INVENTUM ENGINEERING, PC

Source Area Solidification
Interim Remedial Measure Work Plan

Riverview Innovation & Technology Campus

Brownfield Cleanup Program Site No. C915353

3875 River Road

Tonawanda, New York 14150

October 5, 2023

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List of Acronyms and Abbreviations

AA	Alternatives Analysis
AAR	Alternatives Analysis Report
AMSL	Above Mean Sea Level
AOI	Area of Investigation
AST	Aboveground Storage Tank
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
C&D	Construction and Demolition
CAMP	Community Air Monitoring Plan
CCR	Construction Completion Report
cm/s	Centimeters per second
COG	Coke Oven Gas
CPP	Community Participation Plan
OT	Department of Transportation
DOW	Division of Water
EWP	Excavation Work Plan
ft bgs	Feet below ground surface
ft-amsl	Feet above mean sea level
HASP	Health and Safety Plan
HDPE	High-density polyethylene
HSA	Hollow-Stem Auger
IDW	Investigation Derived Waste
IHWS	Inactive Hazardous Waste Site
ISCO	In situ Chemical Oxidation
ISS	In situ Solidification/Solidification
IRM	Interim Remedial Measure
MCC	Maximum Concentration of Contaminates
mg/kg	Milligrams per kilogram
mL/min	Milliliters per minute
MS/MSD	Matrix spike/matrix spike duplicate
MW	Monitoring Well
NA	Natural Attenuation
NAPL	Non-aqueous Phase liquid
ng/L	Nanograms per liter
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OSC	Ontario Specialty Contracting
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyls
PFAS	Per- and Polyfluoroalkyl Substances
PID	Photoionization detector

POTW	Publicly Owned Treatment Works
PPE	Personal Protective Equipment
PDIWP	Pre-Design Investigation Work Plan
PVC	Polyvinyl chloride
QAPP	Quality Assurance Project Plan
QC	Quality Control
RI	Remedial Investigation
RIR	Remedial Investigation Report
RITC	Riverview Innovation & Technology Campus, Inc.
RIWP	Remedial Investigation Work Plan
SB	Soil Boring
SCG	Standards, Criteria, and Guidance
SCO	Soil Cleanup Objective
SGV	Standards and Guidance Values
SS	Surface Sample
SSDS	Sub-Slab Depressurization System
SVOC	Semi-volatile organic compound
TAL	Target Analyte List
TCC	Tonawanda Coke Corporation
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TCWG	Tonawanda Community Working Group
TOGS	Technical and Operational Guidance Series
TP	Test Pit
TOC	Total Organic Carbon
TPH	Total Petroleum Hydrocarbons
ug/Kg	Micrograms per kilogram
ug/L	Micrograms per liter
mg/L	Milligrams per liter
VOC	Volatile Organic Compound

Executive Summary

On behalf of Riverview Innovation & Technology Campus, Inc (RITC), Inventum Engineering, P.C. (Inventum) has prepared this Source Area Solidification Interim Remedial Measures Work Plan (Solidification IRM) for the RITC Brownfield Cleanup Program Site (BCP Site). The Solidification IRM has been prepared to address pre-existing conditions exposed as a result of the pre-design Investigation Work Plan (PDIWP) activities. In addition to protecting the environment via the groundwater to surface water pathway, this Solidification IRM Scope will provide additional data required for the remedial design of the remedy that will be selected and approved by the New York State Department of Environmental Conservation (NYSDEC). The scope includes activities that are appropriate and applicable for any of the remedial alternatives that meet the Standards, Criteria and Guidance (SCGs), in the draft Alternatives Analysis Report (AAR, Inventum 2022). This activity is required for all remedial alternatives and has no influence on the selection of the remedial alternative. The solidification of the areas outlined within this IRM directly reduces the toxicity and mobility of the constituents in these target areas more than one year sooner than could occur if the actions were delayed until after the Remedial Action Work Plan was completed and implemented. The scope of work will provide data on the exact volume of material to be generated in the former production area and is proposed to allow the work to be conducted in advance of the winter weather.

Data Gaps

The Remedial Investigation (RI) coupled with the ongoing IRMs provide a comprehensive understanding of the nature and extent of impacts on the BCP Site. The data proposed for collection within the PDIWP are related to the details of the remedial design and not for the investigation or characterization of an unknown source or impact. This Solidification IRM will provide additional detailed data on the volumes of impacted materials within the former production area (AOI-2). The materials exposed during the ongoing pre-design studies, while somewhat less contaminated than expected, are also far more heterogenous, making the quantification desired from the PDI less accurate than anticipated.

Solidification IRM Work Plan Scope

The Solidification IRM has been developed to provide the sequence of activities to be completed to limit the potential for ground- to surface water impacts and to collect and refine the remedial design criteria associated with materials management, and support completion of a remedial design/remedial action work plan in an efficient manner that also further reduces the duration that the VOC, cyanide and ammonia impacted fill on the BCP Site is a potential threat to human health and the environment. The target areas for the Solidification IRM are:

- Think Safety Tank Secondary Containment – High ammonia concentrations, one of the three primary constituents affecting the SWPPP discharge;
- Weak Ammonia Tank Area – Tar and wash oil have been identified at times in the fill, the quality of fill within the secondary containment is very heterogeneous;
- Light Oil Area – The area that produced the most visible releases to the box culvert prior to the implementation of the Groundwater IRMs;
- Vicinity of MW-BCP-05 in the former Production Area – The area that produced the second most visible releases to the box culvert prior to the implementation of the Groundwater IRMs;
- Exhauster Building Area – The area reported to have allowed direct release of lubricating oils to the subsurface;

- Tar Management Area – The Tar Management Area had the highest concentration of tanks and piping managing hazardous wastes on the BCP Site. The secondary containment was less than 20 years old, and the possibility exists that for 80 years any releases in this area would have been able to contact the underlying fill (Note: the Tar Management Area is not included in this work plan and shall only be included after demonstration of a successful bench-scale test and a suitable mix design is proposed in an addendum);
- Pump House Area – After the pump house slab was lifted, a network of underground piping was removed. The piping was transported for offsite microencapsulation as hazardous waste, the fill was impacted by poorly joined and leaking pipes; and
- Tar Seep No. 2 – The largest concentration of viscous tar identified on the BCP Site.

Each of these areas represents a potential source area as documented in the draft Remedial Investigation Report and the draft AAR. In-situ solidification of these materials will:

- Confirm the bench-scale effectiveness of the bench-scale testing at full scale;
- Reduce the potential for migration of site related constituents from the fill in the target areas to ground- or surface water;
- Allow accurate measurement of the volume of solidified material to be managed from these locations; and
- Reduce the schedule for whichever remedial alternative is selected.

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 Source Area Solidification Interim Remedial Measures 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 that all activities producing the data were performed in full accordance with NYSDEC-approved work plans and any NYSDEC-approved modifications.

Respectfully Submitted,

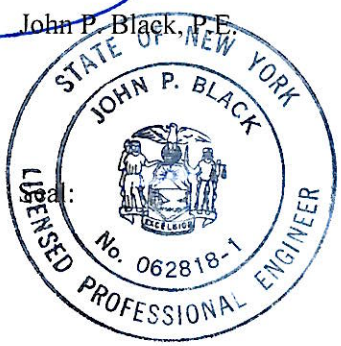
Inventum Engineering, P.C.

Date: 10/5/2023

John P. Black, P.E.

License No: 062818-1

Seal:



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1 Introduction

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

The Solidification IRM was prepared to eliminate, or at least mitigate, sources of impact to the 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.

