12/28/20 21:25
Endosulfan Sulfate	0.84	5.61	5.91	5		1	12/28/20 21:25
Endrin	0.84	6.20	6.39	3		1	12/28/20 21:25
Endrin Aldehyde	0.84	4.63	4.73	2		1	12/28/20 21:25
Endrin Ketone	0.84	6.04	6.29	4		1	12/28/20 21:25
Heptachlor	0.84	5.88	6.24	6		1	12/28/20 21:25
Heptachlor Epoxide	0.84	5.98	6.32	6		1	12/28/20 21:25
Methoxychlor	0.84	5.69	5.83	2		1	12/28/20 21:25
alpha-BHC	0.84	6.00	6.05	<1		1	12/28/20 21:25
alpha-Chlordane	0.84	5.90	6.10	3		1	12/28/20 21:25
beta-BHC	0.84	6.01	6.49	8		1	12/28/20 21:25
delta-BHC	0.84	6.29	6.42	2		1	12/28/20 21:25
gamma-BHC (Lindane)	0.84	5.95	6.12	3		1	12/28/20 21:25
gamma-Chlordane	0.84	6.02	6.29	4		1	12/28/20 21:25
4,4'-DDD	0.84	5.81	6.01	3		1	12/17/20 00:29
4,4'-DDE	0.84	6.17	6.56	6		1	12/17/20 00:29
4,4'-DDT	0.84	6.04	6.46	7		1	12/17/20 00:29
Aldrin	0.84	5.95	6.44	8		1	12/17/20 00:29
Dieldrin	0.84	6.14	6.66	8		1	12/17/20 00:29
Endosulfan I	0.84	5.95	6.28	5		1	12/17/20 00:29
Endosulfan II	0.84	5.94	6.32	6		1	12/17/20 00:29
Endosulfan Sulfate	0.84	5.86	6.29	7		1	12/17/20 00:29

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Confirmation Results

Endrin	0.84	6.22	6.55	5	1	12/17/20 00:29
Endrin Aldehyde	0.84	5.23	5.52	5	1	12/17/20 00:29
Endrin Ketone	0.84	6.08	6.49	7	1	12/17/20 00:29
Heptachlor	0.84	5.85	6.44	10	1	12/17/20 00:29
Heptachlor Epoxide	0.84	6.03	6.39	6	1	12/17/20 00:29
Methoxychlor	0.84	5.98	5.98	<1	1	12/17/20 00:29
alpha-BHC	0.84	5.87	6.16	5	1	12/17/20 00:29
alpha-Chlordane	0.84	5.85	6.17	5	1	12/17/20 00:29
beta-BHC	0.84	5.94	6.67	12	1	12/17/20 00:29
delta-BHC	0.84	6.18	6.47	5	1	12/17/20 00:29
gamma-BHC (Lindane)	0.84	5.82	6.13	5	1	12/17/20 00:29
gamma-Chlordane	0.84	39.7	6.43	144	E 1	12/17/20 00:29

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Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Sample Name: Performance Evaluation
Lab Code: RQ2015834-05

Service Request: R2010907
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

8081B

Prep Method:

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDT	0.84	35	35	<1	E	1	12/16/20 15:38
Endrin	0.84	16	18	12		1	12/16/20 15:38
Methoxychlor	0.84	74	81	9	E	1	12/16/20 15:38
Toxaphene		0	0			1	12/16/20 15:38
alpha-BHC	0.84	3.4	3.2	6		1	12/16/20 15:38
beta-BHC	0.84	3.5	3.7	6		1	12/16/20 15:38
gamma-BHC (Lindane)	0.84	3.4	3.3	3		1	12/16/20 15:38

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Sample Name: Performance Evaluation
Lab Code: RQ2015835-01

Service Request: R2010907
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography

8081B

Prep Method:

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDT	0.84	34	35	3	E	1	12/17/20 00:48
Endrin	0.84	16	18	12		1	12/17/20 00:48
Methoxychlor	0.84	72	79	9	E	1	12/17/20 00:48
Toxaphene		0	0			1	12/17/20 00:48
alpha-BHC	0.84	3.5	3.7	6		1	12/17/20 00:48
beta-BHC	0.84	3.6	3.8	5		1	12/17/20 00:48
gamma-BHC (Lindane)	0.84	3.4	3.6	6		1	12/17/20 00:48

ALS Group USA, Corp.
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Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Sample Name: Performance Evaluation
Lab Code: RQ2015968-09

Service Request: R2010907
Date Collected: NA
Date Received:

Units: ug/Kg

Basis: Dry

Organochlorine Pesticides by Gas Chromatography

8081B

Prep Method:

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDT	0.84	29	30	3		1	12/28/20 15:19
Endrin	0.84	15	15	<1		1	12/28/20 15:19
Methoxychlor	0.84	55	65	17	E	1	12/28/20 15:19
Toxaphene		0	0			1	12/28/20 15:19
alpha-BHC	0.84	3.0	3.1	3		1	12/28/20 15:19
beta-BHC	0.84	3.0	3.1	3		1	12/28/20 15:19
gamma-BHC (Lindane)	0.84	2.9	3.0	3		1	12/28/20 15:19

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dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Extraction Method: EPA 3541

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		22 - 128	14 - 119
SS-BCP-16-02	R2010907-001	41	40
SS-BCP-17-02	R2010907-004	50	48
Method Blank	RQ2014353-01	61	61
Lab Control Sample	RQ2014353-04	65	60
Duplicate Lab Control Sample	RQ2014353-05	60	58

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014353-01

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	32 U	32	17	1	12/29/20 01:55	11/20/20	
Aroclor 1221	65 U	65	17	1	12/29/20 01:55	11/20/20	
Aroclor 1232	32 U	32	17	1	12/29/20 01:55	11/20/20	
Aroclor 1242	32 U	32	17	1	12/29/20 01:55	11/20/20	
Aroclor 1248	32 U	32	17	1	12/29/20 01:55	11/20/20	
Aroclor 1254	32 U	32	17	1	12/29/20 01:55	11/20/20	
Aroclor 1260	32 U	32	17	1	12/29/20 01:55	11/20/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	61	22 - 128	12/29/20 01:55	
Tetrachloro-m-xylene	61	14 - 119	12/29/20 01:55	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 12/29/20

Duplicate Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Units:ug/Kg
Basis:Dry

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ2014353-04			RQ2014353-05				
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aroclor 1016	8082A	104	162	64	103	169	61	41-127	<1	30
Aroclor 1260	8082A	106	162	65	102	169	61	37-127	3	30

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 11:02
Date Received: 11/17/20

Sample Name: SS-BCP-16-02
Lab Code: R2010907-001

Units: ug/Kg
Basis: Dry
Percent Solids: 79.1

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1260	22	27	37	31	J	1	12/30/20 11:38

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Service Request: R2010907

Date Collected: NA

Date Received:

Sample Name: Lab Control Sample

Lab Code: RQ2014353-04

Units: ug/Kg

Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A

Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1016	17	104	124	18		1	12/29/20 02:15
Aroclor 1260	17	106	144	30		1	12/29/20 02:15

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received:

Sample Name: Duplicate Lab Control Sample
Lab Code: RQ2014353-05

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082A
Prep Method: EPA 3541

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1016	18	103	119	14		1	12/29/20 02:34
Aroclor 1260	18	102	137	29		1	12/29/20 02:34

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic
		Acid 10 - 151
SS-BCP-16-02	R2010907-001	100
SS-BCP-17-02	R2010907-004	71
Method Blank	RQ2014594-01	70
Lab Control Sample	RQ2014594-02	71
Duplicate Lab Control Sample	RQ2014594-03	72
SS-BCP-17-02 MS	RQ2014594-04	97
SS-BCP-17-02 DMS	RQ2014594-05	97

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20
Date Received: 11/17/20
Date Analyzed: 11/30/20
Date Extracted: 11/25/20

Duplicate Matrix Spike Summary
Chlorinated Herbicides by GC

Sample Name: SS-BCP-17-02
Lab Code: R2010907-004
Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike RQ2014594-04			Duplicate Matrix Spike RQ2014594-05			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-T	12 U	43.3	60.9	71	45.2	61.2	74	19-127	4	30
2,4,5-TP	12 U	41.1	60.9	68	44.1	61.2	72	11-133	7	30
2,4-D	12 U	39.6	60.9	65	40.3	61.2	66	24-165	2	30
Dicamba	12 U	37.3	60.9	61	39.3	61.2	64	10-136	5	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2014594-01

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	10 U	10	5.0	1	11/30/20 17:14	11/25/20	
2,4,5-TP	10 U	10	4.5	1	11/30/20 17:14	11/25/20	
2,4-D	10 U	10	6.5	1	11/30/20 17:14	11/25/20	
Dicamba	10 U	10	3.1	1	11/30/20 17:14	11/25/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	70	10 - 151	11/30/20 17:14	

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 11/30/20

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2014594-02

Duplicate Lab Control Sample
RQ2014594-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2,4,5-T	8151A	30.2	50.0	60	30.8	50.1	61	19-127	2	30
2,4,5-TP	8151A	28.3	50.0	57	29.1	50.1	58	18-122	3	30
2,4-D	8151A	33.4	50.0	67	34.1	50.1	68	24-165	2	30
Dicamba	8151A	26.5	50.0	53	26.9	50.1	54	26-128	2	30

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Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Service Request: R2010907

Date Collected: NA

Date Received:

Sample Name: Lab Control Sample

Lab Code: RQ2014594-02

Units: ug/Kg

Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A

Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	5.1	30.2	31.0	3		1	11/30/20 17:34
2,4,5-TP	4.6	28.3	53.0	61		1	11/30/20 17:34
2,4-D	6.6	33.4	37.3	11		1	11/30/20 17:34
Dicamba	3.2	26.5	27.5	4		1	11/30/20 17:34

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dba ALS Environmental

Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Service Request: R2010907

Date Collected: NA

Date Received:

Sample Name: Duplicate Lab Control Sample

Lab Code: RQ2014594-03

Units: ug/Kg

Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A

Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	5.1	30.8	31.9	4		1	11/30/20 17:54
2,4,5-TP	4.6	29.1	57.4	65		1	11/30/20 17:54
2,4-D	6.6	34.1	36.7	7		1	11/30/20 17:54
Dicamba	3.2	26.9	29.1	8		1	11/30/20 17:54

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Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:10
Date Received: 11/17/20

Sample Name: SS-BCP-17-02
Lab Code: RQ2014594-04

Units: ug/Kg
Basis: Dry
Percent Solids: 82.8

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	6.1	43.3	48.7	12		1	11/30/20 21:31
2,4,5-TP	5.5	41.1	49.5	19		1	11/30/20 21:31
2,4-D	8.0	39.6	43.4	9		1	11/30/20 21:31
Dicamba	3.8	37.3	39.3	5		1	11/30/20 21:31

ALS Group USA, Corp.
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Confirmation Results

Client: Inventum Engineering
Project: Riverview BCP RI
Matrix: Soil

Service Request: R2010907
Date Collected: 11/13/20 14:10
Date Received: 11/17/20

Sample Name: SS-BCP-17-02
Lab Code: RQ2014594-05

Units: ug/Kg
Basis: Dry
Percent Solids: 82.8

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	6.2	45.2	48.7	7		1	11/30/20 21:51
2,4,5-TP	5.6	44.1	51.3	15		1	11/30/20 21:51
2,4-D	8.0	40.3	49.2	20		1	11/30/20 21:51
Dicamba	3.8	39.3	42.7	8		1	11/30/20 21:51



Metals

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: R2010907-MB

Service Request: R2010907
Date Collected: NA
Date Received: NA

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	20 U	mg/Kg	20	12	1	11/23/20 19:37	11/20/20	
Antimony, Total	6010D	6.0 U	mg/Kg	6.0	0.6	1	11/23/20 19:37	11/20/20	
Arsenic, Total	6010D	1.0 U	mg/Kg	1.0	0.7	1	11/23/20 19:37	11/20/20	
Barium, Total	6010D	2.0 U	mg/Kg	2.0	1.5	1	11/23/20 19:37	11/20/20	
Beryllium, Total	6010D	0.30 U	mg/Kg	0.30	0.03	1	11/23/20 19:37	11/20/20	
Cadmium, Total	6010D	0.50 U	mg/Kg	0.50	0.24	1	11/23/20 19:37	11/20/20	
Calcium, Total	6010D	100 U	mg/Kg	100	40	1	11/23/20 19:37	11/20/20	
Chromium, Total	6010D	1.0 U	mg/Kg	1.0	0.4	1	11/23/20 19:37	11/20/20	
Cobalt, Total	6010D	5.0 U	mg/Kg	5.0	0.5	1	11/23/20 19:37	11/20/20	
Copper, Total	6010D	2.0 U	mg/Kg	2.0	0.7	1	11/23/20 19:37	11/20/20	
Iron, Total	6010D	20 U	mg/Kg	20	13	1	11/23/20 19:37	11/20/20	
Lead, Total	6010D	5.0 U	mg/Kg	5.0	0.4	1	11/23/20 19:37	11/20/20	
Magnesium, Total	6010D	100 U	mg/Kg	100	20	1	11/23/20 19:37	11/20/20	
Manganese, Total	6010D	2.0 U	mg/Kg	2.0	1.5	1	11/23/20 19:37	11/20/20	
Mercury, Total	7471B	0.033 U	mg/Kg	0.033	0.013	1	11/25/20 13:01	11/24/20	
Nickel, Total	6010D	4.0 U	mg/Kg	4.0	0.7	1	11/23/20 19:37	11/20/20	
Potassium, Total	6010D	200 U	mg/Kg	200	50	1	11/23/20 19:37	11/20/20	
Selenium, Total	6010D	1.0 U	mg/Kg	1.0	0.6	1	11/23/20 19:37	11/20/20	
Silver, Total	6010D	1.0 U	mg/Kg	1.0	0.09	1	11/23/20 19:37	11/20/20	
Sodium, Total	6010D	100 U	mg/Kg	100	60	1	11/23/20 19:37	11/20/20	
Thallium, Total	6010D	1.0 U	mg/Kg	1.0	0.7	1	11/23/20 19:37	11/20/20	
Vanadium, Total	6010D	5.0 U	mg/Kg	5.0	0.8	1	11/23/20 19:37	11/20/20	
Zinc, Total	6010D	2.0 U	mg/Kg	2.0	1.4	1	11/23/20 19:37	11/20/20	

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 11/23/20 - 11/25/20

Lab Control Sample Summary
Inorganic Parameters

Units:mg/Kg
Basis:Dry

Lab Control Sample
R2010907-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum, Total	6010D	198	200	99	80-120
Antimony, Total	6010D	47.1	50.0	94	80-120
Arsenic, Total	6010D	3.62	4.0	91	80-120
Barium, Total	6010D	207	200	104	80-120
Beryllium, Total	6010D	4.97	5.00	99	80-120
Cadmium, Total	6010D	5.12	5.00	102	80-120
Calcium, Total	6010D	210	200	104	80-120
Chromium, Total	6010D	20.9	20.0	105	80-120
Cobalt, Total	6010D	51.8	50.0	104	80-120
Copper, Total	6010D	25.4	25.0	102	80-120
Iron, Total	6010D	101	100	101	80-120
Lead, Total	6010D	50.4	50.0	101	80-120
Magnesium, Total	6010D	200	200	99	80-120
Manganese, Total	6010D	50.5	50.0	101	80-120
Mercury, Total	7471B	0.167	0.167	100	80-120
Nickel, Total	6010D	51.3	50.0	103	80-120
Potassium, Total	6010D	1930	2000	97	80-120
Selenium, Total	6010D	88.4	101	88	80-120
Silver, Total	6010D	4.93	5.0	99	80-120
Sodium, Total	6010D	2010	2000	101	80-120
Thallium, Total	6010D	186	200	93	80-120
Vanadium, Total	6010D	51.0	50.0	102	80-120
Zinc, Total	6010D	49.6	50.0	99	80-120



General Chemistry

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: R2010907-MB1

Service Request: R2010907
Date Collected: NA
Date Received: NA

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.30 U	mg/Kg	0.30	0.17	1	11/25/20 10:28	11/24/20	

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Analytical Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: R2010907-MB2

Service Request: R2010907
Date Collected: NA
Date Received: NA

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.30 U	mg/Kg	0.30	0.17	1	11/25/20 10:53	11/24/20	

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dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Collected: 11/16/20
Date Received: 11/17/20
Date Analyzed: 11/25/20
Date Extracted: 11/24/20

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name: TP-BCP-27-01
Lab Code: R2010907-009
Analysis Method: 9012B
Prep Method: Method

Units: mg/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike		Result	Duplicate Matrix Spike		% Rec Limits	RPD	RPD Limit
			Spike Amount	% Rec		Spike Amount	% Rec			
Cyanide, Total	0.65	3.18	2.94	86	3.57	3.37	87	10-159	11	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 11/25/20

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/Kg
Basis:Dry

Lab Control Sample
R2010907-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	9012B	3.03	3.00	101	85-115

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907

Date Analyzed: 11/25/20

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/Kg

Basis:Dry

Lab Control Sample

R2010907-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	9012B	18.5	18.0	103	85-115

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907
Date Analyzed: 11/25/20

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/Kg**Basis:**Dry**Lab Control Sample**

R2010907-LCS3

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	9012B	3.02	3.00	101	85-115

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QA/QC Report

Client: Inventum Engineering
Project: Riverview BCP RI
Sample Matrix: Soil

Service Request: R2010907**Date Analyzed:** 11/25/20

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/Kg**Basis:**Dry**Lab Control Sample**

R2010907-LCS4

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	9012B	17.9	18.0	99	85-115



February 18, 2025

Service Request No:R2107681

Mr. Todd Waldrop
Inventum Engineering
481 Carlisle Drive
Herndon, VA 20170

Laboratory Results for: RITC RI

Dear Mr.Waldrop,

Enclosed are the results of the sample(s) submitted to our laboratory July 30, 2021
For your reference, these analyses have been assigned our service request number **R2107681**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7475. You may also contact me via email at Meghan.Pedro@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Meghan Pedro
Project Manager

ADDRESS

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dba ALS Environmental



Narrative Documents

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Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Received: 07/30/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Manual Integrations may have been used in the quantitation of the results in this report. Manual Integrations are readily identified in the raw data on the Quantitation Reports (Organics) by the automatic placement of an "m" next to the sample result. For Ion Chromatography, the manual integrations are identified by the automatic placement of "manipulated" or "manually integrated" in the upper left corner of the chromatogram (Hexavalent Chromium) or "M" by the result in the "Type" column (anions). The reason for the manual integration is noted on the "after" chromatogram, which is found with the original chromatogram and quantitation report. All integrations follow the lab SOP ADM-INT "Manual Integration."

Sample Receipt:

Two soil samples were received for analysis at ALS Environmental on 07/30/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

No significant anomalies were noted with this analysis.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Method 8260C, 08/08/2021: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Reports revised 2/18/25 to include 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene, this is the summary report and does not include any sub lab results.

A handwritten signature in black ink, appearing to read "Meghan Pedicini".

Approved by _____

Date 02/18/2025



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP BCP 52 CL			Lab ID: R2107681-001			

Analyte	Results	Flag	MDL	MRL	Units	Method
1,2,4-Trimethylbenzene	0.35	J	0.22	5.3	ug/Kg	8260C
1,3,5-Trimethylbenzene	0.24	J	0.22	5.3	ug/Kg	8260C
2-Butanone (MEK)	14		2.2	5.3	ug/Kg	8260C
Acetone	92		16	26	ug/Kg	8260C
Aluminum, Total	24900		15	25	mg/Kg	6010D
Arsenic, Total	4.9		0.9	1.2	mg/Kg	6010D
Barium, Total	154		1.9	2.5	mg/Kg	6010D
Benzene	0.53	J	0.22	5.3	ug/Kg	8260C
Beryllium, Total	1.28		0.04	0.37	mg/Kg	6010D
Cadmium, Total	1.15		0.11	0.62	mg/Kg	6010D
Calcium, Total	2600		40	120	mg/Kg	6010D
Chromium, Total	31.2		0.5	1.2	mg/Kg	6010D
Cobalt, Total	15.7		0.2	6.2	mg/Kg	6010D
Copper, Total	21.3		0.2	2.5	mg/Kg	6010D
Iron, Total	37800		170	250	mg/Kg	6010D
Lead, Total	12.0		0.5	6.2	mg/Kg	6010D
Magnesium, Total	6860		20	120	mg/Kg	6010D
Manganese, Total	735		0.2	2.5	mg/Kg	6010D
Mercury, Total	0.040	J	0.016	0.040	mg/Kg	7471B
Nickel, Total	35.1		0.9	5.0	mg/Kg	6010D
Potassium, Total	2520		70	250	mg/Kg	6010D
Sodium, Total	110	J	30	120	mg/Kg	6010D
Total Solids	78.7				Percent	ALS SOP
Vanadium, Total	44.1		0.9	6.2	mg/Kg	6010D
Zinc, Total	110		1.8	2.5	mg/Kg	6010D

CLIENT ID: TP BCP 52 28			Lab ID: R2107681-002			

Analyte	Results	Flag	MDL	MRL	Units	Method
1,2,4-Trimethylbenzene	19		0.29	7.1	ug/Kg	8260C
1,3,5-Trimethylbenzene	10		0.29	7.1	ug/Kg	8260C
2-Butanone (MEK)	41		2.9	7.1	ug/Kg	8260C
2-Methylnaphthalene	13000	J	6700	40000	ug/Kg	8270E
Acenaphthene	8200	J	7700	40000	ug/Kg	8270E
Acenaphthylene	72000		8200	40000	ug/Kg	8270E
Acetone	150		22	35	ug/Kg	8260C
Aluminum, Total	4790		14	23	mg/Kg	6010D
Anthracene	110000		6800	40000	ug/Kg	8270E
Arsenic, Total	18.0		0.8	1.1	mg/Kg	6010D
Barium, Total	85.0		1.8	2.3	mg/Kg	6010D
Benz(a)anthracene	200000		6000	40000	ug/Kg	8270E
Benzene	15		0.29	7.1	ug/Kg	8260C



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP BCP 52 28		Lab ID: R2107681-002				
Analyte	Results	Flag	MDL	MRL	Units	Method
Benzo(a)pyrene	240000		11000	40000	ug/Kg	8270E
Benzo(b)fluoranthene	240000		6800	40000	ug/Kg	8270E
Benzo(g,h,i)perylene	110000		9300	40000	ug/Kg	8270E
Benzo(k)fluoranthene	99000		6600	40000	ug/Kg	8270E
Beryllium, Total	0.97		0.04	0.34	mg/Kg	6010D
Cadmium, Total	0.55	BJ	0.10	0.57	mg/Kg	6010D
Calcium, Total	930		40	110	mg/Kg	6010D
Carbazole	24000	J	6600	40000	ug/Kg	8270E
Carbon Disulfide	0.61	J	0.42	7.1	ug/Kg	8260C
Chromium, Total	9.4		0.4	1.1	mg/Kg	6010D
Chrysene	200000		6000	40000	ug/Kg	8270E
Cobalt, Total	5.6	J	0.10	5.7	mg/Kg	6010D
Copper, Total	18.8		0.2	2.3	mg/Kg	6010D
Cyanide, Total	0.67		0.17	0.27	mg/Kg	9012B
Cyclohexane	2.5	J	0.37	7.1	ug/Kg	8260C
Dibenz(a,h)anthracene	30000	J	8800	40000	ug/Kg	8270E
Dibenzofuran	33000	J	7400	40000	ug/Kg	8270E
Ethylbenzene	6.2	J	1.5	7.1	ug/Kg	8260C
Fluoranthene	510000		11000	40000	ug/Kg	8270E
Fluorene	63000		7600	40000	ug/Kg	8270E
Indeno(1,2,3-cd)pyrene	130000		13000	40000	ug/Kg	8270E
Iron, Total	16200		150	230	mg/Kg	6010D
Isopropylbenzene (Cumene)	1.0	J	0.29	7.1	ug/Kg	8260C
Lead, Total	16.5		0.5	5.7	mg/Kg	6010D
m,p-Xylenes	13	J	2.9	14	ug/Kg	8260C
Magnesium, Total	980		20	110	mg/Kg	6010D
Manganese, Total	96.3		0.2	2.3	mg/Kg	6010D
Mercury, Total	0.054		0.016	0.039	mg/Kg	7471B
Methyl Acetate	1.3	J	1.2	7.1	ug/Kg	8260C
Methylcyclohexane	5.1	J	0.44	7.1	ug/Kg	8260C
Naphthalene	40000	J	7600	40000	ug/Kg	8270E
Nickel, Total	13.5		0.8	4.6	mg/Kg	6010D
o-Xylene	8.6		1.5	7.1	ug/Kg	8260C
Phenanthrene	320000		5800	40000	ug/Kg	8270E
Potassium, Total	810		60	230	mg/Kg	6010D
Pyrene	380000		6800	40000	ug/Kg	8270E
Selenium, Total	2.2		0.7	1.1	mg/Kg	6010D
Sodium, Total	100	J	30	110	mg/Kg	6010D
Toluene	8.8		2.9	7.1	ug/Kg	8260C
Total Solids	82.6				Percent	ALS SOP



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: TP BCP 52 28			Lab ID: R2107681-002			
Analyte	Results	Flag	MDL	MRL	Units	Method
Vanadium, Total	19.1		0.9	5.7	mg/Kg	6010D
Zinc, Total	33.2		1.6	2.3	mg/Kg	6010D



Sample Receipt Information

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com

Client: Inventum Engineering
Project: RITC RI

Service Request:R2107681

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2107681-001	TP BCP 52 CL	7/29/2021	1050
R2107681-002	TP BCP 52 28	7/29/2021	1050

[illegible]



Cooler Receipt and Preservation Check Form

R2107681

Inventum Engineering
RITC RI

5



Project/Client Inventum Engineering Folder Number _____

Cooler received on 7/30/21 by: Am

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	<u>Y</u> <u>N</u>
2	Custody papers properly completed (ink, signed)?	<u>Y</u> <u>N</u>
3	Did all bottles arrive in good condition (unbroken)?	<u>Y</u> <u>N</u>
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<u>Y</u> <u>N</u>

5a	Perchlorate samples have required headspace?	<u>Y</u> <u>N</u> <u>NA</u>
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	<u>Y</u> <u>N</u> <u>NA</u>
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore <u>5035set</u> <u>NA</u>	

8. Temperature Readings Date: 7/30/21 Time: 1050 ID: IR#7 IR#11 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>10.9</u>						
Within 0-6°C?	<u>Y</u> <u>N</u>	<u>Y</u> <u>N</u>	<u>Y</u> <u>N</u>	<u>Y</u> <u>N</u>	<u>Y</u> <u>N</u>	<u>Y</u> <u>N</u>	<u>Y</u> <u>N</u>
If <0°C, were samples frozen?	<u>Y</u> <u>N</u>	<u>Y</u> <u>N</u>	<u>Y</u> <u>N</u>	<u>Y</u> <u>N</u>	<u>Y</u> <u>N</u>	<u>Y</u> <u>N</u>	<u>Y</u> <u>N</u>

If out of Temperature, note packing/ice condition: Ice melted Poorly Packed (described below) Same Day Rule

& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: 2002 by Am on 7/30/21 at 1055
5035 samples placed in storage location: F-03 by Am on 7/30/21 at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 7/30/21 Time: 1807 by: Am

9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
10. Did all bottle labels and tags agree with custody papers? YES NO
11. Were correct containers used for the tests indicated? YES NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
13. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH	Yes No						
≤2		HNO ₃							
≤2		H ₂ SO ₄							
<4		NaHSO ₄							
5-9		For 608pest		No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522		If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃							
		ZnAcetate	- -						
		HCl	** **						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 060701-17W, 060701-15R, 061421-3

Explain all Discrepancies/ Other Comments:

- Over sampled -

5035 vials blank - outa bag labelled

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: Am

PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

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REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.	+	Correlation coefficient for MSA is <0.995.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).	N	Inorganics- Matrix spike recovery was outside laboratory limits.
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.	N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.	S	Concentration has been determined using Method of Standard Additions (MSA).
E	Organics- Concentration has exceeded the calibration range for that specific analysis.	W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.	P	Concentration >40% difference between the two GC columns.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.	C	Confirmed by GC/MS
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.	Q	DoD reports: indicates a pesticide/Aroclor is not confirmed ($\geq 100\%$ Difference between two GC columns).
#	Spike was diluted out.	X	See Case Narrative for discussion.
		MRL	Method Reporting Limit. Also known as:
		LOQ	Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
		MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
		LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
		ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Accreditations¹



NELAP States
Florida ID # E87674
New Hampshire ID # 2941
New York ID # 10145
Pennsylvania ID# 68-786
Texas ID#T104704581
Virginia #460167

Non-NELAP States
Connecticut ID #PH0556
Delaware Approved
Maine ID #NY01587
North Carolina #36701
North Carolina #676
Rhode Island LAO00333

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory. To verify NH accredited analytes, go to <https://www4.des.state.nh.us/CertifiedLabs/Certified-Method.aspx>.

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Client: Inventum Engineering
Project: RITC RI

Service Request: R2107681

Non-Certified Analytes

Certifying Agency: New York Department of Health

Method	Matrix	Analyte
ALS SOP	Soil	Total Solids

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: RITC RI/

Service Request: R2107681

Sample Name: TP BCP 52 CL
Lab Code: R2107681-001
Sample Matrix: Soil

Date Collected: 07/29/21
Date Received: 07/30/21

Analysis Method	Extracted/Digested By	Analyzed By
6010D	NMANSEN	KMCLAEN
7471B	NMANSEN	NMANSEN
8260C		FNAEGLER
8270E	KSERCU	JMISIUREWICZ
9012B	CWOODS	GNITAJOUPPI
ALS SOP		KAWONG

Sample Name: TP BCP 52 28
Lab Code: R2107681-002
Sample Matrix: Soil

Date Collected: 07/29/21
Date Received: 07/30/21

Analysis Method	Extracted/Digested By	Analyzed By
6010D	NMANSEN	KMCLAEN
7471B	NMANSEN	NMANSEN
8260C		FNAEGLER
8270E	KSERCU	JMISIUREWICZ
9012B	CWOODS	GNITAJOUPPI
ALS SOP		KAWONG



PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

INORGANIC

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C or 6010D	3005A/3010A
6020A or 6020B	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-N-2016 Amenable and Residual Cyanide	SM 4500-CN-G and SM 4500-CN-B,C-2016
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C or 6010D	3050B
6020A or 6020B	3050B
6010C or 6010D TCLP (1311) extract	3005A/3010A
6010C or 6010D SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

ORGANIC

Preparation Methods for Organic methods are listed in the header of the Results pages.

Regarding "Bulk/5035A":

For soil/solid samples submitted in soil jars for Volatiles analysis, the prep method is listed as "Bulk/5035A". The lab follows the closed-system EPA 5035A protocols once the sample is transferred to a sealed vial, but collection in bulk in soil jars does not follow the collection protocols listed in EPA 5035A. In accordance with the NYSDOH technical notice of October 2012, all results or reporting limits <200 ug/kg are to be considered estimated due to potential low bias.



Sample Results

ALS Environmental—Rochester Laboratory

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Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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Phone (585) 288-5380 Fax (585) 288-8475

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Sample Name: TP BCP 52 CL
Lab Code: R2107681-001

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.3 U	5.3	0.22	.83	08/08/21 15:39	
1,1,2,2-Tetrachloroethane	5.3 U	5.3	0.47	.83	08/08/21 15:39	
1,1,2-Trichloroethane	5.3 U	5.3	0.22	.83	08/08/21 15:39	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.3 U	5.3	0.22	.83	08/08/21 15:39	
1,1-Dichloroethane (1,1-DCA)	5.3 U	5.3	0.22	.83	08/08/21 15:39	
1,1-Dichloroethene (1,1-DCE)	5.3 U	5.3	0.31	.83	08/08/21 15:39	
1,2,3-Trichlorobenzene	5.3 U	5.3	0.55	.83	08/08/21 15:39	
1,2,4-Trichlorobenzene	5.3 U	5.3	0.45	.83	08/08/21 15:39	
1,2,4-Trimethylbenzene	0.35 J	5.3	0.22	.83	08/08/21 15:39	
1,2-Dibromo-3-chloropropane (DBCP)	5.3 U	5.3	0.80	.83	08/08/21 15:39	
1,2-Dibromoethane	5.3 U	5.3	0.22	.83	08/08/21 15:39	
1,2-Dichlorobenzene	5.3 U	5.3	0.22	.83	08/08/21 15:39	
1,2-Dichloroethane	5.3 U	5.3	0.22	.83	08/08/21 15:39	
1,2-Dichloropropane	5.3 U	5.3	0.22	.83	08/08/21 15:39	
1,3,5-Trimethylbenzene	0.24 J	5.3	0.22	.83	08/08/21 15:39	
1,3-Dichlorobenzene	5.3 U	5.3	0.22	.83	08/08/21 15:39	
1,4-Dichlorobenzene	5.3 U	5.3	0.24	.83	08/08/21 15:39	
1,4-Dioxane	110 U	110	22	.83	08/08/21 15:39	
2-Butanone (MEK)	14	5.3	2.2	.83	08/08/21 15:39	
2-Hexanone	5.3 U	5.3	0.38	.83	08/08/21 15:39	
4-Methyl-2-pentanone	5.3 U	5.3	0.25	.83	08/08/21 15:39	
Acetone	92	26	16	.83	08/08/21 15:39	
Benzene	0.53 J	5.3	0.22	.83	08/08/21 15:39	
Bromochloromethane	5.3 U	5.3	0.22	.83	08/08/21 15:39	
Bromodichloromethane	5.3 U	5.3	0.22	.83	08/08/21 15:39	
Bromoform	5.3 U	5.3	0.53	.83	08/08/21 15:39	
Bromomethane	5.3 U	5.3	2.3	.83	08/08/21 15:39	
Carbon Disulfide	5.3 U	5.3	0.31	.83	08/08/21 15:39	
Carbon Tetrachloride	5.3 U	5.3	0.28	.83	08/08/21 15:39	
Chlorobenzene	5.3 U	5.3	0.22	.83	08/08/21 15:39	
Chloroethane	5.3 U	5.3	0.44	.83	08/08/21 15:39	
Chloroform	5.3 U	5.3	0.22	.83	08/08/21 15:39	
Chloromethane	5.3 U	5.3	1.5	.83	08/08/21 15:39	
Cyclohexane	5.3 U	5.3	0.28	.83	08/08/21 15:39	
Dibromochloromethane	5.3 U	5.3	0.22	.83	08/08/21 15:39	
Dichlorodifluoromethane (CFC 12)	5.3 U	5.3	0.35	.83	08/08/21 15:39	
Dichloromethane	5.3 U	5.3	3.0	.83	08/08/21 15:39	
Ethylbenzene	5.3 U	5.3	1.1	.83	08/08/21 15:39	
Isopropylbenzene (Cumene)	5.3 U	5.3	0.22	.83	08/08/21 15:39	
Methyl Acetate	5.3 U	5.3	0.89	.83	08/08/21 15:39	
Methyl tert-Butyl Ether	5.3 U	5.3	0.22	.83	08/08/21 15:39	
Methylcyclohexane	5.3 U	5.3	0.33	.83	08/08/21 15:39	
Styrene	5.3 U	5.3	1.1	.83	08/08/21 15:39	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Sample Name: TP BCP 52 CL
Lab Code: R2107681-001

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.3 U	5.3	0.25	.83	08/08/21 15:39	
Toluene	5.3 U	5.3	2.2	.83	08/08/21 15:39	
Trichloroethene (TCE)	5.3 U	5.3	0.24	.83	08/08/21 15:39	
Trichlorofluoromethane (CFC 11)	5.3 U	5.3	0.28	.83	08/08/21 15:39	
Vinyl Chloride	5.3 U	5.3	0.49	.83	08/08/21 15:39	
cis-1,2-Dichloroethene	5.3 U	5.3	0.22	.83	08/08/21 15:39	
cis-1,3-Dichloropropene	5.3 U	5.3	0.22	.83	08/08/21 15:39	
m,p-Xylenes	11 U	11	2.2	.83	08/08/21 15:39	
o-Xylene	5.3 U	5.3	1.1	.83	08/08/21 15:39	
trans-1,2-Dichloroethene	5.3 U	5.3	0.22	.83	08/08/21 15:39	
trans-1,3-Dichloropropene	5.3 U	5.3	0.22	.83	08/08/21 15:39	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	31 - 154	08/08/21 15:39	
Dibromofluoromethane	98	63 - 138	08/08/21 15:39	
Toluene-d8	101	66 - 138	08/08/21 15:39	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Sample Name: TP BCP 52 28
Lab Code: R2107681-002

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
1,1,2,2-Tetrachloroethane	7.1 U	7.1	0.63	1.17	08/08/21 16:02	
1,1,2-Trichloroethane	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
1,1,2-Trichloro-1,2,2-trifluoroethane	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
1,1-Dichloroethane (1,1-DCA)	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
1,1-Dichloroethene (1,1-DCE)	7.1 U	7.1	0.42	1.17	08/08/21 16:02	
1,2,3-Trichlorobenzene	7.1 U	7.1	0.74	1.17	08/08/21 16:02	
1,2,4-Trichlorobenzene	7.1 U	7.1	0.60	1.17	08/08/21 16:02	
1,2,4-Trimethylbenzene	19	7.1	0.29	1.17	08/08/21 16:02	
1,2-Dibromo-3-chloropropane (DBCP)	7.1 U	7.1	1.1	1.17	08/08/21 16:02	
1,2-Dibromoethane	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
1,2-Dichlorobenzene	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
1,2-Dichloroethane	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
1,2-Dichloropropane	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
1,3,5-Trimethylbenzene	10	7.1	0.29	1.17	08/08/21 16:02	
1,3-Dichlorobenzene	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
1,4-Dichlorobenzene	7.1 U	7.1	0.32	1.17	08/08/21 16:02	
1,4-Dioxane	140 U	140	29	1.17	08/08/21 16:02	
2-Butanone (MEK)	41	7.1	2.9	1.17	08/08/21 16:02	
2-Hexanone	7.1 U	7.1	0.51	1.17	08/08/21 16:02	
4-Methyl-2-pentanone	7.1 U	7.1	0.33	1.17	08/08/21 16:02	
Acetone	150	35	22	1.17	08/08/21 16:02	
Benzene	15	7.1	0.29	1.17	08/08/21 16:02	
Bromochloromethane	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
Bromodichloromethane	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
Bromoform	7.1 U	7.1	0.71	1.17	08/08/21 16:02	
Bromomethane	7.1 U	7.1	3.0	1.17	08/08/21 16:02	
Carbon Disulfide	0.61 J	7.1	0.42	1.17	08/08/21 16:02	
Carbon Tetrachloride	7.1 U	7.1	0.37	1.17	08/08/21 16:02	
Chlorobenzene	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
Chloroethane	7.1 U	7.1	0.59	1.17	08/08/21 16:02	
Chloroform	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
Chloromethane	7.1 U	7.1	2.0	1.17	08/08/21 16:02	
Cyclohexane	2.5 J	7.1	0.37	1.17	08/08/21 16:02	
Dibromochloromethane	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
Dichlorodifluoromethane (CFC 12)	7.1 U	7.1	0.47	1.17	08/08/21 16:02	
Dichloromethane	7.1 U	7.1	4.0	1.17	08/08/21 16:02	
Ethylbenzene	6.2 J	7.1	1.5	1.17	08/08/21 16:02	
Isopropylbenzene (Cumene)	1.0 J	7.1	0.29	1.17	08/08/21 16:02	
Methyl Acetate	1.3 J	7.1	1.2	1.17	08/08/21 16:02	
Methyl tert-Butyl Ether	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
Methylcyclohexane	5.1 J	7.1	0.44	1.17	08/08/21 16:02	
Styrene	7.1 U	7.1	1.5	1.17	08/08/21 16:02	

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Sample Name: TP BCP 52 28
Lab Code: R2107681-002

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	7.1 U	7.1	0.33	1.17	08/08/21 16:02	
Toluene	8.8	7.1	2.9	1.17	08/08/21 16:02	
Trichloroethene (TCE)	7.1 U	7.1	0.32	1.17	08/08/21 16:02	
Trichlorofluoromethane (CFC 11)	7.1 U	7.1	0.37	1.17	08/08/21 16:02	
Vinyl Chloride	7.1 U	7.1	0.66	1.17	08/08/21 16:02	
cis-1,2-Dichloroethene	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
cis-1,3-Dichloropropene	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
m,p-Xylenes	13 J	14	2.9	1.17	08/08/21 16:02	
o-Xylene	8.6	7.1	1.5	1.17	08/08/21 16:02	
trans-1,2-Dichloroethene	7.1 U	7.1	0.29	1.17	08/08/21 16:02	
trans-1,3-Dichloropropene	7.1 U	7.1	0.29	1.17	08/08/21 16:02	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	79	31 - 154	08/08/21 16:02	
Dibromofluoromethane	100	63 - 138	08/08/21 16:02	
Toluene-d8	102	66 - 138	08/08/21 16:02	



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Sample Name: TP BCP 52 CL
Lab Code: R2107681-001

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	410 U	410	91	1	08/18/21 22:33	8/2/21	
2,3,4,6-Tetrachlorophenol	410 U	410	150	1	08/18/21 22:33	8/2/21	
2,4,5-Trichlorophenol	410 U	410	110	1	08/18/21 22:33	8/2/21	
2,4,6-Trichlorophenol	410 U	410	91	1	08/18/21 22:33	8/2/21	
2,4-Dichlorophenol	410 U	410	79	1	08/18/21 22:33	8/2/21	
2,4-Dimethylphenol	410 U	410	73	1	08/18/21 22:33	8/2/21	
2,4-Dinitrophenol	2100 U	2100	690	1	08/18/21 22:33	8/2/21	
2,4-Dinitrotoluene	410 U	410	160	1	08/18/21 22:33	8/2/21	
2,6-Dinitrotoluene	410 U	410	89	1	08/18/21 22:33	8/2/21	
2-Chloronaphthalene	410 U	410	82	1	08/18/21 22:33	8/2/21	
2-Chlorophenol	410 U	410	68	1	08/18/21 22:33	8/2/21	
2-Methylnaphthalene	410 U	410	68	1	08/18/21 22:33	8/2/21	
2-Methylphenol	410 U	410	85	1	08/18/21 22:33	8/2/21	
2-Nitroaniline	2100 U	2100	96	1	08/18/21 22:33	8/2/21	
2-Nitrophenol	410 U	410	95	1	08/18/21 22:33	8/2/21	
3,3'-Dichlorobenzidine	410 U	410	46	1	08/18/21 22:33	8/2/21	
3- and 4-Methylphenol Coelution	410 U	410	78	1	08/18/21 22:33	8/2/21	
3-Nitroaniline	2100 U	2100	82	1	08/18/21 22:33	8/2/21	
4,6-Dinitro-2-methylphenol	2100 U	2100	230	1	08/18/21 22:33	8/2/21	
4-Bromophenyl Phenyl Ether	410 U	410	110	1	08/18/21 22:33	8/2/21	
4-Chloro-3-methylphenol	410 U	410	82	1	08/18/21 22:33	8/2/21	
4-Chloroaniline	410 U	410	69	1	08/18/21 22:33	8/2/21	
4-Chlorophenyl Phenyl Ether	410 U	410	87	1	08/18/21 22:33	8/2/21	
4-Nitroaniline	2100 U	2100	42	1	08/18/21 22:33	8/2/21	
4-Nitrophenol	2100 U	2100	82	1	08/18/21 22:33	8/2/21	
Acenaphthene	410 U	410	77	1	08/18/21 22:33	8/2/21	
Acenaphthylene	410 U	410	83	1	08/18/21 22:33	8/2/21	
Acetophenone	410 U	410	120	1	08/18/21 22:33	8/2/21	
Anthracene	410 U	410	68	1	08/18/21 22:33	8/2/21	
Atrazine	410 U	410	57	1	08/18/21 22:33	8/2/21	
Benz(a)anthracene	410 U	410	61	1	08/18/21 22:33	8/2/21	
Benzaldehyde	2100 U	2100	99	1	08/18/21 22:33	8/2/21	
Benzo(a)pyrene	410 U	410	110	1	08/18/21 22:33	8/2/21	
Benzo(b)fluoranthene	410 U	410	68	1	08/18/21 22:33	8/2/21	
Benzo(g,h,i)perylene	410 U	410	94	1	08/18/21 22:33	8/2/21	
Benzo(k)fluoranthene	410 U	410	66	1	08/18/21 22:33	8/2/21	
Biphenyl	410 U	410	120	1	08/18/21 22:33	8/2/21	
2,2'-Oxybis(1-chloropropane)	410 U	410	84	1	08/18/21 22:33	8/2/21	
Bis(2-chloroethoxy)methane	410 U	410	100	1	08/18/21 22:33	8/2/21	
Bis(2-chloroethyl) Ether	410 U	410	80	1	08/18/21 22:33	8/2/21	
Bis(2-ethylhexyl) Phthalate	620 U	620	75	1	08/18/21 22:33	8/2/21	
Butyl Benzyl Phthalate	410 U	410	49	1	08/18/21 22:33	8/2/21	
Caprolactam	410 U	410	90	1	08/18/21 22:33	8/2/21	

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Sample Name: TP BCP 52 CL
Lab Code: R2107681-001

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	410 U	410	66	1	08/18/21 22:33	8/2/21	
Chrysene	410 U	410	60	1	08/18/21 22:33	8/2/21	
Di-n-butyl Phthalate	410 U	410	66	1	08/18/21 22:33	8/2/21	
Di-n-octyl Phthalate	410 U	410	150	1	08/18/21 22:33	8/2/21	
Dibenz(a,h)anthracene	410 U	410	89	1	08/18/21 22:33	8/2/21	
Dibenzofuran	410 U	410	74	1	08/18/21 22:33	8/2/21	
Diethyl Phthalate	410 U	410	73	1	08/18/21 22:33	8/2/21	
Dimethyl Phthalate	410 U	410	78	1	08/18/21 22:33	8/2/21	
Fluoranthene	410 U	410	110	1	08/18/21 22:33	8/2/21	
Fluorene	410 U	410	76	1	08/18/21 22:33	8/2/21	
Hexachlorobenzene	410 U	410	98	1	08/18/21 22:33	8/2/21	
Hexachlorobutadiene	410 U	410	70	1	08/18/21 22:33	8/2/21	
Hexachlorocyclopentadiene	410 U	410	130	1	08/18/21 22:33	8/2/21	
Hexachloroethane	410 U	410	76	1	08/18/21 22:33	8/2/21	
Indeno(1,2,3-cd)pyrene	410 U	410	140	1	08/18/21 22:33	8/2/21	
Isophorone	410 U	410	85	1	08/18/21 22:33	8/2/21	
N-Nitrosodi-n-propylamine	410 U	410	130	1	08/18/21 22:33	8/2/21	
N-Nitrosodiphenylamine	410 U	410	260	1	08/18/21 22:33	8/2/21	
Naphthalene	410 U	410	77	1	08/18/21 22:33	8/2/21	
Nitrobenzene	410 U	410	73	1	08/18/21 22:33	8/2/21	
Pentachlorophenol (PCP)	2100 U	2100	410	1	08/18/21 22:33	8/2/21	
Phenanthrene	410 U	410	58	1	08/18/21 22:33	8/2/21	
Phenol	410 U	410	82	1	08/18/21 22:33	8/2/21	
Pyrene	410 U	410	68	1	08/18/21 22:33	8/2/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	77	10 - 109	08/18/21 22:33	
2-Fluorobiphenyl	59	10 - 102	08/18/21 22:33	
2-Fluorophenol	56	10 - 88	08/18/21 22:33	
Nitrobenzene-d5	62	10 - 95	08/18/21 22:33	
Phenol-d6	54	10 - 145	08/18/21 22:33	
Terphenyl-d14	99	10 - 106	08/18/21 22:33	

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Sample Name: TP BCP 52 28
Lab Code: R2107681-002

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	40000 U	40000	9000	100	08/20/21 01:09	8/2/21	
2,3,4,6-Tetrachlorophenol	40000 U	40000	15000	100	08/20/21 01:09	8/2/21	
2,4,5-Trichlorophenol	40000 U	40000	10000	100	08/20/21 01:09	8/2/21	
2,4,6-Trichlorophenol	40000 U	40000	9000	100	08/20/21 01:09	8/2/21	
2,4-Dichlorophenol	40000 U	40000	7800	100	08/20/21 01:09	8/2/21	
2,4-Dimethylphenol	40000 U	40000	7300	100	08/20/21 01:09	8/2/21	
2,4-Dinitrophenol	210000 U	210000	69000	100	08/20/21 01:09	8/2/21	
2,4-Dinitrotoluene	40000 U	40000	16000	100	08/20/21 01:09	8/2/21	
2,6-Dinitrotoluene	40000 U	40000	8900	100	08/20/21 01:09	8/2/21	
2-Chloronaphthalene	40000 U	40000	8100	100	08/20/21 01:09	8/2/21	
2-Chlorophenol	40000 U	40000	6800	100	08/20/21 01:09	8/2/21	
2-Methylnaphthalene	13000 J	40000	6700	100	08/20/21 01:09	8/2/21	
2-Methylphenol	40000 U	40000	8400	100	08/20/21 01:09	8/2/21	
2-Nitroaniline	210000 U	210000	9600	100	08/20/21 01:09	8/2/21	
2-Nitrophenol	40000 U	40000	9400	100	08/20/21 01:09	8/2/21	
3,3'-Dichlorobenzidine	40000 U	40000	4600	100	08/20/21 01:09	8/2/21	
3- and 4-Methylphenol Coelution	40000 U	40000	7800	100	08/20/21 01:09	8/2/21	
3-Nitroaniline	210000 U	210000	8200	100	08/20/21 01:09	8/2/21	
4,6-Dinitro-2-methylphenol	210000 U	210000	23000	100	08/20/21 01:09	8/2/21	
4-Bromophenyl Phenyl Ether	40000 U	40000	11000	100	08/20/21 01:09	8/2/21	
4-Chloro-3-methylphenol	40000 U	40000	8200	100	08/20/21 01:09	8/2/21	
4-Chloroaniline	40000 U	40000	6900	100	08/20/21 01:09	8/2/21	
4-Chlorophenyl Phenyl Ether	40000 U	40000	8700	100	08/20/21 01:09	8/2/21	
4-Nitroaniline	210000 U	210000	4100	100	08/20/21 01:09	8/2/21	
4-Nitrophenol	210000 U	210000	8200	100	08/20/21 01:09	8/2/21	
Acenaphthene	8200 J	40000	7700	100	08/20/21 01:09	8/2/21	
Acenaphthylene	72000	40000	8200	100	08/20/21 01:09	8/2/21	
Acetophenone	40000 U	40000	12000	100	08/20/21 01:09	8/2/21	
Anthracene	110000	40000	6800	100	08/20/21 01:09	8/2/21	
Atrazine	40000 U	40000	5700	100	08/20/21 01:09	8/2/21	
Benz(a)anthracene	200000	40000	6000	100	08/20/21 01:09	8/2/21	
Benzaldehyde	210000 U	210000	9800	100	08/20/21 01:09	8/2/21	
Benzo(a)pyrene	240000	40000	11000	100	08/20/21 01:09	8/2/21	
Benzo(b)fluoranthene	240000	40000	6800	100	08/20/21 01:09	8/2/21	
Benzo(g,h,i)perylene	110000	40000	9300	100	08/20/21 01:09	8/2/21	
Benzo(k)fluoranthene	99000	40000	6600	100	08/20/21 01:09	8/2/21	
Biphenyl	40000 U	40000	12000	100	08/20/21 01:09	8/2/21	
2,2'-Oxybis(1-chloropropane)	40000 U	40000	8300	100	08/20/21 01:09	8/2/21	
Bis(2-chloroethoxy)methane	40000 U	40000	9900	100	08/20/21 01:09	8/2/21	
Bis(2-chloroethyl) Ether	40000 U	40000	8000	100	08/20/21 01:09	8/2/21	
Bis(2-ethylhexyl) Phthalate	61000 U	61000	7400	100	08/20/21 01:09	8/2/21	
Butyl Benzyl Phthalate	40000 U	40000	4900	100	08/20/21 01:09	8/2/21	
Caprolactam	40000 U	40000	8900	100	08/20/21 01:09	8/2/21	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Sample Name: TP BCP 52 28
Lab Code: R2107681-002