The Draft Remedial Investigation Report (Draft RI Report, Inventum, 2022) for the BCP Site was submitted to the NYSDEC on March 18, 2022, and revisions were submitted in July 2022 and September 2023. The Draft Alternatives Analysis Report (AAR) for the BCP Site was submitted September 29, 2022 with a revision submitted in September 2023. The PDIWP (Inventum 2023) was approved February 15, 2023.

1.1 Work Plan Organization

This Solidification IRM Work Plan has been organized into the following sections:

Section 1 - Introduction
Section 2 - IRM Activities and Data Collection
Section 3 - Reporting
Section 4 - Schedule
Section 5 - Bibliography

2 IRM Activities and Data Collection

The Solidification IRM activities are proposed to eliminate or mitigate the mobility of constituents in source areas that existed below the ground surface in the production area and at Tar Seep No. 2 while collecting data for the remedial designs including actions anticipated in the Production Area AOI2 and the Coal Yard AOI5 (Figure 2-1). The purposes of these source control activities are to:

- Full scale-confirmation of the in-situ solidification and excavation depths in the former production area;
- Solidify the conditions exposed below the former building slab and secondary containment areas in the Production Area AOI before the winter weather in 2023/2024;
- Solidify conditions in close proximity to the stormwater management systems and upgradient of the south drainage ditch, and
- Quantify the conditions of the target areas within the former production area including, but not limited to;
    - The volume of unstable and grossly contaminated material below slabs;
    - The volume of unstable and grossly contaminated material below the secondary containment locations; and
- Quantify the conditions within the area affected in and around Tar Seep No. 2.

A summary of the areas applicable to the proposed Solidification IRM scope (Figure 2-3 through Figure 2-5) is provided below:

- Production Area, Solidification and Definition of Treatment Volume in the Vicinity of the Stormwater Management Systems:
    - Soil/fill below the PT01 (Think Safety Tank) Secondary Containment.
    - Soil/fill below the Weak Ammonia Liquor Secondary Containment.
    - Soil/fill below the Light Oil Area Secondary Containment.
    - Soils/fill below the Process Equipment Area (MW-BCP-05A and MW-BCP-10A Area)
    - Soils/fill below the Exhauster Building[1]
    - Soils/fill below the Pump House
- Solidification and Definition of Treatment Volume
    - Viscous Tar in the TP-BCP-25 Area

2.1 Solidification

The areas of focus under the scope of work are largely those that pose potential exposures to the stormwater collection system. The actions in this Solidification IRM are applicable under an onsite consolidation or offsite disposal alternative. While the solidification and quantification are only a minor component of the alternatives being screened in the Alternatives Analysis, the IRM scope will reduce the mobility of compounds in the production area well before a remedy is selected, designed and could be implemented.

Bench-scale solidification testing is being conducted in accordance with the protocols outlined in the PDIWP (Inventum, 2023). The results are being tabulated as they become available from the laboratories and the ample data is available and summarized in the attached tables. The breeze material is available on the property (Figure 2-2) and does not require import from an offsite source. Breeze was selected as a

[1] The soils/fill below the Tar Management Area Secondary Containment are not included in this Work Plan.

solidification agent due to its high carbon content and tremendous surface area. Breeze absorbs liquids and is believed to adsorb organic compounds that are then locked in place by the binding properties of the lime kiln dust or Portland cement. The absorption of liquid was demonstrated during the bench-scale testing as during initial trials the groundwater saturated breeze would not yield a sample of water. This absorption capability is important, especially for saturated fill as observed in many areas of the former production area. The adsorption properties was demonstrated by testing using groundwater from Sump 2 in contact with both breeze and relatively inert quartz gravel. While both were effective for VOCs, the breeze eliminated the VOCs, cyanide, and ammonia more effectively than the gravel. In fact, the breeze tests reduced the ammonia concentration below the class GA standard, while the gravel test produced a sample twice the standard.

Analytes	Class GA Ambient Water Quality Standards and Guidance Values	Units	BreezeTest-01-09132023		BreezeTest-02-09132023		BreezeTest-03-09132023		BreezeTest-04-09132023		BreezeTest-05-09132023	
Sample Date			9/13/2023		9/13/2023		9/13/2023		9/13/2023		9/13/2023	
Sample Description			Sump 2		Sump 2 & Breeze Sample 01		Sump 2 & Breeze Sample 02		Sump 2 & Gravel		Distilled Water & Gravel	
TCL VOCs (SW8260C)												
Acetone	50	ug/l	**236**		**19.4**		**17.1**		**24.4**		**14.1**	
Benzene	1	ug/l	**519**		<1.00	U	<1.00	U	<1.00	U	<1.00	U
Toluene	5	ug/l	**67.2**		<2.00	U	<2.00	U	<2.00	U	<2.00	
m,p-Xylene	5	ug/l	**44.8**		<2.00	U	<2.00	U	<2.00	U	<2.00	U
Total VOCs	-	ug/l	**867**		**19.4**		**17.1**		**24.4**		**14.1**	
Percent Difference	-	%	-		**97.8**		**98.0**		**97.2**		-	
TCL SVOCs (SW8270D)												
Phenanthrene	-	ug/l	<10.0	U	<10.0	U	<10.0	U	<10.0	U	**17.5**	
Cyanide (SW9012B)												
Cyanide	0.20	mg/l	**0.200**		**0.0560**		**0.0930**		**0.140**		<0.010	U
Percent Difference	-	%	-		**72.0**		**53.5**		**30.0**		-	
Ammonia (SM4500)												
Ammonia, as N	2	mg/l	**7.7**		**1.2**		**1.5**		**4.0**		<0.1	U
Percent Difference	-	%	-		**84.4**		**80.5**		**48.1**		-	

The verification testing conducted during the IRM will demonstrate that the resulting mass using the defined mixtures of LKD and breeze does not leach above the target standards in accordance with the TCLP testing. The beneficial contribution of the breeze both by reducing the total VOCs, cyanide, and ammonia and providing a long-term source of carbon will reduce the mobility of these constituents to the groundwater system.

The mixture of either Portland cement or Lime Kiln Dust (LKD) with breeze have effectively eliminated the characteristic of toxicity from the mobile tar samples from the target production areas and Tar Seep No. 2. While benzene, 2-Methylphenol, 3-Methylphenol/4-Methylphenol, arsenic and barium were detected in the leachate, none above the concentration that would be classified as hazardous waste. The combination of 10 percent breeze and either 15 percent LKD or 10 percent Portland Cement produced effective results for the Tar Seep No. 2 samples. As the bench-scale test samples are selected from the materials presenting the highest visually and olfactory evidence of contamination, the lowest addition rates that produce samples that do not contain the characteristics of hazardous waste are recommended for the starting mixture for full scale solidification. Mix 6 - 10 percent breeze and 15 percent LKD is proposed for the initial treatment of the tar layer at Tar Seep No. 2.

For the Light Oil Area, benzene was the only constitution to exceed the TCLP at 1.6 milligrams per liter (mg/L) from the baseline sample. The combination of 10 percent breeze with either 10 percent LKD or 10

percent Portland Cement and the combination of 5 percent LKD and 5 percent breeze produced effective in reducing the TCLP benzene level below the TCLP hazardous waste criteria.

The Weak Ammonia area did not have any baseline hazardous TCLP detections. However, the TCLP benzene level was reduced by the combinations of 5 percent LKD and 5% breeze, 10 percent breeze with 10 percent Portland Cement, and 15 percent LKD and 10 percent breeze.