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	24000 J	40000	6600	100	08/20/21 01:09	8/2/21	
Chrysene	200000	40000	6000	100	08/20/21 01:09	8/2/21	
Di-n-butyl Phthalate	40000 U	40000	6600	100	08/20/21 01:09	8/2/21	
Di-n-octyl Phthalate	40000 U	40000	15000	100	08/20/21 01:09	8/2/21	
Dibenz(a,h)anthracene	30000 J	40000	8800	100	08/20/21 01:09	8/2/21	
Dibenzofuran	33000 J	40000	7400	100	08/20/21 01:09	8/2/21	
Diethyl Phthalate	40000 U	40000	7200	100	08/20/21 01:09	8/2/21	
Dimethyl Phthalate	40000 U	40000	7700	100	08/20/21 01:09	8/2/21	
Fluoranthene	510000	40000	11000	100	08/20/21 01:09	8/2/21	
Fluorene	63000	40000	7600	100	08/20/21 01:09	8/2/21	
Hexachlorobenzene	40000 U	40000	9700	100	08/20/21 01:09	8/2/21	
Hexachlorobutadiene	40000 U	40000	7000	100	08/20/21 01:09	8/2/21	
Hexachlorocyclopentadiene	40000 U	40000	13000	100	08/20/21 01:09	8/2/21	
Hexachloroethane	40000 U	40000	7600	100	08/20/21 01:09	8/2/21	
Indeno(1,2,3-cd)pyrene	130000	40000	13000	100	08/20/21 01:09	8/2/21	
Isophorone	40000 U	40000	8500	100	08/20/21 01:09	8/2/21	
N-Nitrosodi-n-propylamine	40000 U	40000	13000	100	08/20/21 01:09	8/2/21	
N-Nitrosodiphenylamine	40000 U	40000	26000	100	08/20/21 01:09	8/2/21	
Naphthalene	40000 J	40000	7600	100	08/20/21 01:09	8/2/21	
Nitrobenzene	40000 U	40000	7300	100	08/20/21 01:09	8/2/21	
Pentachlorophenol (PCP)	210000 U	210000	41000	100	08/20/21 01:09	8/2/21	
Phenanthrene	320000	40000	5800	100	08/20/21 01:09	8/2/21	
Phenol	40000 U	40000	8200	100	08/20/21 01:09	8/2/21	
Pyrene	380000	40000	6800	100	08/20/21 01:09	8/2/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	0 *	10 - 109	08/20/21 01:09	D
2-Fluorobiphenyl	0 *	10 - 102	08/20/21 01:09	D
2-Fluorophenol	0 *	10 - 88	08/20/21 01:09	D
Nitrobenzene-d5	0 *	10 - 95	08/20/21 01:09	D
Phenol-d6	0 *	10 - 145	08/20/21 01:09	D
Terphenyl-d14	0 *	10 - 106	08/20/21 01:09	D



Metals

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Sample Name: TP BCP 52 CL
Lab Code: R2107681-001

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	24900	mg/Kg	25	15	1	08/10/21 20:27	08/10/21	
Antimony, Total	6010D	7.5 U	mg/Kg	7.5	0.7	1	08/10/21 20:27	08/10/21	
Arsenic, Total	6010D	4.9	mg/Kg	1.2	0.9	1	08/10/21 20:27	08/10/21	
Barium, Total	6010D	154	mg/Kg	2.5	1.9	1	08/10/21 20:27	08/10/21	
Beryllium, Total	6010D	1.28	mg/Kg	0.37	0.04	1	08/10/21 20:27	08/10/21	
Cadmium, Total	6010D	1.15	mg/Kg	0.62	0.11	1	08/10/21 20:27	08/10/21	
Calcium, Total	6010D	2600	mg/Kg	120	40	1	08/10/21 20:27	08/10/21	
Chromium, Total	6010D	31.2	mg/Kg	1.2	0.5	1	08/10/21 20:27	08/10/21	
Cobalt, Total	6010D	15.7	mg/Kg	6.2	0.2	1	08/10/21 20:27	08/10/21	
Copper, Total	6010D	21.3	mg/Kg	2.5	0.2	1	08/10/21 20:27	08/10/21	
Iron, Total	6010D	37800	mg/Kg	250	170	10	08/10/21 22:01	08/10/21	
Lead, Total	6010D	12.0	mg/Kg	6.2	0.5	1	08/10/21 20:27	08/10/21	
Magnesium, Total	6010D	6860	mg/Kg	120	20	1	08/10/21 20:27	08/10/21	
Manganese, Total	6010D	735	mg/Kg	2.5	0.2	1	08/10/21 20:27	08/10/21	
Mercury, Total	7471B	0.040 J	mg/Kg	0.040	0.016	1	08/05/21 14:53	08/04/21	
Nickel, Total	6010D	35.1	mg/Kg	5.0	0.9	1	08/10/21 20:27	08/10/21	
Potassium, Total	6010D	2520	mg/Kg	250	70	1	08/10/21 20:27	08/10/21	
Selenium, Total	6010D	1.2 U	mg/Kg	1.2	0.7	1	08/10/21 20:27	08/10/21	
Silver, Total	6010D	1.2 U	mg/Kg	1.2	0.2	1	08/10/21 20:27	08/10/21	
Sodium, Total	6010D	110 J	mg/Kg	120	30	1	08/12/21 18:35	08/10/21	
Thallium, Total	6010D	12 U	mg/Kg	12	9	10	08/10/21 22:01	08/10/21	
Vanadium, Total	6010D	44.1	mg/Kg	6.2	0.9	1	08/10/21 20:27	08/10/21	
Zinc, Total	6010D	110	mg/Kg	2.5	1.8	1	08/10/21 20:27	08/10/21	

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Sample Name: TP BCP 52 28
Lab Code: R2107681-002

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	4790	mg/Kg	23	14	1	08/10/21 20:30	08/10/21	
Antimony, Total	6010D	6.9 U	mg/Kg	6.9	0.7	1	08/10/21 20:30	08/10/21	
Arsenic, Total	6010D	18.0	mg/Kg	1.1	0.8	1	08/10/21 20:30	08/10/21	
Barium, Total	6010D	85.0	mg/Kg	2.3	1.8	1	08/10/21 20:30	08/10/21	
Beryllium, Total	6010D	0.97	mg/Kg	0.34	0.04	1	08/10/21 20:30	08/10/21	
Cadmium, Total	6010D	0.55 BJ	mg/Kg	0.57	0.10	1	08/10/21 20:30	08/10/21	
Calcium, Total	6010D	930	mg/Kg	110	40	1	08/10/21 20:30	08/10/21	
Chromium, Total	6010D	9.4	mg/Kg	1.1	0.4	1	08/10/21 20:30	08/10/21	
Cobalt, Total	6010D	5.6 J	mg/Kg	5.7	0.10	1	08/10/21 20:30	08/10/21	
Copper, Total	6010D	18.8	mg/Kg	2.3	0.2	1	08/10/21 20:30	08/10/21	
Iron, Total	6010D	16200	mg/Kg	230	150	10	08/10/21 22:04	08/10/21	
Lead, Total	6010D	16.5	mg/Kg	5.7	0.5	1	08/10/21 20:30	08/10/21	
Magnesium, Total	6010D	980	mg/Kg	110	20	1	08/10/21 20:30	08/10/21	
Manganese, Total	6010D	96.3	mg/Kg	2.3	0.2	1	08/10/21 20:30	08/10/21	
Mercury, Total	7471B	0.054	mg/Kg	0.039	0.016	1	08/05/21 14:56	08/04/21	
Nickel, Total	6010D	13.5	mg/Kg	4.6	0.8	1	08/10/21 20:30	08/10/21	
Potassium, Total	6010D	810	mg/Kg	230	60	1	08/10/21 20:30	08/10/21	
Selenium, Total	6010D	2.2	mg/Kg	1.1	0.7	1	08/10/21 20:30	08/10/21	
Silver, Total	6010D	1.1 U	mg/Kg	1.1	0.2	1	08/10/21 20:30	08/10/21	
Sodium, Total	6010D	100 J	mg/Kg	110	30	1	08/12/21 18:39	08/10/21	
Thallium, Total	6010D	1.1 U	mg/Kg	1.1	0.8	1	08/10/21 20:30	08/10/21	
Vanadium, Total	6010D	19.1	mg/Kg	5.7	0.9	1	08/10/21 20:30	08/10/21	
Zinc, Total	6010D	33.2	mg/Kg	2.3	1.6	1	08/10/21 20:30	08/10/21	



General Chemistry

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Sample Name: TP BCP 52 CL
Lab Code: R2107681-001

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.31 U	mg/Kg	0.31	0.18	1	08/12/21 11:54	08/11/21	

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Sample Name: TP BCP 52 CL
Lab Code: R2107681-001

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	78.7	Percent	-	-	1	08/03/21 07:00	NA	

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Sample Name: TP BCP 52 28
Lab Code: R2107681-002

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.67	mg/Kg	0.27	0.17	1	08/12/21 11:55	08/11/21	

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Sample Name: TP BCP 52 28
Lab Code: R2107681-002

Service Request: R2107681
Date Collected: 07/29/21 10:50
Date Received: 07/30/21 09:40

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Total Solids	ALS SOP	82.6	Percent	-	-	1	08/03/21 07:00	NA	



QC Summary Forms

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Volatile Organic Compounds by GC/MS

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QA/QC Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5035A

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		31 - 154	63 - 138	66 - 138
TP BCP 52 CL	R2107681-001	90	98	101
TP BCP 52 28	R2107681-002	79	100	102
Lab Control Sample	RQ2109547-03	99	104	101
Method Blank	RQ2109547-04	97	99	101

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2109547-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	08/08/21 14:06	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.44	1	08/08/21 14:06	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	08/08/21 14:06	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	08/08/21 14:06	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	08/08/21 14:06	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.29	1	08/08/21 14:06	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.52	1	08/08/21 14:06	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.42	1	08/08/21 14:06	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	08/08/21 14:06	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.75	1	08/08/21 14:06	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	08/08/21 14:06	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	08/08/21 14:06	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	08/08/21 14:06	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	08/08/21 14:06	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	08/08/21 14:06	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	08/08/21 14:06	
1,4-Dichlorobenzene	5.0 U	5.0	0.22	1	08/08/21 14:06	
1,4-Dioxane	100 U	100	20	1	08/08/21 14:06	
2-Butanone (MEK)	5.0 U	5.0	2.0	1	08/08/21 14:06	
2-Hexanone	5.0 U	5.0	0.36	1	08/08/21 14:06	
4-Methyl-2-pentanone	5.0 U	5.0	0.23	1	08/08/21 14:06	
Acetone	25 U	25	15	1	08/08/21 14:06	
Benzene	5.0 U	5.0	0.20	1	08/08/21 14:06	
Bromochloromethane	5.0 U	5.0	0.20	1	08/08/21 14:06	
Bromodichloromethane	5.0 U	5.0	0.20	1	08/08/21 14:06	
Bromoform	5.0 U	5.0	0.50	1	08/08/21 14:06	
Bromomethane	5.0 U	5.0	2.1	1	08/08/21 14:06	
Carbon Disulfide	5.0 U	5.0	0.29	1	08/08/21 14:06	
Carbon Tetrachloride	5.0 U	5.0	0.26	1	08/08/21 14:06	
Chlorobenzene	5.0 U	5.0	0.20	1	08/08/21 14:06	
Chloroethane	5.0 U	5.0	0.41	1	08/08/21 14:06	
Chloroform	5.0 U	5.0	0.20	1	08/08/21 14:06	
Chloromethane	5.0 U	5.0	1.4	1	08/08/21 14:06	
Cyclohexane	5.0 U	5.0	0.26	1	08/08/21 14:06	
Dibromochloromethane	5.0 U	5.0	0.20	1	08/08/21 14:06	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.33	1	08/08/21 14:06	
Dichloromethane	5.0 U	5.0	2.8	1	08/08/21 14:06	
Ethylbenzene	5.0 U	5.0	1.0	1	08/08/21 14:06	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	08/08/21 14:06	
Methyl Acetate	5.0 U	5.0	0.84	1	08/08/21 14:06	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	08/08/21 14:06	
Methylcyclohexane	5.0 U	5.0	0.31	1	08/08/21 14:06	
Styrene	5.0 U	5.0	1.0	1	08/08/21 14:06	

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2109547-04

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.23	1	08/08/21 14:06	
Toluene	5.0 U	5.0	2.0	1	08/08/21 14:06	
Trichloroethene (TCE)	5.0 U	5.0	0.22	1	08/08/21 14:06	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.26	1	08/08/21 14:06	
Vinyl Chloride	5.0 U	5.0	0.46	1	08/08/21 14:06	
cis-1,2-Dichloroethene	5.0 U	5.0	0.20	1	08/08/21 14:06	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	08/08/21 14:06	
m,p-Xylenes	10 U	10	2.0	1	08/08/21 14:06	
o-Xylene	5.0 U	5.0	1.0	1	08/08/21 14:06	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	08/08/21 14:06	
trans-1,3-Dichloropropene	5.0 U	5.0	0.20	1	08/08/21 14:06	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	31 - 154	08/08/21 14:06	
Dibromofluoromethane	99	63 - 138	08/08/21 14:06	
Toluene-d8	101	66 - 138	08/08/21 14:06	

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QA/QC Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Analyzed: 08/08/21

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2109547-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	20.0	20.0	100	68-123
1,1,2,2-Tetrachloroethane	8260C	16.2	20.0	81	78-121
1,1,2-Trichloroethane	8260C	18.3	20.0	92	84-117
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	19.7	20.0	99	54-121
1,1-Dichloroethane (1,1-DCA)	8260C	19.6	20.0	98	76-123
1,1-Dichloroethene (1,1-DCE)	8260C	20.0	20.0	100	65-115
1,2,3-Trichlorobenzene	8260C	16.4	20.0	82	60-128
1,2,4-Trichlorobenzene	8260C	16.6	20.0	83	62-130
1,2,4-Trimethylbenzene	8260C	16.7	20.0	84	67-121
1,2-Dibromo-3-chloropropane (DBCP)	8260C	18.5	20.0	93	54-135
1,2-Dibromoethane	8260C	17.0	20.0	85	77-117
1,2-Dichlorobenzene	8260C	15.8	20.0	79	75-116
1,2-Dichloroethane	8260C	17.8	20.0	89	74-116
1,2-Dichloropropane	8260C	18.0	20.0	90	79-112
1,3,5-Trimethylbenzene	8260C	16.5	20.0	83	66-122
1,3-Dichlorobenzene	8260C	15.9	20.0	79	72-118
1,4-Dichlorobenzene	8260C	15.4	20.0	77	72-117
1,4-Dioxane	8260C	365	400	91	59-147
2-Butanone (MEK)	8260C	19.0	20.0	95	67-129
2-Hexanone	8260C	17.9	20.0	90	68-118
4-Methyl-2-pentanone	8260C	19.8	20.0	99	64-123
Acetone	8260C	17.3 J	20.0	86	32-154
Benzene	8260C	18.6	20.0	93	77-114
Bromochloromethane	8260C	17.7	20.0	88	78-117
Bromodichloromethane	8260C	18.1	20.0	90	72-118
Bromoform	8260C	18.4	20.0	92	55-134
Bromomethane	8260C	18.6	20.0	93	10-150
Carbon Disulfide	8260C	23.3	20.0	117	44-139
Carbon Tetrachloride	8260C	18.9	20.0	95	51-123
Chlorobenzene	8260C	17.0	20.0	85	79-115
Chloroethane	8260C	24.3	20.0	122	10-140
Chloroform	8260C	18.1	20.0	91	76-115
Chloromethane	8260C	27.7	20.0	139 *	10-131

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QA/QC Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Analyzed: 08/08/21

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2109547-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyclohexane	8260C	20.1	20.0	101	67-122
Dibromochloromethane	8260C	18.1	20.0	90	68-121
Dichlorodifluoromethane (CFC 12)	8260C	22.5	20.0	113	51-144
Dichloromethane	8260C	17.5	20.0	87	72-118
Ethylbenzene	8260C	17.2	20.0	86	64-118
Isopropylbenzene (Cumene)	8260C	17.4	20.0	87	60-123
Methyl Acetate	8260C	25.3	20.0	126 *	31-122
Methyl tert-Butyl Ether	8260C	17.8	20.0	89	76-118
Methylcyclohexane	8260C	21.2	20.0	106	70-124
Styrene	8260C	16.5	20.0	83	74-117
Tetrachloroethene (PCE)	8260C	17.9	20.0	90	58-124
Toluene	8260C	17.8	20.0	89	72-116
Trichloroethene (TCE)	8260C	18.3	20.0	92	69-118
Trichlorofluoromethane (CFC 11)	8260C	21.5	20.0	108	52-127
Vinyl Chloride	8260C	24.5	20.0	122	59-153
cis-1,2-Dichloroethene	8260C	19.2	20.0	96	79-113
cis-1,3-Dichloropropene	8260C	19.1	20.0	95	66-117
m,p-Xylenes	8260C	34.2	40.0	86	68-118
o-Xylene	8260C	16.8	20.0	84	71-116
trans-1,2-Dichloroethene	8260C	19.1	20.0	95	73-114
trans-1,3-Dichloropropene	8260C	19.7	20.0	98	57-135



Semivolatile Organic Compounds by GC/MS

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QA/QC Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681

SURROGATE RECOVERY SUMMARY

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Extraction Method: EPA 3546

Sample Name	Lab Code	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol
		10 - 109	10 - 102	10 - 88
TP BCP 52 CL	R2107681-001	77	59	56
TP BCP 52 28	R2107681-002	0 D *	0 D *	0 D *
Method Blank	RQ2109244-01	74	60	57
Lab Control Sample	RQ2109244-02	89	72	66
Duplicate Lab Control Sample	RQ2109244-03	85	67	50
TP BCP 52 28 MS	RQ2109244-04	0 D *	0 D *	0 D *
TP BCP 52 28 DMS	RQ2109244-05	0 D *	0 D *	0 D *

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QA/QC Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681

SURROGATE RECOVERY SUMMARY

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Extraction Method: EPA 3546

Sample Name	Lab Code	Nitrobenzene-d5	Phenol-d6	Terphenyl-d14
		10 - 95	10 - 145	10 - 106
TP BCP 52 CL	R2107681-001	62	54	99
TP BCP 52 28	R2107681-002	0 D *	0 D *	0 D *
Method Blank	RQ2109244-01	65	54	99
Lab Control Sample	RQ2109244-02	64	65	110 *
Duplicate Lab Control Sample	RQ2109244-03	55	57	108 *
TP BCP 52 28 MS	RQ2109244-04	0 D *	0 D *	0 D *
TP BCP 52 28 DMS	RQ2109244-05	0 D *	0 D *	0 D *

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QA/QC Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: 07/29/21
Date Received: 07/30/21
Date Analyzed: 08/20/21
Date Extracted: 08/2/21

Duplicate Matrix Spike Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Sample Name: TP BCP 52 28 **Units:** ug/Kg
Lab Code: R2107681-002 **Basis:** Dry
Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Matrix Spike RQ2109244-04				Duplicate Matrix Spike RQ2109244-05				% Rec Limits	RPD	RPD Limit
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec				
1,2,4,5-Tetrachlorobenzene	39000 U	39000 DU	3980	0 *	40000 DU	4040	0 *	13-145	NC	30	
2,3,4,6-Tetrachlorophenol	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	55-98	NC	30	
2,4,5-Trichlorophenol	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	52-93	NC	30	
2,4,6-Trichlorophenol	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	50-89	NC	30	
2,4-Dichlorophenol	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	50-84	NC	30	
2,4-Dimethylphenol	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	50-86	NC	30	
2,4-Dinitrophenol	200000 U	200000 DU	3970	0 *	210000 DU	4040	0 *	20-101	NC	30	
2,4-Dinitrotoluene	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	60-106	NC	30	
2,6-Dinitrotoluene	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	57-100	NC	30	
2-Chloronaphthalene	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	51-91	NC	30	
2-Chlorophenol	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	45-83	NC	30	
2-Methylnaphthalene	13000 J	9520 DJ	3970	-88 *	12700 DJ	4040	-8 *	50-86	28	30	
2-Methylphenol	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	47-90	NC	30	
2-Nitroaniline	200000 U	200000 DU	3970	0 *	210000 DU	4040	0 *	50-101	NC	30	
2-Nitrophenol	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	48-83	NC	30	
3,3'-Dichlorobenzidine	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	19-111	NC	30	
3- and 4-Methylphenol Coelution	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	47-90	NC	30	
3-Nitroaniline	200000 U	200000 DU	3970	0 *	210000 DU	4040	0 *	42-85	NC	30	
4,6-Dinitro-2-methylphenol	200000 U	200000 DU	3970	0 *	210000 DU	4040	0 *	42-98	NC	30	
4-Bromophenyl Phenyl Ether	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	54-94	NC	30	
4-Chloro-3-methylphenol	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	51-89	NC	30	
4-Chloroaniline	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	32-77	NC	30	
4-Chlorophenyl Phenyl Ether	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	53-93	NC	30	
4-Nitroaniline	200000 U	200000 DU	3970	0 *	210000 DU	4040	0 *	55-100	NC	30	
4-Nitrophenol	200000 U	200000 DU	3970	0 *	210000 DU	4040	0 *	44-102	NC	30	
Acenaphthene	8200 J	39000 DU	3970	0 *	8080 DJ	4040	-2 *	52-91	NC	30	
Acenaphthylene	72000	50000 D	3970	-554 #	68900 D	4040	-78 #	53-97	32*	30	

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: 07/29/21
Date Received: 07/30/21
Date Analyzed: 08/20/21
Date Extracted: 08/2/21

Duplicate Matrix Spike Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Sample Name: TP BCP 52 28
Lab Code: R2107681-002
Analysis Method: 8270E
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Matrix Spike RQ2109244-04				Duplicate Matrix Spike RQ2109244-05				% Rec Limits	RPD	RPD Limit
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec				
Acetophenone	39000 U	39000 DU	7940	0 *	40000 DU	8080	0 *	38-80	NC	30	
Anthracene	110000	74900 D	3970	-1008 #	108000 D	4040	-179 #	63-98	36*	30	
Atrazine	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	43-131	NC	30	
Benz(a)anthracene	200000	161000 D	3970	-1052 #	205000 D	4040	69 #	59-99	24	30	
Benzaldehyde	200000 U	200000 DU	3970	0 *	210000 DU	4040	0 *	10-103	NC	30	
Benzo(a)pyrene	240000	191000 D	3970	-1177 #	243000 D	4040	141 #	71-129	24	30	
Benzo(b)fluoranthene	240000	193000 D	3970	-1092 #	241000 D	4040	129 #	59-101	22	30	
Benzo(g,h,i)perylene	110000	88600 D	3970	-426 #	113000 D	4040	183 #	67-113	24	30	
Benzo(k)fluoranthene	99000	73200 D	3970	-644 #	95700 D	4040	-76 #	64-107	27	30	
Biphenyl	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	43-88	NC	30	
2,2'-Oxybis(1-chloropropane)	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	45-85	NC	30	
Bis(2-chloroethoxy)methane	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	51-91	NC	30	
Bis(2-chloroethyl) Ether	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	46-87	NC	30	
Bis(2-ethylhexyl) Phthalate	60000 U	60000 DU	3970	0 *	61000 DU	4040	0 *	67-108	NC	30	
Butyl Benzyl Phthalate	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	67-107	NC	30	
Caprolactam	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	50-91	NC	30	
Carbazole	24000 J	14700 DJ	3970	-241 #	19100 DJ	4040	-128 #	62-109	26	30	
Chrysene	200000	154000 D	3970	-1045 #	192000 D	4040	-78 #	62-103	22	30	
Di-n-butyl Phthalate	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	66-109	NC	30	
Di-n-octyl Phthalate	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	65-114	NC	30	
Dibenz(a,h)anthracene	30000 J	26700 DJ	3970	-88 #	31700 DJ	4040	36 #	58-119	17	30	
Dibenzofuran	33000 J	19100 DJ	3970	-355 #	29700 DJ	4040	-85 #	52-93	44*	30	
Diethyl Phthalate	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	56-96	NC	30	
Dimethyl Phthalate	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	55-94	NC	30	
Fluoranthene	510000	372000 D	3970	-3409 #	474000 D	4040	-837 #	59-104	24	30	
Fluorene	63000	33400 DJ	3970	-742 #	51300 D	4040	-289 #	54-93	42*	30	
Hexachlorobenzene	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	55-97	NC	30	
Hexachlorobutadiene	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	47-87	NC	30	
Hexachlorocyclopentadiene	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	10-125	NC	30	
Hexachloroethane	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	41-77	NC	30	
Indeno(1,2,3-cd)pyrene	130000	106000 D	3970	-659 #	137000	4040	129 #	64-114	26	30	
Isophorone	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	40-81	NC	30	

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: 07/29/21
Date Received: 07/30/21
Date Analyzed: 08/20/21
Date Extracted: 08/2/21

Duplicate Matrix Spike Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Sample Name: TP BCP 52 28
Lab Code: R2107681-002
Analysis Method: 8270E
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Matrix Spike RQ2109244-04				Duplicate Matrix Spike RQ2109244-05				% Rec Limits	RPD	RPD Limit
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec				
N-Nitrosodi-n-propylamine	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	43-89	NC	30	
N-Nitrosodiphenylamine	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	53-107	NC	30	
Naphthalene	40000 J	27900 DJ	3970	-296 #	34100 DJ	4040	-137 #	48-85	20	30	
Nitrobenzene	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	46-84	NC	30	
Pentachlorophenol (PCP)	200000 U	200000 DU	3970	0 *	210000 DU	4040	0 *	34-118	NC	30	
Phenanthrene	320000	181000 D	3970	-3522 #	266000 D	4040	-1362 #	60-95	38*	30	
Phenol	39000 U	39000 DU	3970	0 *	40000 DU	4040	0 *	44-90	NC	30	
Pyrene	380000	282000 D	3970	-2373 #	366000 D	4040	-243 #	65-107	26	30	

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2109244-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	330 U	330	74	1	08/17/21 20:41	8/2/21	
2,3,4,6-Tetrachlorophenol	330 U	330	120	1	08/17/21 20:41	8/2/21	
2,4,5-Trichlorophenol	330 U	330	83	1	08/17/21 20:41	8/2/21	
2,4,6-Trichlorophenol	330 U	330	75	1	08/17/21 20:41	8/2/21	
2,4-Dichlorophenol	330 U	330	65	1	08/17/21 20:41	8/2/21	
2,4-Dimethylphenol	330 U	330	60	1	08/17/21 20:41	8/2/21	
2,4-Dinitrophenol	1700 U	1700	570	1	08/17/21 20:41	8/2/21	
2,4-Dinitrotoluene	330 U	330	130	1	08/17/21 20:41	8/2/21	
2,6-Dinitrotoluene	330 U	330	73	1	08/17/21 20:41	8/2/21	
2-Chloronaphthalene	330 U	330	67	1	08/17/21 20:41	8/2/21	
2-Chlorophenol	330 U	330	56	1	08/17/21 20:41	8/2/21	
2-Methylnaphthalene	330 U	330	56	1	08/17/21 20:41	8/2/21	
2-Methylphenol	330 U	330	70	1	08/17/21 20:41	8/2/21	
2-Nitroaniline	1700 U	1700	79	1	08/17/21 20:41	8/2/21	
2-Nitrophenol	330 U	330	78	1	08/17/21 20:41	8/2/21	
3,3'-Dichlorobenzidine	330 U	330	38	1	08/17/21 20:41	8/2/21	
3- and 4-Methylphenol Coelution	330 U	330	64	1	08/17/21 20:41	8/2/21	
3-Nitroaniline	1700 U	1700	67	1	08/17/21 20:41	8/2/21	
4,6-Dinitro-2-methylphenol	1700 U	1700	190	1	08/17/21 20:41	8/2/21	
4-Bromophenyl Phenyl Ether	330 U	330	88	1	08/17/21 20:41	8/2/21	
4-Chloro-3-methylphenol	330 U	330	68	1	08/17/21 20:41	8/2/21	
4-Chloroaniline	330 U	330	57	1	08/17/21 20:41	8/2/21	
4-Chlorophenyl Phenyl Ether	330 U	330	72	1	08/17/21 20:41	8/2/21	
4-Nitroaniline	1700 U	1700	34	1	08/17/21 20:41	8/2/21	
4-Nitrophenol	1700 U	1700	67	1	08/17/21 20:41	8/2/21	
Acenaphthene	330 U	330	63	1	08/17/21 20:41	8/2/21	
Acenaphthylene	330 U	330	68	1	08/17/21 20:41	8/2/21	
Acetophenone	330 U	330	97	1	08/17/21 20:41	8/2/21	
Anthracene	330 U	330	56	1	08/17/21 20:41	8/2/21	
Atrazine	330 U	330	47	1	08/17/21 20:41	8/2/21	
Benz(a)anthracene	330 U	330	50	1	08/17/21 20:41	8/2/21	
Benzaldehyde	1700 U	1700	81	1	08/17/21 20:41	8/2/21	
Benzo(a)pyrene	330 U	330	89	1	08/17/21 20:41	8/2/21	
Benzo(b)fluoranthene	330 U	330	56	1	08/17/21 20:41	8/2/21	
Benzo(g,h,i)perylene	330 U	330	77	1	08/17/21 20:41	8/2/21	
Benzo(k)fluoranthene	330 U	330	54	1	08/17/21 20:41	8/2/21	
Biphenyl	330 U	330	99	1	08/17/21 20:41	8/2/21	
2,2'-Oxybis(1-chloropropane)	330 U	330	69	1	08/17/21 20:41	8/2/21	
Bis(2-chloroethoxy)methane	330 U	330	82	1	08/17/21 20:41	8/2/21	
Bis(2-chloroethyl) Ether	330 U	330	66	1	08/17/21 20:41	8/2/21	
Bis(2-ethylhexyl) Phthalate	510 U	510	61	1	08/17/21 20:41	8/2/21	
Butyl Benzyl Phthalate	330 U	330	41	1	08/17/21 20:41	8/2/21	
Caprolactam	330 U	330	74	1	08/17/21 20:41	8/2/21	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2109244-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	330 U	330	54	1	08/17/21 20:41	8/2/21	
Chrysene	330 U	330	49	1	08/17/21 20:41	8/2/21	
Di-n-butyl Phthalate	330 U	330	54	1	08/17/21 20:41	8/2/21	
Di-n-octyl Phthalate	330 U	330	120	1	08/17/21 20:41	8/2/21	
Dibenz(a,h)anthracene	330 U	330	73	1	08/17/21 20:41	8/2/21	
Dibenzofuran	330 U	330	61	1	08/17/21 20:41	8/2/21	
Diethyl Phthalate	330 U	330	60	1	08/17/21 20:41	8/2/21	
Dimethyl Phthalate	330 U	330	64	1	08/17/21 20:41	8/2/21	
Fluoranthene	330 U	330	84	1	08/17/21 20:41	8/2/21	
Fluorene	330 U	330	63	1	08/17/21 20:41	8/2/21	
Hexachlorobenzene	330 U	330	81	1	08/17/21 20:41	8/2/21	
Hexachlorobutadiene	330 U	330	57	1	08/17/21 20:41	8/2/21	
Hexachlorocyclopentadiene	330 U	330	110	1	08/17/21 20:41	8/2/21	
Hexachloroethane	330 U	330	63	1	08/17/21 20:41	8/2/21	
Indeno(1,2,3-cd)pyrene	330 U	330	110	1	08/17/21 20:41	8/2/21	
Isophorone	330 U	330	70	1	08/17/21 20:41	8/2/21	
N-Nitrosodi-n-propylamine	330 U	330	110	1	08/17/21 20:41	8/2/21	
N-Nitrosodiphenylamine	330 U	330	210	1	08/17/21 20:41	8/2/21	
Naphthalene	330 U	330	63	1	08/17/21 20:41	8/2/21	
Nitrobenzene	330 U	330	60	1	08/17/21 20:41	8/2/21	
Pentachlorophenol (PCP)	1700 U	1700	340	1	08/17/21 20:41	8/2/21	
Phenanthrene	330 U	330	48	1	08/17/21 20:41	8/2/21	
Phenol	330 U	330	68	1	08/17/21 20:41	8/2/21	
Pyrene	330 U	330	56	1	08/17/21 20:41	8/2/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	74	10 - 109	08/17/21 20:41	
2-Fluorobiphenyl	60	10 - 102	08/17/21 20:41	
2-Fluorophenol	57	10 - 88	08/17/21 20:41	
Nitrobenzene-d5	65	10 - 95	08/17/21 20:41	
Phenol-d6	54	10 - 145	08/17/21 20:41	
Terphenyl-d14	99	10 - 106	08/17/21 20:41	

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Analyzed: 08/17/21

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2109244-02					Duplicate Lab Control Sample RQ2109244-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,2,4,5-Tetrachlorobenzene	8270E	2630	3230	81	2580	3350	77	13-145	2	30
2,3,4,6-Tetrachlorophenol	8270E	2500	3230	77	2470	3340	74	55-98	1	30
2,4,5-Trichlorophenol	8270E	2660	3230	82	2680	3340	80	52-93	<1	30
2,4,6-Trichlorophenol	8270E	2390	3230	74	2440	3340	73	50-89	2	30
2,4-Dichlorophenol	8270E	2120	3230	66	2110	3340	63	50-84	<1	30
2,4-Dimethylphenol	8270E	2100	3230	65	2070	3340	62	50-86	1	30
2,4-Dinitrophenol	8270E	1660	3230	51	2040	3340	61	20-101	21	30
2,4-Dinitrotoluene	8270E	3340	3230	103	3350	3340	100	60-106	<1	30
2,6-Dinitrotoluene	8270E	3050	3230	94	3120	3340	93	57-100	2	30
2-Chloronaphthalene	8270E	2290	3230	71	2260	3340	68	51-91	1	30
2-Chlorophenol	8270E	2010	3230	62	1740	3340	52	45-83	15	30
2-Methylnaphthalene	8270E	2080	3230	64	2020	3340	60	50-86	3	30
2-Methylphenol	8270E	2230	3230	69	2040	3340	61	47-90	9	30
2-Nitroaniline	8270E	2810	3230	87	2830	3340	85	50-101	<1	30
2-Nitrophenol	8270E	2240	3230	69	1990	3340	59	48-83	12	30
3- and 4-Methylphenol Coelution	8270E	2330	3230	72	2150	3340	64	47-90	8	30
3-Nitroaniline	8270E	2710	3230	84	2810	3340	84	42-85	3	30
4,6-Dinitro-2-methylphenol	8270E	2350	3230	73	2730	3340	82	42-98	15	30
4-Bromophenyl Phenyl Ether	8270E	2600	3230	80	2560	3340	77	54-94	1	30
4-Chloro-3-methylphenol	8270E	2290	3230	71	2400	3340	72	51-89	5	30
4-Chloroaniline	8270E	1860	3230	57	1930	3340	58	32-77	4	30
4-Chlorophenyl Phenyl Ether	8270E	2570	3230	79	2590	3340	77	53-93	<1	30
4-Nitroaniline	8270E	3150	3230	97	3210	3340	96	55-100	2	30
4-Nitrophenol	8270E	2480	3230	77	2600	3340	78	44-102	5	30
Acenaphthene	8270E	2480	3230	77	2470	3340	74	52-91	<1	30
Acenaphthylene	8270E	2700	3230	83	2690	3340	80	53-97	<1	30
Acetophenone	8270E	4080	6460	63	3710	6690	55	38-80	10	30
Anthracene	8270E	2940	3230	91	2970	3340	89	63-98	1	30
Benz(a)anthracene	8270E	2950	3230	91	3030	3340	91	59-99	3	30
Benzo(a)pyrene	8270E	3940	3230	122	4130	3340	124	71-129	5	30
Benzo(b)fluoranthene	8270E	3090	3230	96	3190	3340	95	59-101	3	30
Benzo(g,h,i)perylene	8270E	3370	3230	104	3520	3340	105	67-113	4	30
Benzo(k)fluoranthene	8270E	3280	3230	101	3430	3340	102	64-107	4	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Analyzed: 08/17/21

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2109244-02					Duplicate Lab Control Sample RQ2109244-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Biphenyl	8270E	2260	3230	70	2270	3340	68	43-88	<1	30
2,2'-Oxybis(1-chloropropane)	8270E	2050	3230	63	1690	3340	51	45-85	19	30
Bis(2-chloroethoxy)methane	8270E	2430	3230	75	2280	3340	68	51-91	7	30
Bis(2-chloroethyl) Ether	8270E	2020	3230	63	1640	3340	49	46-87	21	30
Bis(2-ethylhexyl) Phthalate	8270E	3430	3230	106	3530	3340	106	67-108	3	30
Butyl Benzyl Phthalate	8270E	3340	3230	103	3420	3340	102	67-107	3	30
Caprolactam	8270E	2650	3230	82	2770	3340	83	50-91	4	30
Carbazole	8270E	3170	3230	98	3240	3340	97	62-109	2	30
Chrysene	8270E	3060	3230	95	3120	3340	93	62-103	2	30
Di-n-butyl Phthalate	8270E	3470	3230	107	3570	3340	107	66-109	3	30
Di-n-octyl Phthalate	8270E	3700	3230	115 *	3850	3340	115 *	65-114	4	30
Dibenz(a,h)anthracene	8270E	3320	3230	103	3400	3340	102	58-119	2	30
Dibenzofuran	8270E	2510	3230	78	2550	3340	76	52-93	1	30
Diethyl Phthalate	8270E	2750	3230	85	2790	3340	84	56-96	1	30
Dimethyl Phthalate	8270E	2550	3230	79	2630	3340	79	55-94	3	30
Fluoranthene	8270E	3150	3230	97	3200	3340	96	59-104	2	30
Fluorene	8270E	2520	3230	78	2590	3340	77	54-93	3	30
Hexachlorobenzene	8270E	2740	3230	85	2750	3340	82	55-97	<1	30
Hexachlorobutadiene	8270E	2000	3230	62	1700	3340	51	47-87	16	30
Hexachlorocyclopentadiene	8270E	1550	3230	48	1460	3340	44	10-125	6	30
Hexachloroethane	8270E	1860	3230	58	1380	3340	41	41-77	30	30
Indeno(1,2,3-cd)pyrene	8270E	3270	3230	101	3540	3340	106	64-114	8	30
Isophorone	8270E	2210	3230	68	2210	3340	66	40-81	<1	30
N-Nitrosodi-n-propylamine	8270E	2070	3230	64	1970	3340	59	43-89	5	30
N-Nitrosodiphenylamine	8270E	2780	3230	86	2800	3340	84	53-107	<1	30
Naphthalene	8270E	1880	3230	58	1700	3340	51	48-85	10	30
Nitrobenzene	8270E	2060	3230	64	1860	3340	56	46-84	10	30
Pentachlorophenol (PCP)	8270E	2560	3230	79	2670	3340	80	34-118	4	30
Phenanthrene	8270E	2810	3230	87	2840	3340	85	60-95	<1	30
Phenol	8270E	2050	3230	63	1840	3340	55	44-90	11	30
Pyrene	8270E	3320	3230	103	3410	3340	102	65-107	3	30



Metals

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: R2107681-MB

Service Request: R2107681
Date Collected: NA
Date Received: NA

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010D	20 U	mg/Kg	20	12	1	08/10/21 20:01	08/10/21	
Antimony, Total	6010D	6.0 U	mg/Kg	6.0	0.6	1	08/10/21 20:01	08/10/21	
Arsenic, Total	6010D	1.0 U	mg/Kg	1.0	0.7	1	08/10/21 20:01	08/10/21	
Barium, Total	6010D	2.0 U	mg/Kg	2.0	1.5	1	08/10/21 20:01	08/10/21	
Beryllium, Total	6010D	0.30 U	mg/Kg	0.30	0.03	1	08/10/21 20:01	08/10/21	
Cadmium, Total	6010D	0.09 J	mg/Kg	0.50	0.09	1	08/10/21 20:01	08/10/21	
Calcium, Total	6010D	100 U	mg/Kg	100	40	1	08/10/21 20:01	08/10/21	
Chromium, Total	6010D	1.0 U	mg/Kg	1.0	0.4	1	08/10/21 20:01	08/10/21	
Cobalt, Total	6010D	5.0 U	mg/Kg	5.0	0.09	1	08/10/21 20:01	08/10/21	
Copper, Total	6010D	2.0 U	mg/Kg	2.0	0.2	1	08/10/21 20:01	08/10/21	
Iron, Total	6010D	20 U	mg/Kg	20	13	1	08/10/21 20:01	08/10/21	
Lead, Total	6010D	5.0 U	mg/Kg	5.0	0.4	1	08/10/21 20:01	08/10/21	
Magnesium, Total	6010D	100 U	mg/Kg	100	20	1	08/10/21 20:01	08/10/21	
Manganese, Total	6010D	0.4 J	mg/Kg	2.0	0.2	1	08/10/21 20:01	08/10/21	
Mercury, Total	7471B	0.033 U	mg/Kg	0.033	0.013	1	08/05/21 13:12	08/04/21	
Nickel, Total	6010D	4.0 U	mg/Kg	4.0	0.7	1	08/10/21 20:01	08/10/21	
Potassium, Total	6010D	200 U	mg/Kg	200	50	1	08/10/21 20:01	08/10/21	
Selenium, Total	6010D	1.0 U	mg/Kg	1.0	0.6	1	08/10/21 20:01	08/10/21	
Silver, Total	6010D	1.0 U	mg/Kg	1.0	0.09	1	08/10/21 20:01	08/10/21	
Sodium, Total	6010D	100 U	mg/Kg	100	20	1	08/12/21 18:29	08/10/21	
Thallium, Total	6010D	1.0 U	mg/Kg	1.0	0.7	1	08/10/21 20:01	08/10/21	
Vanadium, Total	6010D	5.0 U	mg/Kg	5.0	0.8	1	08/10/21 20:01	08/10/21	
Zinc, Total	6010D	2.0 U	mg/Kg	2.0	1.4	1	08/10/21 20:01	08/10/21	

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Analyzed: 08/05/21 - 08/12/21

Lab Control Sample Summary
Inorganic Parameters

Units:mg/Kg
Basis:Dry

Lab Control Sample
R2107681-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum, Total	6010D	198	200	99	80-120
Antimony, Total	6010D	47.8	50.0	96	80-120
Arsenic, Total	6010D	3.85	4.0	96	80-120
Barium, Total	6010D	193	200	96	80-120
Beryllium, Total	6010D	4.72	5.00	94	80-120
Cadmium, Total	6010D	4.85	5.00	97	80-120
Calcium, Total	6010D	213	200	106	80-120
Chromium, Total	6010D	19.9	20.0	100	80-120
Cobalt, Total	6010D	49.5	50.0	99	80-120
Copper, Total	6010D	22.8	25.0	91	80-120
Iron, Total	6010D	99.6	100	100	80-120
Lead, Total	6010D	47.8	50.0	96	80-120
Magnesium, Total	6010D	200	200	100	80-120
Manganese, Total	6010D	49.0	50.0	98	80-120
Mercury, Total	7471B	0.171	0.167	103	80-120
Nickel, Total	6010D	50.0	50.0	100	80-120
Potassium, Total	6010D	2070	2000	103	80-120
Selenium, Total	6010D	89.8	101	89	80-120
Silver, Total	6010D	4.45	5.0	89	80-120
Sodium, Total	6010D	2000	2000	100	80-120
Thallium, Total	6010D	182	200	91	80-120
Vanadium, Total	6010D	51.4	50.0	103	80-120
Zinc, Total	6010D	49.7	50.0	99	80-120



General Chemistry

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: R2107681-MB

Service Request: R2107681
Date Collected: NA
Date Received: NA

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cyanide, Total	9012B	0.30 U	mg/Kg	0.30	0.17	1	08/12/21 11:50	08/11/21	

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Analyzed: 08/12/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/Kg
Basis:Dry

Lab Control Sample
R2107681-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	9012B	3.11	3.00	104	85-115

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QA/QC Report

Client: Inventum Engineering
Project: RITC RI
Sample Matrix: Soil

Service Request: R2107681
Date Analyzed: 08/12/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/Kg
Basis:Dry

Lab Control Sample
R2107681-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	9012B	17.6	18.0	98	85-115



ANALYTICAL REPORT

Lab Number:	L2430618
Client:	Inventum Engineering 441 Carlisle Drive Suite C Herndon, NY 20170
ATTN:	John Black
Phone:	(571) 752-6562
Project Name:	RITC
Project Number:	SATELLITE AREA
Report Date:	06/11/24

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



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2430618-01	SS-BCP-32-06032024	SOLID	3875 RIVER RD.	06/03/24 09:00	06/03/24
L2430618-02	SS-BCP-29-06032024	SOLID	3875 RIVER RD.	06/03/24 09:05	06/03/24
L2430618-03	SS-BCP-29-01-06032024	SOLID	3875 RIVER RD.	06/03/24 09:10	06/03/24
L2430618-04	SS-BCP-29-02-06032024	SOLID	3875 RIVER RD.	06/03/24 09:15	06/03/24
L2430618-05	SS-BCP-29-03-06032024	SOLID	3875 RIVER RD.	06/03/24 09:20	06/03/24
L2430618-06	SS-BCP-30-06032024	SOLID	3875 RIVER RD.	06/03/24 09:25	06/03/24
L2430618-07	SS-BCP-30-01-06032024	SOLID	3875 RIVER RD.	06/03/24 09:30	06/03/24
L2430618-08	SS-BCP-30-02-06032024	SOLID	3875 RIVER RD.	06/03/24 09:35	06/03/24
L2430618-09	SS-BCP-30-03-06032024	SOLID	3875 RIVER RD.	06/03/24 09:40	06/03/24
L2430618-10	SS-BCP-31-06032024	SOLID	3875 RIVER RD.	06/03/24 09:45	06/03/24
L2430618-11	SS-BCP-31-01-06032024	SOLID	3875 RIVER RD.	06/03/24 09:50	06/03/24
L2430618-12	SS-BCP-31-02-06032024	SOLID	3875 RIVER RD.	06/03/24 09:55	06/03/24
L2430618-13	SS-BCP-31-03-06032024	SOLID	3875 RIVER RD.	06/03/24 10:00	06/03/24
L2430618-14	SS-BCP-33-06032024	SOLID	3875 RIVER RD.	06/03/24 10:05	06/03/24
L2430618-15	SS-BCP-33-01-06032024	SOLID	3875 RIVER RD.	06/03/24 10:10	06/03/24
L2430618-16	SS-BCP-33-02-06032024	SOLID	3875 RIVER RD.	06/03/24 10:15	06/03/24
L2430618-17	SS-BCP-33-03-06032024	SOLID	3875 RIVER RD.	06/03/24 10:20	06/03/24

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

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: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Case Narrative (continued)

Report Submission

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

Sample Receipt

L2430618-06 and -08: The analysis of Ignitability could not be performed due to sample matrix. Flashpoint analysis was performed instead.

TCLP Semivolatiles

L2430618-07D: The sample has elevated detection limits due to the dilution required by the sample matrix.

TCLP Herbicides

L2430618-04: The surrogate recoveries were outside the acceptance criteria for dcaa (10%/10%); however, re-extraction achieved similar results: dcaa (15%/11%). The results of both extractions are reported.

L2430618-15: The surrogate recoveries were outside the acceptance criteria for dcaa (17%/19%); however, re-extraction achieved similar results: dcaa (26%/21%). The results of both extractions are reported.

TCLP Metals

The WG1930630-3 MS recovery, performed on L2430618-01, is outside the acceptance criteria for silver (74%). A post digestion spike was performed and was within acceptance criteria.

Cyanide, Total

The WG1931466-3 LCSD recovery for cyanide, total (74%), associated with L2430618-08, -09, and -14 through -17, is outside our in-house acceptance criteria, but within the vendor-certified acceptance limits. The results of the original analyses are reported.