The Exhauster area sample did not have any baseline hazardous TCLP detections. The TCLP benzene level was reduced by the combination of 10 percent breeze with 10 percent Portland Cement, 5 percent LKD with 5 percent breeze, and with 15 percent LKD and 10 percent breeze.

For the Pump House Area, while lead and mercury were detected, benzene was the only constituent to exceed or be equal to the Toxicity Characteristic Leaching Procedure (TCLP) at 0.5 mg/L from the baseline sample. The benzene concentration in the stabilized samples were below the characteristic, but the concentration of Portland Cement and LKD was higher than needed in other samples to eliminate free liquids. The selected mixture is 15 percent LKD and 10 percent breeze.

Additional bench-scale testing will be completed to eliminate the possibility that the solidified materials from the Tar Management Area exhibit the characteristics of hazardous waste. As the addition rates are defined, the NYSDEC will be notified should a suitable mix design be identified and an addendum to this Work Plan shall be proposed. The sampling section 2.2 will be used to verify the treatment or to adjust the addition rate(s).

The materials will be blended in a manner that exposes the proposed limits of solidification by carefully following the sequence below. The initial limits will be based on solidification of any material that appears to contain mobile compounds, viscous tar or non-aqueous phase liquid. After the visually identifiable limit of the treatment zone is defined, confirmation samples will be collected around the perimeter of the treatment zone. After solidification of the visually impaired materials and any materials that confirmation samples failed TCLP, the solidified mass will be graded to meet the surrounding ground surface. Note: confirmation may be progressive sampling as some areas progress from one treatment zone limit toward another. Additional treatment will be conducted on any materials that exhibit the characteristics of hazardous waste.

The mixing will be done with hydraulic excavators at shallow depths, blending and verification sampling at depths of 5 to 12 feet can be effectively completed using onsite equipment with or without the addition of moisture. When there is sufficient or excess moisture present, no additional moisture will be introduced. In areas with dryer target materials, or areas where the LKD or Portland has not solidified, moisture will be added to allow reaction of the binding reagent. The solidification will be conducted in-situ within each of the designated areas. Solidification will be based on addition of reagents measured by the bucket load (for breeze) and by supersack (assumed[2] 2,500 pounds per full sack). The use of moisture will be based on visual observations of the hydration of the LKD or Portland cement. The limits of the 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 (Figures 2-3 to 2-5). This will allow inspection of the outer boundary, measurement of the depth of fill, inspection of the underlying silty clay, and sampling. After the definition of at least one boundary (See 2.2 Quantification) the adjacent area will be grided into treatment units or blocks as described below.

[2] The weight in a typical sack will be verified onsite using the pallet scale.

The breeze will be sourced from the coke yard at the BCP Site (Figure 2-2). The Breeze in the coke yard is a primary product of the coke plant, was historically stored and sold from the coke yard, and has been recovered for sale as late as 2020. 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 pre-solidification sample shall be collected for:

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

To confirm the quality of the breeze being utilized:

- nine (9) TOC and VOC samples (1/~200 tons) and
- three (3) SVOC and metals samples (1/~700 tons) will be collected and analyzed during the implementation of this work plan.

The materials to be used will be inspected each morning by the onsite staff. Any materials containing industrial debris, tar or NAPL will be rejected. 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.

Each supersack is approximately 2,500 pounds. One cubic yard of fill is estimated to weigh 3,400 pounds (~125 Pounds per cubic foot [PCF]). After the depth to clay within an area to be stabilized is identified, either a vertical section or a lift-based section will be defined.

1. For the vertical approach, Inventum shall designate an area to be stabilized based on the measured depth to the top of clay. Assuming a 48- to 60 -inch thickness of fill, each 6 foot by 6 foot area shall receive 20 cubic feet of breeze (one 3/4 cubic yard bucket) and one supersack of LKD or Portland cement. The breeze shall be completely and thoroughly blended first, then the LKD or Portland cement shall be blended. After the first area is completely blended and solidified, a verification sample will be collected. Thereafter the sample frequency in Section 2.2 shall be followed. Note: if there is any dry LKD or Portland cement at the completion of blending, water shall be added to ensure there is sufficient moisture for complete hydration.
2. For a lift-based approach, the operator will set all but the lowest one foot of material on an adjacent portion of the area to be stabilized without moving it from the designated treatment limits. For each 200 square feet (SF) (~14 feet by 14 feet[3]) first 20 cubic feet of breeze (approximately one ¾ cubic yard bucket) will be added and thoroughly blended with the excavator then and one supersack of LKD or Portland Cement will be thoroughly blended into the same lift. After the material is mixed into the one foot lift; another one-foot lift shall be placed on the stabilized material and then stabilized using the same process and ratios. After the second lift of the first area is solidified, a verification sample will be collected. The blending process will be repeated until the targeted grade is obtained, with the exception of sampling which will be completed in accordance with the frequency shown in Section 2.2. The process of stabilizing in one-foot lifts will be repeated in the next treatment area until all material within the target treatment area are stabilized. Note: if there is any dry LKD or Portland cement at the completion of blending, water shall be added to ensure there is sufficient moisture for compete hydration.

[3] The areas may not be square, this is provided as an example.

Vertical Mixing Ratio Examples

Blending Ratio		Full Depth Lift Fill			Breeze	
LKD or Portland		Weight	Volume	Square Side Length	Ratio	Volume
%	Lbs/Sack	Lbs	CF	FT		CF
48-inch Thick						
5%	2500	50000	400	10.0	5%	20
10%	2500	25000	200	7.1	10%	20
15%	2500	16667	140	5.9	15%	21
20%	2500	12500	100	5.0	20%	20
54-inch Thick						
5%	2500	50000	400	9.4	5%	20
10%	2500	25000	200	6.7	10%	20
15%	2500	16667	140	5.6	15%	20
20%	2500	12500	100	4.7	20%	20
60-inch Thick						
5%	2500	50000	400	8.9	5%	20
10%	2500	25000	200	6.3	10%	20
15%	2500	16667	140	5.3	15%	20
20%	2500	12500	100	4.5	20%	20
66-inch Thick						
5%	2500	50000	400	8.5	5%	20
10%	2500	25000	200	6.0	10%	20
15%	2500	16667	140	5.0	15%	20
20%	2500	12500	100	4.3	20%	20
72-inch Thick						
5%	2500	50000	400	8.2	5%	20
10%	2500	25000	200	5.8	10%	20
15%	2500	16667	140	4.8	15%	20
20%	2500	12500	100	4.1	20%	20
78-inch Thick						
5%	2500	50000	400	7.8	5%	20
10%	2500	25000	200	5.5	10%	20
15%	2500	16667	140	4.6	15%	20
20%	2500	12500	100	3.9	20%	20

The solidified materials shall be graded to facilitate drainage away from the stormwater collection systems and toward the groundwater IRM collection locations.

2.2 Quantification

The areas of focus under the scope of work are largely those that pose potential exposures to the stormwater collection system or that will dictate the size of the consolidation cells, should an alternative including onsite consolidation be selected. The actions in this Source Control IRM are applicable under an onsite consolidation or offsite disposal alternative. While the solidification and quantification are only a minor component of the recommended alternative, the IRM scope will reduce the mobility of compounds in the production area and allow Inventum to quantify the volume of material associated with the primary exposure pathway on the BCP Site to storm/surface water.

The quantification of these areas will include:

- In-situ solidification of materials that demonstrates 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;
- Define the limits of materials that could be classified as source materials in each of the areas addressed within this Source Control IRM;
- 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.

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 be:

- 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.

During the solidification, 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 (Figures 2-3 to 2-5).