Nitrogen, Ammonia

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Case Narrative (continued)

The WG1931538-3 Laboratory Duplicate RPD for nitrogen, ammonia (98%), performed on L2430618-17, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

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:



Kelly Stenstrom

Title: Technical Director/Representative

Date: 06/11/24

ORGANICS

VOLATILES

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-01
 Client ID: SS-BCP-32-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:00
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8260D
 Analytical Date: 06/05/24 18:23
 Analyst: MCM
 Percent Solids: 85%
 TCLP/SPLP Ext. Date: 06/04/24 09:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	76		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	96		70-130
dibromofluoromethane	118		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-02
Client ID: SS-BCP-29-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:05
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8260D
Analytical Date: 06/05/24 18:51
Analyst: MCM
Percent Solids: 72%
TCLP/SPLP Ext. Date: 06/04/24 09:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	160		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	98		70-130
dibromofluoromethane	105		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-03
Client ID: SS-BCP-29-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:10
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8260D
Analytical Date: 06/05/24 19:18
Analyst: MCM
Percent Solids: 89%
TCLP/SPLP Ext. Date: 06/04/24 09:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	11		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	93		70-130
dibromofluoromethane	109		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-04
 Client ID: SS-BCP-29-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:15
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8260D
 Analytical Date: 06/05/24 19:46
 Analyst: MCM
 Percent Solids: 81%
 TCLP/SPLP Ext. Date: 06/04/24 09:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	8.7		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	95		70-130
dibromofluoromethane	112		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-05
 Client ID: SS-BCP-29-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:20
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8260D
 Analytical Date: 06/05/24 20:13
 Analyst: MCM
 Percent Solids: 85%
 TCLP/SPLP Ext. Date: 06/04/24 09:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	28		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	96		70-130
dibromofluoromethane	111		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-06
 Client ID: SS-BCP-30-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:25
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8260D
 Analytical Date: 06/05/24 20:41
 Analyst: MCM
 Percent Solids: 94%
 TCLP/SPLP Ext. Date: 06/04/24 09:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	350		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	96		70-130
dibromofluoromethane	103		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-07
Client ID: SS-BCP-30-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:30
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8260D
Analytical Date: 06/05/24 21:09
Analyst: MCM
Percent Solids: 83%
TCLP/SPLP Ext. Date: 06/04/24 09:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	83		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	100		70-130
dibromofluoromethane	115		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-08
 Client ID: SS-BCP-30-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:35
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8260D
 Analytical Date: 06/05/24 21:36
 Analyst: MCM
 Percent Solids: 91%
 TCLP/SPLP Ext. Date: 06/04/24 09:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	70		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	99		70-130
dibromofluoromethane	113		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-09
 Client ID: SS-BCP-30-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:40
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8260D
 Analytical Date: 06/06/24 06:38
 Analyst: MCM
 Percent Solids: 91%
 TCLP/SPLP Ext. Date: 06/05/24 13:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	55		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	96		70-130
dibromofluoromethane	125		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-10
 Client ID: SS-BCP-31-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:45
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8260D
 Analytical Date: 06/06/24 07:06
 Analyst: MCM
 Percent Solids: 79%
 TCLP/SPLP Ext. Date: 06/05/24 13:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	ND		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	98		70-130
dibromofluoromethane	114		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-11
Client ID: SS-BCP-31-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:50
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8260D
Analytical Date: 06/06/24 12:37
Analyst: LAC
Percent Solids: 90%
TCLP/SPLP Ext. Date: 06/05/24 13:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	ND		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	98		70-130
dibromofluoromethane	113		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-12
 Client ID: SS-BCP-31-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:55
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8260D
 Analytical Date: 06/06/24 13:05
 Analyst: LAC
 Percent Solids: 89%
 TCLP/SPLP Ext. Date: 06/05/24 13:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	ND		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	95		70-130
dibromofluoromethane	108		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-13
Client ID: SS-BCP-31-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:00
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8260D
Analytical Date: 06/06/24 13:32
Analyst: LAC
Percent Solids: 87%
TCLP/SPLP Ext. Date: 06/05/24 13:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	ND		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	97		70-130
dibromofluoromethane	113		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-14
 Client ID: SS-BCP-33-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:05
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8260D
 Analytical Date: 06/06/24 14:00
 Analyst: LAC
 Percent Solids: 87%
 TCLP/SPLP Ext. Date: 06/05/24 13:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	160		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	96		70-130
dibromofluoromethane	111		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-15
Client ID: SS-BCP-33-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:10
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8260D
Analytical Date: 06/06/24 14:28
Analyst: LAC
Percent Solids: 91%
TCLP/SPLP Ext. Date: 06/05/24 13:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	36		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	97		70-130
dibromofluoromethane	113		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-16
Client ID: SS-BCP-33-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:15
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8260D
Analytical Date: 06/09/24 18:22
Analyst: MCM
Percent Solids: 92%
TCLP/SPLP Ext. Date: 06/08/24 08:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	46		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	89		70-130
dibromofluoromethane	109		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-17
Client ID: SS-BCP-33-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:20
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8260D
Analytical Date: 06/09/24 18:45
Analyst: MCM
Percent Solids: 90%
TCLP/SPLP Ext. Date: 06/08/24 08:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	85		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	91		70-130
dibromofluoromethane	104		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 06/05/24 17:00
 Analyst: LAC
 TCLP/SPLP Extraction Date: 06/04/24 09:44

Extraction Date: 06/04/24 09:44

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Volatiles by EPA 1311 - Westborough Lab for sample(s): 01-08 Batch: WG1930466-5					
Chloroform	ND		ug/l	7.5	2.2
Carbon tetrachloride	ND		ug/l	5.0	1.3
Tetrachloroethene	ND		ug/l	5.0	1.8
Chlorobenzene	ND		ug/l	5.0	1.8
1,2-Dichloroethane	ND		ug/l	5.0	1.3
Benzene	ND		ug/l	5.0	1.6
Vinyl chloride	ND		ug/l	10	0.71
1,1-Dichloroethene	ND		ug/l	5.0	1.7
Trichloroethene	ND		ug/l	5.0	1.8
1,4-Dichlorobenzene	ND		ug/l	25	1.9
2-Butanone	ND		ug/l	50	19.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	97		70-130
dibromofluoromethane	110		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 06/06/24 06:11
 Analyst: MCM
 TCLP/SPLP Extraction Date: 06/05/24 13:20

Extraction Date: 06/05/24 13:20

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Volatiles by EPA 1311 - Westborough Lab for sample(s): 09-15 Batch: WG1930605-5					
Chloroform	ND		ug/l	7.5	2.2
Carbon tetrachloride	ND		ug/l	5.0	1.3
Tetrachloroethene	ND		ug/l	5.0	1.8
Chlorobenzene	ND		ug/l	5.0	1.8
1,2-Dichloroethane	ND		ug/l	5.0	1.3
Benzene	ND		ug/l	5.0	1.6
Vinyl chloride	ND		ug/l	10	0.71
1,1-Dichloroethene	ND		ug/l	5.0	1.7
Trichloroethene	ND		ug/l	5.0	1.8
1,4-Dichlorobenzene	ND		ug/l	25	1.9
2-Butanone	ND		ug/l	50	19.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	88		70-130
4-Bromofluorobenzene	97		70-130
dibromofluoromethane	116		70-130

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 06/09/24 16:51
 Analyst: MAG
 TCLP/SPLP Extraction Date: 06/08/24 08:48

Extraction Date: 06/08/24 08:48

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Volatiles by EPA 1311 - Westborough Lab for sample(s): 16-17 Batch: WG1932023-5					
Chloroform	ND		ug/l	7.5	2.2
Carbon tetrachloride	ND		ug/l	5.0	1.3
Tetrachloroethene	ND		ug/l	5.0	1.8
Chlorobenzene	ND		ug/l	5.0	1.8
1,2-Dichloroethane	ND		ug/l	5.0	1.3
Benzene	ND		ug/l	5.0	1.6
Vinyl chloride	ND		ug/l	10	0.71
1,1-Dichloroethene	ND		ug/l	5.0	1.7
Trichloroethene	ND		ug/l	5.0	1.8
1,4-Dichlorobenzene	ND		ug/l	25	1.9
2-Butanone	ND		ug/l	50	19.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	95		70-130
dibromofluoromethane	108		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Volatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-08 Batch: WG1930466-3 WG1930466-4								
Chloroform	94		92		70-130	2		20
Carbon tetrachloride	81		80		63-132	1		20
Tetrachloroethene	87		88		70-130	1		20
Chlorobenzene	94		94		75-130	0		25
1,2-Dichloroethane	100		99		70-130	1		20
Benzene	95		95		70-130	0		25
Vinyl chloride	65		64		55-140	2		20
1,1-Dichloroethene	83		79		61-145	5		25
Trichloroethene	87		89		70-130	2		25
1,4-Dichlorobenzene	92		93		70-130	1		20
2-Butanone	110		100		63-138	10		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		93		70-130
Toluene-d8	92		93		70-130
4-Bromofluorobenzene	95		97		70-130
dibromofluoromethane	98		94		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Volatiles by EPA 1311 - Westborough Lab Associated sample(s): 09-15 Batch: WG1930605-3 WG1930605-4								
Chloroform	100		99		70-130	1		20
Carbon tetrachloride	95		96		63-132	1		20
Tetrachloroethene	96		100		70-130	4		20
Chlorobenzene	96		97		75-130	1		25
1,2-Dichloroethane	100		100		70-130	0		20
Benzene	99		98		70-130	1		25
Vinyl chloride	77		78		55-140	1		20
1,1-Dichloroethene	99		98		61-145	1		25
Trichloroethene	95		96		70-130	1		25
1,4-Dichlorobenzene	97		97		70-130	0		20
2-Butanone	110		110		63-138	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		93		70-130
Toluene-d8	93		93		70-130
4-Bromofluorobenzene	99		98		70-130
dibromofluoromethane	98		96		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Volatiles by EPA 1311 - Westborough Lab Associated sample(s): 16-17 Batch: WG1932023-3 WG1932023-4								
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	100		110		63-132	10		20
Tetrachloroethene	110		100		70-130	10		20
Chlorobenzene	100		99		75-130	1		25
1,2-Dichloroethane	100		100		70-130	0		20
Benzene	98		99		70-130	1		25
Vinyl chloride	99		96		55-140	3		20
1,1-Dichloroethene	110		110		61-145	0		25
Trichloroethene	97		94		70-130	3		25
1,4-Dichlorobenzene	98		96		70-130	2		20
2-Butanone	66		75		63-138	13		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	106		104		70-130
Toluene-d8	101		99		70-130
4-Bromofluorobenzene	91		92		70-130
dibromofluoromethane	107		107		70-130

SEMIVOLATILES

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-01
Client ID: SS-BCP-32-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:00
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8270E
Analytical Date: 06/09/24 17:59
Analyst: CMM
Percent Solids: 85%
TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	690		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	1700	E	ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	9.4	J	ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	89		21-120
Phenol-d6	78		10-120
Nitrobenzene-d5	88		23-120
2-Fluorobiphenyl	95		15-120
2,4,6-Tribromophenol	113		10-120
4-Terphenyl-d14	90		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-01 D
 Client ID: SS-BCP-32-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:00
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 18:22
 Analyst: CMM
 Percent Solids: 85%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

TCLP Semivolatiles by EPA 1311 - Westborough Lab						

3-Methylphenol/4-Methylphenol	2100		ug/l	120	14.	5

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-02
 Client ID: SS-BCP-29-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:05
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 15:55
 Analyst: CMM
 Percent Solids: 72%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	ND		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	ND		ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	79		21-120
Phenol-d6	76		10-120
Nitrobenzene-d5	87		23-120
2-Fluorobiphenyl	91		15-120
2,4,6-Tribromophenol	97		10-120
4-Terphenyl-d14	105		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-03
 Client ID: SS-BCP-29-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:10
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 16:19
 Analyst: CMM
 Percent Solids: 89%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	ND		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	ND		ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	85		21-120
Phenol-d6	80		10-120
Nitrobenzene-d5	92		23-120
2-Fluorobiphenyl	94		15-120
2,4,6-Tribromophenol	92		10-120
4-Terphenyl-d14	100		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-04
 Client ID: SS-BCP-29-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:15
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 13:56
 Analyst: CMM
 Percent Solids: 81%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/05/24 21:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	ND		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	ND		ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		21-120
Phenol-d6	70		10-120
Nitrobenzene-d5	80		23-120
2-Fluorobiphenyl	78		15-120
2,4,6-Tribromophenol	81		10-120
4-Terphenyl-d14	85		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-05
 Client ID: SS-BCP-29-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:20
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 16:43
 Analyst: CMM
 Percent Solids: 85%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	ND		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	ND		ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	79		21-120
Phenol-d6	77		10-120
Nitrobenzene-d5	88		23-120
2-Fluorobiphenyl	90		15-120
2,4,6-Tribromophenol	90		10-120
4-Terphenyl-d14	94		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-06
 Client ID: SS-BCP-30-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:25
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 15:43
 Analyst: CMM
 Percent Solids: 94%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	1600	E	ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	3800	E	ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	14	J	ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		21-120
Phenol-d6	73		10-120
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	76		15-120
2,4,6-Tribromophenol	101		10-120
4-Terphenyl-d14	79		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-06 D
 Client ID: SS-BCP-30-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:25
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 16:05
 Analyst: CMM
 Percent Solids: 94%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

TCLP Semivolatiles by EPA 1311 - Westborough Lab						

2-Methylphenol	2200		ug/l	250	55.	10
3-Methylphenol/4-Methylphenol	5300		ug/l	250	28.	10

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-07 D
 Client ID: SS-BCP-30-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:30
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 16:51
 Analyst: CMM
 Percent Solids: 83%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	100	34.	10
2,4-Dinitrotoluene	ND		ug/l	250	19.	10
Hexachlorobutadiene	ND		ug/l	100	30.	10
Hexachloroethane	ND		ug/l	100	22.	10
Nitrobenzene	ND		ug/l	100	33.	10
2,4,6-Trichlorophenol	ND		ug/l	250	25.	10
Pentachlorophenol	ND		ug/l	500	98.	10
2-Methylphenol	1600		ug/l	250	55.	10
3-Methylphenol/4-Methylphenol	4200		ug/l	250	28.	10
2,4,5-Trichlorophenol	ND		ug/l	250	19.	10
Pyridine	ND		ug/l	180	45.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	103		21-120
Phenol-d6	97		10-120
Nitrobenzene-d5	103		23-120
2-Fluorobiphenyl	112		15-120
2,4,6-Tribromophenol	137	Q	10-120
4-Terphenyl-d14	118		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-08
Client ID: SS-BCP-30-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:35
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8270E
Analytical Date: 06/09/24 17:14
Analyst: CMM
Percent Solids: 91%
TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	530		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	1200	E	ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	6.0	J	ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	78		21-120
Phenol-d6	69		10-120
Nitrobenzene-d5	74		23-120
2-Fluorobiphenyl	75		15-120
2,4,6-Tribromophenol	98		10-120
4-Terphenyl-d14	79		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-08 D
 Client ID: SS-BCP-30-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:35
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 17:36
 Analyst: CMM
 Percent Solids: 91%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

TCLP Semivolatiles by EPA 1311 - Westborough Lab						

3-Methylphenol/4-Methylphenol	1500		ug/l	120	14.	5

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-09
 Client ID: SS-BCP-30-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:40
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 14:57
 Analyst: CMM
 Percent Solids: 91%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	1900	E	ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	4300	E	ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	9.9	J	ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		21-120
Phenol-d6	73		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	76		15-120
2,4,6-Tribromophenol	100		10-120
4-Terphenyl-d14	79		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-09 D
 Client ID: SS-BCP-30-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:40
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 15:20
 Analyst: CMM
 Percent Solids: 91%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
2-Methylphenol	2700		ug/l	250	55.	10
3-Methylphenol/4-Methylphenol	6500		ug/l	250	28.	10

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-10
 Client ID: SS-BCP-31-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:45
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 17:06
 Analyst: CMM
 Percent Solids: 79%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	ND		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	ND		ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		21-120
Phenol-d6	77		10-120
Nitrobenzene-d5	87		23-120
2-Fluorobiphenyl	87		15-120
2,4,6-Tribromophenol	90		10-120
4-Terphenyl-d14	95		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-11
 Client ID: SS-BCP-31-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:50
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 14:20
 Analyst: CMM
 Percent Solids: 90%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/05/24 21:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	ND		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	ND		ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	78		21-120
Phenol-d6	73		10-120
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	85		15-120
2,4,6-Tribromophenol	86		10-120
4-Terphenyl-d14	92		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-12
Client ID: SS-BCP-31-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:55
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8270E
Analytical Date: 06/09/24 14:43
Analyst: CMM
Percent Solids: 89%
TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
Extraction Date: 06/05/24 21:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	ND		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	ND		ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		21-120
Phenol-d6	77		10-120
Nitrobenzene-d5	92		23-120
2-Fluorobiphenyl	93		15-120
2,4,6-Tribromophenol	95		10-120
4-Terphenyl-d14	102		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-13
 Client ID: SS-BCP-31-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:00
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 17:30
 Analyst: CMM
 Percent Solids: 87%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	ND		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	ND		ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	75		21-120
Phenol-d6	73		10-120
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	86		15-120
2,4,6-Tribromophenol	86		10-120
4-Terphenyl-d14	93		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-14
 Client ID: SS-BCP-33-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:05
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 17:54
 Analyst: CMM
 Percent Solids: 87%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	170		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	190		ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	ND		ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		21-120
Phenol-d6	74		10-120
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	82		15-120
2,4,6-Tribromophenol	87		10-120
4-Terphenyl-d14	90		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-15
 Client ID: SS-BCP-33-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:10
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8270E
 Analytical Date: 06/09/24 15:07
 Analyst: CMM
 Percent Solids: 91%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/05/24 21:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	260		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	750		ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	4.9	J	ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		21-120
Phenol-d6	82		10-120
Nitrobenzene-d5	90		23-120
2-Fluorobiphenyl	91		15-120
2,4,6-Tribromophenol	98		10-120
4-Terphenyl-d14	100		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-16
Client ID: SS-BCP-33-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:15
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8270E
Analytical Date: 06/09/24 15:31
Analyst: CMM
Percent Solids: 92%
TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
Extraction Date: 06/05/24 21:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	220		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	570		ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	ND		ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		21-120
Phenol-d6	72		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	81		15-120
2,4,6-Tribromophenol	85		10-120
4-Terphenyl-d14	87		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-17
Client ID: SS-BCP-33-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:20
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8270E
Analytical Date: 06/09/24 18:18
Analyst: CMM
Percent Solids: 90%
TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
Extraction Date: 06/06/24 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	3.4	1
2,4-Dinitrotoluene	ND		ug/l	25	1.9	1
Hexachlorobutadiene	ND		ug/l	10	3.0	1
Hexachloroethane	ND		ug/l	10	2.2	1
Nitrobenzene	ND		ug/l	10	3.3	1
2,4,6-Trichlorophenol	ND		ug/l	25	2.5	1
Pentachlorophenol	ND		ug/l	50	9.8	1
2-Methylphenol	330		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	740		ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	ND		ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	86		21-120
Phenol-d6	86		10-120
Nitrobenzene-d5	99		23-120
2-Fluorobiphenyl	98		15-120
2,4,6-Tribromophenol	104		10-120
4-Terphenyl-d14	107		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
 Analytical Date: 06/07/24 20:37
 Analyst: EK
 TCLP/SPLP Extraction Date: 06/04/24 04:45

Extraction Method: EPA 3510C
 Extraction Date: 06/05/24 21:17

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Semivolatiles by EPA 1311 - Westborough Lab for sample(s): 04,11-12,15-16 Batch: WG1930295-1					
Hexachlorobenzene	ND		ug/l	10	3.4
2,4-Dinitrotoluene	ND		ug/l	25	1.9
Hexachlorobutadiene	ND		ug/l	10	3.0
Hexachloroethane	ND		ug/l	10	2.2
Nitrobenzene	ND		ug/l	10	3.3
2,4,6-Trichlorophenol	ND		ug/l	25	2.5
Pentachlorophenol	ND		ug/l	50	9.8
2-Methylphenol	ND		ug/l	25	5.5
3-Methylphenol/4-Methylphenol	ND		ug/l	25	2.8
2,4,5-Trichlorophenol	ND		ug/l	25	1.9
Pyridine	ND		ug/l	18	4.5

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	65		21-120
Phenol-d6	63		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	86		15-120
2,4,6-Tribromophenol	83		10-120
4-Terphenyl-d14	91		33-120

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
 Analytical Date: 06/07/24 17:05
 Analyst: CMM
 TCLP/SPLP Extraction Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Semivolatiles by EPA 1311 - Westborough Lab for sample(s): 01-03,05-10,13-14,17 Batch: WG1930738-1					
Hexachlorobenzene	ND		ug/l	10	3.4
2,4-Dinitrotoluene	ND		ug/l	25	1.9
Hexachlorobutadiene	ND		ug/l	10	3.0
Hexachloroethane	ND		ug/l	10	2.2
Nitrobenzene	ND		ug/l	10	3.3
2,4,6-Trichlorophenol	ND		ug/l	25	2.5
Pentachlorophenol	ND		ug/l	50	9.8
2-Methylphenol	ND		ug/l	25	5.5
3-Methylphenol/4-Methylphenol	ND		ug/l	25	2.8
2,4,5-Trichlorophenol	ND		ug/l	25	1.9
Pyridine	ND		ug/l	18	4.5

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	85		21-120
Phenol-d6	85		10-120
Nitrobenzene-d5	89		23-120
2-Fluorobiphenyl	98		15-120
2,4,6-Tribromophenol	101		10-120
4-Terphenyl-d14	109		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Semivolatiles by EPA 1311 - Westborough Lab Associated sample(s): 04,11-12,15-16 Batch: WG1930295-2 WG1930295-3								
Hexachlorobenzene	80		75		40-140	6		30
2,4-Dinitrotoluene	52		50		40-132	4		30
Hexachlorobutadiene	79		78		28-111	1		30
Hexachloroethane	42		43		21-105	2		30
Nitrobenzene	74		75		40-140	1		30
2,4,6-Trichlorophenol	96		94		30-130	2		30
Pentachlorophenol	78		71		9-103	9		30
2-Methylphenol	70		70		30-130	0		30
3-Methylphenol/4-Methylphenol	77		78		30-130	1		30
2,4,5-Trichlorophenol	100		98		30-130	2		30
Pyridine	26		37		10-66	35	Q	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	69		69		21-120
Phenol-d6	66		66		10-120
Nitrobenzene-d5	78		77		23-120
2-Fluorobiphenyl	88		87		15-120
2,4,6-Tribromophenol	83		79		10-120
4-Terphenyl-d14	88		86		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Semivolatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-03,05-10,13-14,17 Batch: WG1930738-2 WG1930738-3								
Hexachlorobenzene	88		86		40-140	2		30
2,4-Dinitrotoluene	85		82		40-132	4		30
Hexachlorobutadiene	97		94		28-111	3		30
Hexachloroethane	68		70		21-105	3		30
Nitrobenzene	86		86		40-140	0		30
2,4,6-Trichlorophenol	107		100		30-130	7		30
Pentachlorophenol	94		93		9-103	1		30
2-Methylphenol	86		86		30-130	0		30
3-Methylphenol/4-Methylphenol	88		87		30-130	1		30
2,4,5-Trichlorophenol	109		103		30-130	6		30
Pyridine	20		13		10-66	42	Q	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	81		79		21-120
Phenol-d6	82		80		10-120
Nitrobenzene-d5	88		88		23-120
2-Fluorobiphenyl	94		89		15-120
2,4,6-Tribromophenol	91		88		10-120
4-Terphenyl-d14	98		94		33-120

PESTICIDES

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-01
 Client ID: SS-BCP-32-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:00
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8081B
 Analytical Date: 06/08/24 14:01
 Analyst: EMR
 Percent Solids: 85%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	56		30-150	B
Decachlorobiphenyl	57		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-01
Client ID: SS-BCP-32-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:00
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8151A
Analytical Date: 06/08/24 12:27
Analyst: JAG
Percent Solids: 85%
TCLP/SPLP Ext. Date: 06/05/24 00:25
Methylation Date: 06/07/24 18:53

Extraction Method: EPA 8151A
Extraction Date: 06/06/24 18:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	64		30-150	A
DCAA	62		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-02
 Client ID: SS-BCP-29-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:05
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8081B
 Analytical Date: 06/08/24 17:15
 Analyst: MMG
 Percent Solids: 72%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		30-150	A
Decachlorobiphenyl	100		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	96		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-02
Client ID: SS-BCP-29-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:05
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8151A
Analytical Date: 06/08/24 12:46
Analyst: JAG
Percent Solids: 72%
TCLP/SPLP Ext. Date: 06/05/24 00:25
Methylation Date: 06/07/24 18:53

Extraction Method: EPA 8151A
Extraction Date: 06/06/24 18:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	41		30-150	A
DCAA	40		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-03
Client ID: SS-BCP-29-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:10
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8081B
Analytical Date: 06/08/24 17:27
Analyst: MMG
Percent Solids: 89%
TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	94		30-150	A
Decachlorobiphenyl	119		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		30-150	B
Decachlorobiphenyl	113		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-03
 Client ID: SS-BCP-29-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:10
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8151A
 Analytical Date: 06/08/24 13:22
 Analyst: JAG
 Percent Solids: 89%
 TCLP/SPLP Ext. Date: 06/05/24 00:25
 Methylation Date: 06/07/24 18:53

Extraction Method: EPA 8151A
 Extraction Date: 06/06/24 18:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	57		30-150	A
DCAA	55		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-04
 Client ID: SS-BCP-29-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:15
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8081B
 Analytical Date: 06/06/24 23:52
 Analyst: JAG
 Percent Solids: 81%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/05/24 19:57

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	86		30-150	A
Decachlorobiphenyl	83		30-150	A
2,4,5,6-Tetrachloro-m-xylene	81		30-150	B
Decachlorobiphenyl	77		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-04
Client ID: SS-BCP-29-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:15
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8151A
Analytical Date: 06/07/24 23:04
Analyst: MMG
Percent Solids: 81%
TCLP/SPLP Ext. Date: 06/05/24 00:25
Methylation Date: 06/07/24 18:51

Extraction Method: EPA 8151A
Extraction Date: 06/06/24 00:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	10	Q	30-150	A
DCAA	10	Q	30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-04 RE
 Client ID: SS-BCP-29-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:15
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8151A
 Analytical Date: 06/10/24 02:54
 Analyst: MMG
 Percent Solids: 81%
 TCLP/SPLP Ext. Date: 06/05/24 00:25
 Methylation Date: 06/09/24 11:20

Extraction Method: EPA 8151A
 Extraction Date: 06/08/24 15:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	15	Q	30-150	A
DCAA	11	Q	30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-05
 Client ID: SS-BCP-29-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:20
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8081B
 Analytical Date: 06/08/24 17:38
 Analyst: MMG
 Percent Solids: 85%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	86		30-150	A
Decachlorobiphenyl	102		30-150	A
2,4,5,6-Tetrachloro-m-xylene	83		30-150	B
Decachlorobiphenyl	97		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-05
 Client ID: SS-BCP-29-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:20
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8151A
 Analytical Date: 06/08/24 13:39
 Analyst: JAG
 Percent Solids: 85%
 TCLP/SPLP Ext. Date: 06/05/24 00:25
 Methylation Date: 06/07/24 18:53

Extraction Method: EPA 8151A
 Extraction Date: 06/06/24 18:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	30		30-150	A
DCAA	46		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-06
 Client ID: SS-BCP-30-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:25
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8081B
 Analytical Date: 06/08/24 17:50
 Analyst: MMG
 Percent Solids: 94%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	A
Decachlorobiphenyl	103		30-150	A
2,4,5,6-Tetrachloro-m-xylene	73		30-150	B
Decachlorobiphenyl	90		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-06
 Client ID: SS-BCP-30-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:25
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8151A
 Analytical Date: 06/08/24 13:57
 Analyst: JAG
 Percent Solids: 94%
 TCLP/SPLP Ext. Date: 06/05/24 00:25
 Methylation Date: 06/07/24 18:53

Extraction Method: EPA 8151A
 Extraction Date: 06/06/24 18:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	43		30-150	A
DCAA	44		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-07
Client ID: SS-BCP-30-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:30
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8081B
Analytical Date: 06/08/24 18:01
Analyst: MMG
Percent Solids: 83%
TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	A
Decachlorobiphenyl	111		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	94		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-07
 Client ID: SS-BCP-30-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:30
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8151A
 Analytical Date: 06/08/24 15:17
 Analyst: MMG
 Percent Solids: 83%
 TCLP/SPLP Ext. Date: 06/05/24 00:25
 Methylation Date: 06/07/24 18:53

Extraction Method: EPA 8151A
 Extraction Date: 06/06/24 18:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	42		30-150	A
DCAA	42		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-08
 Client ID: SS-BCP-30-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:35
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8081B
 Analytical Date: 06/08/24 18:13
 Analyst: MMG
 Percent Solids: 91%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	110		30-150	A
Decachlorobiphenyl	128		30-150	A
2,4,5,6-Tetrachloro-m-xylene	87		30-150	B
Decachlorobiphenyl	110		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-08
 Client ID: SS-BCP-30-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:35
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8151A
 Analytical Date: 06/08/24 15:35
 Analyst: MMG
 Percent Solids: 91%
 TCLP/SPLP Ext. Date: 06/05/24 00:25
 Methylation Date: 06/07/24 18:53

Extraction Method: EPA 8151A
 Extraction Date: 06/06/24 18:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	41		30-150	A
DCAA	41		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-09
Client ID: SS-BCP-30-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:40
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8081B
Analytical Date: 06/08/24 18:36
Analyst: MMG
Percent Solids: 91%
TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87		30-150	A
Decachlorobiphenyl	108		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	96		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-09
Client ID: SS-BCP-30-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:40
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8151A
Analytical Date: 06/08/24 15:53
Analyst: MMG
Percent Solids: 91%
TCLP/SPLP Ext. Date: 06/05/24 00:25
Methylation Date: 06/07/24 18:53

Extraction Method: EPA 8151A
Extraction Date: 06/06/24 18:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	42		30-150	A
DCAA	41		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-10
Client ID: SS-BCP-31-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:45
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8081B
Analytical Date: 06/08/24 18:47
Analyst: MMG
Percent Solids: 79%
TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
Extraction Date: 06/06/24 14:02

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	A
Decachlorobiphenyl	110		30-150	A
2,4,5,6-Tetrachloro-m-xylene	88		30-150	B
Decachlorobiphenyl	105		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-10
 Client ID: SS-BCP-31-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:45
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8151A
 Analytical Date: 06/08/24 16:11
 Analyst: MMG
 Percent Solids: 79%
 TCLP/SPLP Ext. Date: 06/05/24 00:25
 Methylation Date: 06/07/24 18:53

Extraction Method: EPA 8151A
 Extraction Date: 06/06/24 22:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	48		30-150	A
DCAA	46		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-11
Client ID: SS-BCP-31-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:50
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8081B
Analytical Date: 06/07/24 00:04
Analyst: JAG
Percent Solids: 90%
TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
Extraction Date: 06/05/24 19:57

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	102		30-150	A
Decachlorobiphenyl	108		30-150	A
2,4,5,6-Tetrachloro-m-xylene	100		30-150	B
Decachlorobiphenyl	99		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-11
 Client ID: SS-BCP-31-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:50
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8151A
 Analytical Date: 06/10/24 03:13
 Analyst: MMG
 Percent Solids: 90%
 TCLP/SPLP Ext. Date: 06/05/24 00:25
 Methylation Date: 06/09/24 11:20

Extraction Method: EPA 8151A
 Extraction Date: 06/08/24 15:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	38		30-150	A
DCAA	31		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-12
 Client ID: SS-BCP-31-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:55
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8081B
 Analytical Date: 06/07/24 00:15
 Analyst: JAG
 Percent Solids: 89%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/05/24 19:57

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	A
Decachlorobiphenyl	86		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	78		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-12
 Client ID: SS-BCP-31-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:55
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8151A
 Analytical Date: 06/10/24 03:31
 Analyst: MMG
 Percent Solids: 89%
 TCLP/SPLP Ext. Date: 06/05/24 00:25
 Methylation Date: 06/09/24 11:20

Extraction Method: EPA 8151A
 Extraction Date: 06/08/24 15:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	31		30-150	A
DCAA	27	Q	30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-13
 Client ID: SS-BCP-31-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:00
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8081B
 Analytical Date: 06/08/24 18:58
 Analyst: MMG
 Percent Solids: 87%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:02

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	84		30-150	A
Decachlorobiphenyl	106		30-150	A
2,4,5,6-Tetrachloro-m-xylene	84		30-150	B
Decachlorobiphenyl	102		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-13
 Client ID: SS-BCP-31-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:00
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8151A
 Analytical Date: 06/08/24 16:30
 Analyst: MMG
 Percent Solids: 87%
 TCLP/SPLP Ext. Date: 06/05/24 00:25
 Methylation Date: 06/07/24 18:53

Extraction Method: EPA 8151A
 Extraction Date: 06/06/24 22:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	43		30-150	A
DCAA	42		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-14
Client ID: SS-BCP-33-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:05
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8081B
Analytical Date: 06/08/24 19:10
Analyst: MMG
Percent Solids: 87%
TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
Extraction Date: 06/06/24 14:02

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	98		30-150	A
Decachlorobiphenyl	111		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	95		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-14
Client ID: SS-BCP-33-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:05
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8151A
Analytical Date: 06/08/24 16:48
Analyst: MMG
Percent Solids: 87%
TCLP/SPLP Ext. Date: 06/05/24 00:25
Methylation Date: 06/07/24 18:53

Extraction Method: EPA 8151A
Extraction Date: 06/06/24 22:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	62		30-150	A
DCAA	56		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-15
 Client ID: SS-BCP-33-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:10
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8081B
 Analytical Date: 06/07/24 00:27
 Analyst: JAG
 Percent Solids: 91%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/05/24 19:57

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	98		30-150	A
Decachlorobiphenyl	104		30-150	A
2,4,5,6-Tetrachloro-m-xylene	122		30-150	B
Decachlorobiphenyl	85		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-15
 Client ID: SS-BCP-33-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:10
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8151A
 Analytical Date: 06/07/24 22:27
 Analyst: MMG
 Percent Solids: 91%
 TCLP/SPLP Ext. Date: 06/05/24 00:25
 Methylation Date: 06/07/24 18:51

Extraction Method: EPA 8151A
 Extraction Date: 06/06/24 00:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	17	Q	30-150	A
DCAA	19	Q	30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-15 RE
 Client ID: SS-BCP-33-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:10
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8151A
 Analytical Date: 06/10/24 03:49
 Analyst: MMG
 Percent Solids: 91%
 TCLP/SPLP Ext. Date: 06/05/24 00:25
 Methylation Date: 06/09/24 11:20

Extraction Method: EPA 8151A
 Extraction Date: 06/08/24 15:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	26	Q	30-150	A
DCAA	21	Q	30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-16
 Client ID: SS-BCP-33-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:15
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid
 Analytical Method: 1,8081B
 Analytical Date: 06/07/24 00:38
 Analyst: JAG
 Percent Solids: 92%
 TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/05/24 19:57

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	50		30-150	B
Decachlorobiphenyl	56		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-16
Client ID: SS-BCP-33-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:15
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8151A
Analytical Date: 06/10/24 04:07
Analyst: MMG
Percent Solids: 92%
TCLP/SPLP Ext. Date: 06/05/24 00:25
Methylation Date: 06/09/24 11:20

Extraction Method: EPA 8151A
Extraction Date: 06/08/24 15:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	46		30-150	A
DCAA	40		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-17
Client ID: SS-BCP-33-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:20
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8081B
Analytical Date: 06/08/24 19:21
Analyst: MMG
Percent Solids: 90%
TCLP/SPLP Ext. Date: 06/05/24 00:25

Extraction Method: EPA 3510C
Extraction Date: 06/06/24 14:02

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	102		30-150	A
Decachlorobiphenyl	127		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		30-150	B
Decachlorobiphenyl	113		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-17
Client ID: SS-BCP-33-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:20
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8151A
Analytical Date: 06/08/24 17:06
Analyst: MMG
Percent Solids: 90%
TCLP/SPLP Ext. Date: 06/05/24 00:25
Methylation Date: 06/07/24 18:53

Extraction Method: EPA 8151A
Extraction Date: 06/06/24 22:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	65		30-150	A
DCAA	60		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8081B
 Analytical Date: 06/06/24 22:55
 Analyst: JAG
 TCLP/SPLP Extraction Date: 06/04/24 04:45

Extraction Method: EPA 3510C
 Extraction Date: 06/05/24 16:16

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Pesticides by EPA 1311 - Westborough Lab for sample(s): 04,11-12,15-16 Batch: WG1930192-1						
Lindane	ND		ug/l	0.100	0.022	A
Heptachlor	ND		ug/l	0.100	0.016	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	A
Endrin	ND		ug/l	0.200	0.021	A
Methoxychlor	ND		ug/l	1.00	0.034	A
Toxaphene	ND		ug/l	1.00	0.314	A
Chlordane	ND		ug/l	1.00	0.232	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	91		30-150	A
Decachlorobiphenyl	98		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		30-150	B
Decachlorobiphenyl	87		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 06/07/24 20:00
Analyst: JAG
TCLP/SPLP Extraction Date: 06/04/24 04:45
Methylation Date: 06/07/24 15:30

Extraction Method: EPA 8151A
Extraction Date: 06/06/24 00:33

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Herbicides by EPA 1311 - Westborough Lab for sample(s): 04,15 Batch: WG1930354-1						
2,4-D	ND		mg/l	0.025	0.001	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	58		30-150	A
DCAA	60		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8081B
 Analytical Date: 06/08/24 14:38
 Analyst: EMR
 TCLP/SPLP Extraction Date: 06/05/24 00:25

Extraction Method: EPA 3510C
 Extraction Date: 06/06/24 14:01

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Pesticides by EPA 1311 - Westborough Lab for sample(s): 01-03,05-10,13-14,17 Batch: WG1930737-1						
Lindane	ND		ug/l	0.100	0.022	A
Heptachlor	ND		ug/l	0.100	0.016	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	A
Endrin	ND		ug/l	0.200	0.021	A
Methoxychlor	ND		ug/l	1.00	0.034	A
Toxaphene	ND		ug/l	1.00	0.314	A
Chlordane	ND		ug/l	1.00	0.232	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	88		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	94		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8151A
 Analytical Date: 06/08/24 10:20
 Analyst: JAG
 TCLP/SPLP Extraction Date: 06/05/24 00:25
 Methylation Date: 06/07/24 18:53

Extraction Method: EPA 8151A
 Extraction Date: 06/06/24 18:17

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Herbicides by EPA 1311 - Westborough Lab for sample(s): 01-03,05-10,13-14,17 Batch: WG1930845-1						
2,4-D	ND		mg/l	0.025	0.001	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	53		30-150	A
DCAA	54		30-150	B

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 06/10/24 01:05
Analyst: MMG
TCLP/SPLP Extraction Date: 06/04/24 04:45
Methylation Date: 06/09/24 11:20

Extraction Method: EPA 8151A
Extraction Date: 06/08/24 13:32

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Herbicides by EPA 1311 - Westborough Lab for sample(s): 04,11-12,15-16 Batch: WG1931592-1						
2,4-D	ND		mg/l	0.025	0.001	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	51		30-150	A
DCAA	44		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Pesticides by EPA 1311 - Westborough Lab Associated sample(s): 04,11-12,15-16 Batch: WG1930192-2 WG1930192-3									
Lindane	116		99		30-150	16		20	A
Heptachlor	117		97		30-150	19		20	A
Heptachlor epoxide	118		99		30-150	17		20	A
Endrin	119		101		30-150	16		20	A
Methoxychlor	142		124		30-150	14		20	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	103		88		30-150	A
Decachlorobiphenyl	108		100		30-150	A
2,4,5,6-Tetrachloro-m-xylene	101		88		30-150	B
Decachlorobiphenyl	102		94		30-150	B

Lab Control Sample Analysis Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Herbicides by EPA 1311 - Westborough Lab Associated sample(s): 04,15 Batch: WG1930354-2 WG1930354-3									
2,4-D	78		72		30-150	8		25	A
2,4,5-TP (Silvex)	56		53		30-150	6		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	55		55		30-150	A
DCAA	62		63		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Pesticides by EPA 1311 - Westborough Lab Associated sample(s): 01-03,05-10,13-14,17 Batch: WG1930737-2 WG1930737-3									
Lindane	97		92		30-150	5		20	A
Heptachlor	96		92		30-150	4		20	A
Heptachlor epoxide	95		90		30-150	5		20	A
Endrin	98		93		30-150	5		20	A
Methoxychlor	120		113		30-150	6		20	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		80		30-150	A
Decachlorobiphenyl	101		98		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		89		30-150	B
Decachlorobiphenyl	107		106		30-150	B

Lab Control Sample Analysis Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Herbicides by EPA 1311 - Westborough Lab Associated sample(s): 01-03,05-10,13-14,17 Batch: WG1930845-2 WG1930845-3									
2,4-D	90		85		30-150	6		25	A
2,4,5-TP (Silvex)	46		42		30-150	9		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	54		51		30-150	A
DCAA	47		44		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Herbicides by EPA 1311 - Westborough Lab Associated sample(s): 04,11-12,15-16 Batch: WG1931592-2 WG1931592-3									
2,4-D	90		94		30-150	4		25	A
2,4,5-TP (Silvex)	45		44		30-150	2		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	63		65		30-150	A
DCAA	52		52		30-150	B

METALS

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-01
 Client ID: SS-BCP-32-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:00
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Solid
 Percent Solids: 85%

TCLP/SPLP Ext. Date: 06/05/24 00:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

TCLP Metals by EPA 1311 - Mansfield Lab

Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/10/24 12:56	06/10/24 14:36	EPA 3015	1,6010D	TAA
Barium, TCLP	0.0494	J	mg/l	0.500	0.0210	1	06/10/24 12:56	06/10/24 14:36	EPA 3015	1,6010D	TAA
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/10/24 12:56	06/10/24 14:36	EPA 3015	1,6010D	TAA
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/10/24 12:56	06/10/24 14:36	EPA 3015	1,6010D	TAA
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/10/24 12:56	06/10/24 14:36	EPA 3015	1,6010D	TAA
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/24 12:14	06/10/24 14:52	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/10/24 12:56	06/10/24 14:36	EPA 3015	1,6010D	TAA
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/10/24 12:56	06/10/24 14:36	EPA 3015	1,6010D	TAA



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-02
 Client ID: SS-BCP-29-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:05
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Solid
 Percent Solids: 72%

TCLP/SPLP Ext. Date: 06/05/24 00:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

TCLP Metals by EPA 1311 - Mansfield Lab

Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/10/24 12:56	06/10/24 15:09	EPA 3015	1,6010D	TAA
Barium, TCLP	1.06		mg/l	0.500	0.0210	1	06/10/24 12:56	06/10/24 15:09	EPA 3015	1,6010D	TAA
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/10/24 12:56	06/10/24 15:09	EPA 3015	1,6010D	TAA
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/10/24 12:56	06/10/24 15:09	EPA 3015	1,6010D	TAA
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/10/24 12:56	06/10/24 15:09	EPA 3015	1,6010D	TAA
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/24 12:14	06/10/24 15:33	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/10/24 12:56	06/10/24 15:09	EPA 3015	1,6010D	TAA
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/10/24 12:56	06/10/24 15:09	EPA 3015	1,6010D	TAA



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-03
 Client ID: SS-BCP-29-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:10
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

TCLP/SPLP Ext. Date: 06/05/24 00:25

Matrix: Solid

Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

TCLP Metals by EPA 1311 - Mansfield Lab

Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/10/24 12:56	06/10/24 15:13	EPA 3015	1,6010D	TAA
Barium, TCLP	0.583		mg/l	0.500	0.0210	1	06/10/24 12:56	06/10/24 15:13	EPA 3015	1,6010D	TAA
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/10/24 12:56	06/10/24 15:13	EPA 3015	1,6010D	TAA
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/10/24 12:56	06/10/24 15:13	EPA 3015	1,6010D	TAA
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/10/24 12:56	06/10/24 15:13	EPA 3015	1,6010D	TAA
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/24 12:14	06/10/24 15:36	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/10/24 12:56	06/10/24 15:13	EPA 3015	1,6010D	TAA
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/10/24 12:56	06/10/24 15:13	EPA 3015	1,6010D	TAA



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-04
 Client ID: SS-BCP-29-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:15
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

TCLP/SPLP Ext. Date: 06/05/24 00:25

Matrix: Solid

Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/07/24 02:08	06/07/24 19:29	EPA 3015	1,6010D	CEY
Barium, TCLP	0.962		mg/l	0.500	0.0210	1	06/07/24 02:08	06/07/24 19:29	EPA 3015	1,6010D	CEY
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/07/24 02:08	06/07/24 19:29	EPA 3015	1,6010D	CEY
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/07/24 02:08	06/07/24 19:29	EPA 3015	1,6010D	CEY
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/07/24 02:08	06/07/24 19:29	EPA 3015	1,6010D	CEY
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/06/24 23:35	06/07/24 15:28	EPA 7470A	1,7470A	DHL
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/07/24 02:08	06/07/24 19:29	EPA 3015	1,6010D	CEY
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/07/24 02:08	06/07/24 19:29	EPA 3015	1,6010D	CEY



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-05
 Client ID: SS-BCP-29-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:20
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 06/05/24 00:25
 Matrix: Solid
 Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

TCLP Metals by EPA 1311 - Mansfield Lab

Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/10/24 12:56	06/10/24 15:16	EPA 3015	1,6010D	TAA
Barium, TCLP	0.668		mg/l	0.500	0.0210	1	06/10/24 12:56	06/10/24 15:16	EPA 3015	1,6010D	TAA
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/10/24 12:56	06/10/24 15:16	EPA 3015	1,6010D	TAA
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/10/24 12:56	06/10/24 15:16	EPA 3015	1,6010D	TAA
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/10/24 12:56	06/10/24 15:16	EPA 3015	1,6010D	TAA
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/24 12:14	06/10/24 15:39	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/10/24 12:56	06/10/24 15:16	EPA 3015	1,6010D	TAA
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/10/24 12:56	06/10/24 15:16	EPA 3015	1,6010D	TAA



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-06
 Client ID: SS-BCP-30-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:25
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Solid
 Percent Solids: 94%

TCLP/SPLP Ext. Date: 06/05/24 00:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

TCLP Metals by EPA 1311 - Mansfield Lab

Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/10/24 12:56	06/10/24 15:20	EPA 3015	1,6010D	TAA
Barium, TCLP	0.0354	J	mg/l	0.500	0.0210	1	06/10/24 12:56	06/10/24 15:20	EPA 3015	1,6010D	TAA
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/10/24 12:56	06/10/24 15:20	EPA 3015	1,6010D	TAA
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/10/24 12:56	06/10/24 15:20	EPA 3015	1,6010D	TAA
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/10/24 12:56	06/10/24 15:20	EPA 3015	1,6010D	TAA
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/24 12:14	06/10/24 15:43	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/10/24 12:56	06/10/24 15:20	EPA 3015	1,6010D	TAA
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/10/24 12:56	06/10/24 15:20	EPA 3015	1,6010D	TAA



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-07
 Client ID: SS-BCP-30-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:30
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Solid
 Percent Solids: 83%

TCLP/SPLP Ext. Date: 06/05/24 00:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/10/24 12:56	06/10/24 15:23	EPA 3015	1,6010D	TAA
Barium, TCLP	0.0800	J	mg/l	0.500	0.0210	1	06/10/24 12:56	06/10/24 15:23	EPA 3015	1,6010D	TAA
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/10/24 12:56	06/10/24 15:23	EPA 3015	1,6010D	TAA
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/10/24 12:56	06/10/24 15:23	EPA 3015	1,6010D	TAA
Lead, TCLP	0.0407	J	mg/l	0.500	0.0270	1	06/10/24 12:56	06/10/24 15:23	EPA 3015	1,6010D	TAA
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/24 12:14	06/10/24 15:46	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/10/24 12:56	06/10/24 15:23	EPA 3015	1,6010D	TAA
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/10/24 12:56	06/10/24 15:23	EPA 3015	1,6010D	TAA



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-08
 Client ID: SS-BCP-30-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:35
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 06/05/24 00:25
 Matrix: Solid
 Percent Solids: 91%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/10/24 12:56	06/10/24 15:27	EPA 3015	1,6010D	TAA
Barium, TCLP	0.0566	J	mg/l	0.500	0.0210	1	06/10/24 12:56	06/10/24 15:27	EPA 3015	1,6010D	TAA
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/10/24 12:56	06/10/24 15:27	EPA 3015	1,6010D	TAA
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/10/24 12:56	06/10/24 15:27	EPA 3015	1,6010D	TAA
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/10/24 12:56	06/10/24 15:27	EPA 3015	1,6010D	TAA
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/24 12:14	06/10/24 15:49	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/10/24 12:56	06/10/24 15:27	EPA 3015	1,6010D	TAA
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/10/24 12:56	06/10/24 15:27	EPA 3015	1,6010D	TAA



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-09
 Client ID: SS-BCP-30-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:40
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:

TCLP/SPLP Ext. Date: 06/05/24 00:25

Matrix: Solid

Percent Solids: 91%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

TCLP Metals by EPA 1311 - Mansfield Lab

Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/10/24 12:56	06/10/24 15:30	EPA 3015	1,6010D	TAA
Barium, TCLP	0.129	J	mg/l	0.500	0.0210	1	06/10/24 12:56	06/10/24 15:30	EPA 3015	1,6010D	TAA
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/10/24 12:56	06/10/24 15:30	EPA 3015	1,6010D	TAA
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/10/24 12:56	06/10/24 15:30	EPA 3015	1,6010D	TAA
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/10/24 12:56	06/10/24 15:30	EPA 3015	1,6010D	TAA
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/24 12:14	06/10/24 15:53	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/10/24 12:56	06/10/24 15:30	EPA 3015	1,6010D	TAA
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/10/24 12:56	06/10/24 15:30	EPA 3015	1,6010D	TAA



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-10
 Client ID: SS-BCP-31-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:45
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Solid
 Percent Solids: 79%

TCLP/SPLP Ext. Date: 06/05/24 00:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

TCLP Metals by EPA 1311 - Mansfield Lab

Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/10/24 12:56	06/10/24 15:34	EPA 3015	1,6010D	TAA
Barium, TCLP	0.481	J	mg/l	0.500	0.0210	1	06/10/24 12:56	06/10/24 15:34	EPA 3015	1,6010D	TAA
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/10/24 12:56	06/10/24 15:34	EPA 3015	1,6010D	TAA
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/10/24 12:56	06/10/24 15:34	EPA 3015	1,6010D	TAA
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/10/24 12:56	06/10/24 15:34	EPA 3015	1,6010D	TAA
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/24 12:14	06/10/24 16:03	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/10/24 12:56	06/10/24 15:34	EPA 3015	1,6010D	TAA
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/10/24 12:56	06/10/24 15:34	EPA 3015	1,6010D	TAA



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-11
 Client ID: SS-BCP-31-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:50
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 06/05/24 00:25
 Matrix: Solid
 Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/07/24 02:08	06/07/24 19:33	EPA 3015	1,6010D	CEY
Barium, TCLP	0.525		mg/l	0.500	0.0210	1	06/07/24 02:08	06/07/24 19:33	EPA 3015	1,6010D	CEY
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/07/24 02:08	06/07/24 19:33	EPA 3015	1,6010D	CEY
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/07/24 02:08	06/07/24 19:33	EPA 3015	1,6010D	CEY
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/07/24 02:08	06/07/24 19:33	EPA 3015	1,6010D	CEY
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/06/24 23:35	06/08/24 14:17	EPA 7470A	1,7470A	DJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/07/24 02:08	06/07/24 19:33	EPA 3015	1,6010D	CEY
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/07/24 02:08	06/07/24 19:33	EPA 3015	1,6010D	CEY



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-12
 Client ID: SS-BCP-31-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:55
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Solid
 Percent Solids: 89%

TCLP/SPLP Ext. Date: 06/05/24 00:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/07/24 02:08	06/07/24 19:37	EPA 3015	1,6010D	CEY
Barium, TCLP	0.429	J	mg/l	0.500	0.0210	1	06/07/24 02:08	06/07/24 19:37	EPA 3015	1,6010D	CEY
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/07/24 02:08	06/07/24 19:37	EPA 3015	1,6010D	CEY
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/07/24 02:08	06/07/24 19:37	EPA 3015	1,6010D	CEY
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/07/24 02:08	06/07/24 19:37	EPA 3015	1,6010D	CEY
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/06/24 23:35	06/08/24 14:20	EPA 7470A	1,7470A	DJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/07/24 02:08	06/07/24 19:37	EPA 3015	1,6010D	CEY
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/07/24 02:08	06/07/24 19:37	EPA 3015	1,6010D	CEY



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-13
 Client ID: SS-BCP-31-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:00
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Solid
 Percent Solids: 87%

TCLP/SPLP Ext. Date: 06/05/24 00:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/10/24 12:56	06/10/24 15:58	EPA 3015	1,6010D	TAA
Barium, TCLP	0.233	J	mg/l	0.500	0.0210	1	06/10/24 12:56	06/10/24 15:58	EPA 3015	1,6010D	TAA
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/10/24 12:56	06/10/24 15:58	EPA 3015	1,6010D	TAA
Chromium, TCLP	0.0321	J	mg/l	0.200	0.0210	1	06/10/24 12:56	06/10/24 15:58	EPA 3015	1,6010D	TAA
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/10/24 12:56	06/10/24 15:58	EPA 3015	1,6010D	TAA
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/24 12:14	06/10/24 16:06	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/10/24 12:56	06/10/24 15:58	EPA 3015	1,6010D	TAA
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/10/24 12:56	06/10/24 15:58	EPA 3015	1,6010D	TAA



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-14
 Client ID: SS-BCP-33-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:05
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Solid
 Percent Solids: 87%

TCLP/SPLP Ext. Date: 06/05/24 00:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

TCLP Metals by EPA 1311 - Mansfield Lab

Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/10/24 12:56	06/10/24 16:02	EPA 3015	1,6010D	TAA
Barium, TCLP	0.416	J	mg/l	0.500	0.0210	1	06/10/24 12:56	06/10/24 16:02	EPA 3015	1,6010D	TAA
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/10/24 12:56	06/10/24 16:02	EPA 3015	1,6010D	TAA
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/10/24 12:56	06/10/24 16:02	EPA 3015	1,6010D	TAA
Lead, TCLP	0.213	J	mg/l	0.500	0.0270	1	06/10/24 12:56	06/10/24 16:02	EPA 3015	1,6010D	TAA
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/24 12:14	06/10/24 16:09	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/10/24 12:56	06/10/24 16:02	EPA 3015	1,6010D	TAA
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/10/24 12:56	06/10/24 16:02	EPA 3015	1,6010D	TAA



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-15
 Client ID: SS-BCP-33-01-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:10
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 06/05/24 00:25
 Matrix: Solid
 Percent Solids: 91%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/07/24 02:08	06/07/24 19:41	EPA 3015	1,6010D	CEY
Barium, TCLP	0.681		mg/l	0.500	0.0210	1	06/07/24 02:08	06/07/24 19:41	EPA 3015	1,6010D	CEY
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/07/24 02:08	06/07/24 19:41	EPA 3015	1,6010D	CEY
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/07/24 02:08	06/07/24 19:41	EPA 3015	1,6010D	CEY
Lead, TCLP	0.0478	J	mg/l	0.500	0.0270	1	06/07/24 02:08	06/07/24 19:41	EPA 3015	1,6010D	CEY
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/06/24 23:35	06/08/24 14:23	EPA 7470A	1,7470A	DJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/07/24 02:08	06/07/24 19:41	EPA 3015	1,6010D	CEY
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/07/24 02:08	06/07/24 19:41	EPA 3015	1,6010D	CEY



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-16
 Client ID: SS-BCP-33-02-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:15
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Solid
 Percent Solids: 92%

TCLP/SPLP Ext. Date: 06/05/24 00:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/07/24 02:08	06/07/24 19:45	EPA 3015	1,6010D	CEY
Barium, TCLP	0.447	J	mg/l	0.500	0.0210	1	06/07/24 02:08	06/07/24 19:45	EPA 3015	1,6010D	CEY
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/07/24 02:08	06/07/24 19:45	EPA 3015	1,6010D	CEY
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/07/24 02:08	06/07/24 19:45	EPA 3015	1,6010D	CEY
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/07/24 02:08	06/07/24 19:45	EPA 3015	1,6010D	CEY
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/06/24 23:35	06/08/24 14:27	EPA 7470A	1,7470A	DJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/07/24 02:08	06/07/24 19:45	EPA 3015	1,6010D	CEY
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/07/24 02:08	06/07/24 19:45	EPA 3015	1,6010D	CEY



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-17
 Client ID: SS-BCP-33-03-06032024
 Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:20
 Date Received: 06/03/24
 Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 06/05/24 00:25
 Matrix: Solid
 Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

TCLP Metals by EPA 1311 - Mansfield Lab

Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/10/24 12:56	06/10/24 16:05	EPA 3015	1,6010D	TAA
Barium, TCLP	0.247	J	mg/l	0.500	0.0210	1	06/10/24 12:56	06/10/24 16:05	EPA 3015	1,6010D	TAA
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/10/24 12:56	06/10/24 16:05	EPA 3015	1,6010D	TAA
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/10/24 12:56	06/10/24 16:05	EPA 3015	1,6010D	TAA
Lead, TCLP	0.0477	J	mg/l	0.500	0.0270	1	06/10/24 12:56	06/10/24 16:05	EPA 3015	1,6010D	TAA
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/24 12:14	06/10/24 16:13	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/10/24 12:56	06/10/24 16:05	EPA 3015	1,6010D	TAA
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/10/24 12:56	06/10/24 16:05	EPA 3015	1,6010D	TAA



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01-03,05-10,13-14,17							Batch: WG1930630-1			
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/10/24 12:56	06/10/24 14:19	1,6010D	TAA
Barium, TCLP	ND		mg/l	0.500	0.0210	1	06/10/24 12:56	06/10/24 14:19	1,6010D	TAA
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/10/24 12:56	06/10/24 14:19	1,6010D	TAA
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/10/24 12:56	06/10/24 14:19	1,6010D	TAA
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/10/24 12:56	06/10/24 14:19	1,6010D	TAA
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/10/24 12:56	06/10/24 14:19	1,6010D	TAA
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/10/24 12:56	06/10/24 14:19	1,6010D	TAA

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 06/04/24 04:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01-03,05-10,13-14,17							Batch: WG1930632-1			
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/24 12:14	06/10/24 14:46	1,7470A	MJR

Prep Information

Digestion Method: EPA 7470A
TCLP/SPLP Extraction Date: 06/04/24 04:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 04,11-12,15-16							Batch: WG1930639-1			
Arsenic, TCLP	0.0390	J	mg/l	1.00	0.0190	1	06/07/24 02:08	06/07/24 12:14	1,6010D	MAM
Barium, TCLP	ND		mg/l	0.500	0.0210	1	06/07/24 02:08	06/07/24 12:14	1,6010D	MAM
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/07/24 02:08	06/07/24 12:14	1,6010D	MAM
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/07/24 02:08	06/07/24 12:14	1,6010D	MAM
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/07/24 02:08	06/07/24 12:14	1,6010D	MAM
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/07/24 02:08	06/07/24 12:14	1,6010D	MAM
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/07/24 02:08	06/07/24 12:14	1,6010D	MAM

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 06/04/24 04:45

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 04,11-12,15-16 Batch: WG1930640-1									
Mercury, TCLP	ND	mg/l	0.0010	0.0005	1	06/06/24 23:35	06/07/24 15:08	1,7470A	DHL

Prep Information

Digestion Method: EPA 7470A
TCLP/SPLP Extraction Date: 06/04/24 04:45

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-03,05-10,13-14,17 Batch: WG1930630-2								
Arsenic, TCLP	94		-		75-125	-		20
Barium, TCLP	92		-		75-125	-		20
Cadmium, TCLP	92		-		75-125	-		20
Chromium, TCLP	90		-		75-125	-		20
Lead, TCLP	94		-		75-125	-		20
Selenium, TCLP	92		-		75-125	-		20
Silver, TCLP	75		-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-03,05-10,13-14,17 Batch: WG1930632-2								
Mercury, TCLP	98		-		80-120	-		
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 04,11-12,15-16 Batch: WG1930639-2								
Arsenic, TCLP	102		-		75-125	-		20
Barium, TCLP	98		-		75-125	-		20
Cadmium, TCLP	97		-		75-125	-		20
Chromium, TCLP	96		-		75-125	-		20
Lead, TCLP	102		-		75-125	-		20
Selenium, TCLP	101		-		75-125	-		20
Silver, TCLP	80		-		75-125	-		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 04,11-12,15-16 Batch: WG1930640-2					
Mercury, TCLP	96	-	80-120	-	

Matrix Spike Analysis **Batch Quality Control**

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-03,05-10,13-14,17 QC Batch ID: WG1930630-3 QC Sample: L2430618-01 Client ID: SS-BCP-32-06032024												
Arsenic, TCLP	ND	1.2	1.16	97		-	-		75-125	-		20
Barium, TCLP	0.0494J	20	18.1	90		-	-		75-125	-		20
Cadmium, TCLP	ND	0.53	0.479	90		-	-		75-125	-		20
Chromium, TCLP	ND	2	1.77	88		-	-		75-125	-		20
Lead, TCLP	ND	5.3	4.96	94		-	-		75-125	-		20
Selenium, TCLP	ND	1.2	1.10	92		-	-		75-125	-		20
Silver, TCLP	ND	0.5	0.368	74	Q	-	-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-03,05-10,13-14,17 QC Batch ID: WG1930632-3 QC Sample: L2430618-01 Client ID: SS-BCP-32-06032024												
Mercury, TCLP	ND	0.025	0.0248	99		-	-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 04,11-12,15-16 QC Batch ID: WG1930639-3 QC Sample: L2430357-01 Client ID: MS Sample												
Arsenic, TCLP	0.0196J	1.2	1.34	112		-	-		75-125	-		20
Barium, TCLP	0.337J	20	20.7	104		-	-		75-125	-		20
Cadmium, TCLP	ND	0.53	0.516	97		-	-		75-125	-		20
Chromium, TCLP	ND	2	1.93	96		-	-		75-125	-		20
Lead, TCLP	ND	5.3	5.62	106		-	-		75-125	-		20
Selenium, TCLP	ND	1.2	1.30	108		-	-		75-125	-		20
Silver, TCLP	ND	0.5	0.416	83		-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 04,11-12,15-16 QC Batch ID: WG1930640-3 QC Sample: L2430357-01 Client ID: MS Sample									
Mercury, TCLP	ND	0.025	0.0244	97	-	-	75-125	-	20

Lab Duplicate Analysis *Batch Quality Control*

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-03,05-10,13-14,17 QC Batch ID: WG1930630-4 QC Sample: L2430618-01 Client ID: SS-BCP-32-06032024						
Arsenic, TCLP	ND	ND	mg/l	NC		20
Barium, TCLP	0.0494J	0.0501J	mg/l	NC		20
Cadmium, TCLP	ND	ND	mg/l	NC		20
Chromium, TCLP	ND	ND	mg/l	NC		20
Lead, TCLP	ND	ND	mg/l	NC		20
Selenium, TCLP	ND	ND	mg/l	NC		20
Silver, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-03,05-10,13-14,17 QC Batch ID: WG1930632-4 QC Sample: L2430618-01 Client ID: SS-BCP-32-06032024						
Mercury, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 04,11-12,15-16 QC Batch ID: WG1930639-4 QC Sample: L2430357-01 Client ID: DUP Sample						
Arsenic, TCLP	0.0196J	ND	mg/l	NC		20
Barium, TCLP	0.337J	0.342J	mg/l	NC		20
Cadmium, TCLP	ND	ND	mg/l	NC		20
Chromium, TCLP	ND	ND	mg/l	NC		20
Lead, TCLP	ND	ND	mg/l	NC		20
Selenium, TCLP	ND	ND	mg/l	NC		20
Silver, TCLP	ND	ND	mg/l	NC		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 04,11-12,15-16 QC Batch ID: WG1930640-4 QC Sample: L2430357-01 Client ID: DUP Sample					
Mercury, TCLP	ND	ND	mg/l	NC	20

INORGANICS & MISCELLANEOUS

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-01
Client ID: SS-BCP-32-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:00
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 18:18	1,1030	REM



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-02
Client ID: SS-BCP-29-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:05
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Wet Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 09:13	1,1030	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-03
Client ID: SS-BCP-29-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:10
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 09:13	1,1030	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-04
Client ID: SS-BCP-29-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:15
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 09:13	1,1030	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-05
Client ID: SS-BCP-29-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:20
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 09:13	1,1030	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-07
Client ID: SS-BCP-30-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:30
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 18:18	1,1030	REM



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-08
Client ID: SS-BCP-30-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:35
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 18:18	1,1030	REM



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-10
Client ID: SS-BCP-31-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:45
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 09:13	1,1030	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-11
Client ID: SS-BCP-31-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:50
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 09:13	1,1030	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-12
Client ID: SS-BCP-31-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:55
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 09:13	1,1030	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-13
Client ID: SS-BCP-31-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:00
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 09:13	1,1030	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-14
Client ID: SS-BCP-33-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:05
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 18:18	1,1030	REM



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-15
Client ID: SS-BCP-33-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:10
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 18:18	1,1030	REM



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-16
Client ID: SS-BCP-33-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:15
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 18:18	1,1030	REM



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-17
Client ID: SS-BCP-33-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:20
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/08/24 18:18	1,1030	REM



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-01
Client ID: SS-BCP-32-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:00
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.5		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	2.7		mg/kg	1.1	0.23	1	06/07/24 18:40	06/10/24 14:39	1,9010C/9012B	KEP
pH (H)	6.97		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	59		mg/kg	18	6.5	1	06/06/24 16:32	06/09/24 16:22	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:54	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:39	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-02
Client ID: SS-BCP-29-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:05
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	72.1		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	2.0		mg/kg	1.4	0.29	1	06/07/24 18:40	06/10/24 14:42	1,9010C/9012B	KEP
pH (H)	9.53		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	220		mg/kg	10	3.8	1	06/06/24 16:32	06/09/24 16:23	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:54	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:39	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-03
Client ID: SS-BCP-29-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:10
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	88.6		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	2.7		mg/kg	1.1	0.24	1	06/07/24 18:40	06/10/24 14:43	1,9010C/9012B	KEP
pH (H)	12.6		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	16		mg/kg	8.3	3.1	1	06/06/24 16:32	06/09/24 16:24	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:54	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:40	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-04
Client ID: SS-BCP-29-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:15
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.2		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	1.3		mg/kg	1.1	0.24	1	06/07/24 18:40	06/10/24 14:44	1,9010C/9012B	KEP
pH (H)	12.6		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	7.6	J	mg/kg	8.6	3.2	1	06/06/24 16:32	06/09/24 16:25	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:54	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:40	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-05
Client ID: SS-BCP-29-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:20
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.3		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	2.4		mg/kg	1.1	0.23	1	06/07/24 18:40	06/10/24 14:48	1,9010C/9012B	KEP
pH (H)	11.7		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	11		mg/kg	8.3	3.1	1	06/06/24 16:32	06/09/24 16:25	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:55	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:40	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-06
Client ID: SS-BCP-30-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:25
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

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	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	7.5		mg/kg	1.0	0.22	1	06/07/24 18:40	06/10/24 14:59	1,9010C/9012B	KEP
pH (H)	8.52		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	100		mg/kg	15	5.6	1	06/06/24 16:32	06/09/24 16:26	121,4500NH3-BH	AT
Flash Point	>150		deg F	70	NA	1	-	06/11/24 12:00	1,1010A	JBB
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:55	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:40	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-07
Client ID: SS-BCP-30-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:30
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.9		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	5.8		mg/kg	1.1	0.24	1	06/07/24 18:40	06/10/24 15:00	1,9010C/9012B	KEP
pH (H)	12.3		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	37		mg/kg	8.0	3.0	1	06/06/24 16:32	06/09/24 16:27	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:55	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:40	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-08
Client ID: SS-BCP-30-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:35
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.2		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	4.9		mg/kg	1.0	0.21	1	06/08/24 06:00	06/10/24 19:13	1,9010C/9012B	KEP
pH (H)	12.4		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	19		mg/kg	7.9	2.9	1	06/06/24 16:32	06/09/24 16:45	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:56	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:41	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-09
Client ID: SS-BCP-30-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:40
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.2		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	10		mg/kg	1.1	0.23	1	06/08/24 06:00	06/10/24 19:14	1,9010C/9012B	KEP
pH (H)	10.5		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	21		mg/kg	6.4	2.4	1	06/06/24 16:32	06/09/24 16:32	121,4500NH3-BH	AT
Flash Point	>150		deg F	70	NA	1	-	06/11/24 12:00	1,1010A	JBB
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:57	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:41	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-10
Client ID: SS-BCP-31-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:45
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.4		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	3.4		mg/kg	1.2	0.25	1	06/07/24 18:40	06/10/24 15:01	1,9010C/9012B	KEP
pH (H)	8.52		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	7.8	J	mg/kg	8.2	3.0	1	06/06/24 16:32	06/09/24 16:33	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:57	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:42	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-11
Client ID: SS-BCP-31-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:50
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.7		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	5.2		mg/kg	1.0	0.22	1	06/07/24 18:40	06/10/24 15:02	1,9010C/9012B	KEP
pH (H)	12.6		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	8.6		mg/kg	7.1	2.6	1	06/06/24 16:32	06/09/24 16:34	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:57	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:42	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-12
Client ID: SS-BCP-31-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 09:55
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.1		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	8.2		mg/kg	1.0	0.22	1	06/07/24 18:40	06/10/24 15:03	1,9010C/9012B	KEP
pH (H)	12.6		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	4.9	J	mg/kg	8.2	3.0	1	06/06/24 16:32	06/09/24 16:35	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:57	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:42	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-13
Client ID: SS-BCP-31-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:00
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.8		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	4.5		mg/kg	1.1	0.24	1	06/07/24 18:40	06/10/24 15:04	1,9010C/9012B	KEP
pH (H)	11.2		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	4.2	J	mg/kg	8.6	3.2	1	06/06/24 16:32	06/09/24 16:36	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:58	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:43	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-14
Client ID: SS-BCP-33-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:05
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.6		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	6.8		mg/kg	1.1	0.23	1	06/08/24 06:00	06/10/24 19:15	1,9010C/9012B	KEP
pH (H)	8.03		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	170		mg/kg	7.8	2.9	1	06/06/24 16:32	06/09/24 16:37	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:58	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:43	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-15
Client ID: SS-BCP-33-01-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:10
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.8		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	19		mg/kg	1.0	0.22	1	06/08/24 06:00	06/10/24 19:16	1,9010C/9012B	KEP
pH (H)	12.5		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	20		mg/kg	8.2	3.1	1	06/06/24 16:32	06/09/24 16:38	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:58	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:43	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-16
Client ID: SS-BCP-33-02-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:15
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

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	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	20		mg/kg	1.0	0.21	1	06/08/24 06:00	06/10/24 19:17	1,9010C/9012B	KEP
pH (H)	12.6		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	12		mg/kg	8.1	3.0	1	06/06/24 16:32	06/09/24 16:39	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:58	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:43	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

SAMPLE RESULTS

Lab ID: L2430618-17
Client ID: SS-BCP-33-03-06032024
Sample Location: 3875 RIVER RD.

Date Collected: 06/03/24 10:20
Date Received: 06/03/24
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.2		%	0.100	NA	1	-	06/04/24 11:29	121,2540G	ROI
Cyanide, Total	10		mg/kg	1.1	0.23	1	06/08/24 06:00	06/10/24 19:18	1,9010C/9012B	KEP
pH (H)	11.1		SU	-	NA	1	-	06/07/24 03:20	1,9045D	CAR
Nitrogen, Ammonia	11		mg/kg	7.1	2.6	1	06/06/24 16:32	06/09/24 16:40	121,4500NH3-BH	AT
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:59	125,7.3	JLB
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:43	125,7.3	JLB



Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1931337-1										
Cyanide, Total	ND		mg/kg	0.97	0.20	1	06/07/24 18:40	06/10/24 14:27	1,9010C/9012B	KEP
General Chemistry - Westborough Lab for sample(s): 05-07,10-13 Batch: WG1931339-1										
Cyanide, Total	ND		mg/kg	0.97	0.20	1	06/07/24 18:40	06/10/24 14:27	1,9010C/9012B	KEP
General Chemistry - Westborough Lab for sample(s): 08-09,14-17 Batch: WG1931466-1										
Cyanide, Total	ND		mg/kg	0.90	0.19	1	06/08/24 06:00	06/10/24 18:47	1,9010C/9012B	KEP
General Chemistry - Westborough Lab for sample(s): 01-17 Batch: WG1931538-1										
Nitrogen, Ammonia	ND		mg/kg	7.5	0.02	1	06/06/24 16:32	06/09/24 16:19	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01-17 Batch: WG1931763-1										
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:53	125,7.3	JLB
General Chemistry - Westborough Lab for sample(s): 01-17 Batch: WG1931766-1										
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/09/24 12:54	06/09/24 14:38	125,7.3	JLB

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-17 Batch: WG1930940-1								
pH	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1931337-2 WG1931337-3								
Cyanide, Total	93		89		80-120	4		35
General Chemistry - Westborough Lab Associated sample(s): 05-07,10-13 Batch: WG1931339-2 WG1931339-3								
Cyanide, Total	93		88		80-120	4		35
General Chemistry - Westborough Lab Associated sample(s): 08-09,14-17 Batch: WG1931466-2 WG1931466-3								
Cyanide, Total	81		74	Q	80-120	9		35
General Chemistry - Westborough Lab Associated sample(s): 01-17 Batch: WG1931538-2								
Nitrogen, Ammonia	93		-		83-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-17 Batch: WG1931763-2								
Cyanide, Reactive	94		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-17 Batch: WG1931766-2								
Sulfide, Reactive	91		-		60-125	-		40

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 06,09 Batch: WG1932682-1					
Flash Point	101	-	96-104	-	

Matrix Spike Analysis Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1931337-4 WG1931337-5 QC Sample: L2430618-01 Client ID: SS-BCP-32-06032024												
Cyanide, Total	2.7	12	12	81		13	93		75-125	8		35
General Chemistry - Westborough Lab Associated sample(s): 05-07,10-13 QC Batch ID: WG1931339-4 WG1931339-5 QC Sample: L2430549-01 Client ID: MS Sample												
Cyanide, Total	ND	11	ND	0	Q	0.30J	0	Q	75-125	NC		35
General Chemistry - Westborough Lab Associated sample(s): 08-09,14-17 QC Batch ID: WG1931466-4 WG1931466-5 QC Sample: L2430420-10 Client ID: MS Sample												
Cyanide, Total	ND	10	10	100		9.6	96		75-125	4		35
General Chemistry - Westborough Lab Associated sample(s): 01-17 QC Batch ID: WG1931538-4 QC Sample: L2430618-17 Client ID: SS-BCP-33-03-06032024												
Nitrogen, Ammonia	11	410	420	99		-	-		55-144	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-17 QC Batch ID: WG1929362-1 QC Sample: L2430618-01 Client ID: SS-BCP-32-06032024						
Solids, Total	84.5	84.8	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-17 QC Batch ID: WG1930940-2 QC Sample: L2430618-10 Client ID: SS-BCP-31-06032024						
pH (H)	8.52	8.60	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 01-17 QC Batch ID: WG1931538-3 QC Sample: L2430618-17 Client ID: SS-BCP-33-03-06032024						
Nitrogen, Ammonia	11	32	mg/kg	98	Q	20
General Chemistry - Westborough Lab Associated sample(s): 01-17 QC Batch ID: WG1931763-3 QC Sample: L2430728-01 Client ID: DUP Sample						
Cyanide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01-17 QC Batch ID: WG1931766-3 QC Sample: L2430728-01 Client ID: DUP Sample						
Sulfide, Reactive	ND	ND	mg/kg	NC		40

Project Name: RITC**Lab Number:** L2430618**Project Number:** SATELLITE AREA**Report Date:** 06/11/24**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2430618-01A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-01B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-01C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		TCN-9010(14),REACTS(14),IGNIT-1030(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-01S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-01T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-01W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2430618-01X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2430618-01X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-02A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-02B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-02C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		REACTS(14),TCN-9010(14),IGNIT-1030(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-02S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-02T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-02W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2430618-02X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2430618-02X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-03A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-03B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)

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L2430618-03C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		IGNIT-1030(14),TCN-9010(14),REACTS(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-03S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-03T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-03W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2430618-03X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),BA-CI(180),AS-CI(180),HG-C(28),PB-CI(180),SE-CI(180),CR-CI(180),AG-CI(180)
L2430618-03X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-04A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-04B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-04C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		IGNIT-1030(14),TCN-9010(14),REACTS(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-04S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-04T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-04W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2430618-04X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),BA-CI(180),AS-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2430618-04X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-05A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-05B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-05C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		TCN-9010(14),IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-05S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-05T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-05W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2430618-05X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),BA-CI(180),AS-CI(180),HG-C(28),PB-CI(180),SE-CI(180),CR-CI(180),AG-CI(180)
L2430618-05X9	Tumble Vessel	A	NA		3.3	Y	Absent		-

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L2430618-06A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-06B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-06C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		TCN-9010(14),REACTS(14),FLASH(),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-06S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-06T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-06W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2430618-06X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),BA-CI(180),AS-CI(180),HG-C(28),PB-CI(180),SE-CI(180),CR-CI(180),AG-CI(180)
L2430618-06X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-07A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-07B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-07C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		IGNIT-1030(14),REACTS(14),TCN-9010(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-07S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-07T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-07W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2430618-07X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2430618-07X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-08A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-08B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-08C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		IGNIT-1030(14),TCN-9010(14),REACTS(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-08S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-08T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-08W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2430618-08X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)

*Values in parentheses indicate holding time in days

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L2430618-08X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-09A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-09B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-09C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		REACTS(14),TCN-9010(14),FLASH(),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-09S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-09T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-09W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2430618-09X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2430618-09X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-10A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-10B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-10C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		TCN-9010(14),REACTS(14),IGNIT-1030(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-10S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-10T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-10W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2430618-10X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),BA-CI(180),AS-CI(180),HG-C(28),PB-CI(180),SE-CI(180),CR-CI(180),AG-CI(180)
L2430618-10X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-11A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-11B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-11C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		REACTS(14),IGNIT-1030(14),TCN-9010(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-11S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-11T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-11W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)

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L2430618-11X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2430618-11X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-12A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-12B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-12C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		REACTS(14),IGNIT-1030(14),TCN-9010(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-12S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-12T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-12W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2430618-12X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2430618-12X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-13A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-13B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-13C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		REACTS(14),IGNIT-1030(14),TCN-9010(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-13S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-13T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-13W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2430618-13X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),BA-CI(180),AS-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2430618-13X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-14A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-14B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-14C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		REACTS(14),TCN-9010(14),IGNIT-1030(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-14S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)

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L2430618-14T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-14W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2430618-14X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),SE-CI(180),CR-CI(180),AG-CI(180)
L2430618-14X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-15A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-15B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-15C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		TCN-9010(14),REACTS(14),IGNIT-1030(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-15S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-15T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-15W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2430618-15X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2430618-15X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-16A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-16B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2430618-16C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		TCN-9010(14),IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-16S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-16T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-16W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2430618-16X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),BA-CI(180),AS-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2430618-16X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2430618-17A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2430618-17B	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)

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Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2430618-17C	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		IGNIT-1030(14),TCN-9010(14),REACTS(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2430618-17S	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-17T	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2430618-17W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2430618-17X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.3	Y	Absent		CD-CI(180),BA-CI(180),AS-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2430618-17X9	Tumble Vessel	A	NA		3.3	Y	Absent		-

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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: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

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

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Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- 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.)

Project Name: RITC
Project Number: SATELLITE AREA

Lab Number: L2430618
Report Date: 06/11/24

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.
- 125 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates IIIA, April 1998.

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.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS.

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.

Nonpotable Water: **EPA RSK-175 Dissolved Gases**

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 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).

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, 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.

 NEW YORK CHAIN OF CUSTODY		Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page <u>1</u> of <u>2</u>		Date Rec'd in Lab <u>6/4/24</u>		ALPHA Job # <u>12430618</u>									
Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193		Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288		Project Information Project Name: <u>RITC</u> Project Location: <u>3875 River Rd.</u> Project # <u>Satellite AREA</u> (Use Project name as Project #) ☐		Deliverables ☐ ASP-A ☐ ASP-B ☒ EQuS (1 File) ☐ EQuS (4 File) ☐ Other		Billing Information ☒ Same as Client Info PO #									
Client Information Client: <u>INVENTUM ENG</u> Address: <u>441 Carlisle Drive</u> <u>HERNDON VA</u> Phone: <u>716-553-5129</u> Fax: Email: <u>Peter.Zaffano@inventumeng.com</u>		Project Manager: <u>JOHN BLACH</u> ALPHAQuote #: Turn-Around Time Standard ☒ Rush (only if pre approved) ☐ Due Date: # of Days:		Regulatory Requirement ☐ NY TOGS ☒ NY Part 375 ☐ AWQ Standards ☐ NY CP-51 ☐ NY Restricted Use ☐ Other ☐ NY Unrestricted Use ☐ NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: ☐ NJ ☒ NY ☐ Other:											
These samples have been previously analyzed by Alpha ☐ Other project specific requirements/comments: <u>HAZCAT (TCLP RCI)</u> Please specify Metals or TAL.				ANALYSIS TCLP Composite Analysis T-Ambient T-Gravide TS-SM 2040 RCI				Sample Filtration ☐ Done ☐ Lab to do Preservation ☐ Lab to do (Please Specify below) Sample Specific Comments									
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date Time		Sample Matrix	Sampler's Initials	TCLP Composite Analysis		T-Ambient		T-Gravide		TS-SM 2040		RCI		Sample Specific Comments	
30618-01	SS-BLP-32-06032024	6/3/24	0900	SD	PS	X	X	X	X	X							Include Permit,
-02	SS-BLP-29-06032024	6/3/24	0905			X	X	X	X	X							
-03	SS-RCP-29-01-06032024	6/3/24	0910			X	X	X	X	X							
-04	SS-BLP-29-02-06032024	6/3/24	0915			X	X	X	X	X							
-05	SS-RCP-29-03-06032024	6/3/24	0920			X	X	X	X	X							
-06	SS-BLP-30-01-06032024	6/3/24	0925			X	X	X	X	X							
-07	SS-BLP-30-01-06032024	6/3/24	0930			X	X	X	X	X							
-08	SS-BLP-30-02-06032024	6/3/24	0935			X	X	X	X	X							
-09	SS-BLP-30-03-06032024	6/3/24	0940			X	X	X	X	X							
-10	SS-BLP-31-06032024	6/3/24	0945		PS	X	X	X	X	X							
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type Preservative		A A A P A A A A								Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)	
Relinquished By:		Date/Time		Received By:		Date/Time											
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[Signature]		6/3/24 1645		[Signature]		6/4/24 0030											

 NEW YORK CHAIN OF CUSTODY		Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page <u>2</u> of <u>2</u>		Date Rec'd in Lab <u>6/4/24</u>		ALPHA Job # <u>L24 80618</u>																																																																																																																																																																																								
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<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">ALPHA Lab ID (Lab Use Only)</th> <th rowspan="2">Sample ID</th> <th colspan="2">Collection</th> <th rowspan="2">Sample Matrix</th> <th rowspan="2">Sampler's Initials</th> <th colspan="5"></th> </tr> <tr> <th>Date</th> <th>Time</th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>30618 -11</td> <td>SS-BLP-31-01-06032024</td> <td>06/03/24</td> <td>0950</td> <td>SD</td> <td>OP</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>-12</td> <td>SS-BLP-31-02-06032024</td> <td></td> <td>0955</td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>-13</td> <td>SS-BLP-31-03-06032024</td> <td></td> <td>091000</td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>-14</td> <td>SS-BLP-33-06032024</td> <td></td> <td>1005</td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>-15</td> <td>SS-BLP-33-01-06032024</td> <td></td> <td>1010</td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>-16</td> <td>SS-BLP-33-02-06032024</td> <td></td> <td>1015</td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>-17</td> <td>SS-BLP-33-03-06032024</td> <td>6/3/24</td> <td>1020</td> <td></td> <td>OB</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>		ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials						Date	Time						30618 -11	SS-BLP-31-01-06032024	06/03/24	0950	SD	OP	X	X	X	X	X			-12	SS-BLP-31-02-06032024		0955			X	X	X	X	X			-13	SS-BLP-31-03-06032024		091000			X	X	X	X	X			-14	SS-BLP-33-06032024		1005			X	X	X	X	X			-15	SS-BLP-33-01-06032024		1010			X	X	X	X	X			-16	SS-BLP-33-02-06032024		1015			X	X	X	X	X			-17	SS-BLP-33-03-06032024	6/3/24	1020		OB	X	X	X	X	X																																																																																				
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Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type Preservative		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)																																																																																																																																																																																								
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Appendix C – Quality Assurance Project Plan





INVENTUM ENGINEERING, PC

Quality Assurance Project Plan

Remedial Action Work Plan

Full Scale Water Treatment Area Bioremediation

Riverview Innovation & Technology Campus

Brownfield Cleanup Program Site No. C915353

3875 River Road

Tonawanda, NY 14150

December 19, 2024

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1 Introduction

The purpose of this Quality Assurance Project Plan (QAPP) is to serve as a guidance document during implementation of the Remedial Action Work Plan (RAWP), Full Scale Water Treatment Area Bioremediation for the Riverview Innovation and Technology Campus Brownfield Cleanup Program Site (BCP Site) located at 3875 River Road in Tonawanda, Erie County, New York. The RAWP is being conducted in accordance with the BCP Agreement (Index No. C915353-02-20) between the New York State Department of Environmental Conservation (NYSDEC) and Riverview dated February 14, 2020. The BCP Site is listed as Site Number C915353.

This QAPP is designed to provide an overview of Quality Assurance/Quality Control (QA/QC) procedures. Specific methods and QA/QC procedure for chemical testing of environmental samples obtained from the site as part of the RAWP are defined.

An Inventum Engineering, P.C. (Inventum) Project Manager will be responsible for verifying that QA procedures are followed during the investigation and analysis. This will provide for the valid collection of representative samples. The Project Manager will be in direct contact with the analytical laboratory to ensure that holding times and other QA/QC requirements are met. The selected laboratory will be responsible for overseeing analytical QA/QC activities.

The estimated number of environmental samples and corresponding analytical parameters/methods are provided in Table 1 below. These sample quantities may vary depending on media availability and routine adjustments made during the field work.

Table 1 – Analytical Parameters and Methods				
Parameter	EPA Method Reference	Confirmation Sampling (Estimated 6 samples)	Verification Sampling (Estimated 12 samples)	Pre-Solidification Sampling
Toxicity Characteristic Leaching Procedure	1311		1 per 500-tons of material	
Volatile Organic Compounds	8260C	Around the perimeter of the FLOA		1 per Satellite Area
Semi Volatile Organic Compounds	8270D	Around the perimeter of the FLOA		1 per Satellite Area
Metals	6010C			1 per Satellite Area



Total Organic Carbon	9060			1 per Satellite Area
Total Cyanide	SM 4500 CN E-2011		1 per 500-tons of material	1 per Satellite Area
Total Mercury	7470A		1 per 500-tons of material	
Ammonia	E350.1	Around the perimeter of the FLOA	1 per 500-tons of material	1 per Satellite Area
Field Duplicates ⁽¹⁾		1 per 20 Samples Collected		
MS/MSD ⁽²⁾		1 per 20 Samples Collected		
Trip Blanks ⁽³⁾	8260C	One per Volatile Shipment		

The analytical laboratory utilized will be a certified NYSDOH ELAP laboratory for the appropriate categories. The laboratory QA Manager will be responsible for performing project-specific audits and overseeing the quality control data generated.

2 Data Quality Objectives

Data Quality Objectives (DQOs) are qualitative and quantitative statements which specify the quality of data required to support the investigation of the Site. DQOs focus on the identification of the end use of the data to be collected. The project DQOs will be achieved utilizing the definitive data category, as outlined in Guidance for the Data Quality Objectives Process, EPA QA/G-4 (September 1994). All samples will provide definitive data, which are generated using rigorous analytical methods, such as the reference methods approved by the United States Environmental Protection Agency (USEPA). The purpose of this remedial action is to eliminate nuisance characteristics and eliminate potential hazardous concentrations in the soils in the Water Treatment Area through bioremediation.

Within the context of the purpose stated above, the project DQOs for data collected during the investigation are:

- To assess the effectiveness of soil remediation through the application of high nitrogen fertilizer.



2.1 QA Objectives for Chemical Data Management

Sample analytical methodology for the media sampled and data deliverables will meet the requirements in the most recent NYSDEC Analytical Services Protocol (ASP). Laboratories will be instructed that completed Sample Preparation and Analysis Summary forms are to be submitted with the analytical data packages. The laboratory will also be instructed that matrix interferences must be cleaned up, to the extent practicable. Data Usability Summary Reports (DUSRs) will be generated. In order to achieve the definitive data category described above, the data quality indicators of precision, accuracy, representativeness, comparability, and completeness will be measured during offsite chemical analysis.

2.1.1 Precision

Precision examines the distribution of the reported values about their mean. The distribution of reported values refers to how different the individual reported values are from the average reported value. Precision may be affected by the natural variation of the matrix or contamination within that matrix, as well as by errors made in field and/or laboratory handling procedures. Precision is evaluated using analyses of a laboratory matrix spike/matrix spike duplicate (for organics) and matrix duplicates (for inorganics), which not only exhibit sampling and analytical precision, but indicate analytical precision through the reproducibility of the analytical results. Relative Percent Difference (RPD) is used to evaluate precision. RPD criteria must meet the method requirements identified in QAPP Section 6.1.

2.1.2 Accuracy

Accuracy measures the analytical bias in a measurement system. Sources of error are the sampling process, field contamination, preservation, handling, sample matrix, sample preparation, and analysis techniques. These data help to assess the potential concentration contribution from various outside sources. The laboratory objective for accuracy is to equal or exceed the accuracy demonstrated for the applied analytical methods on samples of the same matrix. The percent recovery criterion is used to estimate accuracy based on recovery in the matrix spike/matrix spike duplicate and matrix spike blank samples. The spike and spike duplicate, which will give an indication of matrix effects that may be affecting target compounds is also a good gauge of method efficiency.

2.1.3 Representativeness

Representativeness expresses the degree to which the sample data accurately and precisely represent the characteristics of a population of samples, parameter variations at a sampling point, or environmental conditions. Representativeness is a qualitative parameter, which is most concerned with the proper design of the sampling program or sub-sampling of a given sample. Objectives for representativeness are defined for sampling and analysis tasks and are a function of the investigative objectives. The sampling procedures have been selected with the goal of obtaining representative samples for the media of concern.

2.1.4 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. A DQO for this program is to produce data with the greatest practicable degree of comparability. This goal is achieved through using standard techniques to collect and analyze representative samples and reporting analytical results in appropriate units. Complete field documentation will support the assessment of comparability. Comparability is limited by the other parameters (e.g., precision, accuracy, representativeness, completeness, comparability), because only when precision and accuracy are known can data sets be compared with confidence. In order for data sets to be comparable, it is imperative that contract-required methods and procedures be explicitly followed.



2.1.5 Completeness

Completeness is defined as a measure of the amount of valid data obtainable from a measurement system compared to the amount that was expected to be obtained under normal conditions. It is important that appropriate QA procedures be maintained to verify that valid data are obtained in order to meet project needs. For the data generated, a goal of 90% is required for completeness (or usability) of the analytical data. If this goal is not met, then NYSDEC, Inventum, and Riverview project personnel will determine whether the deviations might cause the data to be rejected.

3 Sampling Locations, Custody, Holding Times, and Analysis

Sample locations and procedures are discussed in the RAWP. Procedures for chain of custody, holding times and laboratory analyses shall be followed as per SW-846 and as per the laboratory's Quality Assurance Plan. All holding times begin with validated time of sample receipt (VTSR) at the laboratory. The laboratory must meet the method required detection limits which are referenced within the EPA Methods (QAPP Table 1).

4 Calibration Procedures and Frequency

In order to obtain a high level of precision and accuracy during sample processing procedures laboratory instruments must be calibrated properly. Several analytical support areas must be considered so the integrity of standards and reagents is upheld prior to instrument calibration. The following section describe the analytical support areas and laboratory instrument calibration procedures.

4.1 Analytical Support Areas

Prior to generating quality data, several analytical support areas must be considered; these are detailed in the following paragraphs.

- **Standard/Reagent Preparation** - Primary reference standards and secondary standard solutions shall be obtained from National Institute of Standards and Technology (NIST), or other reliable commercial sources to verify the highest purity possible. The preparation and maintenance of standards and reagents will be accomplished according to the methods referenced. All standards and standard solutions are to be formally documented (i.e., in a logbook) and should identify the supplier, lot number, purity/concentration, receipt/preparation date, preparers name, method of preparation, expiration date, and any other pertinent information. All standard solutions shall be validated prior to use. Care shall be exercised in the proper storage and handling of standard solutions (e.g., separating volatile standards from nonvolatile standards). The laboratory shall continually monitor the quality of the standards and reagents through well documented procedures.
- **Balances** - The analytical balances shall be calibrated and maintained in accordance with manufacturer specifications. Calibration is conducted with two Class AS" weights that bracket the expected balance use range. The laboratory shall check the accuracy of the balances daily and they must be properly documented in permanently bound logbooks.
- **Refrigerators/Freezers** - The temperature of the refrigerators and freezers within the laboratory shall be monitored and recorded daily. This will verify that the quality of the standards and reagents is not compromised, and the integrity of the analytical samples is upheld. Appropriate acceptance ranges (2 to 6°C for refrigerators) shall be clearly posted on each unit in service.



- Water Supply System - The laboratory must maintain a sufficient water supply for all project needs. The grade of the water must be of the highest quality (analyte-free) in order to eliminate false-positives from the analytical results. Ultraviolet cartridges or carbon absorption treatments are recommended for organic analyses and ion-exchange treatment is recommended for inorganic tests. Appropriate documentation of the quality of the water supply system(s) will be performed on a regular basis.

4.2 Laboratory Instruments

Calibration of instruments is required to verify that the analytical system is operating properly and at the sensitivity necessary to meet established quantitation limits. Each instrument for organic and inorganic analyses shall be calibrated with standards appropriate to the type of instrument and linear range established within the analytical method(s). Calibration of laboratory instruments will be performed according to specified methods.

In addition to the requirements stated within the analytical methods, the contract laboratory will be required to analyze an additional low-level standard at or near the detection limits. In general, standards will be used that bracket the expected concentration of the samples. This will require the use of different concentration levels, which are used to demonstrate the instrument's linear range of calibration.

Calibration of an instrument must be performed prior to the analysis of any samples and then at periodic intervals (continuing calibration) during the sample analysis to verify that the instrument is still calibrated. If the contract laboratory cannot meet the method required calibration requirements, corrective action shall be taken as discussed in QAPP Section 7. All corrective action procedures taken by the contract laboratory are to be documented, summarized within the case narrative, and submitted with the analytical results.

5 Internal Quality Control Checks

Internal QC checks are used to determine if analytical operations at the laboratory are in control, as well as determining the effect sample matrix may have on data being generated. Two types of internal checks are performed and are described as batch QC and matrix-specific QC procedures. The type and frequency of specific QC samples performed by the contract laboratory will be according to the specified analytical method and project specific requirements. Acceptable criteria and/or target ranges for these QC samples are presented within the referenced analytical methods.

QC results which vary from acceptable ranges shall result in the implementation of appropriate corrective measures, potential application of qualifiers, and/or an assessment of the impact these corrective measures have on the established data quality objectives. Quality control samples including any project-specific QC will be analyzed are discussed below.

5.1 Batch QC

Method Blanks - A method blank is defined as laboratory-distilled or deionized water that is carried through the entire analytical procedure. The method blank is used to determine the level of laboratory background contamination. Method blanks are analyzed at a frequency of one per analytical batch.

Matrix Spike Blank Samples - A matrix spike blank (MSB) sample is an aliquot of water spiked (fortified) with all the elements being analyzed for calculation of precision and accuracy to verify that the



analysis that is being performed is in control. An MSB will be performed for each matrix and organic parameter only.

5.2 Matrix-Specific QC

Matrix Spike Samples - An aliquot of a matrix is spiked with known concentrations of specific compounds as stipulated by the methodology. The matrix spike (MS) and matrix spike duplicate (MSD) are subjected to the entire analytical procedure in order to assess both accuracy and precision of the method for the matrix by measuring the percent recovery and relative percent difference of the two spiked samples. The samples are used to assess matrix interference effects on the method, as well as to evaluate instrument performance. MS/MSDs are analyzed at a frequency of one each per 20 samples per matrix.

Matrix Duplicates - The matrix duplicate (MD) is two representative aliquots of the same sample which are prepared and analyzed identically. Collection of duplicate samples provides for the evaluation of precision both in the field and at the laboratory by comparing the analytical results of two samples taken from the same location. Obtaining duplicate samples from a soil matrix requires homogenization (except for volatile organic compounds) of the sample aliquot prior to filling sample containers, in order to best achieve representative samples. Every effort will be made to obtain replicate samples; however, due to interferences, lack of homogeneity, and the nature of the soil samples, the analytical results are not always reproducible.

Rinsate (Equipment) Blanks - A rinsate blank is a sample of laboratory demonstrated analyte free water passed through and over the cleaned sampling equipment. A rinsate blank is used to indicate potential contamination from ambient air and from sample instruments used to collect and transfer samples. This water must originate from one common source within the laboratory and must be the same water used by the laboratory performing the analysis. The rinsate blank should be collected, transported, and analyzed in the same manner as the samples acquired that day. Rinsate blanks for nonaqueous matrices should be performed at a rate of 10 percent of the total number of samples collected throughout the sampling event. Rinse blanks will not be performed on samples (i.e., groundwater) where dedicated disposable equipment is used. It is not anticipated that rinsate blanks will be collected as all sample equipment in contact with the soil or groundwater being sample will be disposal during this PDIWP for development of the SCO for Ammonia.

Trip Blanks - Trip blanks are not required for nonaqueous matrices. Trip blanks are required for aqueous sampling events. They consist of a set of sample bottles filled at the laboratory with laboratory demonstrated analyte free water. These samples then accompany the bottles that are prepared at the lab into the field and back to the laboratory, along with the collected samples for analysis. These bottles are never opened in the field. Trip blanks must return to the lab with the same set of bottles they accompanied to the field. Trip blanks will be analyzed for volatile organic parameters. Trip blanks must be included at a rate of one per volatile sample shipment.

6 Calculation of Data Quality Indicators

6.1 Precision

Precision is evaluated using analyses of a field duplicate and/or a laboratory MS/MSD which not only exhibit sampling and analytical precision but indicate analytical precision through the reproducibility of the analytical results. RPD is used to evaluate precision by the following formula:



$$RPD = \frac{(X1 - X2) \times 100\%}{[(X1 + X2)/2]}$$

Where:

X1= Measured value of sample or matrix spike

X2= Measured value of duplicate or matrix spike duplicate

Precision will be determined through the use of MS/MSD (for organics) and matrix duplicates (for inorganics) analyses.

6.2 Accuracy

Accuracy is defined as the degree of difference between the measured or calculated value and the true value. The closer the numerical value of the measurement comes to the true value or actual concentration, the more accurate the measurement is. Analytical accuracy is expressed as the percent recovery of a compound or element that has been added to the environmental sample at known concentrations before analysis. Analytical accuracy may be assessed through the use of known and unknown QC samples and spiked samples. It is presented as percent recovery. Accuracy will be determined from matrix spike, matrix spike duplicate, and matrix spike blank samples, as well as from surrogate compounds added to organic fractions (i.e., volatiles, semi volatiles, PCB), and is calculated as follows:

$$\text{Accuracy (\%R)} = \frac{(X_s - X_u) \times 100\%}{K}$$

Where:

X_s- Measured value of the spike sample

X_u- Measured value of the unspiked sample

K - Known amount of spike in the sample

6.3 Completeness

Completeness is calculated on a per matrix basis for the project and is calculated as follows:

$$\text{Completeness (\%C)} = \frac{(X_v - X_n) \times 100\%}{N}$$

Where:

X_v- Number of valid measurements

X_n- Number of invalid measurements

N - Number of valid measurements expected to be obtained



7 Corrective Actions

Laboratory corrective actions shall be implemented to resolve problems and restore proper functioning to the analytical system when errors, deficiencies, or out-of-control situations exist at the laboratory. Full documentation of the corrective action procedure needed to resolve the problem shall be filed in the project records, and the information summarized in the case narrative. A discussion of the corrective actions to be taken is presented in the following sections.

7.1 Incoming Samples

Problems noted during sample receipt shall be documented by the laboratory. The Inventum Project Manager shall be contacted immediately for problem resolution. All corrective actions shall be documented thoroughly.

7.2 Sample Holding Times

If any sample extraction and/or analyses exceed method holding time requirements, the Inventum Project Manager shall be notified immediately for problem resolution. All corrective actions shall be documented thoroughly.

7.3 Instrument Calibration

Sample analysis shall not be allowed until all initial calibrations meet the appropriate requirements. All laboratory instrumentation must be calibrated in accordance with method requirements. If any initial/continuing calibration standards exceed method QC limits, recalibration must be performed and, if necessary, reanalysis of all samples affected back to the previous acceptable calibration check.

7.4 Reporting Limits

The laboratory must meet the method required detection limits listed in NYSDEC ASP, 10/95 criteria. If difficulties arise in achieving these limits due to a particular sample matrix, the laboratory must notify Inventum personnel for problem resolution. In order to achieve those detection limits, the laboratory must utilize all appropriate cleanup procedures in an attempt to retain the project required detection limits. When any sample requires a secondary dilution due to high levels of target analytes, the laboratory must document all initial analyses and secondary dilution results. Secondary dilution will be permitted only to bring target analytes within the linear range of calibration. If samples are analyzed at a secondary dilution with no target analytes detected, the Project Manager will be immediately notified so that appropriate corrective actions can be initiated.

7.5 Method QC

All QC method-specified QC samples shall meet the method requirements referenced in the analytical methods. Failure of method-required QC will result in the review and possible qualification of all affected data. If the laboratory cannot find any errors, the affected sample(s) shall be reanalyzed and/or re-extracted/redigested, then reanalyzed within method-required holding times to verify the presence or absence of matrix effects. If matrix effect is confirmed, the corresponding data shall be flagged accordingly using the flagging symbols and criteria. If matrix effect is not confirmed, then the entire batch of samples may have to be reanalyzed and/or re-extracted/redigested, then reanalyzed. Inventum shall be notified as soon as possible to discuss possible corrective actions should unusually difficult sample matrices be encountered.



7.6 Calculation Errors

All analytical results must be reviewed systematically for accuracy prior to submittal. If upon data review calculation and/or reporting errors exist, the laboratory will be required to reissue the analytical data report with the corrective actions appropriately documented in the case narrative.

8 Data Reduction, Validation, and usability

8.1 Data Reduction

Laboratory analytical data are first generated in raw form at the instrument. These data may be either in a graphic or printed tabular format. Specific data generation procedures and calculations are found in each of the referenced. Analytical results must be reported consistently. Identification of all analytes must be accomplished with an authentic standard of the analyte traceable to NIST or USEPA sources. Individuals experienced with a methods particular analysis and knowledgeable of requirements will perform data reduction.



9 References

- Comprehensive Environmental Response Compensation and Liability Act (CERCLA) Quality Assurance Manual, Final Copy, Revision I, October 1989.
- National Enforcement Investigations Center of USEPA Office of Enforcement. NEIC Policies and Procedures. Washington: USEPA.
- New York State Department of Environmental Conservation (NYSDEC). 1995. Analytical Services Protocol, (ASP) 10/95 Edition. Albany: NYSDEC.



Appendix D.1 – Inventum Health and Safety Plan



Inventum Engineering

Site-Specific Health and Safety Plan (HASP)

(Required for all Type 2 and 3 projects.)

1. General Information

Client Name: Riverview Project #: RITC
Innovation and Technology
Campus, Inc.

Project Name: Brownfield Project Manager: John
Cleanup Program Remedial Black, PE
Action

Street Address:
3875 River Road
Tonawanda, New York 14150

Prepared By: James Edwards **Date:** December 19, 2024

Approved By: John Black, P.E. **Date:** December 20, 2024

Proposed Date(s) of Work: Q4 2024 through 2025

Proposed Scope of Work:

Inventum Engineering, P.C. (Inventum) will be the owner's representative, investigation team and engineer supporting the site management and remedial actions through the New York State Brownfield Cleanup Program (BCP) for the Riverview Innovation and Technology Campus located on the former Tonawanda Coke Corporation Facility (BCP Site). The general scope of work is provided below, and tasks will be updated with additional details/specifications as the project progresses through the BCP.

Task 1 - Site Management and Oversight

Inventum will conduct site visits and provide full-time site management support, general management support, and general contractor and subcontractor oversight related to the remedial actions of the BCP Site. This task includes site work related to monitoring and support of the task outlined in the Remedial Action Work Plans, but specifically excludes Inventum personnel directly performing any intrusive site work or oversight of contractors/subcontractors performing intrusive site work. Direct intrusive site work and/or intrusive site work oversight is covered under Tasks 2 through 5 below.

Task 2 – Surficial Soil Sampling

Surficial (approximately 0 to 1 foot below ground surface [bgs] or from a stockpiles) soil samples will be collected from designated locations of the Remedial Action work areas. These shallow samples will be collected using a hand-auger, shovel, spoon or trowel and the material will be recovered for lithological characterization and field screening with a PID equipped with a 10.6 eV lamp. All observations and measurements will be logged in the field notebook. Samples may be collected for various constituents including Semi-Volatile Organic Compounds (SVOCs), Volatile Organic Compounds (VOCs), and Ammonia.



Inventum Engineering

Site-Specific Health and Safety Plan (HASP)

(Required for all Type 2 and 3 projects.)

Task 3 – Subsurface Soil Sampling

Subsurface (> 1 feet bgs) soils samples will be collected from locations outlined in Remedial Action Work Plans at the BCP Site to establish current conditions as needed. Depending on the depth of sample, subsurface samples may be collected using a hand-auger, shovel, trowel, light or heavy excavating equipment. Material will be recovered for lithological characterization and field screening with a PID equipped with a 10.6 eV lamp. All observations and measurements will be logged in the field notebook. Samples may be collected for various constituents including SVOCs, VOCs, and Ammonia.

Task 4 – Test Pit Excavations

Test pits will be excavated using an excavator. Excavated material and soils will be temporarily stockpiled a minimum of 2-feet away from the edge of the pit. Excavated soils will be recovered and presented to Inventum for lithological characterization and field screening with a PID equipped with a 10.6 eV lamp. All observations and measurements will be logged in the field notebook. Samples may be collected for various constituents including SVOCs, VOCs, and Ammonia.

Task 5 – Sampling of Residuals

Samples may be collected from various sumps, pits, or containers at the BCP Site to characterize contents as part of a Remedial Action. To the extent practicable, all samples will be collected from the surface or from equipment outside the accumulation point to avoid the need for confined space entry. Samples may be collected installed using a bailer, hand-auger, shovel, trowel, sludge sampler or other long reach equipment. Material will be recovered, and field screened with a PID equipped with a 10.6 eV lamp. All observations and measurements will be logged in the field notebook. Samples may be collected for various constituents including Metals, SVOCs, VOCs, PCBs, cyanide, mercury, hazardous characteristics, pH and water content.

Task 6 – Surface Water Sampling (Sediment Ponds)

Surface water samples will be collected from Sedimentation Pond 001. Surface water samples will be analyzed for VOCs, and SVOCs.

The samples will be collected as a grab sample and no personnel will enter the pond to collect samples.



Inventum Engineering

Site-Specific Health and Safety Plan (HASP)

(Required for all Type 2 and 3 projects.)

Inventum Role(s) On Site:

- ☐ Inventum Staff Will Not Be On Site (HASP and Risk Analysis is for subcontractor information only)
- ☒ Resident Project Representative (*e.g.*, “Observe and Document”)
- ☐ Construction Manager (*e.g.*, CM, Managing/General Contractor)
- ☒ Representative for Client (*e.g.*, “Agent for Owner”)
- ☒ General On-site Consulting/Engineering Services
- ☒ Other
 - ☒ Soil Sampling
 - ☒ Solid Waste Sampling
 - ☒ Liquid Waste Sampling
 - ☒ Groundwater Sampling
 - ☒ Surface Water Sampling
 - ☒ Wastewater Sampling
 - ☒ Sediment Sampling
 - ☐ Surveying
 - ☐ Confined Space Entry



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Major Project Tasks	Inventum Task	Subcontractor Task	Minimum PPE Level Required see HASP for details (suggested levels for Subcontractor work)				
1. Site Management and Oversight	☒	☐	☐ N/A	☒ D	☐ C	☐ B	☐ A
2. Surficial Soil Sampling	☒	☒	☐ N/A	☒ D	☐ C	☐ B	☐ A
3. Subsurface Soil Sampling	☒	☒	☐ N/A	☒ D	☐ C	☐ B	☐ A
4. Test Pit Excavation	☒	☒	☐ N/A	☒ D	☐ C	☐ B	☐ A
5. Sampling of Residuals	☒	☐	☐ N/A	☒ D	☐ C	☐ B	☐ A
6. Surface Water Sampling	☒	☐	☐ N/A	☒ D	☐ C	☐ B	☐ A

2. Contingency Planning

LOCAL EMERGENCY RESOURCES:	
Ambulance: 911	Emergency Room: 716.447.6100
Police: 911	Fire Department: 911
NYSDEC Contact: Ben McPherson, Project Manager, 716.851.7220	Poison Control Center: 1-800-222-1222 ☐ Specify:
Other (client services offered, etc.):	

SITE RESOURCES:			
Drinking Water Supply	☐ Inventum	☐ Subcontractor	☒ Client
Wash Water Supply	☐ Inventum	☐ Subcontractor	☒ Client
Telephone – Land Line		☐ Subcontractor	☒ Client
Telephone - Cellular	☒ Inventum	☒ Subcontractor	
First Aid Kit	☒ Inventum	☒ Subcontractor	
Fire Extinguisher	☐ Inventum	☒ Subcontractor	☒ Client
Emergency Shower N/A	☐ Inventum	☐ Subcontractor	☐ Client
Eye Wash N/A	☐ Inventum	☐ Subcontractor	☐ Client
Other: Confined space retrieval device N/A	☐ Inventum	☐ Subcontractor	☐ Client



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

EMERGENCY/SAFETY CONTACTS:	
Inventum Technical Contacts	John Black (571.217.6761); Todd Waldrop (571.217.3627); James Edwards (571.232.5048)
Inventum Project Manager (PM): John Black	571.217.6761
Inventum Office Safety Coordinator (OSC)	John Black (571.217.6761); Todd Waldrop (571.217.3627); James Edwards (571.232.5048)
Inventum Field Contact:	John Black (571.217.6761); Todd Waldrop (571.217.3627); James Edwards (571.232.5048); Peter Zaffram (716.553.5129)
Contractor Contact (To Vary – Main Remedial Contractor provided):	Ontario Specialty Contracting; 716.856.3333
Client Contact:	Dan Flanigan (716.560.3006) John Yensan (716.856.3333)
Front Gate Guard Shack	716.783.5744

Emergency Route:

Hospitals or clinics identified for emergency medical care should be contacted, to verify that emergency care is provided at that location. Verify the exact location of the medical facility during this call. See directions and map of route to Kenmore Mercy Hospital on the following page:

Hospital: **Kenmore Mercy Hospital**
2950 Elmwood Ave
Buffalo, NY 14127
716.447.6100

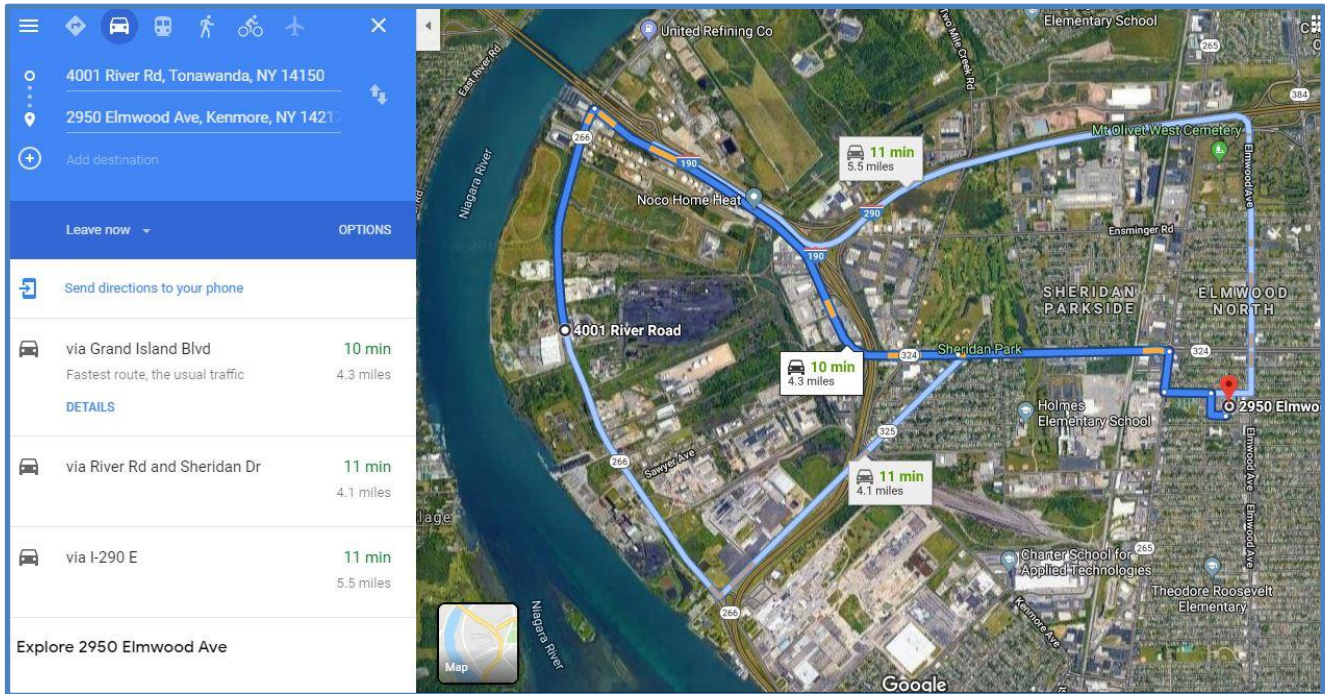
Other: NA



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Map to Hospital



Directions to Hospital:

- **Turn right onto River Road**
- **Turn right onto Grand Island Blvd (about 2 miles)**
- **Merge onto Sheridan Dr.**
- **Go about 1.5 miles and turn right onto Elmwood Avenue**
- **Make a sharp right and hospital is on left**

Emergency Procedures:

If an emergency develops at the site, the first responder should take the following course of action:

- Notify the proper emergency services for assistance.
- Notify other personnel at the site.
- As soon as possible, contact the Inventum Project Manager to inform them of the incident.
- Complete the Inventum Incident Report Form (see Appendices) within 24 hours of the incident and client notifications, as required.