Confirmation Testing	Perimeter Length (Feet)	Confirmation Samples	TCLP Method 1311
Think Safety Tank Area	80	4	4
Light Oil Area	480	4	4
Weak Ammonia Tank Area	1200	18	18
MW-BCP-05A Area	500	7	7
Exhauster Building Area	500	5	5
Pump House Area	440	6	6
Tar Seep No. 2	600	10	10

Confirmation samples will be collected around the perimeter of each treatment area to confirm the observations made. The confirmation samples will be collected around the perimeter of each area that is stabilized (the current PDIWP Scope includes samples within some of the target areas, but not necessarily the perimeter). 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 in non-hazardous.

During the solidification, 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	Estimated Depth	Volume	Verification Samples	TCLP Method 1311	Ammonia	Cyanide	Mercury	Field Unconfined Compressive Strength
	(Square Feet)	(Feet)	(Tons)						
Think Safety Tank Area	900	4.5	335	2	2	2	2	2	10
Light Oil Area	8000	4.5	2970	6	6	3	3	3	30
Weak Ammonia Tank Area	11300	4.5	4196	9	9	4	4	4	45
MW-BCP-05A Area	8600	4.5	3193	7	7	4	4	4	35
Exhauster Building Area	10600	4.5	3936	8	8	4	4	4	40
Pump House Area	7800	4.5	2896	6	6	3	3	3	30
Tar Seep No. 2	15700	1.5	1943	4	4	0	0	0	20

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.

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 stabilized[4]. 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 hazardous 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. Should the mass continue to exhibit the characteristics of hazardous waste, the area will be located with GPS and the materials shall be addressed under the remedial action.

One verification sample will be collected from the first area solidified, either full depth (near the center of mass) or in lifts (from the center of the second lift). Thereafter discrete sample locations will be selected and samples will be collected to provide a representative distribution of the total mass solidified.

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.

An estimated volume of 2,000 tons (1,200 cubic yards) of breeze will be used for the solidification. A pre-solidification sample shall be collected for Total Organic Carbon (TOC), VOCs, SVOCs, Metals, cyanide and ammonia. To confirm the quality of the breeze being utilized, nine (9) TOC and VOC samples (1/~200 tons) and three (3) SVOC and metals samples (1/~700 tons) will be collected and analyzed during the implementation of this work plan.

2.3 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:

[4] While verification samples are typically collected from the first 25% of stabilized materials, the area 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.

- Top of clay will be determined, prior to stabilization, 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.

2.4 Community Air Monitoring

The air monitoring program during the Pre-design Investigation will be conducted in accordance with the Community Air Monitoring Plan (CAMP) provided in Appendix C. Three (3) perimeter air monitoring units (1 Upwind and 2 Downwind) were installed on the BCP Site on April 29, 2020 (Appendix C). 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.

2.5 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).

3 Reporting

The Source Control IRM scope will be incorporated into the remedial design after a remedial alternative is selected. 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. Pre-Design Investigations – Summary table for each area stabilized including:
    a. Volume stabilized;
    b. Type of binding reagent (LKD or 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.

4 Schedule

The proposed schedule for the Source Control IRM is expected to take 3 to 5 months and the activities described within this Work Plan will start upon approval from NYSDEC. RITC's goal would be to begin this working in later part of the third quarter or early part of the fourth quarter of 2023 to avoid freezing ground conditions.

5 Bibliography

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

1. Inventum Engineering, 2021f, Secondary Containment IRM Work Plan – Closure, May.

2. Inventum Engineering, 2022b, Draft Remedial Investigation Report, March 18.

3. Inventum Engineering, 2022c, Draft Alternatives Analysis Report (AAR), September 29.

4. Inventum Engineering, 2023, Pre-Design Investigation Work Plan, Revised February 15.

5. New York State Department of Environmental Conservation, 2010, DER-10: Technical Guidance for Site Investigation and Remediation, June.

6. New York State Department of Environmental Conservation, 2010, DER-31 Green Remediation, September.

7. New York State Department of Environmental Conservation, 2010, CP-51: Soil Cleanup Guidance Policy, October.

8. Thompson Reuters West Law, n.d. 6CRR-NY 376.4, Title 6. Department of Environmental Conservation, Chapter IV. Quality Services, Subchapter B. Solid Wastes, Part 376. Land Disposal Restrictions.

Tables

Table 1-1
Bench Scale Testing - Tar Seep 2
Riverview Innovation Technology Campus, Inc.
Tonawanda, New York