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Investigation of Near Miss Incident and Initial Report of Incident/Exposure:

Inventum employees are required to report any incident, near miss, or injury, as soon as possible, by contacting the following:

☒ Inventum Managing Partner	☒ Notify supervisor	☒ Notify project manager
☐ Notify Site Manager ()	☐ Complete client report: as required	

(name):

(phone number):

Emergency Equipment Required On Site:

☒ First Aid Kit	☐ Fire Extinguisher
☐ Emergency Eye Wash	☐ Spill Control Media
☐ Emergency Shower	☐ Tripod/Hoist/Harness for non-entry confined space rescue



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

3. Site Classification

Identification of Potential Hazards		YES	NO	SITE TYPE ⁽¹⁾
1.	Is the work a Phase I ESA (i.e., supervised plant walk-through, etc.)?	☐	☒	1
2.	Is the work being performed solely by a subcontractor (i.e., INVENTUM not on site)?	☐	☒	1
3.	Is the work just a supervised inspection for process evaluation, other inspections, meetings, records review, or a tour?	☐	☒	1
4. ¹	Is the work completely absent any chemical, physical, biological, or radiological hazards which would require a site-specific health and safety plan?	☐	☒	1
5.	Does the work include any mandatory client H&S requirements?	☒	☐	1, 2, or 3
6.	Does the project include on-site work other than office type areas?	☒	☐	2 or 3
7.	Does the proposed work scope involve any of the following:			
	Known and controlled chemical or biological hazards	☒	☐	2
	Unprotected work at elevation (fall protection required)	☐	☒	2
	Invasive activities (i.e., Phase II ESA, UST Removal, sampling, etc.)	☒	☐	2 or 3
	Exposure to ionizing radiation (i.e., using nuclear gauges, etc.)	☐	☒	2 or 3
	Open excavations/trenches (Competent Person may be required on site)	☒	☐	2 or 3
	Confined space entry (permit may be required)	☐	☒	2 or 3
	The use of scaffolding (qualified inspections are required)	☐	☒	2 or 3
	Heavy equipment	☒	☐	2 or 3
	Facility maintenance (O&M, piping, electrical, lockout/tagout, etc.)	☐	☒	2 or 3
	Underground utilities may be encountered	☒	☐	2 or 3
	Overhead utilities may be encountered	☒	☐	2 or 3
	Stack testing	☐	☒	2 or 3
	Geotechnical drilling	☒	☐	2 or 3
	Demolition Activities with known or suspected contamination	☒	☐	2 or 3
	Unknown or uncontrolled chemical or biological hazards	☐	☒	3
	Known and uncontrolled chemical or biological hazards	☒	☐	3
	Waste sampling	☒	☐	3
	Construction activities with known or suspected contamination	☒	☐	3
	Remedial activities (RCRA, CERCLA, EnviroBlend [®] , Oxigent, etc.)	☒	☐	3
8.	Is the work regulated by 29 CFR 1910.120 (OSHA) or 30 CFR (MSHA)?	☒	☐	3
9.	Is the work regulated by NPL, CERCLA, RCRA, TSD, or SARA?	☒	☐	3

⁽¹⁾ Denotes typical site level (based on activities).



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Site Type Designation:

- ☐ **Type 1** Known and controlled hazards associated with consulting/engineering services.
- ☐ **Type 2** Known and controlled hazards, but with invasive, hazardous activities and/or civil/mechanical construction related services, or sampling.
- ☒ **Type 3** Unknown and/or uncontrolled hazards associated with corrective action clean-up, and/or remediation of hazardous substances.

4. Site Characterization

Client Requirement(s) ¹ :	☒ None	☐ Site Orientation	☐ H&S Orientation
	☐ Permits or Other Requirements (specify and attach, if available):		
Site Information:	☒ Map/Diagram (attach)	☐ Map/Diagram Unavailable	
	☐ Inactive Site	☒ Active Site (specify below)	
General Environmental Concerns:	☒ Contaminated Water	☒ Wastewater	☒ Dust
	☒ Contaminated Soil	☒ Solid Waste	☒ Noise
	☒ Contaminated Air	☒ Waterways	☒ Asbestos
Site Security/Access Control:	☐ None	☒ On Site	
	☐ Other (explain):		
Amenities Available for Work:	☐ None	☒ Waste Storage	☒ Restrooms
	☒ Tools/Equipment Storage	☒ Office/Trailer Space	☒ Supplies Storage
Utilities Available For Work:	☐ None	☒ As Listed: Water, electric	
Medical Services Available:	☐ None On Site	☒ As Listed: First aid	
Facility Alarms/Signals:	☒ None	☐ As Listed:	
Traffic/Parking/Railway Issues:	☐ None	☒ As Listed (On-Site/Off-Site): On-site parking	
☒ Permits Required (specify) ² :	☐ Confined Space Entry	☒ Local: POTW	☐ State:
	☐ Federal:	☐ Other:	☒ N/A
☒ Utility Locate Service(s):	☒ On Site	☐ Client	☒ Other: Former Site employees contracted to client for daily site management
	☐ Off Site	☐	☒ One Call
		☐	☐ N/A

¹ If relying on the client for any specific hazard identification and control, implemented control and effectiveness should be documented prior to beginning any work activities. This is recommended for all field projects.

² Permit examples: Utilities (electrical, water, gas, etc.); Excavations; Explosives; Cranes; Burning; Fuel storage; Traffic control; Hoists; Cutting; Welding; Demolition; Confined space; Restricted access areas; etc.



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Detailed Physical Description of Site/Facility: ☒ **Map/Diagram Attached**

The Site is located at 3875 River Road, Town of Tonawanda, Erie County, New York. The BCP Site encompasses approximately 86.5 acres of land although Riverview Innovation Technology Campus, Inc (client) will control additional acreage outside the BCP program within the federal/state superfund programs. The Site is located approximately 0.25 miles west of I-90 on the east side of River Road. The surrounding properties are primarily industrial or vacant.

The former coke production facility is located in the northern center portion of the property which includes coke ovens, coke by-product plant, storage tanks, and railway line spurs. The southern portion of the property is mainly open with multiple former raw material coal and coke piles located throughout the area. The facility is no longer in operation; however, activities on site include surficial mining of remaining coal/coke storage areas and water management from secondary containment areas.

Historically, manufacturing processes used at the plant have included: by products coking, light oil distillation, ammonia recovery, and ethene, toluene, and xylene extraction. Historical investigations that were performed at the site have identified some conditions that previously required remediation.

Figure 1; Site Location



Site Activities/Current Operations: ☐ None ☒ As Specified

Other Concurrent Site Activities, Work, and/or Other Adjacent Hazards or Concerns:

☐ None

As Specified:

☐ Schools

☐ Daycare

☐ Hospital

☐ Airport

☐ Residential

☒ Offices

☐ Shopping

☒ Active parking lot in work space



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

5. Hazard Evaluation

Complete ⁽¹⁾ Substance Name (be specific)	Specific Applicable OSHA Standard (if any)	Physical State ⁽²⁾ (S, L, G, Aq, Vap, F, P)	Max. ⁽³⁾ Conc. Level Per Physical State	General ⁽⁴⁾ Control Measures (Eng., Admin., PPE)
Coal Tar	0.2 mg/m3	S	Coal Tar Product	Eng., PPE
Benzo(a)pyrene	0.2 mg/m3	S	4,100 ug/kg	Eng., PPE
Benzo(b)fluoranthene	N/A	S	4,600 ug/kg	Eng., PPE
Benzo(a)anthracene	N/A	S	20,000 ug/kg	Eng., PPE
Chrysene	0.2 mg/m3	S	21,000 ug/kg	Eng., PPE
Dibenz(a,h)anthracene	N/A	S	1,700 ug/kg	Eng., PPE
Indeno(1,2,3-cd)pyrene	N/A	S	15,000 ug/kg	Eng., PPE
Cyanide	N/A	L	2.75 mg/L	Eng., PPE
1,4-Dichlorobenzene	75 ppm	L	29 ug/L	Eng., PPE
Benzene	1 ppm	L	85 ug/L	Eng., PPE
Chlorobenzene	75 ppm	L	22 ug/L	Eng., PPE
Xylenes	100 ppm	L	36 ug/L	Eng., PPE
Toluene	200 ppm	L	59 ug/L	Eng., PPE
Iron	N/A	L	160 mg/L	Eng., PPE
Manganese	N/A	L	11.2 mg/L	Eng., PPE
Phenolics	5 ppm	L	0.61 mg/L	Eng., PPE
1,1,1-Trichloroethane	350 ppm	L	12.2 ug/L	Eng., PPE
Methylene chloride	25 ppm	L	52 ug/L	Eng., PPE
Selenium	0.2 mg/m3	L	0.0116 mg/L	Eng., PPE
Nickel	N/A	L	0.153 mg/L	Eng., PPE
Cadmium	0.005 mg/m3	L	0.19 mg/L	Eng., PPE
Chromium Total	1 mg/m3	L	0.086 mg/L	Eng., PPE
Lead	0.050 mg/m3	L	0.025 mg/L	Eng., PPE

(1) Use OSHA regulated name, not elemental forms. If available, attach SDS. Identify any sample preservative or O&M chemicals or subcontractor chemicals in this table also.

(2) S = Solids, L = Liquid, G = Gas, Aq = Aqueous, Vap = Vapor, F = Fume, P = Airborne Particulate.

(3) If available, attach laboratory results or summary tables.

(4) See the following sections for detailed control measures: personal protection equipment (PPE), Air Monitoring (Admin), or Site Control (Admin and Eng.).

(6) IP = Ionization Potential, VP = Vapor Pressure, LEL = Lower Explosive Limit, UEL = Upper Explosive Limit, N/A = Not Applicable, N.D. = Not Determined

(7) IDLH = Immediately Dangerous to Life and Health. NEVER enter IDLH conditions on site without proper respiratory protection.

(8) C = Ceiling Value, ST = Short-Term Exposure Limit, TWA = Time-Weighted Average, None Est. = None Established

(9) R = Respirable Limit, T = Total Limit

(10) Warning Properties: Good (G), Poor (P), None (N)



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

5. Hazard Evaluation (continued)

Site-Specific Physical Hazards

HAZARD	SPECIFIC CONTROL MEASURE
Slip/Trip/Fall Injury	– Use roads or trails whenever possible. – Occasionally reassess route to avoid dangerous terrain. – Maintain good housekeeping and keep work area clear of loose materials and equipment. – Use portable steps to mount and dismount sampling vehicle.
Ingestion of or contact with impacted soil	– Wear safety glasses. – Wear nitrile and appropriate cut-/puncture-resistant gloves (see Glove Selection Guideline) when performing tasks. – Wash hands and arms thoroughly when daily work is completed. – No eating, drinking, or smoking while conducting monitoring or sampling activities.
Pinched fingers or toes	– Where appropriate cut-/puncture-resistant gloves (see Glove Selection Guideline) when the potential for hand injury exists. – Where steel-toed safety shoes with steel shanks while on site.
Strained muscles	– Use proper lifting posture, techniques, and equipment when handling heavy objects. – Use two people for loads >40 lbs. or awkward items. – Take rests as needed during and between carries.
Cutting activities	
Flying debris/eye injuries	– Wear ANSI-approved safety glasses when the potential for flying debris and eye injuries exists.



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Animals (dogs, etc.)	Be aware of any animals on site or adjacent to the site. Appropriate care should be taken if any feral (wild) animals are encountered.
☐	Blasting/Explosives	INVENTUM personnel shall not handle any explosive devices or materials. INVENTUM personnel should understand the blasting procedures being used by the subcontractor, and all of the associated health & safety precautions. The subcontractor shall handle, store, and use the explosives in accordance with 29 CFR 1926.900, Subpart H and U.
☐	Boat or Barge	A boat or barge should be used that is adequately stable for the type of activity conducted. The boat or barge should have all of the appropriate and current licensing and registrations required by the applicable regulatory agencies. All applicable laws and regulations will be followed when launching the boat or barge, and when navigating to and from the work site. Personal floatation devices should always be worn while navigating the boat or barge. The boat <u>must be equipped</u> with the following approved United States Coast Guard (USCG) safety equipment: – A Type 1, 2, or 3 personal flotation device (PFD) for every person aboard (should be worn while navigating) The following equipment is <u>recommended</u>: – A Type 4 throwable PFD – Audible distress signal device (air horn, whistle) – Fire extinguisher (if engine-propelled) – Auxiliary propulsion (spare paddles, trolling motor) – Bow and stern lines – Anchor and anchor line – First aid kit – Visual distress signal device(s) (flares, dyes) – Additional PFDs Be familiar with local weather and tidal characteristics. Do not conduct sampling from a boat/barge when threatening weather is imminent, or poor visibility exists. Sampling from a boat is prohibited in water containing substances likely to cause injury upon short-term or prolonged contact. Sampling from a boat is prohibited when the temperature of the water is high or low enough to cause injury upon short-term or prolonged exposure. Avoid sampling from a boat when unsafe water turbulence (waves) exists. Avoid standing in a boat. Always use the buddy system when sampling from a boat or barge; one person should be on shore with visual contact of the barge and should be able to summon emergency assistance if needed. Be familiar with local weather and tidal characteristics. Work on a boat or barge will not be performed when threatening or severe weather is impending or present.
☒	Briars or Thistles	Be aware of any briars or thistles on site. Wear appropriate clothing and gloves. Avoid contact with briars or thistles whenever possible.



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Business Traffic	Be aware of traffic patterns associated with local businesses near the work site. Allow traffic to enter and exit the businesses in such a manner to avoid creating traffic hazards, back-ups, delays, or potential accident situations.
☒	Cement and Fertilizer Dust	Stay clear of mixing operations and avoid contact with or breathing of the dust.
☐	Chain Saws	Stay clear of any chain saw operations. Subcontractor is responsible for the safe use of chain saws on site.
☒	Cleaning Agents	Use caution when applying cleaning agent to equipment. Use gloves, safety glasses, splash shields, and protective clothing as needed.
☒	Client Activities	Be aware of client activities at or adjacent to the site. Work activities should be coordinated with other site activities to avoid conflicts. <u>Contact EDP offices prior to starting work.</u>
☒	Cold Stress	Work schedules may be modified when temperatures are below 20° F as measured by the wind chill factor. Take frequent breaks to warm up. Drink plenty of fluids. Wear appropriate clothing, and monitor for cold stress symptoms (frostbite, hypothermia, etc.).
☒	Compressed Air or Gas Cylinders	Compressed air or gas cylinders should be clearly marked, and they should be stored, transported, and secured in an approved manner.
☒	Compressed Air/Gas or Pressurized Liquids Hoses, Lines & Fittings	Compressed air or gas, or pressurized liquid lines or hoses should be inspected at least daily, or in the event a leak develops, or if a line or hose is run over or crimped.
☐	Concrete/Masonry/ Foundations	No construction loads shall be placed on a concrete structure or portion of a concrete structure unless a person who is qualified in structural design has determined that the structure or portion of the structure is capable of supporting the loads. All protruding reinforcing steel, onto and into which employees could fall, shall be guarded to eliminate the hazard of impalement. No employee shall be permitted to work under concrete buckets while buckets are being elevated or lowered into position. To the extent practical, elevated concrete buckets shall be routed so that no employee, or the fewest number of employees, are exposed to the hazards associated with falling concrete buckets. A limited access zone shall be established whenever a masonry wall is being constructed. All masonry walls over eight feet in height shall be adequately braced to prevent overturning and to prevent collapse unless the wall is adequately supported so that it will not overturn or collapse. The bracing shall remain in place until permanent supporting elements of the structure are in place.
☐	Confined Spaces (tanks, vaults, vessels, trenches, manholes, some excavations, etc.)	The scope of this project does entail entry into confined spaces. Confined spaces will not be entered unless a confined space entry permit has been completed, signed, and approved, and all participating personnel are trained in confined space entry procedures, including safety, and rescue procedures. All potential hazards of confined space may not be addressed by this hazard assessment, and health and safety plan.
☒	Cutting Tools	Stay clear of contractors' cutting tools, especially saws and torches. Be aware that cutting operations could create other hazards, such as falling objects, or shifting materials, etc. Safety glasses should be worn while using cutting tools. Spark-proof tools should be used when working in areas of potential explosive or flammable conditions. Fixed-open blade knives are prohibited.
☒	Demolition Activities	Stay clear of walls, ceilings, roofs, etc., as they are being demolished.



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Demolition Debris	Demolition material should only be handled by appropriate equipment because of sharp points, edges, etc. Demolition material may also pose a trip hazard, fall, or puncture hazard, so avoid walking or climbing on debris piles, etc.
☒	Drums	If drums are used on-site, they should be clearly labeled with the name of the contents and the appropriate label. Drums should only be handled with the appropriate equipment. Drums discovered during excavations, etc., shall not be opened or moved until appropriate identification can be performed. At a minimum, Level B protection is required for sampling any unlabeled drums discovered during remediation procedures.
☒	Dust/Particulates (Particulates Not Otherwise Regulated) (PNOR) (OSHA PEL = 15 mg./m ³ , total) (OSHA PEL = 5 mg./m ³ , respirable)	For general dust, work should be performed up-wind if possible. <u>If conditions warrant it</u> , monitoring should be done with a PM-10. Monitoring should occur at least 3 times per day, and every time re-entering the site. Readings should be taken downwind from the work area or inside the equipment as indicated by the conditions on site. If the OSHA PEL is exceeded, or is likely to be exceeded, engineering or administrative controls should be used, or a dust respirator must be worn. For hazardous dusts, a detailed air monitoring plan and a respiratory protection plan should be developed for the site activities.
☐	Elevated Work	For any construction work activities elevated 6 feet or more, or other non-construction activities elevated 4 feet or more, fall protection must be provided. Caution should be taken on catwalks and ladders because of potential slippery conditions, or the potential for footwear to catch on the surfaces.
☒	Energized Sources (electrical equipment or hookups, lines, etc.,) (Lockout/Tagout)	Contractors for all electrical activities, and any facility equipment with moving parts should follow proper lock-out/tag-out procedures, and only properly trained employees will perform the work. Employees will not perform any lock-out/tag-out activities unless personnel are properly trained in lockout/tagout procedures. Heed any caution signs or labels.
☒	Equipment Exhaust	Equipment exhaust should be ventilated away from the work area while drilling inside structures. Industrial fans can be used to move exhaust out of the area.
☒	Ergonomic Issues (job hazard analysis)	Ergonomic hazards will be addressed on a site-specific basis once mobilization to the field has occurred. Workstations will be evaluated on an individual basis.
☒	Evening Work	If work is performed during the evening hours, work shall be limited by the availability and the quality of artificial lighting. Care should also be taken to avoid slip, trip, and fall hazards that are not as easy to identify during low light conditions.
☒	Excavations	Stay clear of excavation walls. INVENTUM personnel will not enter an excavation, in accordance with 1926 Sub Part P. Subcontractor must provide a Competent Person on site, if one is required by the planned activities. Side cuts should conform to 1926 Subpart P requirements, or shoring should be used. All open excavations should be secured using traffic cones, barrier tape, or barricade signs stating "Do Not Enter Excavations", especially if left open overnight.
☐	Explosives	Be aware of potential explosive materials and how to identify them. No smoking is allowed on-site or near where potential explosive materials may be present.
☒	Facility Conveyors (product or waste lines)	Stay clear of facility conveyors, product process lines, and waste disposal lines. Be aware of any client-specific health and safety requirements to work in these areas.
☒	Facility Equipment/Machinery	Be aware of active and moving client equipment on site.



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Facility Piping - aboveground	Stay clear of aboveground pipes. Client is responsible to identify all applicable aboveground facility pipes prior to any work activities in the area. Pipes can be overhead hazards, or trip hazards. Pipes can be hazardous because of the material flowing through them, such as steam, natural gas, toxic chemicals, etc. Some pipes are also coated with hazardous material such as asbestos.
☒	Facility Piping - belowground	Client is responsible to identify all applicable underground facility pipe locations prior to any subsurface activities.
☒	Fall Hazard	Proper tie-off, harnesses, railings, etc. should be used when performing work on ladders, scaffolding, man-lifts, or on the roof of buildings, etc. Stay clear of the edges of pits, trenches, quarries, etc.
☒	Falling Objects	Be aware of any potential falling objects or materials on site. Stay clear of any areas identified as potential falling object areas.
☒	Fences	Be aware of fences in disrepair that may be trip hazards or may have materials that could cause punctures or cuts. Use caution when crossing over or under fences.
☒	Field Equipment	If field equipment is heavy or awkward to carry, get assistance or use carts to help move around the site.
☒	Field Vehicle	Inventum personnel shall follow all applicable state and federal traffic laws while traveling to and from the site, and while working on the site. In particular, the following laws should be followed: speed limits, parking restrictions, use of wipers and lights during precipitation events, limiting cell phone use, etc. It is the responsibility of the driver to verify that all safety equipment on the vehicle is working properly before driving the vehicle. In particular, the following items should be checked: tire pressure, tire tread, windshield wipers, windshield washer, headlights, tail lights, brake lights, spare tire, fire extinguisher, first aid kit, etc.
☒	Fire Hazards	Eliminate sources of ignition in work areas that have ignitable materials. Provide an ABC fire extinguisher in close proximity to the support zone.
☒	Flooded Areas	Do not drive through flooded areas or standing water. Do not wade into moving water, or water deeper than 2 feet without adequate assistance.
☒	Flying Debris/ Eye Injuries	Be aware of any flying debris on site and wear protective eyewear when necessary.
☒	Fork Lifts	Be aware of forklift patterns and stay clear of those routes.
☒	Hand Tools	Use only the appropriate tool for the task at hand. Use the tool(s) as designed, described, and intended by the manufacturer.
☒	Heat Stress	The work schedule may be modified if the ambient temperature is more than 80° F. Take breaks as necessary, and drink plenty of fluids. If necessary, wear sunscreen and sunglasses on bright days. Monitor site personnel for signs of heat stress symptoms (heat rash, heat cramps, heat exhaustion, or heat stroke).
☒	Heavy Equipment	Contractor is responsible for safe operation of equipment. All mobile heavy equipment must have a functioning backup alarm, and operators must comply with equipment manufacturer's instructions. Maintain proper distance and remain in line of sight of operator and out of reach of equipment. Isolate equipment swings, if possible. Make eye contact with the equipment operator before approaching the equipment. Understand and review hand signals, and wear orange safety vest, if necessary.



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Heavy Lifting	Use proper lifting procedures and equipment when handling heavy objects such as drums, manhole covers, tank covers, etc.
☒	High Pressure Gas Lines, etc.	Be aware of high-pressure gas lines and follow approved safety precautions when working with or around the lines.
☐	Highway Traffic	Traffic control within the right-of-way will be in accordance with the WDOT "Work Zone Safety – Guidelines for Construction, Maintenance, and Utility Operations" procedures. Work may be restricted within specific lanes during peak traffic times. Verify peak traffic times, and review planned activities with the WDOT, so that appropriate lane closures can be coordinated.
☒	Housekeeping	All field vehicles, job trailers, and field offices will be properly cleaned and organized to prevent cluttered work and storage areas.
☐	Hunters/Firing Range, etc.	Be aware of surrounding activities that may involve hunting, firearms, etc. that may not be in your immediate area, but could create an unsafe work environment.
☒	Ice (thin)	When project activities include either crossing ice or working directly on the ice, a detailed plan should be developed that will be used to continually evaluate the ice conditions, and to determine when work should be terminated due to unsafe conditions. All staff working on the ice will wear an appropriate and approved personal floatation device. Other emergency equipment such as ropes, a throwable floatation device, a means to warm a wet and cold worker, etc. must be available. A buddy system should also be used for this type of work, such that one person is always on shore or at least on previously determined safe ice.
☒	Insects (ticks, bees, spiders, etc.)	Site workers with known allergies to insect bites should carry their own medication. In case of emergencies, inform fellow workers of any severe allergies. Use insect repellent as necessary, and as specifically allowed on site. If possible, wear long-sleeved shirts and pants. If appropriate, check for ticks at the end of each day. Have other appropriate first aid supplies handy for bites.
☒	Stakeholders	Be aware of the potential for irate neighbors or outsiders that may interfere with work activities, or that may potentially damage equipment or on-site materials, etc.
☐	Ladders	Ladders should only be used if they are in good condition, conform to OSHA requirements, and if they will be used in an appropriate manner. Be especially cautious of slipping on ladders when the ladder or footwear is wet or dirty.
☐	Landfill Gas (Methane, CO ₂ , Hydrogen Sulfide)	Avoid breathing gas, especially in low oxygen areas (simple asphyxiant). Potentially flammable and explosive, so keep ignition sources away from gas. Explosive conditions of LEL >5% in a work area should be ventilated as soon as possible, or the area should be evacuated.
☐	Leachate (Municipal Solid Waste (MSW))	MSW leachate may contain hazardous biological substances, so avoid physical contact with leachate and, if possible, stay up-wind. If contact is made with leachate, wash affected areas thoroughly with soap and water. If boots contact leachate, they should be thoroughly washed with soap and water also.
☒	Lead	Wear gloves when in contact with lead contaminated soil, etc. Thoroughly wash hands and arms when daily work is completed.



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Long Hours/Fatigue	Long work hours can lead to fatigue, and fatigue can lead to the physical inability to perform the work in a safe manner, or travel to or from, a work site in a safe manner. If long work hours are scheduled, or if the scheduled work takes longer than planned, field staff should determine if fatigue is, or will be, an issue. Field staff should evaluate whether they are able to complete the work in a safe manner, or whether they are able to travel in a safe manner. If fatigue is an issue, appropriate breaks should be planned or taken, including overnight stays when necessary.
☒	Material Handling	Move containers and heavy material only with the proper equipment, and secure them to prevent dropping, falling, or loss of control during transport. Stay clear of material handling operations, especially near slopes. Do not stand down the slope from equipment, supplies or materials being moved above on the slope, or being deployed onto the slope.
☒	Material Storage	Stored material may be a falling hazard, or a crush hazard. Do not stand adjacent to materials stacked up, such as pipes, geosynthetic rolls, etc., or in the area of deployment.
☐	Methane Gas (Landfill Gas)	Explosive conditions (5% LEL) will be ventilated, if encountered, prior to working in an area. Methane is a simple asphyxiant.
☐	Mine or Quarry	No work shall be performed within 15 feet (or other designated client setback, whichever is greatest) of the mine or quarry walls. Be aware of the potential for falling rocks or slope failures.
☒	Municipal Solid Waste (MSW)	MSW may contain hazardous biological substances, so avoid physical contact, and if possible, stay up-wind. Wear appropriate PPE, such as gloves, safety shoes, and safety glasses. Wash hands, arms, and face after working near MSW. Reusable PPE and equipment should be thoroughly decontaminated after exposure to MSW. MSW may also contain sharp objects with the potential to puncture PPE.
☒	Natural Gas	Natural gas is flammable and explosive. Keep ignition sources away from gas sources. Use spark-proof tools when working with gas lines, etc.
☒	Noise	Hearing protection must be worn when noise levels exceed 85 dBA in the work area. If you need to raise your voice to be heard at the work site, then hearing protection should be worn. Hearing protection will be worn near drill rigs.
☒	Overhead Hazards	Pay attention to overhead equipment, piping, and structures. A hard hat must be worn at all times when overhead hazards are present on site including the operation of a drill rig.
☒	Pedestrian Traffic (public, client, workers)	Be aware of pedestrian traffic patterns and, route traffic around the exclusion zone(s), as necessary, to avoid distractions and the potential for exposures or accidents. Use appropriate barricades and caution tape to mark work areas.
☒	Poisonous Plants	Be able to identify any local poisonous plants and avoid them if possible or wear protective clothing as necessary. When removing potentially exposed clothing or PPE, the clothing or PPE should be carefully and thoroughly washed or decontaminated.
☒	Portable Heaters	Be aware of portable heater locations and stay a safe distance from them.
☒	Power Washing Equipment	Stay clear of the power washing nozzles and equipment.
☒	Propane Tanks	Be aware of propane tank locations, and any gas lines leading to or from the tanks.



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☐	Radiation (ionizing)	Exposure to ionizing radiation can be controlled by one of three methods: time, distance, or shielding. Limit your time near the radioactive source. Keep your distance from the radioactive source. Shield yourself from the radioactive source with appropriate shielding material. If the radioactive source(s) are from INVENTUM equipment, the INVENTUM employee using the equipment needs required training to use the equipment and must be monitored using a dosimeter badge.
☐	Rock Blasting	Contractor is responsible for following safe blasting protocol. Heed all contractor warnings at time of blasting and stay well clear until safe to return to area, as indicated by the contractor.
☒	Sample Preservative Chemicals:	Wear safety glasses and nitrile gloves when adding preservative chemicals to sample bottles or vials. Have clean wash water nearby.
☐	Scaffolding	Stay clear of scaffolding. Be aware of the OSHA safety requirements for using constructing and scaffolding.
☒	Severe Weather	Work may be suspended if dangerous weather conditions (lightning, tornadoes, high winds, heavy rain, freezing rain, etc.) occur. Be aware of changing weather conditions and be prepared to take shelter as necessary. Potential shelters should be identified prior to beginning work.
☒	Sharp Objects	Wear appropriate gloves when handling sharp objects or use appropriate equipment to move objects.
☒	Slippery Ground/Surfaces	Exercise caution, especially on slopes, field trailer floors and stairs, after a precipitation event. Use slip resistant boots or implement surface preparations to eliminate the slippery nature of the surface prior to accessing the area. Spill control measures and general housekeeping should be utilized to help prevent slipping on wet floors, wet pavement, and general work areas.
☒	Slips, Trips, and Falls:	Maintain clear walkways for work areas.
☒	Snakes	Be aware of the potential for snakes in the area and wear snake boots, snake chaps, gaiters, or leggings as needed.
☒	Steam Cleaning Equipment	Stay clear of the steam cleaning nozzles and equipment.
☐	Steel Erection	All materials, equipment, and tools, which are not in use while aloft, shall be secured against accidental displacement. The controlling contractor shall bar other construction processes below steel erection unless overhead protection for the employees below is provided. Employees engaged in steel erection activities on a walking/working surface with an unprotected side or edge more than 15 feet above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.
☐	Steep Slopes or Banks	Pay attention to footing and walking. Stay a safe distance from unstable or extremely steep slopes. Wear appropriate footwear. Be aware of potential slope or bank failures. Heavy equipment should not be operated on or near unstable slopes or banks.
☒	Strong Nuisance Odors	Strong odors should be ventilated before entering a work area, or a respirator shall be worn as needed.
☒	Sunburn	For extended periods of time outdoors on sunny days, sunglasses, long-sleeved shirts and long pants should be worn to help prevent sunburn and eye problems. Wear sunscreen as appropriate for the project.



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Surface Water	Working next to or on, bodies of water shall be done using the buddy system. Staff shall wear USCG-approved personal floatation devices when on or adjacent to bodies of water.
☒	Terrain	Uneven or steep terrain can cause hazardous conditions for walking and transporting equipment around the site. Site personnel should use caution when working on uneven surfaces, and they should avoid working down-slope from heavy equipment, or materials being moved or stored.
☒	Traffic (client, contractors, public, semi-trucks, forklifts, etc.)	Obey all posted speed limits. Park in designated areas only. Be aware of traffic patterns on site, and during access to the site. Use orange traffic cones and barrier warning tape, as needed, or if within 25 feet of the right-of-way. INVENTUM personnel must wear orange safety vests when working in or near traffic areas. Class 2 traffic vests are required with traffic speeds 25 mph or higher. Class 3 traffic vests are required with traffic speeds 50 mph or higher.
☐	Trains/Railroad Tracks	Be aware of any train activities on the site, entering or leaving the site, or immediately adjacent to the site. Do not walk between the rails or on the railroad ties. When driving, stop at all railroad crossings, even if they are unmarked, and look in both directions before proceeding across the tracks.
☒	Transporting Hazardous Materials	INVENTUM personnel who transport hazardous materials shall have the required DOT training prior to transporting materials, and will comply with all applicable DOT regulations and requirements for labeling, packaging, etc.
☐	Tree Cutting	Stay clear of tree cutting activities.
☒	Trenching	INVENTUM personnel will enter trenches in accordance with 1926 Sub Part P. Be aware that some trenching conditions may result in a confined space condition.
☒	Trip Hazards (wires, cords, hoses, debris, corn stubble, uneven surfaces, etc.)	Temporary wires, cords, hoses, etc., should be properly located, marked, and protected to help prevent tripping and disruption to work activities. Trip hazards are particularly a problem early in the morning, late in the day, or under other poor lighting conditions.
☒	Underground Storage Tanks (USTs) (Septic Tanks)	If any unknown USTs are encountered, drilling or excavations will be terminated in that location until a new scope of work, Risk Assessment and Health & Safety Plan can be developed.
☒	Uneven Surfaces	Be aware of uneven walking or driving surfaces and exercise caution when moving around the site.
☒	Utilities – Overhead (electrical, telephone, cable TV, etc.)	A subcontractor, the client, or INVENTUM will locate and identify all overhead utilities. The owner or client will be responsible for identifying all applicable overhead utilities, product lines, pipes, and aboveground tanks. A minimum clearance of 20 feet must be maintained between equipment and overhead utility lines.
☒	Utilities – Underground (electric, gas, telephone, water, storm sewer, sanitary sewer, cable TV, etc.)	A subcontractor, the client, or INVENTUM will call Digger's Hotline to locate all underground utilities. The owner or client will be responsible for marking all applicable on-site underground utilities, product lines, pipes, and tanks.
☒	Waterways	Exercise caution near, around, or in waterways. Harnesses should be worn when working in, or within 4 feet of, the waterway, especially when attempting to sample from shore or a boat or barge. All applicable laws and regulations will be followed when navigating a boat or barge to and from a work site.



Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Welding Tools	Stay clear of welding operations, and do not look directly at the welding process without appropriate eyewear and shield.
☐	Traffic Control	Traffic Control: Traffic control within the right-of-way will be in accordance with the local Public Right-of-Way Agency. Work may be restricted within specific lanes during peak traffic times. Verify peak traffic times and review planned activities with the local Public Right-of-Way Agency, so that appropriate lane closures can be coordinated.

Proposed Date(s) of Inventum

Work: June 2020 through

October 202

ON-SITE PROJECT TEAM MEMBER	ON-SITE PROJECT RESPONSIBILITIES
John Black	Inventum Site Health and Safety Representative (Supervisor); Remedial Contractor Oversight
Todd Waldrop	Inventum Site Health and Safety Representative (Supervisor); Remedial Contractor Oversight
James Edwards	Inventum Site Health and Safety Representative (Supervisor); Remedial Contractor Oversight

Any required construction/demolition activities: ☒ No ☐ Yes If Yes, complete Section 1



Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

1. Construction Tasks: work tasks to be performed by Inventum staff or Inventum subcontractors

Civil

☐ Sewer (utility)	☐ Steel (erection)
☐ Water (utility)	☐ Pre-cast (erection)
☐ Electric (utility)	☐ Concrete (erection)
☐ Communications (utility)	☐ Re-bar
☐ Siding	☐ Elevator
☐ Roofing	☐ Fireproofing
☐ Drywall	☐ Windows
☐ Flooring	☐ Landscaping
☐ Ceilings	☐ Painting
☐ Casework	☐ Insulation
☐ Masonry	☐ Doors
☐ Escalator	☐ Finish Concrete
☐ Others	
☐ Others	
☐ Others	

Mechanical

- ☐ Insulation
- ☐ Millwright
- ☐ Fire Protection
- ☐ Boiler
- ☐ Industrial Ventilation
- ☐ Steel Fabrication/Erection

Other

- ☐ Electrical
- ☐ Demolition (attach a detailed "Demolition Plan")

Estimated Direct-Hire Inventum Employees:

Home Office: ☐ Not Applicable ☐ Specify:

Craft Labor: ☐ Not Applicable ☐ Specify:

Craft

Quantity

Craft

Quantity



Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

2. Applicable Safety Standards or Regulations:

☒ Federal OSHA

☐ State OSHA

☐ Owner/Client

Specific Standards:

29 CFR 1910 (OSHA)

29 CFR 1926 (Other Regulations)

☒ Medical Services and First Aid	1910.151	1926.50
☒ Hazard Communication (HAZCOM)	1910.1200	1926.59
☐ Lead Exposure	1910.1025	1926.62
☒ HAZWOPER	1910.120	1926.65
☒ Personal Protective Equipment (PPE)	1910.132-138	1926.95-107
☒ Respiratory Protection	1910.134	1926.103
☒ Ventilation	1910.94	1926.57
☒ Noise Exposure	1910.95	1926.52
☐ Illumination	N/A	1926.56
☐ Fire Protection	1910.157	1926.24 and 150-155
☐ Sanitation	1910.141	1926.51
☐ Materials Handling (rigging, etc.)	1910.176	1926.250-251
☐ Welding/Cutting	1910.251-255	1926.350-354
☐ Lockout/Tagout	1910.147	1926.417
☐ Electrical (flexible cords, etc.)	1910.305	1926.400-449
☐ Scaffolding	1910.28-29	1926.450-454
☐ Fall Protection (elevated work)	1910.23-29, 1910.66-68	1926.104-107; 500-503
☐ Ladders/Stairways	1910.25-27	1926.1050 and 1060
☐ Cranes, Derricks, Hoists, Elevators, etc.	1910.179-181	1926.550-555
☐ Aerial Lifts	1910.66-68	1926.556
☒ Earthmoving Equipment	N/A	1926.602
☐ Powered Industrial Trucks (forklifts)	1910.178	1926.602
☒ Excavations and Trenching	N/A	1926.650-652
☐ Concrete and Masonry	N/A	1926.700-706
☐ Steel Erection	N/A	1926.750-761
☐ Demolition	N/A	1926.850-860
☒ Asbestos	1910.1001	1926.1101
☐ Confined Space Entry	1910.146	1926.21



Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

☐ Commercial Diving	1910.401-441	1926.1071-1092
☒ Compressed Gases	1910.101-105	N/A
☐ Ionizing Radiation	1910.1096	1926.53
☒ Benzene	1910.1028	1926.1128
☒ Cadmium	1910.1027	1926.1127
☒ Tools - Hand and Power	N/A	1926.300-307
☐ Blasting and Using Explosives	N/A	1926.900-914



Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

3. Training Required (* required for all "Type 3" sites; but minimum recommended)

Check "A" if training required for everyone, and check "T" if training required for specific task.

A	T	SUBJECT	REFERENCE
			29 CFR 1910 29 CFR 1926 or Other
☒	☐	HAZWOPER 40 hour*	1910.120 1926.65
☐	☐	3-Day HAZWOPER Supervised On-Site*	1910.120 1926.65
☒	☐	8-Hour HAZWOPER Refresher*	1910.120 1926.65
☐	☐	8-Hour Supervisor HAZWOPER*	1910.120 1926.65
☐	☒	First Aid, CPR*	1910.151 1926.23,,50
☐	☒	Respiratory Protection	1910.134 1926.103
☐	☐	Confined Space ☐ Permit attached	1910.146 1926.21
☐	☐	Mine Safety (MSHA)	N/A 30 CFR 48.8
☐	☐	Lockout/Tagout ☐ Permit attached	1910.147 1926.417
☒	☐	Bloodborne Pathogens	1910.1030 N/A
☒	☐	Noise Exposure	1910.95 1926.52
☐	☒	Competent Person	N/A 1926.32,,450,,650
☐	☐	Construction Health and Safety OSHA 10-Hour	N/A 1926.21
☐	☐	Demolition	N/A 1926.850
☐	☐	Excavations ☐ Permit attached	N/A 1926.650-652
☐	☐	Electrical Work	1910.332 1926.400-.449
☐	☐	Ladders/Stairways	N/A 1926.1050-1060
☐	☐	Scaffolding	1910.28 1926.450-454
☐	☐	Fall Protection	1910.23-29; 1910.66-68 1926.104,,501
☐	☐	Commercial Diving	1910.410 1926.1071-1092
☐	☐	Hot Work ☐ Permit attached	1910.251-255 1926.350
☐	☐	Lead Awareness	1910.1025 1926.62
☐	☐	Asbestos Awareness	1910.1001 1926.1101
☐	☐	Cadmium	1910.1027 1926.1127
☐	☐	Benzene	1910.1028 1926.1128
☐	☐	Ionizing Radiation	1910.1096 1926.53; 10 CFR 19.12
☐	☐	Troxler or NITON Gauge User	1910.1096 10 CFR 19.12
☐	☐	Radiation Safety Program	1910.1096 10 CFR 20.1101
☒	☐	Hazard Communication (HAZCOM)	1910.1200 1926.59
☐	☒	DOT Hazardous Materials Shipping	1910.1201 49 CFR 172.704

Client-specific training: ☒ Not Applicable ☐ Specify

Site-specific orientation: ☒ Not Applicable ☐ Specify

Competent person: ☒ Not Applicable ☐ Specify

Direct-hire employee training/certification: ☒ Not Applicable ☐ Specify



Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

4. Medical Surveillance

Surveillance Required: * required for all "Type 3" sites; baseline is minimum recommended

** Specify frequency below

	29 CFR 1910	29 CFR 1926 or Other
☒ HAZWOPER Physical - Baseline*	1910.120	1926.65
☒ HAZWOPER Physical – Annual	1910.120	1926.65
☐ HAZWOPER Physical - Biennial*	1910.120	1926.65
☒ OSHA Respiratory Protection Questionnaire	1910.134	1926.103
☐ Respiratory Certification Exam	1910.134	1926.103
☒ Arsenic (urine) ** Annual	1910.1018	N/A
☐ Asbestos **	1910.1001	1926.1101
☒ Cadmium (blood) ** Annual	1910.1027	1926.1127
☒ Lead/ZPP (blood) ** Annual	1910.1025	1926.62
☒ Mercury (blood) ** Annual	N/A	N/A
☒ PCB ** Annual	N/A	N/A
☐ Vinyl Chloride **	1910.1017	1926.117
☐ Hepatitis B Vaccine (series) **	1910.1030	N/A
☐ Tetanus/Diphtheria	N/A	Stay Current
☐ Stress Test	N/A	Only as requested
☒ Visual Acuity Test	N/A	Only as requested
☒ Hearing Test (Audiometry)	N/A	Only as requested
☒ Pulmonary Function	N/A	Only as requested

Client-specific drug testing: ☒ Not Applicable ☐ Specify

Client-specific medical monitoring¹: ☒ Not Applicable ☐ Specify

Site-specific medical monitoring: ☒ Not Applicable ☐ Specify

**Frequency of medical monitoring: ☒ Not Applicable ☐ Specify



Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

5. Personal Protective Equipment (PPE)

Based on evaluation of potential hazards, the following levels of personal protection have been designated for the applicable work tasks:

Specific Inventum Job Task or Function	Minimum Level of Protection
Task 1 – Site management and Oversight	☒ D
Level D: safety glasses (ANSI), safety shoes (ANSI); safety vest (ANSI)	
Task 2 and 3 – Surficial and Subsurface Soil Sampling	☒ D ☐ C ☐ B ☐ A
Level D: safety glasses (ANSI), safety shoes (ANSI), ear plugs (ANSI); safety vest (ANSI), nitrile gloves,	
Task 4 – Test Pit Excavations	☒ D ☐ C ☐ B ☐ A
Level D: Hard hat, safety glasses (ANSI), safety shoes (ANSI), nitrile gloves	
Task 5 – Sampling of Residuals	☒ D ☐ C ☐ B ☐ A
Level D: Hard hat, safety glasses (ANSI), safety shoes (ANSI), nitrile gloves	
Task 6 – Surface Water Sampling	☒ D ☐ C ☐ B ☐ A
Level D: Hard hat, safety glasses (ANSI), safety shoes (ANSI), nitrile gloves	



Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

Criteria for changing protection levels are as follows:

EVACUATION ⁽²⁾ or PROTECTION LEVEL CHANGE ⁽³⁾ CRITERIA	APPROVALS REQUIRED ⁽¹⁾
	OSC
Site Evacuation Plan: ☒ Not Applicable ☐ Specify or Attach Plan:	
Change to Level D when: ☐ Not Applicable ☒	☒ N/A All site work in Level D
Change to Level C when: ☒ Not Applicable ☐ dust levels exceed 2.5 mg/m ³ in the breathing zone continuously for 5 minutes.	☒ No work will be conducted in Level C. Site work will stop, controls reevaluated, and HASP updated as necessary
Change to Level B when: ☒ Not Applicable ☐ Specify	☒ Inventum will not conduct any work in Level B.
Change to Level A when: ☒ Not Applicable ☐ Specify	☒ Inventum will not conduct any work in Level A. ☒

⁽¹⁾ OSC: Office Safety Coordinator

⁽²⁾ General Recommendations: Evacuate the area when LEL readings are >10% LEL in the atmosphere, or when PID readings are greater than the PEL in the breathing zone.

⁽³⁾ General Recommendation: To Level C when PID readings are greater than the PEL in the breathing zone. To Level B or A only after detailed evaluation and planning.

Note: Changes to the level of protection shall be made only after the required approvals are obtained. All changes shall be recorded in the field log and reported to the Project Manager as soon as possible. Inventum's goal is to avoid using respiratory protection unless it is absolutely necessary or required. Administrative controls or engineering controls should always be considered as a means to reduce potential exposures, before PPE is required or considered.



Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

6. Air Monitoring⁽¹⁾

The following monitoring instruments shall be used on site to measure airborne contaminant concentrations in either the breathing zone, or as part of the overall site **Air Monitoring Plan** (attach detailed plan):

MONITORING EQUIPMENT	LOCATION OF MONITORING	FREQUENCY OF MONITORING	ACTION LEVELS
☐ Combustible Gas Indicator	☐ N/A ☐ Monitoring Plan Attached ☐ Confined Space ☐ Manhole	☐ Continuously when potential combustible gases or lack of oxygen are suspected. ☐ Specify	5-10% LEL: continue with caution > 10 % LEL: evacuate the area ☐ Specify
☐ O ₂ Monitor ☐ CO Monitor ☐ H ₂ S Monitor	☐ N/A ☐ Confined Space ☐ Manhole – monitor oxygen, carbon monoxide, hydrogen sulfide, and lower explosive limit	☐ Continuously when excess oxygen (>22.5%) or lack of oxygen (<19.5%) are suspected. ☐ Test atmosphere prior to entry and continuous during confined space entry.	< 19.5% Oxygen: evacuate the area; supplied air may be needed. > 22.5% Oxygen: evacuate the area; potential fire hazard. ☐ Specify
☐ Colorimetric Tubes Type: Type: Type:	☐ N/A ☐ Specify ☐ Sample Container ☐ Confined Space ☐ Specify	☐ Periodically during sampling for analytical purposes only. ☐ Whenever noticeable odor is present. ☐ Specify	☐ Specify
☒ PID Lamp Needed: ☐ 9.8 eV ☒ 10.6 eV ☐ 11.7 eV	☒ Personal Monitoring ☒ Sample Container ☐ Confined Space ☐ Specify	☒ Periodically during sampling for analytical purposes only. ☒ Continuously within the employee breathing zone.	☒ None. ☒ >5 ppm above background in breathing zone for 5+ min. Stop work and reevaluate potential sources and controls.
Calibration Gas: Isobutylene		☐ Specify	
Correction Factor:		☐ Specify	
☐ FID	☐ N/A ☐ Specify	☐ Specify	☐ Specify
☒ Personal Dust Monitor	☐ N/A ☒ Personal Monitoring in Breathing Zone (Task 2 - 5 only)	☒ Continuously within the employee breathing zone	☒ >2.5 mg/m ³ at work perimeter for 15 min sustained. Stop work and apply dust controls



Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

☒ Other: Perimeter Monitoring	☒ Perimeter Air Monitoring in accordance with the CAMP	☐ Specify	☐ Specify
☐ Laboratory Supported ☐ Personal ☐ Area ☒ Perimeter	☐ N/A ☐ Specify Employee breathing zone	☐ Specify continuous	☒ When visible dust is present apply dust control measures (water spray) until abated.

⁽¹⁾ Whenever air monitoring is required to be performed, a detailed **Air-Monitoring Plan** should be developed and attached to the HASP. The plan should include **Monitoring Locations**, **Frequency of Readings**, and any **Action Levels** being used to control the work site.

Air Monitoring Plan

Field monitoring of dust production is anticipated only during subsurface soil sampling (Task 3) and test pit excavations (Task 4). A visual assessment of dust levels will be used continuously during the work along with personal employee monitoring and perimeter air monitoring in accordance with an approved CAMP.

Dust production during monitoring well abandoned, monitoring well installation, and surficial soil sampling is not anticipated due to the typical moisture content of the soil.

This level of nuisance dust is visually observable. If dust is observable continuously in the breathing zone for 5 minutes, dust control methods will be used (*e.g.*, water spray will be applied) until dust is abated. Work will be temporarily discontinued until dust is reduced to acceptable levels within the breathing zone. Should particulate levels above the action level be a continual problem, relevant field personnel will reassess the situation with the project manager.



Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

7. Site Controls and Work Zones (describe in detail)

Facility Alarms or Signals: ☒ Not Applicable ☐ Specify

Work Permits Required: ☒ Not Applicable ☐ Specify

Work Traffic Issues: ☒ Not Applicable ☐ Specify

Parking Issues: ☒ Not Applicable ☐ Specify

Railway Traffic Issues: ☒ Not Applicable ☐

Support Zone(s):

☒ Field vehicle ☒ Job Trailer On Site ☐ Other:

Contamination Reduction Zone(s):

☒ Field vehicle ☐ Facility restroom/utility room ☐ Other:

Exclusion Zone(s):

☒ Area immediately surrounding work area ☐ Other:

Site Entry Procedures:

☒ Notify Site Safety Contact Representative.

☒ Read HASP Plan and sign Acknowledgment Statement.

☒ Check in with the facility contact person.

☒ Check in with owners full time site representatives.

☒ Check in with facility security guard.
guard house.

☒ All visitors must check in and sign visitor logbook in

☒ Wear proper personal protective equipment.

☐ Attend facility orientation.

☐

☒ Conduct daily safety meeting (document).

☐ Other: Confined space – do not enter the confined space if LEL >10%, oxygen <21% or >23.5%, carbon monoxide >35 ppm, or hydrogen sulfide >7 ppm. Exit the confined space if the atmospheric conditions become hazards as noted.



Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

Decontamination Procedures:

Personnel: (specify)	Work will be performed in Level D or Modified Level D, and minimal contamination is expected. Follow standard decontamination procedures, and good personal hygiene. Disposable PPE should be removed, contained, and disposed in an appropriate manner. Prior arrangements should be made if disposal is planned for at the project site. Site workers should plan and stage for wash water and soap at the site, prior to beginning the work. Site workers should wash hands and any exposed skin extremely well with soap and water, prior to leaving the contamination reduction zone, eating, drinking, driving, or leaving the site. Any soiled or contaminated clothing should be removed and handled appropriately, by either washing as soon as possible, or if necessary, disposing. Soiled or contaminated clothing should be carefully bagged prior to disposal or washing, to reduce potential exposure.
Equipment: (specify)	Site workers should plan and stage for the appropriate decontamination method at the site prior to beginning the work. Any contaminated single-use disposable equipment or PPE should be appropriately containerized and disposed as soon as possible in an appropriate manner. Prior arrangements should be made if disposal is planned for at the project site. Contaminated equipment or PPE that will be re-used should be handled and cleaned while wearing the appropriate PPE. Typically, equipment is decontaminated using Alconox soap and deionized water.

Disposal of Investigation-derived Material:

☒ Leave on site for disposal. Location TBD ☐ Other:

Work Limitations (time of day, buddy system, etc.):

- ☒ Buddy system required for some tasks.
- ☒ Work will be performed during daylight hours only.
- ☐ Work will be performed using artificial light.
Describe or attach a lighting plan: A lighting plan is attached.
- ☒ No eating, drinking, or smoking in contamination reduction zone(s) or exclusion zone(s).
- ☒ When temperatures are either above 80°F or below 20°F, work schedules may be modified.
- ☒ Other site-specific limitations: Do not enter battery building. Do not enter any former process buildings unaccompanied.



Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

Radiation Safety:

- ☒ Radiation information is not applicable to this project.
- ☐ Notify RSO.
- ☐ Wear dosimeter badge when handling gauge.
- ☐ Post applicable radiation signs and documents.
- ☐ Post emergency numbers.
- ☐ Provide at least two lock systems for overnight storage.
- ☐ Maintain storage at least 15 feet from full-time workstations.
- ☐ Block, brace, and securely lock the gauge during “all” transportation.
- ☐ Limit “public” exposure to gauge while in use.
- ☐ Provide sketch of gauge storage to RSO.



Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

Acknowledgment Statement:

As an employee of Inventum, I have reviewed the Hazard Assessment (HA)/Health & Safety Plan (HASP). I hereby acknowledge that I have received the required level of training and medical surveillance as necessary, that I am knowledgeable about the contents of this site-specific RA/HSP, and that I will use personal protective equipment (PPE) and follow procedures specified in the HASP.

Signatures of Inventum Site Personnel:

	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	



INVENTUM SAFETY OBSERVATION FORM

Revised March 2019

Location/Project Name: _____	Date: _____
Observer Name: _____	
Observee Name: _____	Time: _____
Task Observed	
Description of Task Observed and Background Information	
Positive Comments	



INVENTUM SAFETY OBSERVATION FORM

Revised March 2019

Conclusions / Why the Questionable Items Occurred?					
Feedback Session Conducted By: _____ Date: _____ Name of Observee's Supervisor: _____ Time: _____					
At-Risk Observations/Root Cause Analysis					
Personal Factor: (1) Lack of skill or knowledge (2) Correct way takes more time/requires more effort (3) Shortcutting standard procedures is rewarded or appreciated (4) In past, did not follow procedures or acceptable practices and no incident occurred Job Factor: (5) Lack of or inadequate operational procedures or work standards (6) Inadequate communication of expectations or work standards (7) Inadequate tools or equipment					
At-Risk Observation #	Root Cause Analysis #	Solution(s) To Prevent Potential Incident from Occurring	Person Responsible	Agreed Due Date	Date Completed
Results of Verification (were solutions done?) and Validation (were solutions effective?)					
Reviewed by (PM/Supervisor): _____ Date: _____ Approved by (Practice Safety Leader): _____ Date: _____					



INVENTUM SAFETY OBSERVATION FORM

Revised March 2019

PERSONAL PROTECTIVE EQUIPMENT	Safe	At-Risk	Comments
1. Hearing Protection (e.g., Ear Plugs)			
2. Head Protection (e.g., Hard Hat)			
3. ANSI Rated Eye Protection (e.g., Safety Glasses)			
4. Hand Protection (e.g., Kevlar Gloves)			
5. Foot Protection (e.g., Safety Shoes)			
6. Respiratory Protection			
7. Fall Protection Inspected (e.g., Harness)			
8. ANSI Rated Reflective Vest/High Visibility Clothing			
9. Other (Specify)			
BODY USE AND POSITIONING	Safe	At-Risk	Comments
10. Correct Body Use and Positioning When Lifting/Pushing/Pulling			
11. Pinch Points/Moving Equipment - Hands/Body Clear			
12. Mounts/Dismounts Using 3-Points of Contact			
13. Other (Specify)			



INVENTUM SAFETY OBSERVATION FORM

Revised March 2019

WORK ENVIRONMENT	Safe	At-Risk	Comments
14. Work/Walk Surface Free of Obstructions (e.g., Tripping Hazards)			
15. Housekeeping/Storage			
16. Defined and Secured (e.g., warning devices, barricades, cones, flags)			
17. Suspended Load, Swing Radius & Lift Area is Barricaded			
18. Safety Shutdown Devices			
19. Proper Storage & Labeling /Disposal of Sample & Waste Materials			
20. Cylinders Stored Upright, Secured, & Caps in Place			
21. Manhole/vault Inspected for Hazards			
22. Other (Specify)			



INVENTUM SAFETY OBSERVATION FORM

Revised March 2019

OPERATING PROCEDURES	Safe	At-Risk	Comments
23. Job Planning (HASP reviewed, JSAs, etc.)			
24. Fire Extinguishers Accessible and Inspections Current			
25. Work Permit/Authorization to Work (Hot, Cold, LOTO, Confined Space)			
26. JSA Reviewed & Followed			
27. Hazard Assessment - Hazard Hunt			
28. Interfaces with Other Functions (awareness with other personnel on site)			
29. Operators Looking Behind Prior to Backing Up			
30. Operators Wearing Seat Belts While Operating Equipment			
31. Subsurface Structures Identified			
32. Proper Trench Protective Equipment in Place			
33. Adequate Egress Is Available for Excavation & Trench (within 25 ft. if depth is <4 ft.)			
34. All Materials Set Back at Least 2 Feet From Edge of Trench/Excavation			
35. Other (Specify)			



INVENTUM SAFETY OBSERVATION FORM

Revised March 2019

TOOLS/EQUIPMENT	Safe	At-Risk	Comments
36. Hand Tools (Proper Equipment Selection, Condition, and Use)			
37. Power Tools (Proper Equipment Selection, Condition, and Use)			
38. Equipment, Including Heavy (Proper Equipment Selection, Condition, and Use)			
39. Hoses Inspected			
40. Required Monitoring Equipment Calibrated & Used			
41. Ladders Set up Correctly & Inspected			
42. Right Tools for the Job are Available and in Good Condition - No Fixed Open Blade Knives (FOBKs)			
43. Other (Specify)			
Total #	0	0	



Daily Hazard Review Topic and Sign-In:

Daily Review Topic	Date



Acknowledgment Statement:

As an affected employee of Inventum Engineering, I hereby acknowledge that I have reviewed the contents of this site-specific HSP and the **daily safety meeting topic**, and that I will use the applicable personal protective equipment (PPE) and follow the procedures specified in the HASP.

Signatures of all onsite Inventum Personnel, including Direct-Hires (Required):

_____	Date: _____
_____	Date: _____
_____	Date: _____
_____	Date: _____
_____	Date: _____
_____	Date: _____
_____	Date: _____
_____	Date: _____
_____	Date: _____
_____	Date: _____
_____	Date: _____



Appendix D.2 – OSC Health and Safety Plan



Health and Safety Plan

Riverview Innovation & Technology Campus, Inc.

TONAWANDA COKE Brownfield Remediation

TONAWANDA, NY

Submitted to:

**Riverview Innovation & Technology Campus, Inc.
333 Ganson St.
Buffalo, NY 14203**

Prepared by:



**140 Lee Street, Floor 2
Buffalo, NY 14210**

October 2019

Revised

September 2024

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Authorization Signatures

This site Health and Safety Plan (HASP) has been reviewed and approved by the individuals below. The undersigned certify that to the best of their knowledge this HASP meets the safety requirements as defined by the project specifications and all known applicable governing regulatory requirements.

John Yensan
John Yensan, President
OSC

9/4/2024
Date

Daniel Flanigan
Dan Flanigan, Project Manager
OSC

9/4/2024
Date

Matt Reardon
Matt Reardon, Superintendent
OSC

9/4/2024
Date

Paul Mulvey
Paul Mulvey, Corp. Dir. HSE
OSC

9/4/2024
Date

Conformance Signatures

All Individuals working on this Project, including subcontractors must read and sign. Note: this does not apply to visitors who will not be doing work on the project.

The following personnel have read and fully understand the contents of this site Health and Safety Plan and further agree to all requirements contained herein.

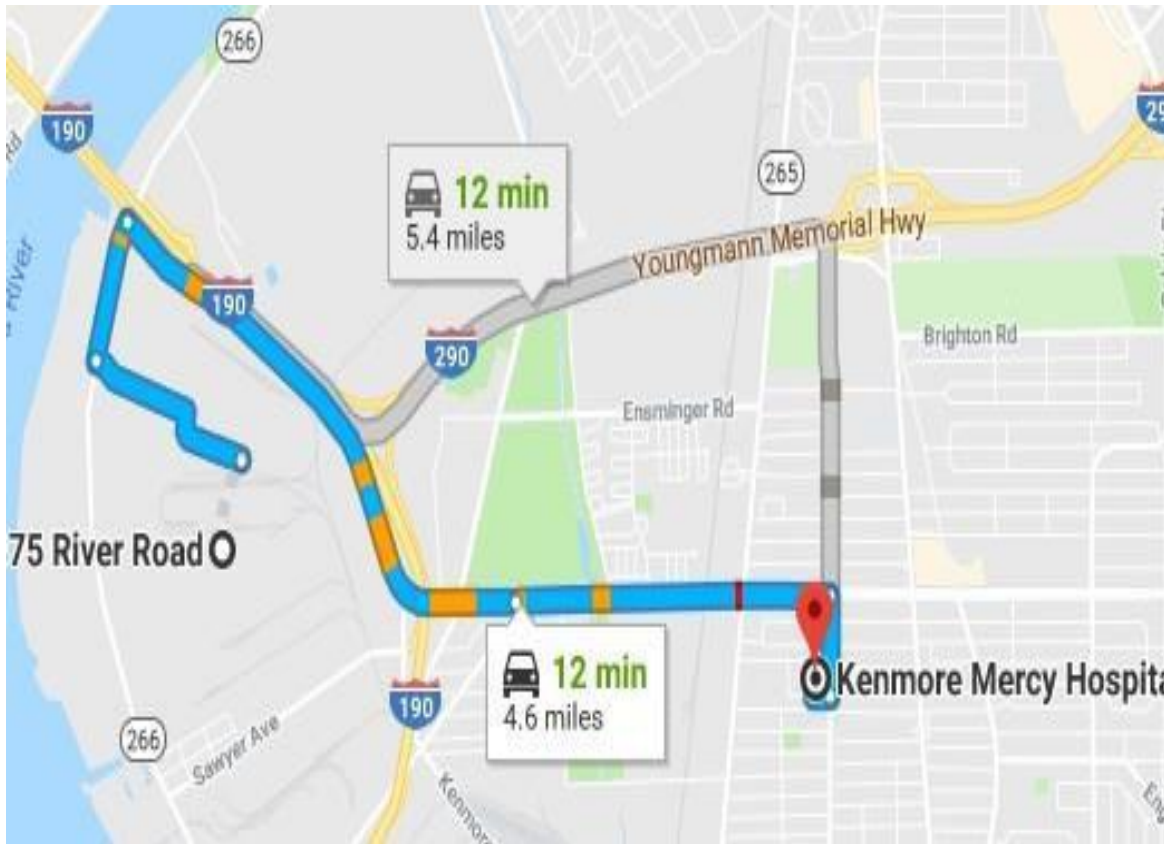
[illegible]

Emergency Contact List

Tonawanda Coke 3875 River Road Tonawanda, New York 14150		
AGENCY	Contact	Phone Number
Owner's Representative	John Black Project Manager	571-217-6761
OSC	Matt Reardon Superintendent	716-570-0717
	Dan Flanigan Project Manager	716-560-3006
	John Yensan President	716-583-4400
	Paul Mulvey Director HS&E	716-856-3333 x 328
Kenmore Mercy Hospital	Medical Emergency	911 (direct) 716-447-6100
Fire, Police, Ambulance	Dispatch	911
Utilities	Water Gas Electric	911

AGENCY	Contact	Phone Number
Site Emergency	Police, Fire Dept., Ambulance	911
Fire Department		911
Police Department & Security		911
Ambulance		911
Poison Control	American Association of Poison Controls	1-800-222-1222
US EPA Release Report Number	National Response Center	1-800-424-8802
HAZARDOUS MATERIALS	CHEMTREC	1-800-424-9300

**LOCAL MEDICAL: KENMORE MERCY HOSPITAL, 2950 ELMWOOD AVE 14127
(DIAL 911 FOR EMERGENCY) (716) 447-6100**



4217

- Turn right onto River Road
- Turn right onto Grand Island Blvd (about 2 miles)
- Merge onto Sheridan Dr.
- Go about 1.5 miles and turn right onto Elmwood Ave.
- Make a sharp right and hospital is on left

OSC Medical Consultant:

Medcor, Inc.
4805 W. Prime Parkway
McHenry, Illinois 60050
800-775-5866

Non-medical Emergency:

Healthworks WNY
2075 Sheridan Drive
Tonawanda, NY 14223
(716) 712-0670

INTRODUCTION

SITE/PROJECT BACKGROUND AND SCOPE

Riverview Innovation & Technology Campus, Inc. (Riverview) has contracted OSC, Inc. for the overall remediation of the former Tonawanda Coke Corporation (TCC) property in Tonawanda, NY. Remediation will be per requirements of the New York State Brownfield Cleanup Program (NYSBCP) and the New York State Inactive Hazardous Waste Site Program (aka State Superfund). Inventum Engineering, PC is providing technical guidance for the project.

The work includes, but is not limited, to the following:

- Mobilization
- Installation of erosion and sediment controls
- Installation of site temporary features (waste/equipment decontamination pads, temporary access roads, and temporary utilities)
- Asbestos removal on structures, building materials, fittings and debris.
- Stabilization and removal of above & below ground tank contents
- Removal of hazardous process and product waste chemicals as well as universal waste
- Cleaning/decontamination of above ground structures deemed to remain on site.
- Demolition of buildings, structures, and tanks not to remain on site
- Treatment/neutralization of surface soils and water as reasonably feasible per NYSBCP
- Removal of “surface tar” and other grossly contaminated soil not otherwise treated/neutralized.
- Rail car cleaning and disassembly
- Tank cleaning and costing for scrap.
- Dewater
- Grading
- Restoration and seed stabilization
- Demobilization

APPLICABILITY AND REFERENCES

OSC has developed the following site Health and Safety Plan (HASP) in accordance with the project contract requirements and Federal, State and Local regulations. It is intended for individuals performing work at the site and not for those considered visitors doing observation only. All operations and equipment used in conjunction with this contract shall, at a minimum, comply with the following:

- New York State Brownfield Cleanup Program
- Project Health and Safety Plan (this HASP)
- OSC Technical Work Plan
- OSHA 29 CFR 1910: Occupational Safety and Health Standards – General Industry

- OSHA 29 CFR 1926: Safety and Health Regulations for Construction
- EPA 9285.1-03: Office of Emergency and Remedial Response – Standard Operating Safety Guides
- OSC Corporate Health, Safety and Environmental Program Manual
- Orientation and Training (Supervision, Laborers, Operators & Visitors)
- Activity Hazard Analysis (AHA)
- Standard Operating Procedures; Emergency Response, Reporting, Incident Investigation, Inspections, Audits, Work Procedures, Hazard Communication, Hot Work, Confined Space, Fire Prevention, Control of Hazardous Energy (Lockout, Tagout, Tryout), Excavations, Controlled Work Zones including decontamination, Ladders, Steps, Stairs, Scaffolding Contractor/Vendor Safety Checklist, Heavy Equipment Operation, Forklift Operation, Powered Aerial Platforms
- Substance Abuse Policy
- Receive site orientation training regarding the project requirements contained in this HASP. Site orientation will be conducted by OSC's Health and Safety Officer (HSO) named in Section 2.0 of this HASP.
- Acknowledge in writing, on page 4 of this HASP titled Conformance Signatures, that they have received the site-specific orientation and therefore, have been trained in and understand the contents of this HASP and the general site safety requirements.

The health and safety protocol that is established in this HASP is based upon the known site conditions and or conditions anticipated to be present from established site data. This HASP is a living document that shall be updated and or revised over the term of this contract as warranted by change in site conditions, scope of work, methods and improvement measures. A copy of this HASP shall be maintained at the project site.

DEFINITIONS

The Owner: Riverview Innovation & Technology Campus, Inc.

The Engineer: Inventum (Owner Representative)

The Contractor: OSC – Company retained by owner to conduct the project.

The Project: Brownfield Cleanup Program, 3875 River Road, Tonawanda, NY

The Project Site: The area designated as the Contractor work area.

Contractor Work Area: An area of the Project site which includes the support zones, access roads, staging areas, contamination reduction zones and exclusion zones.

Active Full Time Project Personnel: All personnel who are permanently assigned to the project and required to perform work. Does not include visitors or vendors visiting the site temporarily who are required to be escorted always by an authorized and trained project employee.

Qualified Person: A person with a recognized degree, or professional certificate, along with extensive knowledge and experience in the subject field who can do design, analysis, evaluation and specifications.

Competent Person: A person who can identify existing and predictable hazards in their surroundings/working conditions which are unsanitary, hazardous or dangerous to employees, and who has both knowledge and authorization to take prompt corrective measures to eliminate them.

Authorized Personnel: A person that is approved or assigned by OSC to perform a specific type of duty/duties, or to be at a specific location(s) at the project site.

Stop Work Authority: HS&E personnel, qualified and competent persons, owner representatives and *all project employees* shall have the authority to stop work in any situation deemed unsafe to those working on the project site, or in any situation that poses a risk to the environment. Work will remain stopped until the parties involved correct their impact or conditions as per the requirements of this HASP.

Contamination Reduction Zone (CRZ): The CRZ is the transitional area between the identified contaminated and clean areas. The CRZ will be provided for the transfer of equipment and materials to and from the exclusion zone; the decontamination of personnel and equipment existing in the exclusion zone; and the physical segregation of the clean and contaminated work areas.

Exclusion Zone (EZ): The exclusion zone encompasses the areas of contaminants of concern (COCs); as well as any areas being utilized for the temporary storage of salvaged materials [ex. valves] and spoils to be discarded as waste. The purpose of the EZ is to limit access to only qualified and necessary personnel and manage the potential spread of COCs.

SITE VISITOR REQUIREMENTS

A safe location, where all visitors can observe site activities of interest will be identified by the HSO. Anyone visiting the site will receive site-specific instructions from the HSO. All visitors shall be escorted by site trained personnel after signing in and completing orientation. Visitor training will include, at a minimum:

- OSC Project Safety Orientation and RIVERVIEW/Honeywell general site orientation
- Project Hazard Communication system
- Activity Hazard Analysis (AHA) review (as needed)
- Work Permit Process (as needed)
- Safety Meetings and Inspections
- PPE requirements
- Decontamination procedures (as needed)
- Emergency procedures, and
- Any other site-specific information that the HSO deems necessary.

Any visitor wishing to enter an established contamination reduction zone (CRZ) or exclusion zone will be required to provide the HSO with documentation of medical monitoring and training equivalent to the requirements of this HASP for that area. Only authorized visitors with written proof that they have been medically certified and trained in accordance with project requirements will be permitted to enter the CRZ and/or exclusion area.

The only exception to this rule is for emergency personnel who may enter the work area without fully complying with the requirements of this subsection. Emergency crews will be quickly briefed as to site conditions and hazards by the HSO.

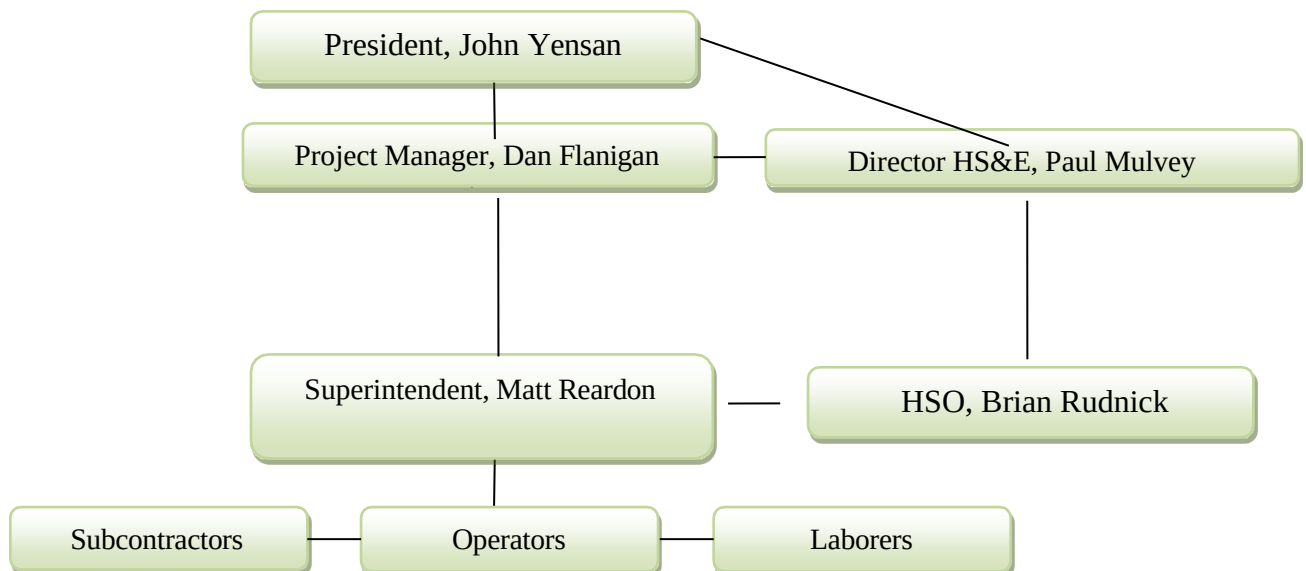
HEALTH and SAFETY ORGANIZATION

The following OSC management personnel will be assigned to this Project:

- President – John Yensan
- Project Manager – Dan Flanigan
- Superintendent – Matt Reardon
- On Site Health & Safety Officer – Brian Rudnick
- Director HS&E – Paul Mulvey

In addition to the above listed management, OSC will provide the appropriate number of operators and laborers, as well as the required subcontractors for this project.

ORGANIZATION CHART



PERSONNEL RESPONSIBILITIES

PROJECT MANAGERS AND SUPERINTENDENTS

The Project Manager will be responsible for the overall direction and completion of this contract. The Project Manager reports to the President and will be responsible for managing and coordinating all project related activities; as well as serving as OSC's primary contact with the Owner and/or Owner's Representative. The Site Superintendent will be responsible for overseeing contractor and subcontractor operations in the field. The Site Superintendent will report directly to the Project Manager.

Project Managers and Superintendents will be responsible for the following:

- Assure daily compliance with the Corporate HS&E Manual and this HASP during the project.
- Implement the procedures and guidelines outlined in this HASP throughout the project.
- Implement incident investigations. The Site Superintendent will notify INVENTUM management and the OSC Director HS&E immediately. Documentation will be maintained on OSC's Incident Report (see attachment I). The Incident Report will be submitted to RIVERVIEW/Honeywell by OSC. The HSO will conduct an investigation with support from the Superintendent and Director.
- Perform and support site safety audits and address all deficiencies.
- Provide incentive and motivation for safe work practices, as well as discipline for unsafe work practices.
- Ensuring a copy of this HASP is onsite always.
- Conduct initial site orientation meetings.

HEALTH AND SAFETY OFFICER (HSO)

The HSO will handle health and safety management on the project and will report to the Director HS&E. Specific duties of the HSO include:

- Overall implementation, enforcement and maintenance of this HASP.
- Act as a point of contact for all project site health and safety concerns.
- Conduct initial training on the contents of this HASP; as well periodic training for when rules/regulations change, new equipment or procedures are introduced, additional skills are needed, and new hazards are presented. Report observations in the daily safety meetings and update AHAs and training accordingly.
- Conduct daily meetings regarding health and safety.
- Supervising any additional HS&E requirements that are needed for this project.

The HSO will monitor the jobsite health and safety via inspection at the start and completion of each day's work; as well as monitoring the jobsite for this purpose throughout the day. The initial daily inspection will be recorded on OSC's inspection and audit form (Attachment I). Corrective actions and end-of-the-day inspection results will be recorded in the HSO's project safety logbook. Any deficiencies will be promptly corrected. All corrective and improvement measures will be



reviewed with project personnel at the morning daily safety briefing. Intentional violations of the site HS&E regulations will be grounds for disciplinary action, which could include temporary suspension or termination of personnel and/or expulsion of vendor and/or subcontractor personnel from the site.

HS&E TECHNICIANS (not anticipated for this project)

The HSO will assign qualified technicians (air monitoring, material sampling, equipment specific and job design professionals) to each work crew or task in hazardous areas as warranted.

OSC CORPORATE MEDICAL CONSULTANT AND NON-EMERGENCIES

The Medical Consultant will be available to provide call-in emergency medical consulting to OSC personnel on an around-the-clock basis. Medical emergencies occurring during normal work hours will be provided by the local hospital (see above). Non-emergency medical support and OSC's Medical Consultant are:

Medcor, Inc.
4805 W. Prime Parkway
McHenry, Illinois 60050
800-775-5866

HealthWorks WNY
2075 Sheridan Drive
Tonawanda, NY 14223
716-712-0670

SUBCONTRACTORS

All subcontractors shall be prequalified according to the OSC subcontractor/vendor prequalification requirements including Certificates of Insurance that meet or exceed the project contract requirements (See RIVERVIEW/Honeywell Project Subcontractor Insurance Requirements Under Separate Cover).

All subcontractor employees shall be required to attend a project safety orientation prior to starting work on site (See Training and Orientation Requirements of this HASP). Subcontractors are responsible for health and safety as it pertains to their operations at the project site and shall provide the required OSC HS&E supporting documentation. Documented proof of training shall be provided for all subcontractor employees. All subcontractors are responsible for providing their employees with the proper site-specific PPE required to perform their work as well as ensure that all tools and equipment are properly inspected and maintained. Subcontractors are responsible for ensuring that their employees conform to all HS&E project requirements and applicable government regulations.

TRAINING and ORIENTATION

Personnel, including subcontractors, shall be provided with the training required to comply with this HASP. Training documentation (training certificates, attendance rosters) will be filed and maintained onsite by the HSO and will be made available for inspection upon request. Training documentation will be kept in an organized manner for each individual worker.

Full time active project personnel working onsite must have received the following:

- Required safety training as defined by OSHA CFR 1926.21 for construction.
- OSHA 1926.65, Hazwoper (employees potentially exposed to hazardous chemicals)
- Medical clearance - fit for work, (includes medical surveillance for specific occupations and probable contaminants) negative drug screen, clearance for respirator use, fit test and training for the type of respirator required.

Supervisor Training – in addition to the above all designated supervisors shall have as a minimum received training that covers competent person training for the specific operation they are responsible for (i.e. excavation trenching and shoring, confined space, rigging, hot work, etc.), first aid and CPR, record keeping, incident investigation, employee substance abuse i.e., reasonable suspicion), HS&E documentation requirements.

SITE SPECIFIC TRAINING

Documentation of training, provided by a qualified safety professional, will be maintained as necessary for the following topics:

- OSC Site Specific Orientation
- Activity Hazard Analysis & Safe work procedures (AHA Review)
- Project Hazard Awareness training
- PPE requirements & possible decontamination procedures
- Heat/Cold Stress
- Fall Protection
- Heavy Equipment Operation (Authorized, Unauthorized)
- Powered Industrial Fork Truck Operation (Authorized, Unauthorized)
- Control of Hazardous Energy Lockout/Tagout and Air Gapping Requirements (1 ft visible air gap)
- Incident reporting
- Emergency response & available services (medical, fire, inclement weather, tornado, bomb threat, signals and procedures)
- Hoisting and Rigging
- Respirator use, maintenance, inspection, medical clearance and fit test
- Excavation hazards and protective measures
- Confined Space

- Dust, Erosion and sediment control
- Noise control measures
- OSC's STAC program
- Authority to stop work (all employees) and the buddy system "No One Works Alone".

JOB SPECIFIC SPECIALIZED TRAINING & MEDICAL CLEARANCE

OSC employees will all participate in the company's annual medical surveillance program which evaluates "fit for duty" condition. These evaluations will be provided by a licensed health care professional.

Employees that may be exposed to elevated levels of contaminants (to be determined) or that wish to use tight-fitting respirators on a voluntary basis will require a current medical evaluation and be respiratory qualified in compliance with OSHA 1910.134.

MEETINGS

Attendance at all HS&E meetings will be documented and filed onsite.

- Daily Morning Safety Brief prior to the start of work "Tool Box Talk".
- Prior to the beginning of each work task, all involved workers shall be required to attend a task-specific HS&E meeting to review task-specific health and safety requirements pertinent to the tasks (AHA review - job hazards and protective measures).

Weekly HS&E Meetings

All onsite Supervisory personnel shall be required to attend a weekly meeting, conducted by the owner representative, to review project and/or task specific procedures. Topics to be discussed at these weekly meetings include, but are not limited to:

- AHA – review for all definable features of work, hazards and controls.
- STAC - employee work observations and recommendations
- Audit/Inspection findings, and recommendations for improvement.
- Necessary training requirements and site work rules;
- Change in work practices and/or work conditions, incident reports.
- Precautions and work practices related to scheduled site activities.
- New or modified site wide procedures or requirements.
- Discussion of potential hazards or hazardous operations.
- Procedures on restricted areas.
- Equipment rules and requirements.
- Restrictions on the handling of materials.
- PPE requirements.
- Delegation of responsibility (emergency backup personnel, competent persons, etc.);

- Review of emergency response for anticipated situations (medical, fire, inclement weather, tornado, bomb threat, environmental release/spill) and communication methods (alarms, radio, voice, and hand signals).

HS&E Audits

The OSC Director, HSE will make project site visits to assure compliance with this HASP and aid as needed. Site audits will be made minimally on a quarterly basis using the company's audit criteria (see Appendix I Forms). An audit finding report will be submitted to the project manager and superintendent within 5 days of the site visit. Highlighted deficiencies must be corrected immediately if not done so during the site visit.

SUBSTANCE ABUSE SCREENING

OSC maintains a drug free workplace. The company prohibits the use, manufacture, sale, possession, or transfer of illegal drugs, alcohol, and controlled substances on project sites.

OSC requires pre-employment, reasonable suspicion and random substance abuse testing (random testing for project-assigned personnel only as required by contractual agreement). Post injury screening may also be conducted in conjunction with reasonable suspicion. Employees as a minimum will undergo a NIDA 10 panel drug screen for illegal drugs before working on the project. Drug and alcohol screens shall be managed by OSC using laboratories certified by HHS under the National Laboratory Certification Program (NLCP).

Reasonable suspicion testing may be triggered by direct observations of employee behavior or drug-related paraphernalia. Site personnel who have been observed using alcohol or controlled substances on site or during breaks at off-site locations after which they will return to work will be requested to take an alcohol or drug test. Reasonable suspicion includes possession (on person or in vehicles) of alcohol or controlled substances on site as well as paraphernalia that suggest drug use. Site personnel who exhibit signs, symptoms, or behaviors of drug or alcohol use as interpreted by a reasonable person will also be requested to take a drug and/or alcohol test.

NOTE - Prescription drugs taken without an authorized prescription for use is considered an illegal drug. Also, in case of any injury, incident, or emergency, employees may be required to undergo a 10-panel screen for illegal drugs, alcohol (breath), or prescribed medication. Submission to substance abuse testing is a condition of employment. Failure or refusal to submit to substance abuse testing is treated the same as a positive result. All reports will be maintained at the main office. Any positive results will be referred to OSC Senior Management for further action.

PROJECT OVERVIEW AND TASK RISK ANALYSIS

TASK/RISK ANALYSIS

An Activity Hazard Analysis (AHA) shall be developed for significant features of work which break jobs down into individual tasks defining the potential hazard of that task and the proper protective and control measures that shall be taken to minimize the hazard. AHA's shall be submitted with any required daily work permit to the owner representative for their review. AHA's shall be modified as warranted by safe work observations, audit and incident investigation. Assessment of the work hazards associated with the scope of work for this project is provided in Table 1.0 below. PPE requirements for all work shall be primarily in level D; ANSI approved hard hat, safety glasses, hearing protection with elevated noise exposures (i.e., working with power tools or near sources of loud noises), abrasion resistant gloves, safety toed boots or safety toed rubber boots (dependent on hazard exposure), high visibility traffic vest or equivalent high visibility clothing, and/or disposable coveralls (modified D). Specific information relating to the potential chemical, physical, biological and radiological hazards is provided in Table 1.1.

TABLE 1.0 OVERALL JOB HAZARD EXPOSURE (See also attachment II (AHA's))	
	Potential Exposure
Mobilization and temporary facilities and controls; establishment of work zones: hazard warning signs, OSC designated work area signage including barricades and area delineation, address safe work surface needs, add lighting, traffic controls, dust, fire and erosion controls.	Low
Installation of erosion and sediment control	Moderate
Installation of site temporary features (waste/equipment decontamination pads, roads)	Moderate
Asbestos removal on structures, building materials, fittings and debris	Moderate/High
Stabilization and removal of above & below ground tank contents	Moderate/High
Removal of hazardous process and product waste chemicals & universal waste	Moderate/High
Cleaning/decontamination of above ground structures deemed to remain on site	Moderate/High
Tank cleaning	Moderate/High
Demolition of buildings, structures, and tanks not to remain on site	Moderate
Treatment/neutralization of surface soils and water as reasonably feasible per NYSBCP	Moderate/High
Removal of "surface tar" and other grossly contaminated soil not otherwise treated	Moderate/High
Restoration and seed stabilization	Low
Demobilization	Low

Low: Non-intrusive work – Minimal hazard/chance of exposure. **Slight:** Non-intrusive work / Possible HS&E hazards with tools. – Little chance of exposure. **Moderate:** Non-intrusive work / Possible HS&E hazards with powered tools, heavy equipment and/or working near or in water – Little chance of exposure to contaminants. **Moderate/High:** Intrusive work / Possible HS&E hazards with equipment – Exposure to contaminants is possible. **High:** Intrusive work / Possible HS&E hazards with equipment – Exposure to contaminants is probable.

CONTAMINATE/CHEMICAL HAZARDS

Existing Site Hazards

Based on information provided in the NYSBCP application and nature of the former facility (coke production and coal tar processing) there are several possible contaminants ranging from minimal to moderate hazardous exposure potential in the soil, groundwater, and surface water. Asbestos is likely to be contained in pipe/fitting/refractory insulation and other building structures.

Although several coal tar constituent chemicals of concern are volatile, the product has been standing open for an extended period time. Much of the volatile and semi-volatile fraction is expected to have been released to the atmosphere minimizing the air pathway (inhalation).

Of the remaining constituent chemicals of concern, the likely exposures are skin absorption/contact and ingestion. These exposure pathways will be controlled using PPE (barrier) and proper hygiene (decontamination).

The following table, taken from the NYSPCP application and originally developed from the GHD, 2018 Remedial Investigation/Feasibility Study Work Plan, lists the chemical constituents that maybe of concern.



Sample Matrix	Sample Date	Parameter	Parameter Concentration		Industrial Standard		Data Source	Table Page Location
Surface Soil	12/21/2005	Benzo(a)pyrene	4,100	ug/kg	1,100	ug/kg	GHD, 2018, Remedial Investigation/Feasibility Study Work Plan, Prepared for Tonawanda Coke Corporation, June.	Table 1a, 2 of 70
Subsurface Soil	8/24/2015	Benzo(b)fluorantene	2,000 to 4,600	ug/kg	1,100	ug/kg		Table 1b, 6 of 70
Surface Soil	8/17/2005 to 8/18/2005	Benzo(a)anthracene	13,000 to 20,000	ug/kg	11,000	ug/kg		Table 2, 11 of 70
Surface Soil	8/17/2005 to 8/18/2005	Benzo(a)pyrene	6,000 to 21,000	ug/kg	1,100	ug/kg		Table 2, 11 of 70
Surface Soil	8/17/2005 to 8/18/2005	Benzo(b)fluoranthene	13,000 to 32,000	ug/kg	11,000	ug/kg		Table 2, 11 of 70
Surface Soil	8/17/2005 to 8/18/2005	Chrysene	12,000 to 21,000	ug/kg	11,000	ug/kg		Table 2, 11 of 70
Surface Soil	8/17/2005 to 8/18/2005	Dibenz(a,h)anthracene	1,300 to 1,700	ug/kg	1,110	ug/kg		Table 2, 11 of 70
Surface Soil	8/18/2005	Indeno(1,2,3-cd)pyrene	15,000	ug/kg	11,000	ug/kg		Table 2, 11 of 70
Subsurface Soils	6/19/1989	Benzo(a)pyrene	2,400 to 11,000	ug/kg	1,100	ug/kg		Table 3, 16 of 70
Subsurface Soils	6/19/1989	Benzo(b)fluorantene	17,000	ug/kg	11,000	ug/kg		Table 3, 16 of 70
Subsurface Soils	6/19/1989	Dibenz(a,h)anthracene	2,200 to 11,000	ug/kg	1,100	ug/kg	Table 3, 16 of 70	
Groundwater	10/18/1985 to 12/12/1989	Cyanide	0.22 to 2.75	mg/L	0.2	mg/L		Table 4, 37, 41, 45, 53, & 57 of 70
Groundwater	8/1/1986	1,4-Dichlorobenzene	29	ug/L	3	ug/L		Table 4, 38 of 70
Groundwater	11/1/1985 to 12/19/1989	Benzene	2.08 to 84	ug/L	1	ug/L		Table 4, 38, 42, & 54 of 70
Groundwater	8/1/1986	Chlorobenzene	22	ug/L	5	ug/L		Table 4, 38 of 70
Groundwater	11/1/1985	Xylenes	19 to 36	ug/L	5	ug/L		Table 4, 38 of 70
Groundwater	11/1/1985 to 8/1/1986	Toluene	11 to 59	ug/L	5	ug/L		Table 4, 38 of 70
Groundwater	6/26/1989 to 7/16/1991	Iron	2.597 to 160	mg/L	0.3	mg/L		Table 4, 36, 40, 48, 52, & 56 of 70
Groundwater	6/26/1989 to 7/16/1991	Manganese	0.801 to 11.2	mg/L	0.3	mg/L		Table 4, 37, 41, 49, & 57 of 70
Groundwater	11/1/1985	Phenolics	0.050 to 0.06	mg/L	0.001	mg/L		Table 4, 37 & 41 of 70
Groundwater	6/28/1989 to 12/13/1989	1,1,1-Trichloroethane	7 to 12.2	ug/L	5	ug/L		Table 4, 38 & 42 of 70
Groundwater	12/13/1989 to 12/20/1989	Methylene chloride	5.15 to 6.96	ug/L	5	ug/L	Table 4, 42 & 54 of 70	
Groundwater	6/26/1989	Selenium	0.0116	mg/L	0.01	mg/L	Table 4, 49 of 70	
Groundwater	6/26/1989	Nickel	0.153	mg/L	0.1	mg/L	Table 4, 53 of 70	
Groundwater	7/16/1991	Cadmium	0.19	mg/L	0.005	mg/L	Table 4, 56 of 70	
Surface Water	11/1/1985 to 8/1/1986	Benzene	23 to 48	ug/L	1	ug/L		Table 5, 62 of 70
Surface Water	11/1/1985	Xylenes	7	ug/L	5	ug/L		Table 5, 62 of 70
Surface Water	10/19/1989 to 7/8/1992	Toluene	12 to 24	ug/L	5	ug/L		Table 5, 62 of 70
Surface Water	3/15/1990 to 7/8/1992	Iron	1.09 to 472	mg/L	0.3	mg/L		Table 5, 62 & 64 of 70
Surface Water	3/15/1990 to 7/8/1992	Manganese	0.47 to 3.91	mg/L	0.3	mg/L		Table 5, 62, 64, & 66 of 70
Surface Water	3/15/1990	Nickel	0.14 to 0.216	mg/L	0.1	mg/L		Table 5, 62 & 64 of 70
Surface Water	11/1/1985 to 8/1/1986	Phenolics	0.039 to 0.61	mg/L	0.001	mg/L		Table 5, 63 of 70
Surface Water	12/19/1989	Methylene Chloride	52	ug/L	5	ug/L		Table 5, 66 of 70
Surface Water	3/15/1990	Chromium Total	0.086	mg/L	0.05	mg/L		Table 5, 64 of 70
Surface Water	7/8/1992	Lead	0.025	mg/L	0.025	mg/L		Table 5, 66 of 70
Sediment	3/15/1990	Benzo(a)pyrene	4,530	ug/kg	1,100	ug/kg	GHD, 2018, Remedial Investigation/Feasibility Study Work Plan, Prepared for Tonawanda Coke Corporation, June.	Table 5, 69 of 70
Sediment	3/15/1990	Dibenz(a,h)anthracene	3,430	ug/kg	1,100	ug/kg		Table 5, 69 of 70
Notes:								
1 The compounds and results are representative of the site conditions at the time the samples were collected. This does not represent all samples or compounds detected, but is considered representative of the data set available for the preparation of the BCP Application.								
2 Abbreviations used:								
ug/kg = micrograms per kilogram								
mg/L = milligrams per liter								
ug/L = micrograms per liter								
ug/kg = micrograms per kilogram								

Chemicals Brought Onsite

The use of chemical products onsite will follow the requirements set forth in OSHA 29 CFR 1910.1200 (OSHA's Hazard Communication Standard), applicable Federal, State and Local regulations and the project procedure provided in this HASP. The potential hazards associated with these products will be mitigated through site specific training, administrative controls (e.g. labeling and storage) and use of the prescribed PPE.

Safety Data Sheets (SDS) for all chemicals brought onsite will be available for review in OSC's field office at the project site. Chemical products shall be labeled which shall include, product name, manufacturer's name, hazard warning, identifier and hazard pictogram.

The following table provides exposure guidelines for common hazardous chemicals that may be brought to the site, if required, for use during this project. The HSO will be notified before any new chemicals (chemicals not listed on the table below) are brought onsite.

HAZARD SUMMARY FOR CHEMICALS BROUGHT ONSITE					
Substance	Route of Entry	Exposure Symptoms	Treatment	8 Hour TWA	STEL and IDLH
Diesel Fuel	• Skin contact • Eye contact • Inhalation • Ingestion	• Harmful if comes in contact with or is absorbed throughout the skin. • Contact may cause skin and eyes irritation. • Prolonged or repeated exposure may cause liver or blood forming organ damage. • May cause skin irritation or dermatitis.	• <u>Eyes</u>: Irrigate immediately. • <u>Skin</u>: Flush with soap and water. • <u>Inhalation</u>: Remove victim to fresh air and provide respiratory support if needed. • <u>Ingestion</u>: Seek medical attention.	300 ppm	STEL: 500 ppm
Grease, Oil and Hydraulic Fluids	• Skin contact • Eye contact • Inhalation • Ingestion	• May be slightly irritating to skin and eyes. • Inhalation may cause headaches. • Ingestion could result in nausea and vomiting.	• <u>Eyes</u>: Irrigate immediately. • <u>Skin</u>: Flush with soap and water. • <u>Inhalation</u>: Remove victim to fresh air and provide respiratory support if needed. • <u>Ingestion</u>: Seek medical attention.	N/A	N/A
Gasoline Petroleum Distillates	• Skin contact • Eye contact • Inhalation • Ingestion	• Acute: Central nervous system effects. Chemical pneumonitis if aspirated into the lungs. • Chronic: Benzene is a confirmed carcinogen. Long term exposure caused kidney and liver cancer in rats/Chemical.	• <u>Eyes</u>: Irrigate immediately. • <u>Skin</u>: Flush with soap and water. • <u>Inhalation</u>: Remove victim to fresh air and provide respiratory support if needed. • <u>Ingestion</u>: Seek medical attention.	300ppm	500ppm STEL

GENERAL PHYSICAL HAZARDS AND STANDARD PROTECTIVE MEASURES

(See Attachment I, AHA for more specific details):

Activity: *All general work activities* (manual ground laboring, operating equipment, supervising, inspecting).

Potential Hazard: noise, slips, trips and falls, struck by, pinched, falling debris, shock, heat/cold stress.

Procedures to Mitigate Hazard: Minimum standard site required PPE (Level D ANSI rated hard hat, eye protection, safety boots, high visibility traffic vest or equivalent clothing, cut/abrasion resistant gloves. Hearing protection (when “you need to raise your voice to hear yourself talk”) is required whenever using powered hand tools, when operating heavy equipment with no enclosed cab or near loud noise sources. Inspect work areas for hazards, overhead power lines, obstructions, slip, trip, fall hazards, uneven surfaces, and vermin. Manage work areas; flag, mark, delineate and cover, identify with appropriate hazard warning signs. Clearly label open pits, wells and other fall hazards (soft barricade 15 feet back, hard barricade 2 feet back). Practice extreme caution in all work areas including vegetation covered areas. Watch footing during equipment access/egress and when moving through the work area, walk with purpose, pick feet up and set up down, keep hands out of pockets, use handrails, stay on designated paths, and don’t take short cuts through the site. Avoid stepping or standing on uneven or unsteady surfaces. In high heat situations stay well hydrated. Personnel will adhere to the heat and cold stress precautions provided in this HASP. All employees have stop work responsibility and authority for safety concerns.

Activity: *Manual Material Handling*

Potential Hazard: Strain, pinched, struck by, lacerations,

Procedures to Mitigate Hazard: Hands and feet clear of pinch points, standard site required PPE and gloves with hazard exposure (i.e. barrier gloves), Observe the OSC lifting program (50 lbs. maximum on this project). Use good body mechanics when lifting, lift objects with your legs and not your back, keep the back straight and object lifted the power zone. Do not twist, pick your feet up and turn. Utilize equipment whenever possible - a forklift, drum cart or other appropriate equipment. Seek assistance if it is needed.

Activity: *General traffic from operations* (heavy equipment, trucks, pedestrian, etc.)

Potential Hazard: Struck by, crush, fire, and burn.

Procedures to Mitigate Hazard: Standard site required PPE. Traffic barricades and directional signs provide ground spotters/flagman equipment traffic, with high visibility, traffic vests or equivalent clothing. Minimum 35 ft. clearance from heavy equipment operations, leveling, compacting, separating and loading out. Develop and implement a traffic control program when site activities occur adjacent to non-OSC vehicular traffic.

Activity: *Site maintenance, materials storage and housekeeping*

Potential Hazard: Slip, trip, fall, fire, burn, chemical hazards, eye, skin, struck by

Procedures to Mitigate Hazard: Personnel will properly store all equipment. Remove all scrap material from the work area and place it in designated storage/lay down areas for disposal.

Delineate work areas and identify with appropriate Hazard Warning Signs. Handling of materials per products SDS and developed proper storage of all flammable and combustible materials; > 20 feet from ignition sources or protected with ½ hour fire barrier (indoors). Likewise, all flammable/combustible liquid will be segregated from the ignition source >20 ft. Store all hazardous materials in approved containers. Keep all solvent wastes, oily rags and liquids in fire resistant containers. One 20 lb. ABC Extinguisher should be provided in storage areas (within 75 ft. away no closer than 20 ft.).

Activity: *Operation of hand and/or power tools*

Potential Hazard: Eye, hand, face, foot injuries, electrocution, noise, fire, burn.

Procedures to Mitigate Hazard: Tool use per Mfg.'s guidelines. Inspect tools before use; verify that guards and safety devices are in place before, during and after operation. Only use a power tool that you have been trained. Use GFCI plugged in at source for all corded tools. Red tag and remove all defective tools from service. Maintain and inspect the tools per the manufacturer's recommendations. All personnel will utilize the proper eye protection and hearing protection.

Activity: *Operating Heavy Equipment* (Excavators, Compactors, Dozers, Skid Steers, Rough Terrain Fork Trucks, Powered Aerial Platforms and Trucks).

Potential Hazard: Struck by, caught between, crushed, rollover, fire, burn.

Procedures to Mitigate Hazard: Equipment operation only by trained and authorized operators. Before use, any machinery or mechanized equipment will be inspected by a competent person and certified to be in safe operating condition. OSC will designate competent persons to be responsible for the inspection of machinery and equipment, daily and during use, to ensure its safe operating condition. Any machinery found to be unsafe will be dead lined; its use will be prohibited until the unsafe conditions have been corrected. Inspection of the machine/equipment will be conducted at the beginning of each shift, during which the equipment may be used, to determine that the brakes and operating systems are in proper working condition. All inspections will be documented. Only designated personnel, with appropriate training and authorization, shall operate machinery and mechanized equipment. Any observed equipment deficiencies that will affect their safe operation, will be corrected before continuing operations. A controlled work zone shall be established for demolition, sorting and loading operations. Likewise, a trained ground spotter shall be provided to assure personnel stay clear when an operator's rear view is obstructed. Dust control measures (active water misting during intrusive activities with water hose or equivalent misting equipment). Utilize the appropriate warning signs and backup alarms. All site personnel working near heavy machinery will use reflective clothing (i.e. vests) to alert the operator of their whereabouts. See appropriate AHA for details (hoisting, heavy equipment operation, etc.).

Activity: *Excavating and Working in Excavations:*

Potential Hazard: Cave in, collapse, chemical exposure, struck by, entrapment.

Procedures to Mitigate Hazard: Per OSHA requirements, provide protective systems of trenches when deeper than 5 feet and entry is necessary. Inspect the excavations/trenches regularly for changing conditions. Ensure that the material from the excavations/trenches is being placed away from the edge, to prevent cave-ins and pit (instability (> 2 feet back)). Backfill the excavations as required by the approved contract specifications, to minimize the number of open excavations and control zones.

All excavation work shall be supervised by a competent person who will determine what protective measures are required, what those controls will be and how they will be implemented (testing, monitoring, benching, sloping, shoring, means of egress, dewatering, etc.). The competent person will inspect the excavations and controls to ensure reinforced structures are barricaded or marked, with barricade tape or traffic cones, during active excavations. If an excavation must remain open prior to backfill, those excavations must be fenced or barricaded (> 6 ft. from edge). Compliance with OSHA 29 CFR 1926 Subpart P will be maintained.

Atmosphere monitoring will be conducted prior to entry and during work activities in excavations/trenches.

Activity: *Working around or near utilities* (Utilities hazards overhead and/or underground).

Potential Hazard: Stored Energy Hazards (electrical, gas, water, sewer, etc.).

Procedures to Mitigate Hazard: Request utility mark out, notify FPO utility authority a minimum of three days prior to performing any intrusive or demolition activities. Prior to work beginning, ensure that all utility lines are not energized. Stay a minimum of 10-feet away from energized lines.

Activity: *Servicing equipment.*

Potential Hazard: Uncontrolled release of hazardous energy (electrical, mechanical, kinetic, pressure, heat, chemical, any type of stored or potential energy).

Procedures to Mitigate Hazard: The lock-out/tag-out procedure provided in this HASP will be followed when working on machines and equipment in which the unexpected energizing / start-up of the machines or equipment, or release of stored energy could cause injury to employees.

Activity: *Working from elevated heights* (> 6 feet) with an open edge to the next lowest.

Potential Hazard: Fall

Procedures to Mitigate Hazard: All work from elevated heights shall be performed as supervised by a competent person. In all cases proper fall protection shall be utilized such as a personal fall restraint system. Maintain 100% tie-off.

BIOLOGICAL HAZARDS

Bites and Stings

Animal bites, such as from coyotes, or stings which are usually irritants that cause localized swelling, itching and minor pain and can be handled with first aid treatment. The bites of certain snakes, lizards and spiders can contain sufficient poison to warrant medical attention. Diseases that may require medical attention, can be transmitted from some animal bites. Examples are rabies (mainly from dogs, skunks, raccoons and foxes), Lyme disease (transmitted from ticks) and encephalitis (transmitted from mosquitoes).

Personnel with known allergic reactions to bee stings should carry the appropriate medication and must notify the Director HS&E and HSO of his/her condition prior to reporting for work at the site.

Ticks, Chiggers and Lyme disease

Ticks and chiggers may be present in vegetated areas during the spring, summer and fall seasons. Preventative measures include protective clothing that covers the entire body, tucking pant legs into boots or socks and tucking a long-sleeved shirt into pants; head/hair protection; and the use of insect repellant containing DEET on all exposed areas and coveralls. Project personnel should check their bodies thoroughly for ticks and should bathe soon after returning home. Remove any ticks carefully, using a gentle firm, tugging motion with fine tweezers. If site employees feel they have been bitten they should notify the HSO immediately.

Snakes

If project personnel encounter a potentially dangerous snake – stop work, remove yourself and other workers from the immediate area and notify the Superintendent. The supervisor will contact an appropriate site representative to request that the hazard be removed. Do not re-enter the work area until you have been cleared by the HSO to do so.

Toxic Plants

Poison Ivy, poison sumac and poison oak may be present during the spring, summer and fall seasons. Avoid contact with these plants. If a project worker has come in contact, the affected area should be washed thoroughly with soap and cool water. Notify the HSO immediately.

Bloodborne Pathogens

29 CFR 1910.1030 requires that all first aid responders who may come in contact with potentially infectious materials be trained and protected from exposure. Furthermore, there is a risk for any site employee to be exposed to discarded needles and/or contaminated sharps.