ANALYTE	SAMPLE ID:		SS-BCP-27		SS-BCP-27-02-06012023		SS-BCP-27-03-06012023		SS-BCP-27-05-06012023		SS-BCP-27-06-06012023	
	LAB REPORT:		L2324292, L2332797		L2330702, 232727		L2330702, 232727		L2330702, 232727		L2330702, 232727	
	COLLECTION DATE:		5/2/2023		6/1/2023		6/1/2023		6/1/2023		6/1/2023	
	DESCRIPTION:		Tar Seep 2 Baseline (No Stabilization Reagent Added)		Tar Seep 2 10% Portland, 10% Breeze		Tar Seep 2, 15% Portland, 10% Breeze		Tar Seep 2 10% LKD, 10% Breeze		Tar Seep 2 15% LKD, 10% Breeze	
	EPA-TCLP (mg/l)	NY Part 375 Class GA Standards (mg/L)	TAR SEEP 2 (DID NOT SEND 5% - 5% MIXTURES)									
VOLATILE ORGANICS 8260D												
Benzene (mg/kg)	-		**13**		NS		NS		NS		NS	
TCLP VOLATILES BY EPA 1311												
1,1-Dichloroethene	0.7	0.005	<0.0017	U	<0.020	U	<0.020	U	<0.020	U	<0.020	U
1,2-Dichloroethane	0.5	0.005	<0.0013	U	<0.020	U	<0.020	U	<0.020	U	<0.020	U
1,4-Dichlorobenzene	7.5	0.003	<0.0019	U	NS		NS		NS		NS	
2-Butanone	200	0.05	<0.019	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U
Benzene	0.5	0.001	**0.061**	J	**0.0254**		**0.0475**		**0.0686**		**0.0658**	
Carbon tetrachloride	0.5	0.005	<0.0013	U	<0.020	U	<0.020	U	<0.020	U	<0.020	U
Chlorobenzene	100	0.005	<0.0018	U	<0.020	U	<0.020	U	<0.020	U	<0.020	U
Chloroform	6	0.007	<0.0022	U	<0.020	U	<0.020	U	<0.020	U	<0.020	U
Tetrachloroethene	0.7	0.005	<0.0018	U	<0.020	U	<0.020	U	<0.020	U	<0.020	U
Trichloroethene	0.5	0.005	<0.0018	U	<0.020	U	<0.020	U	<0.020	U	<0.020	U
Vinyl chloride	0.2	0.002	<0.00071	U	<0.020	U	<0.020	U	<0.020	U	<0.020	U
TCLP SEMIVOLATILES BY EPA 1311												
2,4,5-Trichlorophenol	400	-	<0.0019	U	<0.0019	U	<0.0019	U	<0.0019	U	<0.0019	U
2,4,6-Trichlorophenol	2	-	<0.0025	U	<0.0025	U	<0.0025	U	<0.0025	U	<0.0025	U
2,4-Dinitrotoluene	0.13	0.005	<0.0019	U	<0.0019	U	<0.0019	U	<0.0019	U	<0.0019	U
2-Methylphenol	200	-	**0.330**		**0.31**		**0.33**		**0.39**		**0.5**	
3-Methylphenol/4-Methylphenol	200	-	**0.890**		**0.89**		**0.95**		**1.2**		**1.5**	
Hexachlorobenzene	0.13	0.00004	<0.0034	U	<0.0034	U	<0.0034	U	<0.0034	U	<0.0034	U
Hexachlorobutadiene	0.5	0.0005	<0.0030	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U
Hexachloroethane	3	0.005	<0.0022	U	<0.0022	U	<0.0022	U	<0.0022	U	<0.0022	U
Nitrobenzene	2	0.0004	<0.0033	U	<0.0033	U	<0.0033	U	<0.0033	U	<0.0033	U
Pentachlorophenol	100	0.001	<0.0098	U	<0.0098	U	<0.0098	U	<0.0098	U	<0.0098	U
Pyridine	5	0.05	<0.0045	U	<0.0045	U	<0.0045	U	<0.0045	U	<0.0045	U
TCLP HERBICIDES BY EPA 1311												
2,4,5-TP (Silvex)	1	0.00026	NS		<0.001	U	<0.001	U	<0.001	U	<0.001	U
2,4-D	10	0.050	NS		<0.001	U	<0.001	U	<0.001	U	<0.001	U
TCLP PESTICIDES BY EPA 1311												
Chlordane	0.03	0.00005	NS		<0.000232	U	<0.000232	U	<0.000232	U	<0.000232	U
Endrin	0.02	ND	NS		<0.000021	U	<0.000021	U	<0.000021	U	<0.000021	U
Heptachlor	0.008	0.00004	NS		<0.000016	U	<0.000016	U	<0.000016	U	<0.000016	U
Heptachlor epoxide	0.008	0.00003	NS		<0.000021	U	<0.000021	U	<0.000021	U	<0.000021	U
Lindane	0.4	0.00005	NS		<0.000022	U	<0.000022	U	<0.000022	U	<0.000022	U
Methoxychlor	10	0.035	NS		<0.000034	U	<0.000034	U	<0.000034	U	<0.000034	U
Toxaphene	0.5	0.00006	NS		<0.000314	U	<0.000314	U	<0.000314	U	<0.000314	U
TCLP METALS BY EPA 1311												
Arsenic	5	0.025	NS		**0.0636**	J	**0.0475**	J	**0.0449**	J	**0.056**	J
Barium	100	1	NS		**0.234**	J	**0.204**	J	**0.0868**	J	**0.089**	J
Cadmium	1	0.005	NS		<0.01	U	<0.01	U	<0.01	U	<0.01	U
Chromium	5	0.050	NS		<0.021	U	**0.0268**	J	<0.021	U	<0.021	U
Lead	5	0.025	NS		<0.027	U	<0.027	U	**0.041**	J	<0.027	U
Mercury	0.2	0.0007	NS		<0.0005	U	<0.0005	U	<0.0005	U	<0.0005	U
Selenium	1	0.010	NS		<0.035	U	<0.035	U	<0.035	U	<0.035	U
Silver	5	0.05	NS		<0.028	U	<0.028	U	<0.028	U	<0.028	U
GENERAL CHEMISTRY												
Cyanide, Reactive (mg/kg)	-	-	NS		<10	U	<10	U	<10	U	<10	U
pH (H) (S.U)	-	-	NS		**11.1**		**11.2**		**11.2**		**11.7**	
Sulfide, Reactive (mg/kg)	-	-	NS		<10	U	<10	U	<10	U	<10	U
Cyanide, Total (mg/kg)	-		**1.7**		NS		NS		NS		NS	
Ammonia, as Nitrogen (mg/kg)	-	-	**15**		NS		NS		NS		NS	
IGNITABILITY OF SOLIDS												
Ignitability (mm/sec)			NS		NI		NI		NI		NI	

Table 1-1
Bench Scale Testing - Tar Seep 2
Riverview Innovation Technology Campus, Inc.
Tonawanda, New York

Qualifiers:												
I - The lower value for the two columns has been reported due to obvious interference.												
P - The RPD between the results for the two columns exceeds the method-specified criteria.												
U - Not detected at the reported detection limit for the sample.												
NJ - Presumptive evidence of compound.												
NI - Not Ignitable												
Bold - Compound is detected												
Red Highlight - Exceeds EPA TCLP Standards												
Yellow Highlight - Exceeds Class GA Groundwater Standards												
* 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.												

Table 1-2
Bench Scale Testing - Light Oil Area
Riverview Innovation Technology Campus, Inc.
Tonawanda, New York

ANALYTE	SAMPLE ID:		SS-BCP-21-07182023		SS-BCP-21-02-07182023		SS-BCP-21-04-07182023		SS-BCP-21-06-07182023	
	LAB REPORT:		L2341132		L2341132		L2341132		L2341132	
	COLLECTION DATE:		7/18/2023		7/18/2023		7/18/2023		7/18/2023	
	DESCRIPTION:		Light Oil Area Baseline		LOA 10% Portland, 10% Breeze		LOA 5% LKD, 5% Breeze		LOA 15% LKD, 10% Breeze	
	EPA-TCLP (mg/L)	NY Part 375 Class GA Standards (mg/L)	LIGHT OIL AREA - BELOW LOA SECONDARY CONTAINMENT							
VOLATILE ORGANICS 8260D										
Benzene (mg/kg)	-		**71**		NS		NS		NS	
TCLP VOLATILES BY EPA 1311										
1,1-Dichloroethene	0.7	0.005	<0.0017	U	<0.0017	U	<0.0017	U	<0.0017	U
1,2-Dichloroethane	0.5	0.005	<0.0013	U	<0.0013	U	<0.0013	U	<0.0013	U
1,4-Dichlorobenzene	7.5	0.003	<0.0019	U	<0.0019	U	<0.0019	U	<0.0019	U
2-Butanone	200	0.05	<0.019	U	<0.019	U	<0.019	U	<0.019	U
Benzene	0.5	0.001	**1.6**		**0.077**		**0.098**		**0.050**	
Carbon tetrachloride	0.5	0.005	<0.0013	U	<0.0013	U	<0.0013	U	<0.0013	U
Chlorobenzene	100	0.005	<0.0018	U	<0.0018	U	<0.0018	U	<0.0018	U
Chloroform	6	0.007	<0.0022	U	<0.0022	U	<0.0022	U	<0.0022	U
Tetrachloroethene	0.7	0.005	<0.0018	U	<0.0018	U	<0.0018	U	<0.0018	U
Trichloroethene	0.5	0.005	**0.0022**	J	<0.0018	U	<0.0018	U	<0.0018	U
Vinyl chloride	0.2	0.002	<0.00071	U	<0.00071	U	<0.00071	U	<0.00071	U
TCLP SEMIVOLATILES BY EPA 1311										
2,4,5-Trichlorophenol	400	-	<0.0019	U	<0.019	U	<0.0019	U	<0.0019	U
2,4,6-Trichlorophenol	2	-	<0.0025	U	<0.0025	U	<0.0025	U	<0.0025	U
2,4-Dinitrotoluene	0.13	0.005	<0.0019	U	<0.0019	U	<0.0019	U	<0.0019	U
2-Methylphenol	200	-	**0.0070**	J	<0.0055	U	<0.0055	U	<0.0055	U
3-Methylphenol/4-Methylphenol	200	-	**0.011**	J	**0.0087**	J	**0.011**	J	**0.011**	J
Hexachlorobenzene	0.13	0.00004	<0.0034	U	<0.0034	U	<0.0034	U	<0.0034	U
Hexachlorobutadiene	0.5	0.0005	<0.0030	U	<0.0030	U	<0.0030	U	<0.0030	U
Hexachloroethane	3	0.005	<0.0022	U	<0.0022	U	<0.0022	U	<0.0022	U
Nitrobenzene	2	0.0004	<0.0033	U	<0.0033	U	<0.0033	U	<0.0033	U
Pentachlorophenol	100	0.001	<0.0098	U	<0.0098	U	<0.0098	U	<0.0098	U
Pyridine	5	0.05	<0.0045	U	<0.0045	U	<0.0045	U	<0.0045	U
TCLP HERBICIDES BY EPA 1311										
2,4,5-TP (Silvex)	1	0.00026	<0.001	U	<0.001	U	<0.001	U	<0.001	U
2,4-D	10	0.050	<0.001	U	<0.001	U	<0.001	U	<0.001	U
TCLP PESTICIDES BY EPA 1311										
Chlordane	0.03	0.00005	<0.000232	U	<0.000232	U	<0.000232	U	<0.000232	U
Endrin	0.02	ND	<0.000021	U	<0.000021	U	<0.000021	U	<0.000021	U
Heptachlor	0.008	0.00004	<0.000016	U	<0.000016	U	<0.000016	U	<0.000016	U
Heptachlor epoxide	0.008	0.00003	<0.000021	U	<0.000021	U	<0.000021	U	<0.000021	U
Lindane	0.4	0.00005	<0.000022	U	<0.000022	U	<0.000022	U	<0.000022	U
Methoxychlor	10	0.035	<0.000034	U	<0.000034	U	<0.000034	U	<0.000034	U
Toxaphene	0.5	0.00006	<0.000314	U	<0.000314	U	<0.000314	U	<0.000314	U
TCLP METALS BY EPA 1311										
Arsenic	5	0.025	<0.0190	U	**0.0294**	J	<0.0190	U	**0.0282**	J
Barium	100	1	**0.394**	J	**0.531**		**0.490**	J	**0.333**	J
Cadmium	1	0.005	<0.0100	U	<0.0100	U	<0.0100	U	<0.0100	U
Chromium	5	0.050	<0.0210	U	<0.0210	U	<0.0210	U	<0.0210	U
Lead	5	0.025	<0.0270	U	<0.0270	U	**0.0330**	J	<0.0270	U
Mercury	0.2	0.0007	**0.0005**	J	**0.0007**	J	**0.0009**	J	<0.0005	U
Selenium	1	0.010	<0.500	U	<0.0350	U	<0.0350	U	<0.0350	U
Silver	5	0.05	<0.0280	U	<0.0280	U	<0.0280	U	<0.0280	U
GENERAL CHEMISTRY										
Cyanide, Reactive (mg/kg)	-	-	<10	U	<10	U	<10	U	<10	U
pH (H) (S.U)	-	-	**8.06**		**11.3**		**11.7**		**12.0**	
Sulfide, Reactive (mg/kg)	-	-	**340**		<10	U	<10	U	<10	U
Cyanide, Total (mg/kg)	-		**4.3**		NS		NS		NS	
Ammonia as Nitrogen (mg/kg)	-	-	**250**		NS		NS		NS	
IGNITABILITY OF SOLIDS										
Ignitability (mm/sec)			NI		NI		NI		NI	