All employees on this project will:

- Avoid contact with any blood or potentially contaminated object
- Use caution when picking up or moving objects (stones, brush, debris, etc.)
- Wear leather gloves and not touch suspect objects; and

In addition to the above requirements, the following will apply:

- All personnel will be required to receive bloodborne pathogen awareness training.
- No eating, drinking, smoking, or applying lip balm will be permitted in the designated work, decontamination and first aid areas.
- All first aid kits will be equipped with the proper PPE (i.e. gloves, CPR shields and respirators).
- If a garment (gloves included) is contaminated by blood, or other potentially infectious materials, the garment(s) will be removed as soon as possible.
- After an exposure incident, a confidential medical evaluation and follow-up will be conducted and immediately available to the employee. The HSO will coordinate all medical arrangements.

Radiological Hazards

No radiological hazards are expected during this project.

SITE SECURITY

All onsite personnel and visitors will be required to sign-in and sign-out, at the guard shack and project support trailer, before entering designated work sites. OSC will maintain, onsite, all records of site access. Visitors will be required to be knowledgeable of and conform to this HASP, prior to accessing work zones. Vehicular traffic will be permitted in the designated parking area as permitted by the owner. Access to the controlled work and traffic zones is restricted to authorized vehicles only.

SITE LAYOUT

See project work plan prepared separately.

BUDDY SYSTEM

Working alone is prohibited. All field personnel will be assigned a co-worker who will watch for hazards or problems his/her co-worker might encounter. Communication between employees must be maintained always. Workers will pre-determine hand signals, or other means of emergency signals, for communication when respiratory protection or distance makes communication difficult. Visual contact must remain between the two co-workers; they must remain near each other in order to assist in case of an emergency.

SITE COMMUNICATIONS PLAN

Each work crew, operator and manager will be equipped with a two-way radio. In the event of an emergency, and two-way radio communication is not available, oral and visual safety signals have been established to protect project personnel. These signals will be presented to personnel for all phases of operation before conducting any task. These safety signals will ensure quick communication during adverse or emergency situations. Examples of established signals, and their meanings, are provided below.

Visual Signal	Indication
Hand gripping throat	Out of air, can't breathe
Wave hands over head from side to side	Attention: stand by for next signal
Swing hands from the direction of the person receiving the signal to directly overhead and through a circle	Come here
Pointed finger with extended arm	Look in that direction
Grip partner's wrist with one or both hands	Leave the area immediately
Hand on top of head	Need assistance
Thumbs up	Ok, I'm alright, I understand
Thumbs down	No, negative
Audio Signal	Indication
Short blast of air or vehicle horn	Caution look over here
Three long blasts of air or vehicle horn	Leave the area

PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE will be selected, used, maintained and stored in accordance with OSHA 29 CFR 1926 Subpart E, and applicable manufacturer recommendations. Engineering, administrative and/or work practice controls to minimize hazards will be implemented where feasible, followed by PPE.

MINIMUM LEVELS OF PROTECTION

Level D personal protective equipment that is to be worn always by project personnel at the site includes:

- ANSI approved safety glasses with side shields
- Leather safety boots (ANSI or ASTM)
- Rubber boots w/wet hazards or disposable booties
- Hardhat (ANSI Rated)
- High visibility vest or equivalent high visibility clothing
- Appropriate clothing (long sleeve shirts and pants) and Tyvek coveralls as required
- Gloves (leather always), nitrile as required
- Hearing protection (around powered equipment or using powered hand tools)
- Tick protection when working near water or when grubbing

Modified D PPE will be used when the possibility of dermal hazardous chemical contact, but not inhalation exposure exists and includes:

- The above minimum PPE
- Mono-goggles with face shield in chemical splash situations
- Impermeable chemical barrier gloves (i.e., nitrile) if handling contaminated material
- Coated disposable coveralls (Tyvek or equivalent) if exposure to hazardous chemicals exists
- Face shield and safety glasses with work where the potential for flying debris hazards is present (i.e., chipping, grinding, steel on steel impact activities)

Level C PPE will be used if there is the possibility of inhalation of hazardous concentrations (or unknown concentrations) of vapors or fumes at or above OSHA PELs. Level C PPE includes:

- Modified level D PPE
- Air purifying respirator (half-face)
- Appropriate filtering media (particulate, mercury, organic, or combination cartridge)

NOTE: OSC employees are given the option of using an air purifying respirator for voluntary use.

Level B is not anticipated for this project but may be made available if necessary.

Levels D and Modified Level D are the anticipated PPE during this project. These minimum levels of protection are considered preliminary and may change based upon initial exposure assessment and routine assessments as work progresses. No change to the specified level of protection will be made without the approval of the HSO and in agreement with the Director HS&E

SELECTION OF PROTECTION LEVELS

PPE will be used when project and support activities involve known, or suspected, contamination; when vapors, gases or particulates may be generated by site activities; or when direct contact with skin may occur. Respirators protect the lungs against airborne toxicants. Chemical resistant clothing protects skin from contact with harmful and absorbable chemicals.

Level D: Protection will be used when no airborne contaminant exposure is likely, and job functions do not require the use of respiratory equipment or chemical resistive clothing. The equipment for this level of protection is described above and is expected to be the minimum for the project.

Level D Modified: Protection will be modified when additional contact hazards have been identified such as splash hazards and contaminated or nuisance dust. See the description above.

Level C: Protection that will be provided when airborne contaminants have been identified, and which require the use of air purifying respiratory equipment to keep exposures below health-based limits. Examples of respiratory protection for this project are half or full-face air purifying respirators with appropriate cartridges (i.e. P-100 cartridges for lead particulate, Black Organic Vapor – VOC, Brown/Gold Acid Gas, etc.). Likewise, excavation work may require an approved P100/vapor combination cartridge.

Level B: Protection that will be provided when the highest level of respiratory protection is needed with partial body or skin protection. Equipment for this level of protection will include a minimum of the following:

- SCBA, PAPR or airline respirator depending on contaminate and situation
- Chemical resistant protective clothing for hazards identified.
- Hardhat or helmet for hazards identified.
- Chemical resistant gloves with liners for hazards identified.
- Chemical resistant safety shoes or boot covers for hazards identified.

Level B is not expected for this project.

HEARING PROTECTION

Project personnel will be provided hearing protection and required to use it whenever conducting tasks where exposures may exceed 90 dB as indicated in the following table:

Equipment	Sound Level at Operator		
	Average, dB	Range	TWA, dBA
<i>Earth Moving:</i>			
Front End Loader	88	85-91	
Backhoe	86.5	79-89	
Bulldozer	96	89-103	
Roller	90	79-93	
Scraper	96	84-102	
Excavator	86	83-92	89.6*
Truck	96	89-103	
Paver	101	100-102	
<i>Power Units:</i>			
Generators	<85		
Compressors	<85		
<i>Impact:</i>			
Pile Driver (diesel/pneum.)	98	82-105	
Pile Driver (gravity)	82.5	62-91	
Pneumatic Breaker	106	94-111	
Hydraulic Breaker	95.5	90-100	
Pneumatic Chipper	109		
<i>Other Equipment</i>			
Compactor/Vibrator	94.5	85-98	86.1
Compressed Air Blower	104		
Power Saw	88.5	78-95	
Electric Drill	102		

Noise Standards	Noise Level
OSHA (at worker's ear)	90 dB (A) TWA
Day Time Community (at property line)	65 dB (A)

***Open windows**

OSC has monitored sound levels for various tasks and operations conducted during the project to both verify that the levels cited above are accurate and to serve as exposure indicators. Sound levels have been measured for each task or operation reasonably expected of having noise levels that could result in exposures above 90 dB as an 8-hr. TWA. Regardless of the results, however, OSC employees will be required to use hearing protection under pre-defined conditions.

Hearing protection will be required whenever an employee is either using a powered tool or working near loud noises (excavators, sheet driving, or working in heavy equipment with windows open). Hearing protection may be obtained from the HSO. Each employee is responsible for wearing hearing protection when required. Replacements may be obtained from the HSO, if necessary. Employees are encouraged to use hearing protection voluntarily if communications are not compromised.

RESPIRATORY PROTECTION

Project personnel may be required, to use respiratory protection to reduce their exposure to airborne hazardous substances. The standard requirements that determine the selection and use of respirators depend on the hazards present. Respirators will also be made available, at the project work area, for emergencies.

Only respirators that are approved by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupation Safety and Health (NIOSH) are allowed. Use must follow the regulatory requirements set forth by OSHA 29 CFR 1910.134 and OSHA 29 CFR 1926.103.

OSC employees may voluntarily use a filtering facepiece in conditions when respiratory protection is not mandatory. Employees that are medically cleared to use an APR may wear any type of respirator voluntarily.

Medical Clearance & Fit Testing

All personnel, which are assigned to tasks where a respirator is needed, must have prior medical clearance. Medical evaluations and fit testing are provided by OSC. Fit test records and all project personnel medical documentation will be filed and maintained onsite, by the HSO.

Medical limitations and restrictions will be strictly enforced. No employee will be permitted to use a respirator if he/she has any facial abnormality or facial hair that may affect the fit or seal of their respirator

Training

All personnel who are required to wear a respirator will receive training (in addition to required annual training) from the HSO on the use, maintenance, proper care and inspection of their respirators. Attendance at all training will be documented. Attendance records will be maintained onsite by the HSO and will be available for inspection upon request.

Inspection

All respirators to be used at the jobsite will be inspected for damage by the employee, prior to use. After they are trained, every employee will be responsible for inspection of their own respirator. The following elements will be inspected;

- Tightness of the connections
- Face piece
- Headbands
- Inhalation valve
- Cartridge or filter fittings
- Signs of deterioration

Any malformation, distortion, missing parts, cracks, etc. in the respirator will cause the equipment to be deemed useless until a qualified technician can properly repair the respirator. If necessary, a new respirator will be issued.

Respirator Type

The type of respirator, and who is required to wear them, will be identified on a task specific level by the HSO, in consultation with the Director HS&E, based on the type of work that will be performed and the potential for exposure to airborne contaminants.

Standard Procedure for Use

All personnel will adhere to the following standard operating procedure for respirator use;

- Carefully inspect the respirator prior to entering potentially contaminated work areas
- Conduct positive and negative pressure leak tests each time the respirator is to be used
- Do not remove the respirator in contaminated work areas
- Wear a respirator with straps inside disposable garment hood (if equipped)

Cleaning and disinfecting

Any reusable respirator must be cleaned after each use. The steps required to clean a respirator after use are;

- Remove the cartridge and headbands
- Disassemble all respirator parts
- Wash all parts, except for the cartridge and headband, in a cleaner-disinfectant solution or use soap and hot water
- Rinse all parts completely in clean, warm water
- Air dry in a clean, sanitary area
- Re-assemble the respirator
- Store the cleaned respirator in a sealed bag.

Storage

Respirators will be stored in a sealed bag to protect against dust, sunlight, extreme temperature, moisture and abrasives. Inhalation holes will be covered with duct tape immediately after leaving a contaminated area. The tape will be left on until the respirator is donned for the next entry into a contaminated area. This tape will prevent any contaminants from being dislodged from the cartridge. Respirators should be stored so that the face piece and exhalation valve will rest in a normal position and function will not be impaired by the elastic setting in an abnormal position. The respirator should not be hung to store or air dried by its straps.

STANDARD OPERATING PROCEDURES (SOPs)

General

- Ensure that all safety equipment and protective clothing is kept clean and well maintained.
- Ensure that all prescription eyeglasses are safety glasses and are compatible with respirators.
- Ensure that all disposable or reusable gloves are approved by the HSO
- Respirator filters will be changed daily.
- At the end of each day, decontaminate or dispose of all PPE used onsite. The HSO is responsible for ensuring decontamination before PPE reuse.
- Project personnel will have vision or corrected vision to at least 20/40 in one eye.
- Onsite personnel that are found to be disregarding any provision of this HASP will be barred, at the request of the HSO, from this project.
- Do not reuse disposable outerwear such as coveralls, gloves and boots. Used disposable outerwear will be removed upon leaving the exclusion zone and placed inside disposable containers that are provided for this sole purpose. The containers will be stored at the project site, at the designated staging area, and OSC will arrange for the proper disposal of these materials at the completion of the project.
- When working, immediately replace protective coveralls that have become torn or badly soiled.
- Eating, drinking, smoking, chewing gum and tobacco use shall be in designated areas.
- All personnel must thoroughly wash their hands, face and forearms prior to using the facilities, eating, drinking and smoking.
- NO alcohol, drugs (without prescriptions) or firearms will be allowed onsite at any time.

All personnel who are on medication with a safety-sensitive effect will report it to the HSO, prior to work start-up, The HSO will require a letter from the individual's personal physician stating what limitations, if any; the medication may impose on the individual.

EXCAVATION SAFETY

OSC maintains strict procedure for soil excavations. The safety of all employees during these operations depends on the soil structure and stability, contamination, weather conditions, buried utilities and structures and superimposed loads.

When excavating within a wet, sandy area, or if the area has been backfilled at any time, it is likely to be very unstable. All personnel working in these conditions must be cautious and provide extra sloping, if possible. A change in weather conditions, such as heavy rain or snow, can loosen the soil and increase the risk of collapse. If the area of excavation is prone to collapse precautions, such as covering the area, should be taken. Heavy equipment or materials should be kept as far away as possible from the excavation area because they can also increase the risk of collapse. All excavated soil should be removed from the rim of the area and contained if possible.

An excavation competent person must be on site anytime entry into an excavation is necessary. Any person entering an excavation must be trained in the hazards and safe work practices of excavations.

To eliminate the impact on buried pipelines or cables, before any excavation begins OSC personnel will notify all utility companies to locate their lines. If such a hazard exists, the lines will be carefully marked (potting, hand digging, etc.) prior to the start of the excavation activities.

When deeper than five feet, to prevent collapsing soil the excavation must be sloped, shored or somehow contained before any personnel may enter. A ladder will be provided for employees who are working in depths for more than four feet and spacing between will not exceed 25 feet. The ladder will not be removed until all employees have exited the excavation site.

All excavation sites will be inspected daily by an OSC designated competent person. All activity will cease if the competent person, site superintendent, and/or the HSO find the site hazardous. The competent person will make an inspection any time there is a change in conditions (i.e., weather, water, heavy equipment operation, etc.).

EXTERIOR PRECAUTIONS

OSC requires that all exterior structures (sidewalks, bridges, etc.) be protected and clear of excavated materials. Sidewalks will be shored to carry a load of at least 125 pounds/sf. Planks, which are being used for temporary walkways, will be laid parallel to the length of the walkway and will be fastened together. If possible, guard rails or fences will be erected to protect employees and vehicle traffic from the edge of excavation sites.

LOCKOUT/TAGOUT POLICY

For repairs or maintenance, equipment will be locked out. This procedure ensures the health and safety of all personnel by deactivating any movable, electrical or pressurized equipment. This policy applies to all machinery or equipment that can be moved either using electrical power, hydraulic power, compressed air, steam or energy stored in springs/suspension devices. Damaged tags will be placed on all movable equipment and machinery.

Only project personnel and supervisors are authorized to lockout machinery/equipment. Every employee is responsible for his/her own equipment and nobody else is permitted to remove a lock or tag except the authorized employee. Any violation of this policy is cause for strict disciplinary action.

Lockout Procedures

Lockout devices are used to prevent the accidental re-energizing of equipment.

De-energizing Circuits and Equipment: Disconnect the circuits and equipment, to be worked on, from all electrical sources and release stored energy that could accidentally re-energize equipment.

Application of Locks and Tags: Only authorized personnel are allowed to place a lock and tag on each disconnecting – means used to de-energize the circuits or equipment before the work begins. A lock prevents unauthorized personnel from re-energizing the equipment or circuits. A tag prohibits unauthorized operation of the disconnecting device.

Verification of De-energized Condition of Circuits/Equipment: Prior to work on equipment, OSC requires that a “qualified” employee verify that the equipment is de-energized and cannot be restarted. This is typically done by a visible break in the conductors (i.e. air gap) of one foot or more.

Re-energizing Circuits and Equipment: Before circuits or equipment are re-energized, the following steps must be taken in the following order:

- A “qualified” employee conducts tests and verified that all tools and devices have been removed.
- All exposed employees are warned to stay clear of the circuits and equipment.
- Authorized personnel will remove their own locks and tags.
- The HSO will conduct a visual inspection of the area to be sure all employees are clear of the circuits and equipment.

ELECTRICAL

Only qualified and authorized personnel may work on or around electrical equipment. OSC personnel are not permitted to work on energized lines or equipment. Live or hot work must be contracted to a qualified third party unless specific authorization is given by the OSC President or Director HS&E. The following shall be observed;

- The working space around all electrical equipment will be large enough to permit access to all parts of the equipment. The working space will never be used for the storage of other materials so that immediate access can be gained.
- Only NEC certified electrical tools may be used.
- A ground fault circuit interrupter (GFCI) shall be utilized with all portable electric tools; plugged in at the source and tested prior to use. All electrical equipment shall be properly grounded or guarded (double insulated tools, GFCI).
- Single phase electrical tools must be plugged into properly grounded receptacles.
- The use of extension cords is discouraged. If their use is necessary, extension cords must never be used in traffic areas where they may be a hazard, or where they may become unplugged. Extension cords will always be grounded.
- Any energized electrical equipment, operating at 50 volts or higher, must be protected by a cabinet or other approved enclosure with warning signs that are immediately visible.

FALL PROTECTION

All work from elevated heights > 6 ft. with an open edge to the next lowest level shall be performed as supervised by a competent person. In all cases proper fall protection systems shall be utilized as determined by the competent person for fall protection; restraint systems (PFRS, guard rails, and warning lines (restricted for unprotected edge work where traditional systems are not practical).

Whenever possible, fall restraint shall be used over fall arrest. OSC observes a policy of 100% tie-off at all times.

INCIDENT PREVENTION PROCEDURES SAFETY TASK ANALYSIS CARD

The Safety Task Analysis Card (STAC) process is a required component of all OSC projects. The STAC is a pre-printed, bi-fold card that must be completed by each employee at least once per week. The card is used by the employee as a reference tool throughout their work shift. STAC card observations are used to address new work tasks and/or potential hazards.

STAC's are used in addition to safe work permits and/or approved work procedures. The STAC is designed to be an ongoing learning tool. By breaking jobs into small parts, workers can identify hazards and eliminate or control them. It is intended as a tool to help employees make observations and correct fellow employees at risk behaviors.

The STAC must be completed by each employee at least once per week. This is the minimum requirement. Project personnel found participating in or observing risky actions without submitting a properly completed STAC will be re-trained on the need to do so.

Project supervisors and/or the HSO will review submitted STACs with employees during tailgate safety meetings and identify corrective actions.

FIRE PREVENTION AND PROTECTION

Emergency response and contingency procedures provided this HASP will be in effect throughout all phases of work. Included are firefighting equipment, alarm systems, the location of the closest fire departments and procedures for handling fire emergencies. Firefighting equipment will be inspected on a regular basis, maintained in proper working condition and will be in an accessible place, at the site, at all times.

All heavy equipment will be equipped with a fire extinguisher.

Fire extinguishers will be immediately available when working with or near combustible or flammable items.

A fire extinguisher, rated 2A or greater, will be provided for every 3,000 sf of protected building area, or major fraction thereof, on every floor and they will be placed no more than 100 feet from any point within the building. Fire extinguishers will be placed adjacent to stairways in multi-story buildings. This condition is not expected on the project.

SITE HOUSEKEEPING

The following housekeeping guidelines apply at this site:

- All excess material and debris will be kept clear from all working areas.
- Combustible materials will be removed at regular intervals and all wastes will be properly disposed of at frequent intervals.
- Containers will be provided for the collection and separation of all discarded materials and refuse. Covers and identification will be provided for all containers used for flammable or harmful substances.

MECHANICAL EQUIPMENT

The following guidelines apply when dealing with the inspection and operation of all mechanical equipment;

- All vehicles and equipment used on the site, must be checked at the beginning of each shift to assure that all parts that affect safe operation are in proper working condition and are free from defects. An inspection form must be completed and filed with the HSO.
- Personnel will not be permitted to operate equipment when there is an obstructed view to the rear or sides, unless there is a spotter.
- Employees will not work or walk under or between any equipment that has parts which are suspended or held aloft unless/until the parts are substantially blocked to prevent falling and shifting.
- Hydraulic leaks must be addressed immediately by stopping the equipment, preventing further leaking and cleaning any hydraulic fluid spills/leaks. Notify the HSO immediately for proper corrective actions to be determined.

HIGH PRESSURE WASHERS

OSC requires that only trained and authorized personnel operate high pressure washers. This policy is intended to protect both OSC employees as well as any property where the equipment will be used. The following guidelines apply:

- The lance must always be pointed at the specific work area.
- Personnel will remain at least 25 feet away from the washer; and the item being washed.
- Care should be taken to ensure the proper footing of the operator.
- The operator will wear the following personal protective equipment: Hard hat with face shield, goggles, safety boots with metal foot and shin guards, hearing protection, PVC rain or chemical resistant suit and heavy gloves; as well as any additional equipment to protect against chemicals, as needed.
- OSC requires that all operators be trained in the emergency shutdown procedures and general equipment maintenance of high-pressure washers.
- Under no circumstances will an operator be allowed to make modifications to a power washer while on a job.

VEHICLE AND EQUIPMENT SAFETY

Only trained and qualified personnel may operate equipment and vehicles. This policy is intended to protect all employees and client properties. The guidelines for this policy are as follows;

- Each unit is to be inspected prior to its use on site and then inspected periodically depending on the equipment involved and the manufacturer's specifications.
- No repair work, or refueling, will be done while the vehicles or equipment are in operation. The engine is to be turned off and all buckets, blades, gates or booms must be lowered to the ground, or a substantial support.
- Equipment backup alarms must be operational and audible over the surrounding noise levels. If this is not the case, an assistant must be assigned to the operator, and he/she will be required to clear the way.
- Only authorized personnel are permitted to ride in company vehicles and equipment.
- Under no circumstances will an employee be permitted to get on or off a moving vehicle.
- Operators must wear the following PPE: Boots/sturdy work shoes, ear protection devices when the noise level is excessive (see hearing protection section), heavy work gloves. Hardhats and safety eyewear with side shields are required whenever outside of an enclosed cab. Safety glasses and hearing protection are required when the cab windows are open.
- The operator must always wear seatbelts .
- To ensure the proper visibility all windshields, side windows, mirrors and lights will be cleaned as often as necessary.

Trucks

The following guidelines apply to truck operators;

- A current driver's license must be carried always
- Drivers will check loaded material to ensure against loss or shifting during transit
- All DOT regulations will be followed
- When towing trailers, safety chains (grade 70) must be in used
- Non-OSC drivers must receive site-specific instructions upon arrival such as remaining in the truck, where to tarp loads, required PPE if allowed to exit truck, proper entry procedures, etc.

Heavy Equipment

OSC has the following requirements for operating front end loaders, excavators, dozers and tractors;

- Prior to their use onsite, the equipment's brakes, cables and hoses must be checked and in good working order.

- When the equipment is moving, all blades, buckets and bowls will be carried close to the ground but high enough to avoid any obstacles on the ground. If not in motion, they must be lowered to the ground or to a substantial support.
- No employees are permitted to ride on a boom, bucket, bowl or any other heavy equipment extension.
- All safety equipment must be properly installed, and in good working condition, before a piece of equipment will be used on this project.

SANITATION

Except for mobile crews having transportation readily available, all work sites will have toilets provided that adhere to the following requirements: One toilet for 20 or less employees; one toilet seat and one urinal per 40 employees; if there are 200+ employees, one toilet seat and one urinal per 50 workers.

Adequate washing/showering facilities will be provided on site where there are harmful substances, and they will be in close proximity to the site. An acceptable supply of potable water will be provided onsite, and it will be clearly marked as such. Portable water containers will have tightly sealed tops and a tap.

DAILY INSPECTIONS

The HSO will monitor jobsite hazard mitigation through inspections at the start and throughout each workday. Results of these daily inspections will be recorded on a daily safety log.

Any safety violations will be recorded and corrected by the Project Manager. All observed safety violations will be immediately corrected, explained to the person responsible, and reviewed at the next safety meeting. If an employee has excessive violations of the site safety rules, it will be grounds for disciplinary action which could lead to termination of OSC personnel or expulsion if an onsite subcontractor personnel.

INCIDENT REPORTING

OSC will prepare and maintain (on site) incident reports that include corrective actions. These reports will be provided to within 48 hours of the incident and as needed. Each incident report will be reviewed by the OSC Director HS&E. Verbal notification shall be within 2 hours.

Any occupational incident, which results in the death of one or more employees will be reported to OSHA within 8 hours. The inpatient hospitalization an employee and all amputations or loss of an eye will be reported within 24 hours. All such incidents will be reported by OSC to the nearest OSHA Area Director during normal business hours or at the National Hotline (800-321-OSHA (6742)).

In addition to OSC's internal reporting requirements, RIVERVIEW/Honeywell requires all incidents (adverse events) to be investigated and based on the severity, requires notification of the incident within specified timelines. Adverse events are divided into three tiers: Tier 1 events are the most significant and serious events, followed by Tier 2, which are significant events but not as serious as Tier 1 events, and Tier 3 events are essentially all other events that do not meet the criteria for Tier 1 or Tier 2 events. Tier 1 events are to be reported within 2 hours, Tier 2 events are to be reported within 24 hours, and Tier 3 events are to be reported when possible.

Adverse events include the following:

Tier 1:

- A release to air, water or soil that has an actual or potential off-site adverse environmental impact.
- One or more on-site fatalities;
- Three or more employees, contractors or visitors admitted to a hospital;
- Any off-site fatalities, injuries, or harmful exposures resulting from RIVERVIEW/Honeywell products or operations;
- Any security incident that may be immediately dangerous to life or property, including fires, explosions, bomb threats, chemical release, radiation release, release of a biological or chemical agent (aerosolized or gaseous form);
- Suspicious materials, packages or letters that pose immediate risk to employees
- Government representatives alleging or suggesting criminal non-compliance of any kind
- Receipt or notice of any regulatory agency directive or other type of injunctive device designed to curtail or restrict operations; and,
- Community injuries or diagnoses of illnesses allegedly associated with a company-related incident, event or release to air, water or soil.

Tier 2:

- Employee or contractor lost workday injuries/illnesses.
- Employee, contractor or visitor recordable injuries/illnesses (Criteria: "RIVERVIEW/Honeywell Global Recordkeeping Requirements").
- An environmental excursion that does not also trigger Tier 1 reporting.
- A release to air, water or soil that only narrowly avoided an adverse environmental impact or had the potential to be an excursion.
- Discovery of potential or actual evidence of contaminated groundwater from current or former operations that does not otherwise meet the definition of a Tier 1 Event.
- Suspicious activities in or around RIVERVIEW/Honeywell facilities or processes that may present a potential security risk.
- Allegations of previously unknown health/safety/environmental effects caused by products, processes, emissions or discharges (Reference: Risk Management and Reporting (Pstew-3).
- Written notification from a governmental agency alleging non-compliance of any kind.

- Proposal or imposition of an HSER fine, penalty or corrective action.
- Receipt of a non-routine request for information from a governmental agency.
- A non-routine regulatory agency inspection.
- Audits (Peer review, Self-assessments, SBU, Third party findings and recommendations)
- Significant community activism or adverse media coverage not associated with an episodic event.
- A product recall imposed by a regulatory agency.
- Transportation-related event that results in Tier 2 impacts.
- Notice of an allegation from a third party or regulatory agency of environmental impacts from operations on current or formerly operated RIVERVIEW/Honeywell facilities.
- Demands, including voluntary agreements, to conduct a site investigation or remedial measures to respond to environmental impacts from operations on current or formerly operated RIVERVIEW/Honeywell facilities.

Tier 3:

The following Tier 3 events shall be entered into the event tracking system within seven (7) calendar days:

- On-site or off-site employee, contractor employee or visitor injuries/illnesses where first-aid treatment or evaluation is provided by a Medical or Para-Medical Professional.
- A regulatory agency inspection (which is not a Tier 1 or Tier 2 Event and may still be underway) with no notice of fine, penalty or corrective action.

Adverse events must be reported to the PM, the INVENTUM engineering manager, the RM, as soon as possible following the event. All Tier 1 and Tier 2 adverse events must be investigated, and a written investigation report must be prepared and submitted to the RIVERVIEW/Honeywell Event Reporting System.

MEDICAL SURVEILLANCE

MEDICAL EXAMINATIONS

OSC field personnel are provided with a thorough, initial medical examination to assess fitness for the project and to provide baseline health data for subsequent reference. Examinations are conducted by a qualified health care provider and repeated annually (unless abnormal test results, annual “questionnaire” answers or other problems dictate more frequent observation). A copy of the physician’s statement certifying each employee’s ability to work at task specific operations will be maintained in the project file by the HSO.

During the medical examination employees will be evaluated for their ability to wear respiratory protection. This evaluation will include, at a minimum, an examination of the cardiopulmonary system; including forced vital capacity (FVC) and forced expiratory volume C 1 second (FEV 1.0). When indicated by the physician, other tests of the respiratory and cardiovascular systems will be performed on the basis of an individual’s past history, findings of the above below evaluation, and/or the type of equipment the individual may be required to use.

Following is an example of a baseline yearly medical examination:

Medical Monitoring Protocol				
Exam Components	Baseline	Annual	Interim	Exit
Vital Signs	Yes	Yes	Yes	Yes
Vision Screening (Includes Peripheral and Color)	Yes	Yes	Yes	Yes
Urine Drug Screen	Yes	Yes	As needed	As needed
DOT hearing	Yes	Yes	No	Yes
Spirometry	Yes	Yes	Yes	Yes
Chest X-Ray (asbestos/silica work only)	Yes	3	No	3
Review of History	Yes	Yes	Yes	Yes
Physical Exam	Yes	Yes	Yes	Yes
Notes: Only do an X-ray if not done within the last 12 months Only do an X-ray if not done within the last 3 years For medical indications only				

NOTE: Any employee who develops a lost time injury or illness during the period of this contract will be evaluated by the OSC medical consultant. The project supervisor will be provided with a written statement that indicated the employee’s fitness and ability to return to work, signed by the medical consultant prior to allowing the employee to re-enter the work zone.

AIR MONITORING:

Lower Explosive Limit (LEL) monitoring will be conducted around any tank, vessel, or barrel containing coal tar prior to beginning work each day and when coal tar is being handled. Concentrations greater than 10% of the LEL will result in work stopping immediately for further evaluation. When LEL concentrations are zero, the HSO shall determine the need for additional monitoring.

Volatile Organic Compound monitoring (breathing zone) shall be performed when odors are detected. Monitoring will be conducted using a MultiRAE Lite with an 11.7 lamp. Work resulting in readings of 0.6 ppm or greater TWA after 15 minutes of measurement shall stop and the OSC Director, HSE contacted for further evaluation.

Any time a confined space or enclosed building area is entered initially the air shall be characterized using real-time monitors for oxygen content, LEL, and other potential hazards such as carbon monoxide or hydrogen sulfide exposure.

The need for additional air monitoring or exposure measurements will be determined as specific work tasks are developed. Air monitoring and sampling shall be specified in the relevant AHA as approved by the Director HS&E.

CONFINED SPACE ENTRY PROCEDURES

The following guidelines outline the minimum acceptable criteria that will be utilized by OSC and subcontractor personnel for all confined space entry operations.

All project specific confined space entries will be thoroughly reviewed by the designated HSO. Confined Space Permits shall be issued and approved in conjunction with the INVENTUM Project Manager. Personnel entering and working in confined spaces will be required to adhere to the OSHA Permit-Required Confined Space Standard 29 CFR 1926.1200 and the OSHA General Duty Clause. Affected project personnel are instructed in these OSHA regulations as part of the OSC employee training program.

The HSO will be responsible for reviewing the applicable entry protocol with the field team, prior to confined space entry.

DEFINITIONS

CONFINED SPACE: There are two types of confined spaces: permit required and non-permit required. OSHA's "PRCS Evaluation Procedures and Decision Flow Chart" will be used to evaluate the potential for permit require confined space.

PERMIT REQUIRED CONFINED SPACE (PRCS): The space contains, or has the potential to contain;

- A hazardous atmosphere. A hazardous atmosphere is defined as any space where the oxygen is below 19.5% or above 23.5%, combustible vapors are above 10% LEL, or high toxic concentrations are present which may cause death, incapacitation or an impaired ability to self-rescue.
- The space contains a material that may engulf an entrant.
- The space has an internal configuration that may trap or asphyxiate entrants.
- The space contains any other serious health, safety or environmental hazard.

NON-PERMIT REQUIRED CONFINED SPACES: OSHA defined a non-permit required confined space as a PRCS in which all serious hazards have been eliminated. Non-permit required confined spaces will be re-evaluated by the HSO using the “PRCS Evaluation Procedure and Decision Flow Chart” (see attached) whenever they or their characteristics change in a way that could lead to reclassification as a PRCS.

PERSONNEL RESPONSIBILITIES

Entry Supervisors

OSC will designate an entry supervisor to oversee the confined space entry and ensure that personnel engaged in PRCS entry operations will comply with this procedure. Entry supervisors will:

- Verify that all tests specified by the permit, have been conducted and that all procedure and equipment specified by the permit are in place before endorsing the permit and allowing the entry to begin.
- Terminate the entry and cancel the permit when the entry operations covered by the entry permit have been completed, or whenever a condition that is not allowed under the entry permit arises in or near the PRCS.
- Verify that rescue services are available and that the means for summoning them are operable.
- Remove all unauthorized individuals who enter, or attempt to enter, the PRCS during entry operations.
- Determine that the entry operations are consistent with the terms of the entry permit and that acceptable entry conditions are maintained.

Attendants

The entry supervisor will designate a qualified attendant for each PRCS operation. To be qualified, an attendant must know the hazards that authorized entrants may encounter during an entry (including information on the mode, signs and symptoms, and consequences of exposure) and must be aware of the behavioral symptoms of hazard exposure. Attendants will;

- Remain outside the PRCS during entry operations until relieved by another attendant.

- Warn all unauthorized entrants that they must stay clear of the PRCS, or that they must immediately exit if they have entered the PRCS.
- Inform the entry supervisor, if unauthorized personnel have entered the PRCS.
- Continuously maintain an accurate count of entrants in the PRCS and ensure that the means used to identify authorized entrants accurately identifies the entrants.
- Communicate with authorized entrants, as necessary, to monitor entrant status and to alert entrants of the need to evacuate the PRCS.
- Monitor the activities both inside and outside the PRCS.
- Immediately order evacuation of the PRCS if a prohibited condition is detected, the behavioral effects of hazard exposure in an authorized entrant are observed, or a situation outside the PRCS is found that could endanger the authorized entrants; or if the attendant cannot effectively and safely perform his/her duties and responsibilities.
- Perform non-entry rescues, as specified by the Confined Space Entry Permit; summon rescue and other emergency services as soon as it is determined that authorized entrants may need assistance to escape from PRCS hazards.

Attendants will NOT, under any circumstances;

- Monitor more than one occupied PRCS at any given time;
- Perform any duty that might interfere with their primary duty to monitor and protect the authorized entrant; or
- Enter the PRCS for rescue purposes.

Entrants

Authorized PRCS entrants will be identified on each Confined Space Entry Permit. Authorized entrants will;

- Know the hazards, including information on the mode, signs or symptoms, and consequences of exposure.
- Properly use the PPE provided for the PRCS entry.
- Communicate with the attendant, as necessary, so the attendant can monitor entrant status and alert entrants of any need to evacuate the PRCS.
- Evacuate the PRCS and alert the attendant whenever they recognize any warning signs or symptoms of exposure to a dangerous situation; or they detect a prohibited condition; or whenever the attendant or entry supervisor orders the evacuation; or when an evacuation alarm is activated.

TRAINING

All project personnel will be instructed not to enter PRCSs without the proper permit and without following the procedure and practices outline in this SOP and in the Confined Space Entry Permit. Personnel, who are required to enter a PRCS, or act as an attendant or entry supervisor, will be

trained to acquire the understanding, knowledge and skills necessary for the safe performance of their assigned responsibilities and duties.

Entrants will receive training on;

- The means and methods used to communicate with attendants; as well as the means attendants will use to notify them of emergencies.
- The operation of any specialized equipment that is expected to be used, including monitoring and rescue equipment.
- Evacuation signals and procedures; as well as the need for entrants to notify the attendant and evacuate the PRCS if they detect any dangerous conditions.

Attendants will receive training on:

- The procedures for monitoring inside and outside the PRCS and recognizing the conditions that might be hazardous to entrants;
- Procedures for communicating with entrants;
- Procedures for evacuating entrants from the PRCS and when evacuation is required;
- Procedures for controlling access to the PRCS;
- Their responsibility to remain outside the PRCS during entry, unless they are relieved by another attendant, and
- Non-entry rescue procedures.

Entry Supervisors will receive training on;

- Verifying that the Confined Space Entry Permit has been completed properly;
- Procedures for verifying that all tests specified by the Permit have been conducted;
- Requirements for verifying that all the procedures and equipment specified by the Permit are in place before allowing entry to begin;
- Procedures for determining if conditions are acceptable for entry;
- Authorizing entry operations, and
- Terminating entry.

All training will be conducted:

- Before the employee is first assigned confined space duties (initial training);
- Before a change in assigned duties;
- Whenever there is a change in permit space operations that presents a hazard about which employee has not previously been trained, and
- Whenever project management, involved regulatory officials, or the project engineer have reason to believe that there are inadequacies in the knowledge or use of these procedures.

When complete, training will be certified by the instructor. The certification will list the names of the personnel presenting and receiving training and the dates of training. Training certification documentation will be maintained as part of the Project file kept at the site and in the individual's personnel files in the home office.

PRCS ENTRY PROCEDURE

Atmospheric Testing

Before an employee enters any confined space, the entry supervisor will test the internal atmosphere with a calibrated, direct reading instrument to determine if acceptable entry conditions exist for the following conditions, in the given order:

<u>Condition</u>	<u>Acceptable Parameter(s)</u>
A. Oxygen Content	Above 19.5% and Below 23.5%
B. Flammable Gases and Vapors	Less than 10% LEL
C. Potential Toxic Air Contaminants	Below Action Levels for PPE

Continuous systems which cannot be isolated (i.e. sewers) or activities which generate significant airborne contaminants (i.e. welding) will be continuously monitored during entry, unless forced mechanical ventilation is used and has been shown to maintain an acceptable atmosphere.

Entry

The HSO will use the "PRCS Evaluation Procedures and Decision Flow Chart" to verify the presence of a PRCS. If it is determined that a PRCS does exist, the HSO will review the confined space entry procedures with entry personnel; post OSHA required danger signs at the entrances to the PRCS and notify Project personnel of the PRCS location(s); notify offsite emergency response services of the PRCS; and prepare a Confined Space Entry Permit.

Confined Space Permit

The entry supervisor will be responsible for completing the Confined Space Entry Permit. All items on the Permit must be completed. The entry supervisor will verify that all entry personnel are aware of the specific hazards that are associated with the PRCS; that all necessary safety equipment and materials are in place; that all emergency response procedures are in place; and that the pre-entry air monitoring results indicate acceptable entry conditions, before signing the permit.

Pre-entry Briefing

The entry supervisor will conduct a pre-entry briefing with the attendants and authorized entrants to discuss the requirements of the Permit and to ensure that all involved personnel understand their responsibilities and the specific hazards associated with the PRCS. A pre-entry briefing will be conducted, for each attendant and entrant, prior to entry and whenever new hazards are identified.

Entry Authorization

The entry supervisor will sign the Confined Space Entry Permit after the Permit has been completed, all safety equipment is in place, air monitoring results are acceptable, the pre-entry briefing has been conducted, and the rescue procedures have been established. Once the permit has been signed:

- Entrants will wear all the necessary safety and rescue equipment;
- The Permit will be posted at , or near, the PRCS entrance, and
- Entry procedures will begin.

Permit Exit and Cancellation

Each Entry Permit will be valid for one shift only. Expired and canceled Permits will be returned to the Site Superintendent who will file them with the Project documents. Permits will be canceled if;

- A new hazard is identified or encountered;
- An entrant is seriously injured and requires evacuation and/or rescue; or if
- A change in the scope of work required new activities which may create previously unanticipated hazards that could cause serious death or injury.

RESCUE/EMERGENCY RESPONSE

Offsite Rescue and Emergency Services

Offsite rescue and emergency service personnel will be informed by the HSO of the hazards they may confront when called to the jobsite to perform services. These services will be identified and notified prior to any entry. Entry will not be performed if emergency rescue services are not available. The rescue/emergency service personnel will be provided access to all permit spaces from which the rescue may be necessary, so that the emergency responders can develop appropriate rescue plans and conduct rescue operations.

Non-entry Rescue

Non-entry rescues, retrieval systems or methods will be used whenever an authorized entrant enters a PRCS, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant.

Each authorized entrant will use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level or above the entrant's head. Retrieval lines will be attached to a mechanical device or a fixed point outside the Permit space, in such a manner that rescues can begin as soon as the rescuer becomes aware of the necessity. The mechanical device will be ready to retrieve personnel from vertical PRCSs more than five feet deep.

DECONTAMINATION PROCEDURES

Decontamination of equipment and personnel will be performed as necessary and as defined in the project scope. All equipment and personnel will be decontaminated before leaving the property.

Personnel and equipment decontamination procedures to be employed are summarized in the following subsections.

PERSONNEL HYGENE AND DECONTAMINATION

Personnel will be made aware of any personal habit that may allow contaminants into or onto their body. All personnel will check that regularly worn PPE (i.e. hardhats and liners, eye protection, etc.) is clean and in good condition. A storage area for decontaminated PPE will be provided and used outside the contaminated zone. Any products used for personal consumption are prohibited in any work area. Break areas will be limited to specific areas where eating, drinking, smoking, etc. and the storage of these materials will be allowed.

A typical personnel decontamination sequence is presented below.

- Step 1: Scrape the gross contamination from boots and outer gloves. Wash them using soap in a water solution and rinse with water into a designated container in the contamination reduction zone.
- Step 2: Remove the tape from and around boots and outer gloves and deposit in a collection drum (if disposable) or store on a rack (if reusable). Remove the over boots and outer gloves and place them in a collection drum (if disposable) or wash and place on a rack (if reusable).
- Step 3: Remove respirator cartridge and place in a collection drum.
- Step 4: Remove disposable coveralls and place them in a collection drum. Remove boots and store in an appropriate location. Remove disposable inner gloves and dispose of them in a collection drum.
- Step 5: Remove hardhat and safety glasses: Decontaminate as necessary (wash with sanitizing solution [MSA sanitizing solution or equivalent], rinse with potable water and allow to dry at the end of each day).
- Step 6: Remove respirator, if used, and deposit in a plastic liner. Avoid touching face with fingers. Respirators will be washed in a sanitizing solution (MSA sanitizer or equivalent), rinsed with portable water and allowed to air dry at the end of each day.
- Step 7: Thoroughly wash and rinse any exposed skin with water and biodegradable soap using bucket 1. Rinse in bucket 2. Re-rinse in bucket 3. Shower and launder all personal clothing as soon as possible upon completing daily activities.

Personnel hygiene, hand and face washing, and the following decontamination will take place in the project support area.

EQUIPMENT DECONTAMINATION

The HSO will be responsible for inspecting decontaminated vehicles, equipment and material contaminated work areas, to ensure proper decontamination. The users and HSO will verify that each piece of equipment utilized in the exclusion zone has been properly decontaminated.

Decontamination personnel will be required to use Modified Level D PPE as specified in this HASP. The standard operating procedure for the use of high-pressure washers, also provided, will be strictly followed to prevent injury.

HEAVY EQUIPMENT DECONTAMINATION

As a general practice, equipment, such as excavators, bulldozers, etc. will remain within the work zone for the duration of the excavation activities. This ensures the minimization of the potential migration of contaminants outside the project limits. In addition, the sequence of excavation has been designed to avoid the movement of machinery and personnel over areas within the work zones that have been excavated.

Generally heavy equipment, and large materials used in potentially contaminated areas equipment, will be decontaminated as outlined below;

- Conduct gross removal of solids at point use.
- Degrease as necessary.
- Move to the equipment decontamination pad for decontamination via pressure washing.
- Collect and handle resultant liquids/solids.

TOOLS AND SMALL EQUIPMENT DECONTAMINATION

Tools and smaller equipment that may have come in contact with potentially contaminated materials will be decontaminated using the procedures outlined below;

- Flush and wipe components to remove debris and other gross contamination.
- Clean with potable water and non-phosphate detergent (i.e. Alconox) using a brush or high-pressure washer, as necessary, to remove particulate matter and surface films.
- Rinse thoroughly with potable water.
- Allow to air dry for as long as possible.

NON-DISPOSABLE SAMPLING EQUIPMENT

Non-disposable sampling equipment that may have come into contact with potentially contaminated materials will be decontaminated prior to collecting each sample as follows;

- Clean with potable water and non-phosphate detergent using a brush, if necessary, to remove all visible foreign matter.
- Rinse thoroughly with potable water.
- Rinse thoroughly with de-ionized water.
- Visually inspect the openings and treads for solid materials.
- Allow to air dry as long as possible on a clean polyethylene sheet or aluminum foil.

DISPOSAL OF DECONTAMINATION WASTES

All equipment and solvents used for decontamination will be decontaminated or disposed of properly. All aqueous liquids generated in the personnel and equipment decontamination process will be collected, characterized and appropriately disposed of. All disposable PPR will be containerized in drums and properly disposed of.

EMERGENCY EQUIPMENT and FIRST AID REQUIREMENTS

Emergency and first aid equipment to be maintained onsite will include the following;

- Approved, portable, emergency eye wash units in accordance with ANSI Standard Z358.1
- At least one industrial first aid kit will be provided and maintained at an easily accessible, uncontaminated location chosen by the HSO. Additional first aid kits may be provided
- First aid and CPR kit locations will be specifically marked by the HSO and stocked with adequate water and other supplies to cleanse and decontaminate burns, wounds or lesions.
- 10#A: B: C type dry chemical fire extinguishers will be provided at all project site locations where flammable materials present a fire risk. Mobile equipment will be equipped with 2-pound extinguishers.

Agencies and medical facilities that need to be contacted in the event of an onsite emergency, as well as directions to the nearest hospital, are identified at the beginning of this HASP. The tables stating the emergency contact information and hospital location will be posted in a prominent location(s) onsite.

If a site worker becomes injured or ill, Red Cross/American Heart Association recommended first aid procedures shall be followed. First aid, or other appropriate initial reactions, will be provided by the certified first aid technician that is closest to the incident.

NOTE: When protective clothing has been grossly contaminated during an incident, contaminants may be transferred to the treatment personnel or the wearer and cause injuries. Unless severe medical problems have occurred simultaneously with splashes, protective clothing should be washed off as quickly as possible and removed. If the worker can be moved, he/she will be taken to the personnel decontamination station where decontamination procedures, additional first aid or preparation for transport to the hospital will be accomplished. In the event that the victim could not be decontaminated, the rescue service provider must be notified of the situation.

If the injury to the worker is of a chemical nature, the procedures listed below are to be followed;

Eye Exposure: If contaminated solids or liquids get into the eyes, wash eyes immediately using large amounts of water while lifting the lower and upper eyelids occasionally. Wash for at least 15 minutes. Obtain medical attention.

Skin Exposure: If contaminated solids or liquids get on the skin, promptly wash the contaminated skin using soap and water. Immediately obtain medical attention.

Respiratory Exposure: Immediately move the victim to fresh air. Obtain immediate medical attention.

Ingestion Exposure: Identify what contaminant was swallowed. Follow the appropriate procedure described in the SDS and obtain medical attention as soon as possible.

NOTE: Any person who is transported to the hospital for treatment related to an exposure injury will take with them the appropriate information (i.e. SDSs) on the chemical to which he/she has been exposed. SDSs for known or suspected chemicals to exist onsite will be stored in OSC's project field office and maintained by the HSO.

MEDICAL EMERGENCY RESPONSE

REPORTING AN EMERGENCY

The HSO will immediately notify the Site Superintendent stating the points that are listed under a minor injury. However, with a major emergency the HSO must state that this is a major emergency. Concurrently the HSO must direct that 911 be called if not already done so. The Site Superintendent will react as follows:

- Call OSC's Corporate Director HS&E
- Call the fire department (if necessary)
- Call police
- Call the Project Manager

PRE-PLANNING

Arrangements for emergency services will be made prior to initiating onsite operations. Emergency response procedures will be covered as part of the project training.

EMERGENCY CHAIN OF COMMAND

In the event of an emergency, personnel will immediately notify the HSO, using available communications. The HSO will assess the situation and take appropriate action which can include ceasing all work; ordering evacuation of the work zone; requesting emergency medical treatment; and/or administering first aid.

WEATHER

In the event of severe weather (lightning, high winds, etc.), the HSO will notify project personnel. As the storm approaches, all work will stop, loose objects will be secured, and site personnel will take shelter at a location pre-arranged by the HSO. After the severe weather has passed, and prior to work startup, the HSO will inspect the site for hazards.

Lightning – Any visual sighting of lightning will result in stopping outside work activities. Work will not commence until 30 minutes after the last observed strike.

High Winds – Winds higher than 30 mph will cause all exterior hoisting and lifting to cease. Crane operators have the authority to stop lifts at lower wind speeds based on their discretion.

Project Tornado Shelter (not anticipated for this project) - To be determined with initial hazard exposure assessments and site mobilization. All reasonable efforts should be made to access this

location in the event of a tornado. Recognizing imminent tornado signs includes seeing an unusually dark sky, possibly with some green or yellow clouds. You may hear a roaring or rumbling sound like a train, or a whistling sound like a jet. Large hail may also be falling. You may be able to see funnels, or they may be hidden by rain or hail.

Listen to the radio for tornado warnings during bad thunderstorms. If a tornado warning is issued, don't panic. Instead, listen and look. Quickly but calmly follow directions for getting to shelter. Take cover. Indoors you should go down into the basement and crouch down under the stairs, away from windows. Do not take an elevator. If you can't get to a basement, go into a closet or bathroom and pull a mattress over you or sit underneath a sturdy piece of furniture on the ground floor near the center of the building. Pull your knees up under you and protect your head with your hands. A bad place to be in a tornado is in a building with a regular freestanding roof such as a gymnasium, arena, auditorium, church or shopping mall. If you are caught in such a building, take cover under something sturdy. More than half of tornado deaths occur in mobile homes. If a tornado threatens, get out and go to a building with a good foundation, or lay down in a ditch away from vehicles and other objects.

If you are driving, get to a shelter, lie down in a ditch or seek cover up under the girders of an overpass or bridge. Stay as close to the ground as you can. Protect your head and duck flying debris. Stay away from metal and electrical equipment because lightning accompanies tornadoes.

If you have time before the tornado strikes, secure objects such as garbage cans and lawn furniture which can injure people. While most tornado damage is a result of the violent winds, most injuries and deaths actually result from flying debris.

SPILL CONTAINMENT PROCEDURES

The purpose of this section is two-fold; to prevent and control accidental discharge of polluting materials to surface soils and waterways (or groundwater); and to minimize and abate the hazards to human health and the environment from hazardous waste releases to air, soil or surface water. These procedures will be reviewed with project personnel prior to startup and thereafter as necessary during regular weekly HS&E meetings and daily briefings.

EMERGENCY NUMBERS

The names and phone numbers of emergency services and offices to be contacted in the event of a spill, or any other onsite emergency, is provided in the Contact Information portion located at the beginning of this HASP. These phone numbers will be posted by the HSO in prominent positions throughout the Project site.

DEFINITIONS

For the purposes of this plan, spoils are defined as any material that is accidentally or intentionally leaked, pumped, poured, dumped or emitted onto the ground, surface water, groundwater or air.

All spilled material will be considered hazardous; cleaned up following the established spill response procedures; and reported as required.

Spills will be categorized as: Priority 1 or Priority 2.

Priority 1 Spills: Result in a significant release of contamination into the air, or onto the ground, outside the exclusion zone.

Priority 2 Spills: Result in minor spill, less than five (5) gallons and not reportable, which can be easily cleaned up.

POTENTIAL SOURCES and PREVENTATIVE MEASURES

The contracted work has potential spill sources. These include, but are not limited to:

Potential Spill Source	Preventative Measure(S)
Transporting waste material to selected on and offsite disposal facilities	OSC will verify that all transportation vehicles used in support of this contract are equipped with the appropriate spill response equipment, and that the drivers have received the proper spill response training and maintain all their required federal and state licenses and certifications. Loads will be secured, tied down and covered, and transport vehicles will be checked prior to release from the site.
Re-fueling onsite equipment	OSC will prohibit the long term storing of diesel fuel. OSC will limit the amount of fuel kept onsite to only that required for weekly equipment usage.
General spill prevention requirements	Easily accessible spill response stations will be set up containing absorbent pillows, floor dry, shovels and brushes to be used in the event of a spill. The location will be known to all project personnel.

SPILL RESPONSE PROCEDURES

Initial Containment and Response

In the event of a spill, the following initial containment and response procedure must be implemented immediately.

- **Administer first aid to injured person(s).** Any employee that observes a spill will act immediately to remove and /or protect the injured person from a life-threatening situation. First aid and/or decontamination procedure will be implemented as appropriate.
- **Warn other persons and/or vehicles of the hazard.** Personnel will act to prevent any unsuspecting persons from coming in contact with the spilled materials by alerting nearby people and by obtaining assistance of other personnel who are familiar with spill control and clean up training.
- **Stop the spill at the source, if possible.** Without taking unnecessary risks, personnel will attempt to stop the spill at the source. This may involve activities such as up-righting a drum, closing a valve or temporarily sealing a hole with a plug. OSC personnel will not expend more than a brief effort, prior to notifying the HSO.