* 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.
Qualifiers:
I - The lower value for the two columns has been reported due to obvious interference.
P - The RPD between the results for the two columns exceeds the method-specified criteria.
U - Not detected at the reported detection limit for the sample.
NJ - Presumptive evidence of compound.
NI - Not Ignitable
Bold - Compound is detected
Red Highlight - Exceeds EPA TCLP Standards
Yellow Highlight - Exceeds Class GA Groundwater Standards

Table 1-3
Bench Scale Testing - Weak Ammonia Liquor Area
Riverview Innovation Technology Campus, Inc.
Tonawanda, New York

ANALYTE			SAMPLE ID:		SS-BCP-22-07182023		SS-BCP-22-02-07182023		SS-BCP-22-04-07182023		SS-BCP-22-06-07182023	
			LAB REPORT:		L2341132		L2341132		L2341132, 233456		L2341132, 233456	
			COLLECTION DATE:		7/18/2023		7/18/2023		7/18/2023		7/18/2023	
			DESCRIPTION:		Weak Ammonia Liquor Baseline		LOA 10% Portland, 10% Breeze		LOA 5% LKD, 5% Breeze		LOA 15% LKD, 10% Breeze	
	EPA-TCLP (mg/l)	NY Part 375 Class GA Standards (mg/L)	WEAK AMMONIA LIQUOR AREA									
VOLATILE ORGANICS 8260D												
Benzene (mg/kg)	-		**17**		NS				NS		NS	
TCLP VOLATILES BY EPA 1311												
1,1-Dichloroethene	0.7	0.005	<0.0017	U	<0.0017	U			<0.0200	U	<0.0200	U
1,2-Dichloroethane	0.5	0.005	<0.0013	U	<0.0013	U			<0.0200	U	<0.0200	U
1,4-Dichlorobenzene	7.5	0.003	<0.0019	U	<0.0019	U			NS		NS	
2-Butanone	200	0.05	<0.019	U	<0.019	U			<0.100	U	<0.100	U
Benzene	0.5	0.001	**0.200**		**0.130**				**0.138**		**0.0757**	
Carbon tetrachloride	0.5	0.005	<0.0013	U	<0.0013	U			<0.0200	U	<0.0200	U
Chlorobenzene	100	0.005	<0.0018	U	<0.0018	U			<0.0200	U	<0.0200	U
Chloroform	6	0.007	<0.0022	U	<0.0022	U			<0.0200	U	<0.0200	U
Tetrachloroethene	0.7	0.005	<0.0018	U	<0.0018	U			<0.0200	U	<0.0200	U
Trichloroethene	0.5	0.005	<0.0018	U	<0.0018	U			<0.0200	U	<0.0200	U
Vinyl chloride	0.2	0.002	<0.00071	U	<0.00071	U			<0.0200	U	<0.0200	U
TCLP SEMIVOLATILES BY EPA 1311												
2,4,5-Trichlorophenol	400	-	<0.0019	U	<0.0019	U			<0.0019	U	<0.0019	U
2,4,6-Trichlorophenol	2	-	<0.0025	U	<0.0025	U			<0.0025	U	<0.0025	U
2,4-Dinitrotoluene	0.13	0.005	<0.0019	U	<0.0019	U			<0.0019	U	<0.0019	U
2-Methylphenol	200	-	**0.900**		**0.970**				**1.300**		**0.980**	
3-Methylphenol/4-Methylphenol	200	-	**2.000**		**2.500**				**3.400**		**1.900**	
Hexachlorobenzene	0.13	0.00004	<0.0034	U	<0.0034	U			<0.0034	U	<0.0034	U
Hexachlorobutadiene	0.5	0.0005	<0.0030	U	<0.0030	U			<0.0030	U	<0.0030	U
Hexachloroethane	3	0.005	<0.0022	U	<0.0022	U			<0.0022	U	<0.0022	U
Nitrobenzene	2	0.0004	<0.0033	U	<0.0033	U			<0.0033	U	<0.0033	U
Pentachlorophenol	100	0.001	<0.0098	U	<0.0098	U			<0.0098	U	<0.0098	U
Pyridine	5	0.05	**0.0072**	J	<0.0045	U			<0.0045	U	<0.0045	U
TCLP HERBICIDES BY EPA 1311												
2,4,5-TP (Silvex)	1	0.00026	<0.001	U	<0.001	U			<0.001	U	<0.001	U
2,4-D	10	0.050	<0.001	U	<0.001	U			<0.001	U	<0.001	U
TCLP PESTICIDES BY EPA 1311												
Chlordane	0.03	0.00005	<0.000232	U	<0.000232	U			<0.000232	U	<0.000232	U
Endrin	0.02	ND	<0.000021	U	<0.000021	U			<0.000021	U	<0.000021	U
Heptachlor	0.008	0.00004	<0.000016	U	<0.000016	U			<0.000016	U	<0.000016	U
Heptachlor epoxide	0.008	0.00003	<0.000021	U	<0.000021	U			<0.000021	U	<0.000021	U
Lindane	0.4	0.00005	<0.000022	U	<0.000022	U			<0.000022	U	<0.000022	U
Methoxychlor	10	0.035	<0.000034	U	<0.000034	U			<0.000034	U	<0.000034	U
Toxaphene	0.5	0.00006	<0.000314	U	<0.000314	U			<0.000314	U	<0.000314	U
TCLP METALS BY EPA 1311												
Arsenic	5	0.025	<0.0190	U	<0.0190	U			<0.0190	U	<0.0190	U
Barium	100	1	**0.365**	J	**0.308**	J			**0.300**	J	**0.178**	J
Cadmium	1	0.005	<0.0100	U	<0.0100	U			<0.0100	U	<0.0100	U
Chromium	5	0.050	<0.0210	U	<0.0210	U			<0.0210	U	<0.0210	U
Lead	5	0.025	<0.0270	U	<0.0270	U			<0.0270	U	<0.0270	U
Mercury	0.2	0.0007	**0.0008**	J	<0.0005	U			<0.0005	U	<0.0005	U
Selenium	1	0.010	<0.0350	U	**0.0368**	J			<0.0350	U	<0.0350	U
Silver	5	0.05	<0.0280	U	<0.0280	U			<0.0280	U	<0.0280	U
GENERAL CHEMISTRY												
Cyanide, Reactive (mg/kg)	-	-	<10	U	<10	U			<10	U	<10	U
pH (H) (S.U)	-	-	**8.39**		**11.6**				**11.8**		**12.0**	
Sulfide, Reactive (mg/kg)	-	-	<10	U	<10	U			<10	U	<10	U
Cyanide, Total (mg/kg)	-		**1.4**		NS				NS		NS	
Ammonia as Nitrogen (mg/kg)	-	-	**76**		NS				NS		NS	
IGNITABILITY OF SOLIDS												
Ignitability (mm/sec)			NI		NI				NI		NI	

* 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.
Qualifiers:
I - The lower value for the two columns has been reported due to obvious interference.
P - The RPD between the results for the two columns exceeds the method-specified criteria.
U - Not detected at the reported detection limit for the sample.
NJ - Presumptive evidence of compound.
NI - Not Ignitable
Bold - Compound is detected
Red Highlight - Exceeds EPA TCLP Standards
Yellow Highlight - Exceeds Class GA Groundwater Standards

Table 1-4
Bench Scale Testing - Exhauster Building Area
Riverview Innovation Technology Campus, Inc.
Tonawanda, New York

ANALYTE	SAMPLE ID:		SS-BCP-23-07182023		SS-BCP-23-02-07182023		SS-BCP-23-04-07182023		SS-BCP-23-06-07182023	
	LAB REPORT:		L2341132		L2341132		L2341132		L2341132	
	COLLECTION DATE:		7/18/2023		7/18/2023		7/18/2023		7/18/2023	
	DESCRIPTION:		Exhauster Building Area Baseline		LOA 10% Portland, 10% Breeze		LOA 5% LKD, 5% Breeze		LOA 15% LKD, 10% Breeze	
	EPA-TCLP (mg/l)	NY Part 375 Class GA Standards (mg/L)	EXHAUSTER BUILDING AREA							
VOLATILE ORGANICS 8260D										
Benzene (mg/kg)	-		**16**		NS		NS		NS	
TCLP VOLATILES BY EPA 1311										
1,1-Dichloroethene	0.7	0.005	<0.0017	U	<0.0017	U	<0.0017	U	<0.0017	U
1,2-Dichloroethane	0.5	0.005	<0.0013	U	<0.0013	U	<0.0013	U	<0.0013	U
1,4-Dichlorobenzene	7.5	0.003	<0.0019	U	<0.0019	U	<0.0019	U	<0.0019	U
2-Butanone	200	0.05	<0.019	U	<0.019	U	<0.019	U	<0.019	U
Benzene	0.5	0.001	**0.210**		**0.050**		**0.066**		**0.042**	
Carbon tetrachloride	0.5	0.005	<0.0013	U	<0.0013	U	<0.0013	U	<0.0013	U
Chlorobenzene	100	0.005	<0.0018	U	<0.0018	U	<0.0018	U	<0.0018	U
Chloroform	6	0.007	<0.0022	U	<0.0022	U	<0.0022	U	<0.0022	U
Tetrachloroethene	0.7	0.005	<0.0018	U	<0.0018	U	<0.0018	U	<0.0018	U
Trichloroethene	0.5	0.005	<0.0018	U	<0.0018	U	<0.0018	U	<0.0018	U
Vinyl chloride	0.2	0.002	<0.00071	U	<0.00071	U	<0.00071	U	<0.00071	U
TCLP SEMIVOLATILES BY EPA 1311										
2,4,5-Trichlorophenol	400	-	<0.0019	U	<0.0019	U	<0.0019	U	<0.0019	U
2,4,6-Trichlorophenol	2	-	<0.0025	U	<0.0025	U	<0.0025	U	<0.0025	U
2,4-Dinitrotoluene	0.13	0.005	<0.0019	U	<0.0019	U	<0.0019	U	<0.0019	U
2-Methylphenol	200	-	**1.0**		**1.0**		**1.3**		**1.4**	
3-Methylphenol/4-Methylphenol	200	-	**1.5**		**2.7**		**2.1**		**3.0**	
Hexachlorobenzene	0.13	0.00004	<0.0034	U	<0.0034	U	<0.0034	U	<0.0034	U
Hexachlorobutadiene	0.5	0.0005	<0.0030	U	<0.0030	U	<0.0030	U	<0.0030	U
Hexachloroethane	3	0.005	<0.0022	U	<0.0022	U	<0.0022	U	<0.0022	U
Nitrobenzene	2	0.0004	<0.0033	U	<0.0033	U	<0.0033	U	<0.0033	U
Pentachlorophenol	100	0.001	<0.0098	U	<0.0098	U	<0.0098	U	<0.0098	U
Pyridine	5	0.05	**0.011**	J	**0.0049**	J	**0.0058**	J	**0.0085**	J
TCLP HERBICIDES BY EPA 1311										
2,4,5-TP (Silvex)	1	0.00026	<0.001	U	<0.001	U	<0.001	U	<0.001	U
2,4-D	10	0.050	<0.001	U	<0.001	U	<0.001	U	<0.001	U
TCLP PESTICIDES BY EPA 1311										
Chlordane	0.03	0.00005	<0.000232	U	<0.000232	U	<0.000232	U	<0.000232	U
Endrin	0.02	ND	<0.000021	U	<0.000021	U	<0.000021	U	<0.000021	U
Heptachlor	0.008	0.00004	<0.000016	U	<0.000016	U	<0.000016	U	<0.000016	U
Heptachlor epoxide	0.008	0.00003	<0.000021	U	<0.000021	U	<0.000021	U	<0.000021	U
Lindane	0.4	0.00005	<0.000022	U	<0.000022	U	<0.000022	U	<0.000022	U
Methoxychlor	10	0.035	<0.000034	U	<0.000034	U	<0.000034	U	<0.000034	U
Toxaphene	0.5	0.00006	<0.000314	U	<0.000314	U	<0.000314	U	<0.000314	U
TCLP METALS BY EPA 1311										
Arsenic	5	0.025	<0.0190	U	**0.0279**	J	**0.0325**	J	**0.0352**	J
Barium	100	1	**0.566**		**0.444**	J	**0.354**	J	**0.261**	J
Cadmium	1	0.005	<0.0100	U	<0.0100	U	<0.0100	U	<0.0100	U
Chromium	5	0.050	<0.0210	U	<0.0210	U	<0.0210	U	<0.0210	U
Lead	5	0.025	<0.0270	U	<0.0270	U	<0.0270	U	<0.0270	U
Mercury	0.2	0.0007	**0.0007**	J	<0.0005	U	<0.0005	U	<0.0005	U
Selenium	1	0.010	<0.0350	U	<0.0350	U	<0.0350	U	<0.0350	U
Silver	5	0.05	<0.0280	U	<0.0280	U	<0.0280	U	<0.0280	U
GENERAL CHEMISTRY										
Cyanide, Reactive (mg/kg)	-	-	<10	U	<10	U	<10	U	<10	U
pH (H) (S.U)	-	-	**8.55**		**11.6**		**11.9**		**12.2**	
Sulfide, Reactive (mg/kg)	-	-	<10	U	<10	U	<10	U	<10	U
Cyanide, Total (mg/kg)	-		**0.87**	J	NS		NS		NS	
Ammonia as Nitrogen (mg/kg)	-	-	**440**		NS		NS		NS	
IGNITABILITY OF SOLIDS										
Ignitability (mm/sec)			NI		NI		NI		NI	