- **Notify the HSO.** Using available onsite communication systems, or other rapid communication procedures, the HSO will be notified of the spill, including information on the material spilled, quantity, personnel injuries and immediate life-threatening hazards. The HSO will notify emergency contacts immediately (See Emergency Contact List).

NOTE: If a flammable liquid is involved in the spill, remove all ignition sources and monitor for explosive conditions with an LEL meter during cleanup. Also, remove any surrounding materials that might chemically react with the spill materials.

Spill Containment

The HSO will make a rapid assessment of any spill at the site; apply the appropriate HS&E considerations to the use of PPE in the spill release zone; and direct primary containment measures. Depending on the nature of the spill, primary containment measures may include, but are not limited to;

- Constructing a temporary containment berm to control the horizontal flow of the spill using absorbent pads, booms, sandbags, sand and/or other inert materials
- Placing drums under the leak to collect the spilling material before it flows onto the ground
- Digging a sump, installing a polyethylene liner and diverting the spilled material to the sump
- Transferring the material from its original container to another container

Spills that occur between the project site and the offsite disposal facility will be initially contained by the driver using on-board spill response equipment.

Spill Cleanup

The HSO and Project Manager will develop an incident-specific spill clean-up plan for Priority 1 spills that will take into consideration the associated hazards, quantity of spilled material, disposal methods and costs. The incident specific spill clean-up plan will be reviewed for acceptance by the owner representative and/or other Federal, State or Local oversight personnel. Once approved, the spill clean-up plan will be implemented under the direct supervision of the OSC site superintendent.

Generally, all visually detectable spills, leaks or releases of fuel oil will be collected and cleaned up using absorbent pads, booms, sandbags, sand and/or other inert materials as practicable using the response procedures outline below.

Spill Type	Response
Waste oil on the ground	Contain the spill and excavate the visually contaminated soils. Containerize, sample for classification purposes and dispose offsite.
Building/paved surfaces	Contain the spill. Power wash the contaminated are(s). Collect and containerize the resultant wastewater for onsite treatment.
Vehicle	Power wash the vehicle. Collect, contain and treat the resultant decontamination fluids.
Heavy Equipment hydraulic fluid leak	Stop equipment immediately. Clean up spill and/or leaking fluid. Contact HSO for repair approach.
Waste from truck spilled on roadway	Contain the spilled material. Collect, containerize and remove the spilled material. Sample for waste classification purposes. Dispose of material offsite.

Post-spill Inspection

The HSO, site superintendent and owner representative will jointly inspect the spill site to determine that the spill has been cleaned up to the satisfaction of all involved parties.

Reporting

In the event of a spill incident, the HSO will immediately contact the site superintendent and owner representative; initiate the emergency procedure steps that are provided in this HASP and complete a Spill Report for submittal to the owner representative.

OSC will be responsible for reporting any Priority 1 spills immediately following the incident. A written report will be submitted within seven days after the telephone call reporting the incident. The written report will include the item spilled, quantity, identification and manifest numbers, whether the amount spilled is EPA/State/District reportable, exact location of occurrence, containment procedures used, anticipated clean-up and disposal procedures and disposal of spill residue.

HEAT/COLD STRESS

HEAT

The HSO will visually monitor personnel for signs of heat overexposure. The HSO will be responsible for implementing the following program when the ambient air temperature exceeds 85 °F (heat stress monitoring).

Symptoms

Weakness, dizziness, fainting, nausea, headaches, cool and clammy skin, profuse sweating, slurred speech, weak pulse and dilated pupils.

Procedure

Personnel who wear PPE allow their body heat to be accumulated with and elevation of the body temperature. Heat, heat exhaustion and heat stroke can be experienced which, if not remedied, can threaten health and life. A current edition of the American Red Cross Standard First Aid book or equivalent will be maintained onsite at all times so that the HSO and all personnel will be able to recognize the symptoms of heat emergency and be capable of controlling them.

When PPE is worn (especially level C) the suggested guidelines for ambient temperature and maximum wear time per excursion are as follows:

<u>Ambient Temperature (° F)</u>	<u>Maximum Wear Time Per Excursion (Minutes)</u>
Above 90	15
85 – 90	30
80 – 85	60
70 – 80	90
60 – 70	120
50 – 60	180

One method for measuring the effectiveness of employees' rest-recovery regime is by monitoring their heart as follows:

- During a 3-minute period, count the pulse rate for the last 30 seconds of the first minute, the last 30 seconds of the second minute and the last 30 seconds of the third minute.
- Double that count.
- If the recovery rate during the last 30 seconds of the first minute is at 110 beats per minute or less and the deceleration between the first, second and third minute is at least 10 beats/minute, the work recovery regime is acceptable. If the employee's rate is above the specified, longer rest period is required, and accompanied by and increased intake of fluids.

COLD

Whole body protection will be provided to personnel who will have prolonged exposure to cold air. The HSO will use the equivalent chill temperature when determining the combined cooling effect of wind and low temperatures on exposed skin or when determining the proper clothing insulation requirements. The following clothing will be used as deemed necessary by the HSO.

Appropriate underclothing (wool or other cloth)

Outer coats that repel wind and moisture

Face, head and ear coverings

Extra pairs of socks

Insulated safety boots

Wool glove liners or wind and water repellant gloves

Personnel who are working in continuous cold weather are required to warm themselves on a regular basis in the onsite trailer. Drinks will be provided to personnel to prevent dehydration. The HSO will follow the work practices and recommendations for cold stress threshold limit values as stated by the current edition of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices by the American Conference of Governmental Industrial Hygienists, or equivalent cold *stress prevention* methods.

LOGS, REPORTS and RECORDKEEPING

The following reports will be prepared and submitted as indicated below. Copies of the field logs, permits and forms required for this project are provided in Attachment 1.

<u>Type</u>	<u>Frequency</u>
AHA Pre-plan for High Risk Work	Prior to start of work
Employee Daily Safety Brief Site Log	Daily, minimum
Air Monitoring Reports	As necessary
Incident Report	As required, within 48 hours

The above logs and reports will be prepared by the HSO, or the designated representative, at the frequency noted above. Additionally, daily logs of all personnel working or visiting the site will be maintained. Completed logs and reports will be maintained stored on site in the project field office. Copies shall be provided to the Project Manager.

Hot Work Permit Procedures (Welding, Cutting, Open Flame Work & Sparking)

OSC will follow specific procedures to ensure all hot work activities, welding, burning, cutting, sparking and other ignition source work is completed safely without incident (no fires, injuries or property damage). All hot work shall require an approved hot work permit issued by the OSC HSO prior to commencing work. The hot work permit shall define the minimum acceptable procedures and precautions that shall be taken for all phases of the hot work; prior to start of work, as well as during and after hot work is completed. A permit shall be issued daily for each specific location, type of hot work, protective measures, date, time duration and completion time. Hot work permits will be available for review. Completed and signed permits shall be returned to the HSO at the end of the workday. Copies of completed permits shall be maintained in the OSC field office for review.

NOTE: Many of the piping, vessels and towers at the site contain flammable materials. The hot work permit procedure **MUST** be followed.

Authorization of Equipment Operators

All heavy equipment operators working on site will be approved competent either through OSC's in-house program or through local labor union process. Training requirements for approval are as follows;

Heavy Equipment Operators

- Formal classroom with written qualification, or
- On-the-job mentoring for 40-hour minimum under a competent person, and
- Determination of proficiency by an OSC certified supervisor

The formal classroom and mentoring may be adjusted based on an operator's previous experience. In addition, operators may need to obtain state-specific crane licenses/permits.

Crane Operators

- Formal classroom with written qualification
- Determination of proficiency by a certified operator
- On-the-job mentoring for 80-hour minimum under a competent person

The formal classroom and mentoring may be adjusted based on an operator's previous experience. In addition to the certification, operators may need to obtain state-specific licenses/permits.

Appendix D.3 – Activity Hazards Assessment Storage Tank PIG Loading/Unloading





ACTIVITY HAZARD ANALYSIS (AHA)

Storage Tanker PIG Loading / Unloading

Activity: Storage Tanker PIG Loading / Unloading	Date: 02/07/2025	
Description of the Activity: Loading & unloading of the storage PIG	OSC Site Supervisor: Matt Reardon OSC HSE Director: Paul Mulvey	
Project: 19017 – RITC former Tonawanda Coke	Review for Latest Use: Prior to beginning field work	
PREREQUISITES		
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
- Hopper Storage Unit - Low Profile Portable Storage Silo	- Completion of equipment inspection form and subsequent daily pre-use inspections thereafter. Defective equipment shall be red tagged from service and replaced. Inspect all equipment prior to use (PPE, Extinguisher) - Storage Silo to be locked out & tagged out at the end of each day.	- Trained project employees as per the HS&E program. - Review of SOP prior to use
WORK ACTIVITY	POTENTIAL HAZARD	PROTECTIVE AND CONTROL MEASURES
Working in the storage silo/PIG area	- Slips, trips & falls - Uneven terrain - Release / exposure to Portland Cement / Silica - Repetitive motion	- Clear and designated paths in the area for walking - Crushed stone placed to level walking surfaces - Filter bag use at the vent pipe, or with the PIG plumbed to the silo, the dust house can be utilized in place of the filter bag - Additionally, verify all hatches and valves are closed - Utilize proper technique to open and close hopper valves



ACTIVITY HAZARD ANALYSIS (AHA)

Storage Tanker PIG Loading / Unloading

Receiving material into the PIG	• Pressure build up • Overfilling of the PIG • Line whip	• Confirm gauges read 0 and slowly crack vent pipe prior to filling • Check the cement tracker to confirm current capacity prior to loading. Silo should only be filled from PIG when completely empty. • Confirm all whip checks are in place and secure prior to loading.
Transferring material from PIG to Silo	• Pressure build up inside PIG	• Slowly close the vent pipe only when connected to the silo with the bag house on and allow pressure to reach 12-14.5 PSI and do not exceed 15 PSI.



ACTIVITY HAZARD ANALYSIS (AHA)

Storage Tanker PIG Loading / Unloading

AHA Review and Training Acknowledgement:

Employees print name, sign and date in spaces provided below.

PRINT NAME	SIGNATURE	DATE

Appendix D.4 – Activity Hazards Assessment Solidification





ACTIVITY HAZARD ANALYSIS (AHA)

Solidification

Activity: Soils Solidification	Date: 02/07/2025	
Description of the Activity: Solidification of soils through the use of Portland Cement mixing	OSC Site Supervisor: Matt Reardon OSC HSE Director: Paul Mulvey	
Project: 19017 – RITC former Tonawanda Coke	Review for Latest Use: Prior to beginning field work	
PREREQUISITES		
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Hydraulic Excavator(s) Lull / Telehandler PPE	Completion of equipment inspection form and subsequent daily pre-use inspections thereafter. Defective equipment shall be red tagged from service and replaced. Inspect all equipment prior to use (PPE, Extinguisher)	Trained project employees as per the HS&E program. Site specific training for task Silica Safety Training
WORK ACTIVITY	POTENTIAL HAZARD	PROTECTIVE AND CONTROL MEASURES
Working around open excavations	• Open hole, falls • Slip/Trip	• Demarcate open hole locations • Precautions shall be taken to minimize slippery conditions when working in wet weather. • Basic housekeeping requirements shall apply to all construction sites. Egress routes shall be kept clear and clutter shall be minimized.
Loading / Unloading Portland Cement into hopper	• Dust / Chemical Exposure	• Proper PPE is to be worn at all times while loading and unloading the Portland Cement. Tyvek suit, gloves, and a full face respirator are to be worn by ground personnel while loading or unloading Portland Cement. • Work upwind from the hopper when feasible.
Solidification / Mixing of Portland Cement and soils	• Dust / Chemical Exposure	• Hopper operator shall maintain the hopper at as low a point as is feasible for given conditions and location in order to minimize exposure to any dust clouds during placement. • Equipment and personnel to be upwind whenever feasible during placement.



ACTIVITY HAZARD ANALYSIS (AHA)

Solidification

	• Struck by Equipment	• Minimize workers in areas of loading / unloading. • Ensure backup alarms are functioning properly or utilize a spotter as needed to direct equipment. • Protect existing equipment / buildings by using “drive forward” techniques whenever possible, when not possible use spotters or camera assistive devices to back into work areas. • Utilize protective jersey barriers • Position other equipment / materials away from the work area
Cleaning Equipment (Pressure Washing)	• Irritation (Eyes / Skin) from chemical exposure • Noise exposure • Slips, Trips, and Falls • Struck by – high pressure water	• Wear appropriate PPE including safety goggles, face shields, gloves, and long sleeve clothing. • Wear hearing protection (earmuffs or ear plugs) when sound exceeds 85 dBa. • Wear appropriate non-slip footwear and ensure the work area is clear of obstructions. • At no time shall the pressure washer be directed at any personnel; spray is to be maintained on the equipment only.



ACTIVITY HAZARD ANALYSIS (AHA)
Solidification

AHA Review and Training Acknowledgement:

Employees print name, sign and date in spaces provided below.

PRINT NAME	SIGNATURE	DATE

Appendix E – Community Air Monitoring Plan





INVENTUM ENGINEERING, PC

Community Air Monitoring Plan For Remedial Actions

Riverview Innovation & Technology Campus
Brownfield Cleanup Program Site No. C915353

3875 River Road
Tonawanda, NY 14150

October 16, 2024

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1 Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area 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 contaminant releases as a direct result of investigative and remedial work activities. 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 did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required.

- *The Riverview Site will have a perimeter air monitoring program during the Remedial Action work. If there are detections at the property line, additional monitoring requirements will be considered¹.*
- *Three (3) perimeter air monitoring units (1 Upwind and 2 Downwind) were installed on the BCP Site in 2020 and will continue operation for the work outlined in Remedial Action Work Plans. Monitoring locations are shown on the Figure provided in Appendix 2.*
- *A fourth monitoring station will be in operation at the limits of the work area during intrusive earthwork and soil mixing for work outlined in the Remedial Action work plans.*

Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

- *There are no sensitive receptors on the property. The closest residence is more than 0.25 miles away from the property boundary.*

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

2 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 exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern,

¹ The text in *italic font* are comments inserted by Riverview in addition to the standard CAMP Template.



additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

- *VOC and particulate monitoring will be incorporated into the Remedial Action activities.*

Continuous monitoring will be required for all ground intrusive activities during Remedial Action work of contaminated or potentially contaminated material consisting of test pitting, soil mixing, and material excavation.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of surface soil samples. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while accessing surface soils and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

- *During sampling periodic monitoring will be implemented with hand-held instruments.*

Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

- If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 ppm, monitoring should occur within the occupied structure(s). Depending upon the nature of contamination, chemical-specific colorimetric tubes of sufficient sensitivity may be necessary for comparing the exposure point concentrations with appropriate pre-determined response levels (response actions should also be pre-determined). Background readings in the occupied spaces must be taken prior to commencement of the planned work. Any unusual background readings should be discussed with NYSDOH prior to commencement of the work.
- If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m³, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m³ or less at the monitoring point.
- Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, carbon monoxide) may also need to be monitored. Response levels and actions should be pre-determined, as necessary, for each site.

Special Requirements for Indoor Work With Co-Located Residences or Facilities



Unless a self-contained, negative-pressure enclosure with proper emission controls will encompass the work area, all individuals not directly involved with the planned work must be absent from the room in which the work will occur. Monitoring requirements shall be as stated above under “Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures” except that in this instance “nearby/occupied structures” would be adjacent occupied rooms. Additionally, the location of all exhaust vents in the room and their discharge points, as well as potential vapor pathways (openings, conduits, etc.) relative to adjoining rooms, should be understood and the monitoring locations established accordingly. In these situations, it is strongly recommended that exhaust fans or other engineering controls be used to create negative air pressure within the work area during remedial activities. Additionally, it is strongly recommended that the planned work be implemented during hours (e.g. weekends or evenings) when building occupancy is at a minimum.

3 VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

5. The NYSDEC and NYSDOH project managers will be notified there is an exceedance of the VOC action levels.



4 Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should 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 must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 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/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

4. The NYSDEC and NYSDOH project managers will be notified where there is an exceedance of the CAMP particulate monitoring action levels.



Appendix 1

Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall 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/m^3 (1 to $400,000 \text{ :ug/m}^3$);

(c) Precision (2-sigma) at constant temperature: $\pm 10 \text{ :g/m}^3$ for one second averaging; and $\pm 1.5 \text{ g/m}^3$ for sixty second averaging;

(d) Accuracy: $\pm 5\%$ of reading $\pm$ precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, $\eta = 2.5$, as aerosolized);

(e) Resolution: 0.1% of reading or 1g/m^3 , whichever is larger;

(f) Particle Size Range of Maximum Response: $0.1\text{-}10\text{;}$

(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 50° C (14 to 122° F);

(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 must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: 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/m^3 (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/m^3 , the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m^3 above the background level, additional dust suppression techniques must 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 may 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/m^3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. 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. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential-- such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during earth work activities:

- (a) Applying water on haul roads;
- (b) Wetting equipment and excavation faces;
- (c) Spraying water on buckets during excavation and dumping;
- (d) Hauling materials in properly tarped or watertight containers;
- (e) Restricting vehicle speeds to 10 mph;
- (f) Covering excavated areas and material after excavation activity ceases; and
- (g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150 ug/m^3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.



8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.



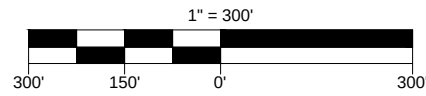
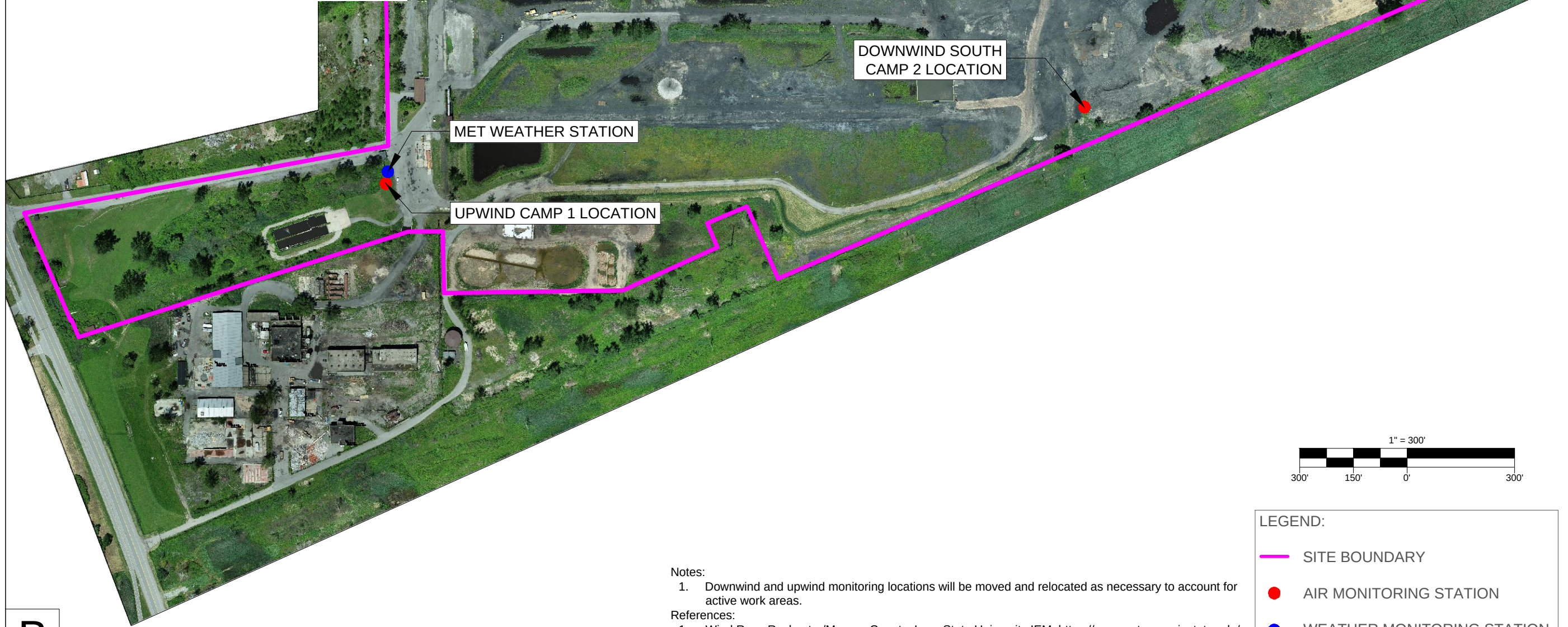
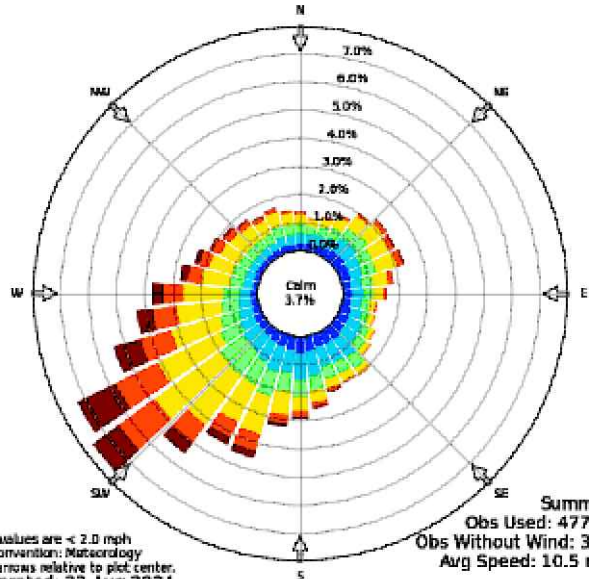
Appendix 2

Perimeter Air Monitoring Locations





Windrose Plot for (BUF) BUFFALO INTL ARPT
Obs Between: 01 Jan 1970 02:00 AM - 22 Aug 2024 02:54 AM America/New_York



LEGEND:	
—	SITE BOUNDARY
●	AIR MONITORING STATION
●	WEATHER MONITORING STATION

- Notes:
- Downwind and upwind monitoring locations will be moved and relocated as necessary to account for active work areas.
- References:
- Wind Rose Rochester/Monroe County, Iowa State University IEM, <https://mesonet.agron.iastate.edu/>

B

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CHECKED	
APPROVED	
PROPERTY OF INVENTUM ENGINEERING	
IMPORTANT: THE DRAWING IS LOANED FOR MUTUAL USE ONLY. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN CONSENT OF INVENTUM ENGINEERING.	
NOTES: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IT IS A VIOLATION OF STATE LAW FOR ANY PERSONS UNLESS ACTING UNDER THE CLOSE PERSONAL SUPERVISION OF THE LICENSED ENGINEER TO ALTER THIS DOCUMENT IN ANY WAY.	
COMMUNITY AIR MONITORING PLAN (CAMP) RIVERVIEW INNOVATION AND TECHNOLOGY CAMPUS 3875 RIVER ROAD TONAWANDA, NEW YORK	
INVENTUM ENGINEERING 441 CARLISLE DRIVE SUITE C HERNDON, VIRGINIA 20170	
DRAWING NUMBER CAMP	

Appendix F – Laboratory Result Tables





Table 1-1
Secondary Containment IRM Work Plan - Closure Sampling: Detections Only
Former Light Oil Area Tanks ST03, ST04, and ST05 "Bullet Tanks"
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

DRAFT

ANALYTE	SAMPLE ID:			F-LOA-01-01302024	F-LOA-02-01302024	F-LOA-03-01302024	F-LOA-04-01302024	F-LOA-05-01302024	F-LOA-06-01302024						
	LAB REPORT:			480-216732	480-216732	480-216732	480-216732	480-216732	480-216732						
	COLLECTION DATE:			1/30/2024	1/30/2024	1/30/2024	1/30/2024	1/30/2024	1/30/2024						
	SAMPLE DEPTH:			4' BGS	4.5' BGS	4' BGS	4' BGS	4' BGS	4' BGS						
	LOCATION:			BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB						
	EPA-TCLP	Part 375 Commercial SCO	Part 375 Industrial SCO	Northwest Corner, Below former ST03	Below Eastern Sump	Center	Northeast Corner, Below fomer ST04 Diesel Tank	West Side, Adjacent to Former Light Oil Building	Southeast Corner, Below former ST05 Gas Tank						
	(mg/l)	(mg/kg)	(mg/kg)												
VOLATILE ORGANICS BY GC/MS															
1,2,4-Trimethylbenzene		190	380	0.00087	<0.00086	U	<0.170	U	0.16	0.0036	J	0.31			
1,3,5-Trimethylbenzene		190	380	0.057	J	<0.00029	U	<0.190	U	0.11	0.0035	J	0.19		
2-Butanone (MEK)		500	1000	<0.200	U	0.01	J	<0.910	U	<0.140	U	0.003	J	<0.170	U
Acetone		500	1000	<0.280	U	0.052		<1.3	U	<0.200	U	0.04		<0.230	U
Benzene		44	89	2.4		0.0015	J	28		0.73		0.0035	J	1.6	
Chloromethane				<0.16	U	<0.00027	U	<0.073	U	<0.011	U	<0.027	U	0.014	J
Ethylbenzene		390	780	0.79		<0.00031	U	0.22	J	0.054		0.0016	J	0.087	J
Isopropylbenzene				<0.010	U	<0.00067	U	<0.046	U	<0.0072	U	<0.066	U	0.009	
p/m-Xylene				1.2		<0.00075	U	0.62		0.5		0.019		0.83	
Methyl Acetate				<0.032	U	<0.0027	U	<0.150	U	<0.023	U	<0.0027	U	0.081	J
o-Xylene				0.47		0.00086	J	0.23	J	0.1		0.0076		0.19	
Styrene				41	J	<0.00022	U	<0.074	U	0.072		<0.022		0.099	
Toluene		500	1000	0.28		0.00037	J	0.21	J	0.47		0.0031	J	0.73	
Xylenes, Total		500	1000	1.67		0.00086		0.85		0.6		0.0266		1.02	
Total VOCs				46.14		0.06473		29.28		1.926		0.0778		3.64	
SEMIVOLATILE ORGANICS BY GC/MS															
2,4-Dimethylphenol				<0.058	U	<0.054	U	0.086	J	<0.050	U	<0.052	U	<0.053	U
2-Methylnaphthalene				0.33	U	0.056	J	<0.048	U	0.24		0.16	J	0.082	J
2-Methylphenol		500	1000	0.032	J	<0.026	U	0.059	J	0.035	J	<0.025	U	0.043	J
3-Methylphenol/4-Methylphenol		500	1000	0.055	J	0.028	J	<0.028	U	0.066	J	0.031	J	0.1	J
Acenaphthene		500	1000	0.087	J	<0.033	U	<0.035	U	0.059	J	<0.032	U	<0.032	U
Acenaphthylene		500	1000	0.2	J	0.042	J	<0.031	U	0.14	J	0.078	J	0.066	J
Anthracene		500	1000	0.24		<0.055	U	<0.060	U	0.14	J	0.092	J	0.067	J
Benzo(a)anthracene		5.6	11	0.46		0.087	J	<0.024	U	0.27		0.12	J	0.16	J
Benzo(a)pyrene		1	1.1	0.38		0.076	J	<0.035	U	0.29		0.11	J	0.15	J
Benzo(b)fluoranthene		5.6	11	0.48		0.1	J	<0.031	U	0.36		0.13	J	0.19	J
Benzo(ghi)perylene		500	1000	0.29		0.077	J	<0.026	U	0.27		0.095	J	0.14	J
Benzo(k)fluoranthene		56	110	0.22	J	0.047	J	<0.031	U	0.16	J	0.067	J	0.0887	J
Biphenyl				0.06	J	<0.033	U	<0.035	U	0.041	J	<0.032	U	<0.032	U
Carbazole				0.07		<0.026	U	<0.028	U	0.056		0.032	J	<0.026	U
Chrysene		56	110	0.4		<0.050	U	<0.054	U	0.26		0.15	J	0.16	J
Dibenzofuran		350	1000	0.19	J	0.032	J	<0.028	U	0.11		0.067	J	0.04	J
Fluoranthene		500	1000	0.84		0.15	J	<0.033	U	0.47		0.23		0.26	
Fluorene		500	1000	0.26		0.045	J	<0.028	U	0.15	J	0.98	J	0.058	J
Indeno(1,2,3-cd)pyrene		5.6	11	0.25		0.064	J	<0.030	U	0.2	J	0.077	J	0.11	J
Naphthalene		500	1000	14		0.41		0.076	J	8.2		2.5		0.72	
Phenanthrene		500	1000	0.93		0.15	J	<0.035	U	0.49		0.32		0.21	J
Pyrene		500	1000	0.91		0.17	J	<0.028	U	0.55		0.24		0.3	
Total SVOCs				20.68		1.534		0.2210		12.56		5.479		2.945	



Table 1-1
Secondary Containment IRM Work Plan - Closure Sampling: Detections Only
Former Light Oil Area Tanks ST03, ST04, and ST05 "Bullet Tanks"
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

DRAFT

ANALYTE	SAMPLE ID:			F-LOA-01-01302024	F-LOA-02-01302024	F-LOA-03-01302024	F-LOA-04-01302024	F-LOA-05-01302024	F-LOA-06-01302024						
	LAB REPORT:			480-216732	480-216732	480-216732	480-216732	480-216732	480-216732						
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	SAMPLE DEPTH:			4' BGS	4.5' BGS	4' BGS	4' BGS	4' BGS	4' BGS						
	LOCATION:			BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB	BULLET TANK SUB-SLAB						
	EPA-TCLP	Part 375 Commercial SCO	Part 375 Industrial SCO	Northwest Corner, Below former ST03	Below Eastern Sump	Center	Northeast Corner, Below fomer ST04 Diesel Tank	West Side, Adjacent to Former Light Oil Building	Southeast Corner, Below former ST05 Gas Tank						
	(mg/l)	(mg/kg)	(mg/kg)												
MERCURY, TOTAL															
Mercury, Total		2.8	5.7	0.15	0.12	0.6	0.38	0.087	0.62						
GENERAL CHEMISTRY															
Sulfide, Reactive				74.3	<9.4	U	147	<9.4	U	19.5	<9.3				
pH (H)	>12.5, <2			8.4	HF	8.2	HF	8.3	HF	9.2	HF	8.8	HF	10	HF
Solids, Total				70.7		75.4		69.5		82.5		76.3		76.1	
TCLP VOLATILES BY EPA 1311															
Benzene	0.5			0.073	<0.0041	U	0.76	<0.0041	U	<0.0041	U	0.019			
SUM				0.073	-	U	0.76	-		-		0.019			
TCLP SEMIVOLATILES BY EPA 1311															
2-Methylphenol	200			<0.0040	U	<0.0020	U	0.0069	J	<0.0020	U	<0.0040	U	0.003	J
3-Methylphenol	200			<0.0040	U	<0.0020	U	0.0031	J	<0.0020	U	<0.0040	U	0.0056	J
4-Methylphenol	200			<0.0035	U	<0.0018	U	0.0031	J	<0.0018	U	<0.0035	U	0.0056	J
SUM				-	-		0.0131	-		-		0.0142			
TCLP METALS BY EPA 1311															
Arsenic, TCLP	5			<0.0056	U	0.0064	J	0.041	<0.015	U	0.007	J	0.007	J	
Barium, TCLP	100			0.5	J	0.3	J	0.42	J	0.87	J	0.62	J	1.3	
Lead, TCLP	5			0.011	JB	0.0052	JB	0.018	JB	0.012	JB	0.019	JB	0.047	B
Mercury, TCLP	0.2			<0.000043	U	<0.000043	U	<0.00043	U	<0.000043	U	<0.000043	U	0.00008	J

* Comparison is not performed on parameters with non-numeric criteria.
EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.
NY-RESC: New York NYCRR Part 375 Commercial Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.
NY-RESI: New York NYCRR Part 375 Industrial Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

TCL and CP-51 Results are Pending

Qualifiers:
U - Not detected at the reported detection limit for the sample.
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Compound was found in the blank and sample.
HF - Analyzed outside of hold time.
Bold - Compound is detected
Red Highlight - Exceeds NYS Part 375 Industrial SCOs
Green Highlight - Exceeds NYS Part 375 Commercial SCOs
Yellow Highlight - Exceeds EPA Toxicity Characteristic Regulatory Levels



Table 1-2

DRAFT

Secondary Containment IRM Workplan - Closure Sampling: Detections Only
Former Light Oil Area Tanks ST03, ST04, and ST05 "Bullet Tanks" Excavation Water
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

ANALYTE	SAMPLE ID:		F-LOA-07-01302024	
	LAB REPORT:		480-216732	
	COLLECTION DATE:		1/30/2024	
	SAMPLE DEPTH:		Surface Water in Excavation	
	LOCATION:		Bullet Tank Sub-Slab	
	Class GA NYS Ambient Water Quality Standards and Guidance Values	Units	Eastern Side of Excavation	
VOCs 8260C				
1,2,4-TRIMETHYLBENZENE	5	ug/L	55	
BENZENE	1	ug/L	2000	
M,P-XYLENES	5	ug/L	410	
O-XYLENE (1,2-DIMETHYLBENZENE)	5	ug/L	110	
STYRENE	5	ug/L	59	
TOLUENE	5	ug/L	770	
Xylenes, Total	5	ug/L	520	
SVOCs 8270D				
2,4-DIMETHYLPHENOL	1	ug/L	160	
2-METHYLNAPHTHALENE	0	ug/L	100	
2-METHYLPHENOL (O-CRESOL)	1	ug/L	220	J
4-METHYLPHENOL (P-CRESOL)	1	ug/L	390	J
4-NITROANILINE	5	ug/L	<1.3	
ACENAPHTHENE	20	ug/L	20	J
ACENAPHTHYLENE	-	ug/L	40	
ACETOPHENONE	-	ug/L	46	
BENZO(A)ANTHRACENE	0.002	ug/L	7.7	J
BENZO(A)PYRENE	-	ug/L	6.4	J
BENZO(B)FLUORANTHENE	0.002	ug/L	10	J
BENZO(G,H,I)PERYLENE	-	ug/L	5.3	J
CARBAZOLE	-	ug/L	37	
CHRYSENE	0.002	ug/L	8.8	J
DIBENZOFURAN	-	ug/L	24	J
FLUORANTHENE	50	ug/L	26	
FLUORENE	50	ug/L	27	
INDENO(1,2,3-C,D)PYRENE	0.002	ug/L	4.2	J
NAPHTHALENE	10	ug/L	9900	
PHENANTHRENE	50	ug/L	38	
PHENOL	1	ug/L	640	J
Mercury 7470A				
MERCURY	0.0007	mg/L	0.15	
Nitrogen, Ammonia E350.1				
NITROGEN, AMMONIA (AS N)	2	mg/L	12.1	
GENERAL CHEMISTRY				
pH (H)	>12.5, <2		10.5	HF

TCL and CP-51 Results are Pending

Qualifiers:

U - Not detected at the reported detection limit for the sample.

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

B - Compound was found in the blank and sample.

HF - Analyzed outside of hold time.

Bold - Compound is detected

Red Highlight - Exceeds class GA Ambient Water Quality Standards



Table 1-3
Secondary Containment IRM Workplan - Closure Sampling: Detections Only
Former Light Oil Building Sub-Slab
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

DRAFT

ANALYTE	SAMPLE ID:		FLOA-SUBSLAB-02052024
	LAB ID:		L2406251-01
	COLLECTION DATE:		2/5/2024
	SAMPLE DEPTH:		1' - 4' Below Slab
	SAMPLE MATRIX:		SOIL
	NY-RESC (mg/kg)	NY-RESI (mg/kg)	Collected from excavated fill pile
VOLATILE ORGANICS BY GC/MS			
1,2,4,5-Tetramethylbenzene			1.4
1,2,4-Trimethylbenzene	190	380	4.9
1,3,5-Trimethylbenzene	190	380	2
Benzene	44	89	17
Cyclohexane			1.6
Ethylbenzene	390	780	7.7
Isopropylbenzene			3.6
n-Propylbenzene	500	1000	1
Methyl acetate			0.093 J
Methyl cyclohexane			5.7
Naphthalene	500	1000	88
o-Xylene			2
p-Diethylbenzene			0.45
p-Ethyltoluene			3.3
p-Isopropyltoluene			0.66
sec-Butylbenzene	500	1000	0.12
p/m-Xylene			10
Styrene			0.25
Toluene	500	1000	2
Xylenes, Total			12
Total VOCs			151.773 -
SEMIVOLATILE ORGANICS BY GC/MS			
2-Methylnaphthalene			0.82
3-Methylphenol/4-Methylphenol	500	1000	0.068 J
Acenaphthene	500	1000	0.71
Acenaphthylene	500	1000	0.14 J
Anthracene	500	1000	0.6
Benzo(a)anthracene	5.6	11	0.51
Benzo(a)pyrene	1	1.1	0.34
Benzo(b)fluoranthene	5.6	11	0.45
Benzo(ghi)perylene	500	1000	0.19
Benzo(k)fluoranthene	56	110	0.17
Biphenyl			0.061 J
Carbazole			0.089 J
Chrysene	56	110	0.45
Dibenzo(a,h)anthracene	0.56	1.1	0.051 J
Dibenzofuran	350	1000	0.3
Fluoranthene	500	1000	1.9
Fluorene	500	1000	0.46
Indeno(1,2,3-cd)pyrene	5.6	11	0.22
Naphthalene	500	1000	16
Phenanthrene	500	1000	1.6
Phenol	500	1000	0.09 J
Pyrene	500	1000	1.6
Total SVOCs			26.819 -



Secondary Containment IRM Workplan - Closure Sampling: Detections Only
Former Light Oil Building Sub-Slab
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

GENERAL CHEMISTRY			
Solids, Total			71.1

EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of

NY-RESC: New York NYCRR Part 375 Commercial Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESI: New York NYCRR Part 375 Industrial Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

TCL and CP-51 Results are Pending

Qualifiers:

U - Not detected at the reported detection limit for the sample.

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

B - Compound was found in the blank and sample.

HF - Analyzed outside of hold time.

Bold - Compound is detected

Red Highlight - Exceeds NYS Part 375 Industrial SCOs

Green Highlight - Exceeds NYS Part 375 Commercial SCOs



Table 1-4
Secondary Containment IRM Workplan - Closure Sampling: Detections Only
Diesel Truck Loading/Unloading Pad
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

DRAFT

ANALYTE	SAMPLE ID:			UNLOAD-01-02132024		UNLOAD-02-02132024	
	LAB REPORT:			J217087		J217087	
	COLLECTION DATE:			2/13/2024		2/13/2024	
	SAMPLE DEPTH:			2' BGS		3.5' BGS	
	LOCATION:			Beneath Diesel Truck loading/unloading pad, western side.		Beneath Diesel Truck loading/unloading pad, eastern side.	
	EPA-TCLP	Part 375 Commercial SCO	Part 375 Industrial SCO				
	(mg/l)	(mg/kg)	(mg/kg)				
VOLATILE ORGANICS BY GC/MS							
1,2,4-Trimethylbenzene		190	380	0.026	J	0.24	
1,3,5-Trimethylbenzene		190	380	<0.028	U	0.052	J
Benzene		44	89	5.5		5.7	
Ethylbenzene		390	780	0.16		0.12	
Isopropylbenzene				0.017	J	0.54	J
p/m-Xylene				0.06	J	0.56	
Methyl Acetate				0.32	J	0.13	J
o-Xylene				0.033	J	0.15	
Toluene		500	1000	0.45		0.28	
Xylenes, Total				0.093		0.71	
Total VOCs				6.633		8.242	
SEMIVOLATILE ORGANICS BY GC/MS							
2-Methylphenol		500	1000	<0.200	U	0.18	J
4-Chlorophenyl phenyl ether				0.58	J	<0.130	U
3-Methylphenol/4-Methylphenol		500	1000	<0.700		0.38	J
Acenaphthylene		500	1000	0.71	J	0.39	J
Anthracene		500	1000	0.51	J	0.27	J
Benzo(a)anthracene		5.6	11	0.97	J	0.59	J
Benzo(a)pyrene		1	1.1	1.1	J	0.62	J
Benzo(b)fluoranthene		5.6	11	1.5		0.92	J
Benzo(ghi)perylene		500	1000	0.56	J	0.38	J
Benzo(k)fluoranthene		56	110	0.62	J	0.32	J
Chrysene		56	110	1	J	0.6	J
Dibenzofuran		350	1000	0.2	J	0.13	J
Fluoranthene		500	1000	2		1.2	
Fluorene		500	1000	0.32	J	0.2	J
Indeno(1,2,3-cd)pyrene		5.6	11	0.48	J	0.32	J
Naphthalene		500	1000	2.1		1.5	
Phenanthrene		500	1000	1	J	0.59	J
Phenol		500	1000	0.33	J	0.24	J
Pyrene		500	1000	1.7		0.99	J
Total SVOCs				15.68		9.82	
MERCURY, TOTAL							
Mercury, Total		2.8	5.7	0.54		2.9	
GENERAL CHEMISTRY							
Sulfide, Reactive				<9.6	U	155	
pH (H)	>12.5, <2			10.3		8.6	
Ammonia, as N				8.3		31.7	
Solids, Total				62.1		75.9	



Table 1-4
Secondary Containment IRM Workplan - Closure Sampling: Detections Only
Diesel Truck Loading/Unloading Pad
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

DRAFT

ANALYTE	SAMPLE ID:		UNLOAD-01-02132024	UNLOAD-02-02132024
	LAB REPORT:		J217087	J217087
	COLLECTION DATE:		2/13/2024	2/13/2024
	SAMPLE DEPTH:		2' BGS	3.5' BGS
	LOCATION:		Beneath Diesel Truck loading/unloading pad, western side.	Beneath Diesel Truck loading/unloading pad, eastern side.
	EPA-TCLP	Part 375 Commercial SCO		
	(mg/l)	(mg/kg)	(mg/kg)	
TCLP VOLATILES BY EPA 1311				
Benzene	0.5	44	89	0.044 0.042
SUM				0.044 0.042
TCLP SEMIVOLATILES BY EPA 1311				
2-Methylphenol	200			<0.0016 U 0.0029 J
3-Methylphenol	200			<0.0016 U 0.0043 J
4-Methylphenol	200			<0.0014 U 0.0043 J
SUM				-
TCLP METALS BY EPA 1311				
Barium, TCLP	100			0.29 J 0.61 J
Cadmium, TCLP	1			<0.00050 U 0.00075 J
Lead, TCLP	5			0.0052 J 0.048
TCLP PESTICIDES BY EPA 1311				
Lindane	0.4			<0.0000060 U 0.000058 J

* Comparison is not performed on parameters with non-numeric criteria.

EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

NY-RESC: New York NYCRR Part 375 Commercial Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESI: New York NYCRR Part 375 Industrial Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

TCL and CP-51 Results are Pending

Qualifiers:

U - Not detected at the reported detection limit for the sample.

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

B - Compound was found in the blank and sample.

Bold - Compound is detected

Red Highlight - Exceeds NYS Part 375 Industrial SCOs

Green Highlight - Exceeds NYS Part 375 Commercial SCOs

Yellow Highlight - Exceeds EPA Toxicity Characteristic Regulatory Levels



Table 1-5
RI Data - TP-BCP-31
Detections Only

DRAFT

Riverview Innovation & Technology Campus, Inc.,

Analytes	Part 375 SCOs		Units	TP-BCP-31	
	Commercial	Industrial			
	Sample Date:			10/29/2020	
	Sample Interval:			0 - 1 ft	
	Formation:			Shallow Fill	
TCL VOCs (SW8260C)					
1,2,4-Trimethylbenzene	190	380	ug/kg	2.2	J
1,3,5-Trimethylbenzene	190	380	ug/kg	1.2	J
1,4-Dichlorobenzene	130,000	250,000	ug/kg	8.7	U
Benzene	44,000	89,000	ug/kg	1.9	J
Cyclohexane	-	-	ug/kg	1.7	J
Ethylbenzene	390,000	780,000	ug/kg	0.54	J
Methylcyclohexane	-	-	ug/kg	2.8	J
Toluene	500,000	1,000,000	ug/kg	1.3	J
m,p-Xylene	500,000	1,000,000	ug/kg	2.1	J
O-Xylene (1,2-Dimethylbenzene)	500,000	1,000,000	ug/kg	1.3	J
Xylenes, Total	500,000	1,000,000	ug/kg	3.4	J
TCL SVOCs (SW8270D)					
2-Methylnaphthalene	-	-	ug/kg	2000	DJ
Acenaphthene	500,000	1,000,000	ug/kg	1500	DJ
Acenaphthylene	500,000	1,000,000	ug/kg	830	DJ
Anthracene	500,000	1,000,000	ug/kg	1700	DJ
Benzo(A)Anthracene	5,600	11,000	ug/kg	9200	D
Benzo(A)Pyrene	1,000	1,100	ug/kg	17000	D
Benzo(B)Fluoranthene	5,600	11,000	ug/kg	16000	D
Benzo(G,H,I)Perylene	500,000	1,000,000	ug/kg	12000	D
Benzo(K)Fluoranthene	56,000	110,000	ug/kg	6200	
Carbazole	-	-	ug/kg	940	DJ
Chrysene	56,000	110,000	ug/kg	11000	D
Dibenz(A,H)Anthracene	560	1,100	ug/kg	2500	D
Dibenzofuran	350,000	1,000,000	ug/kg	950	DJ
Fluoranthene	500,000	1,000,000	ug/kg	14000	D
Fluorene	500,000	1,000,000	ug/kg	590	DJ
Indeno(1,2,3-C,D)Pyrene	5,600	11,000	ug/kg	11000	D
Naphthalene	500,000	1,000,000	ug/kg	2200	D
Phenanthrene	500,000	1,000,000	ug/kg	7500	D
Pyrene	500,000	1,000,000	ug/kg	13000	D



Table 1-5
RI Data - TP-BCP-31
Detections Only

DRAFT

Riverview Innovation & Technology Campus, Inc.,

Analytes	Part 375 SCOs		Units	TP-BCP-31	
	Commercial	Industrial			
	Sample Date:			10/29/2020	
	Sample Interval:			0 - 1 ft	
	Formation:			Shallow Fill	
TAL Metals (SW6010)					
Aluminum	-	-	mg/kg	1260	J
Antimony	-	-	mg/kg	<0.678	UJ
Arsenic	16	16	mg/kg	11.7	J
Barium	400	10,000	mg/kg	96.4	
Beryllium	590	2,700	mg/kg	1	
Cadmium	9.3	60	mg/kg	0.301	J
Calcium	-	-	mg/kg	804	
Chromium, Total	-	-	mg/kg	14.6	
Cobalt	-	-	mg/kg	4.2	J
Copper	270	10,000	mg/kg	42.1	J
Iron	-	-	mg/kg	24300	
Lead	1,000	3,900	mg/kg	19.6	J
Magnesium	-	-	mg/kg	168	J
Manganese	10,000	10,000	mg/kg	54.4	J
Nickel	310	10,000	mg/kg	12.5	
Potassium	-	-	mg/kg	329	
Selenium	1,500	6,800	mg/kg	2.5	
Silver	1,500	6,800	mg/kg	<0.089	U
Sodium	-	-	mg/kg	225	
Thallium	-	-	mg/kg	<0.816	U
Vanadium	-	-	mg/kg	22.6	
Zinc	10,000	10,000	mg/kg	21.4	
Mercury (SW7471)					
Mercury	2.8	5.7	mg/kg	0.04	
Total Cyanide (SW9012B)					
Cyanide	27	10,000	mg/kg	0.3	J
Pesticides (8081B)					
Chlordane (Technical)	2,400	4,700	ug/kg	9.7	J
PFAS (E537 Mod)					
Perfluorooctanesulfonic acid (PFOS)	440	440	ng/g	0.31	J
Perfluoropentanoic Acid (PFPeA)	-	-	ng/g	0.29	J
Perfluoroheptanoic acid (PFHpA)	-	-	ng/g	0.29	J
Perfluorooctanoic acid (PFOA)	500	600	ng/g	0.66	J
SOLIDS					
Total Solids	-	-	%	79.7	
TCL and CP-51 Results are Pending					
Qualifiers:					
U - Not detected at the reported detection limit for the sample.					
J - Presumptive evidence of compound.					
Bold - Compound is detected					
Red Highlight - Exceeds Part 375 SCOs for Industrial Criteria					
Green Highlight - Exceeds Part 375 SCOs for Commercial Criteria					



Table 1-6
RI Data - TP-BCP-52
Detections Only
Riverview Innovation & Technology Campus, Inc.,
Tonawanda, New York

DRAFT

Analytes	Part 375 SCOs		Units	TP-BCP-52-28	
	Commercial	Industrial			
	Sample Date:			7/29/2021	
	Sample Interval:			28-inches	
	Formation:			Shallow Fill	
TCL VOCs (SW8260C)					
1,2,4-Trimethylbenzene	190	380	ug/kg	19	
1,3,5-Trimethylbenzene	190	380	ug/kg	10	
Methyl Ethyl Ketone (2-Butanone)	500,000	1,000,000	ug/kg	41	
Acetone	500,000	1,000,000	ug/kg	150	
Benzene	44,000	89,000	ug/kg	15	
Carbon Disulfide	-	-	ug/kg	0.61	J
Cyclohexane	-	-	ug/kg	2.5	J
Ethylbenzene	390,000	780,000	ug/kg	6.2	J
Isopropylbenzene (Cumene)	-	-	ug/kg	1	J
Methyl Acetate	-	-	ug/kg	1.3	J
Methylcyclohexane	-	-	ug/kg	5.1	J
Toluene	500,000	1,000,000	ug/kg	8.8	
m,p-Xylene	500,000	1,000,000	ug/kg	13	J
O-Xylene (1,2-Dimethylbenzene)	500,000	1,000,000	ug/kg	8.6	
Xylenes, Total	500,000	1,000,000	ug/kg	21.6	J
1,4-Dioxane (SW8270D)					
1,4-Dioxane (P-Dioxane)	100	100	ug/kg	NS	
TCL SVOCs (SW8270D)					
2-Methylnaphthalene	-	-	ug/kg	13000	J
Acenaphthene	500,000	1,000,000	ug/kg	8200	J
Acenaphthylene	500,000	1,000,000	ug/kg	72000	
Anthracene	500,000	1,000,000	ug/kg	110000	
Benzo(A)Anthracene	5,600	11,000	ug/kg	200000	
Benzo(A)Pyrene	1,000	1,100	ug/kg	240000	
Benzo(B)Fluoranthene	5,600	11,000	ug/kg	240000	
Benzo(G,H,I)Perylene	500,000	1,000,000	ug/kg	110000	
Benzo(K)Fluoranthene	56,000	110,000	ug/kg	99000	
Carbazole	-	-	ug/kg	24000	J
Chrysene	56,000	110,000	ug/kg	200000	
Dibenz(A,H)Anthracene	560	1,100	ug/kg	30000	J
Dibenzofuran	350,000	1,000,000	ug/kg	33000	J
Fluoranthene	500,000	1,000,000	ug/kg	510000	
Fluorene	500,000	1,000,000	ug/kg	63000	
Indeno(1,2,3-C,D)Pyrene	5,600	11,000	ug/kg	130000	
Naphthalene	500,000	1,000,000	ug/kg	40000	J
Phenanthrene	500,000	1,000,000	ug/kg	320000	
Pyrene	500,000	1,000,000	ug/kg	380000	



Table 1-6
RI Data - TP-BCP-52
Detections Only
Riverview Innovation & Technology Campus, Inc.,
Tonawanda, New York

DRAFT

Analytes	Part 375 SCOs		Units	TP-BCP-52-28	
	Commercial	Industrial			
	Sample Date:			7/29/2021	
	Sample Interval:			28-inches	
	Formation:			Shallow Fill	
TAL Metals (SW6010)					
Aluminum	-	-	mg/kg	4790	
Arsenic	16	16	mg/kg	18	
Barium	400	10,000	mg/kg	85	
Beryllium	590	2,700	mg/kg	0.971	
Cadmium	9.3	60	mg/kg	0.548	J
Calcium	-	-	mg/kg	935	
Chromium, Total	-	-	mg/kg	9.4	
Cobalt	-	-	mg/kg	5.6	J
Copper	270	10,000	mg/kg	18.8	
Iron	-	-	mg/kg	16200	
Lead	1,000	3,900	mg/kg	16.5	
Magnesium	-	-	mg/kg	977	
Manganese	10,000	10,000	mg/kg	96.3	
Nickel	310	10,000	mg/kg	13.5	
Potassium	-	-	mg/kg	809	
Selenium	1,500	6,800	mg/kg	2.3	
Sodium	-	-	mg/kg	103	J
Vanadium	-	-	mg/kg	19.1	
Zinc	10,000	10,000	mg/kg	33.2	
Mercury (SW7471)					
Mercury	2.8	5.7	mg/kg	0.054	
Total Cyanide (SW9012B)					
Cyanide	27	10,000	mg/kg	0.67	
SOLIDS					
Total Solids	-	-	%	82.6	
TCL and CP-51 Results are Pending					
Qualifiers:					
U - Not detected at the reported detection limit for the sample.					
J - Presumptive evidence of compound.					
Bold - Compound is detected					
Red Highlight - Exceeds Part 375 SCOs for Industrial Criteria					
Green Highlight - Exceeds Part 375 SCOs for Commercial Criteria					