* 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.
Qualifiers:
I - The lower value for the two columns has been reported due to obvious interference.
P - The RPD between the results for the two columns exceeds the method-specified criteria.
U - Not detected at the reported detection limit for the sample.
NJ - Presumptive evidence of compound.
NI - Not Ignitable
Bold - Compound is detected
Red Highlight - Exceeds EPA TCLP Standards
Yellow Highlight - Exceeds Class GA Groundwater Standards

Table 1-5
Bench Scale Testing - Tar Management Area
Riverview Innovation Technology Campus, Inc.
Tonawanda, New York

ANALYTE			SAMPLE ID:		SS-BCP-24-07182023		SS-BCP-24-02-07182023		SS-BCP-24-04-07182023		SS-BCP-24-06-07182023	
			LAB REPORT:		L2341132		L2341132		L2341132, 233456		L2341132	
			COLLECTION DATE:		7/18/2023		7/18/2023		7/18/2023		7/18/2023	
			DESCRIPTION:		Tar Management Area Baseline		LOA 10% Portland, 10% Breeze		LOA 5% LKD, 5% Breeze		LOA 15% LKD, 10% Breeze	
	EPA-TCLP (mg/l)	NY Part 375 Class GA Standards (mg/L)	TAR MANAGEMENT AREA - BELOW SECONDARY CONTAINMENT									
VOLATILE ORGANICS 8260D												
Benzene (mg/kg)	-		**120**		NS				NS		NS	
TCLP VOLATILES BY EPA 1311												
1,1-Dichloroethene	0.7	0.005	<0.0017	U	<0.0017	U			<0.0200	U	<0.0017	U
1,2-Dichloroethane	0.5	0.005	<0.0013	U	<0.0013	U			<0.0200	U	<0.0013	U
1,4-Dichlorobenzene	7.5	0.003	<0.0019	U	<0.0019	U			NS		<0.0019	U
2-Butanone	200	0.05	<0.019	U	<0.019	U			<0.100	U	<0.019	U
Benzene	0.5	0.001	**0.500**		**0.660**				**1.070**		**1.3**	
Carbon tetrachloride	0.5	0.005	<0.0013	U	<0.0013	U			<0.0200	U	<0.0013	U
Chlorobenzene	100	0.005	<0.0018	U	<0.0018	U			<0.0200	U	<0.0018	U
Chloroform	6	0.007	<0.0022	U	<0.0022	U			<0.0200	U	<0.0022	U
Tetrachloroethene	0.7	0.005	<0.0018	U	<0.0018	U			<0.0200	U	<0.0018	U
Trichloroethene	0.5	0.005	<0.0018	U	<0.0018	U			<0.0200	U	<0.0018	U
Vinyl chloride	0.2	0.002	<0.00071	U	<0.00071	U			<0.0200	U	<0.00071	U
TCLP SEMIVOLATILES BY EPA 1311												
2,4,5-Trichlorophenol	400	-	<0.0019	U	<0.0019	U			<0.0019	U	<0.0019	U
2,4,6-Trichlorophenol	2	-	<0.0025	U	<0.0025	U			<0.0025	U	<0.0025	U
2,4-Dinitrotoluene	0.13	0.005	<0.0019	U	<0.0019	U			<0.0019	U	<0.0019	U
2-Methylphenol	200	-	**2.900**		**2.300**				**3.500**		**3.900**	
3-Methylphenol/4-Methylphenol	200	-	**7.000**		**5.900**				**8.500**		**9.000**	
Hexachlorobenzene	0.13	0.00004	<0.0034	U	<0.0034	U			<0.0034	U	<0.0034	U
Hexachlorobutadiene	0.5	0.0005	<0.0030	U	<0.0030	U			<0.0030	U	<0.0030	U
Hexachloroethane	3	0.005	<0.0022	U	<0.0022	U			<0.0022	U	<0.0022	U
Nitrobenzene	2	0.0004	<0.0033	U	<0.0033	U			<0.0033	U	<0.0033	U
Pentachlorophenol	100	0.001	<0.0098	U	<0.0098	U			<0.0098	U	<0.0098	U
Pyridine	5	0.05	**0.0078**	J	<0.0045	U			<0.0045	U	<0.0045	U
TCLP HERBICIDES BY EPA 1311												
2,4,5-TP (Silvex)	1	0.00026	<0.001	U	<0.001	U			<0.001	U	<0.001	U
2,4-D	10	0.050	<0.001	U	<0.001	U			<0.001	U	<0.001	U
TCLP PESTICIDES BY EPA 1311												
Chlordane	0.03	0.00005	<0.000232	U	<0.000232	U			<0.000232	U	<0.000232	U
Endrin	0.02	ND	<0.000021	U	<0.000021	U			<0.000021	U	<0.000021	U
Heptachlor	0.008	0.00004	<0.000016	U	<0.000016	U			<0.000016	U	<0.000016	U
Heptachlor epoxide	0.008	0.00003	<0.000021	U	<0.000021	U			<0.000021	U	<0.000021	U
Lindane	0.4	0.00005	<0.000022	U	<0.000022	U			<0.000022	U	<0.000022	U
Methoxychlor	10	0.035	<0.000034	U	<0.000034	U			<0.000034	U	<0.000034	U
Toxaphene	0.5	0.00006	<0.000314	U	<0.000314	U			<0.000314	U	<0.000314	U
TCLP METALS BY EPA 1311												
Arsenic	5	0.025	**0.0290**	J	<0.0190	U			**0.0350**	J	<0.0190	U
Barium	100	1	**0.479**	J	**0.267**	J			**0.182**	J	**0.146**	J
Cadmium	1	0.005	<0.0100	U	<0.0100	U			<0.0100	U	<0.0100	U
Chromium	5	0.050	<0.0210	U	<0.0210	U			<0.0210	U	<0.0210	U
Lead	5	0.025	**0.0632**	J	<0.0270	U			<0.0270	U	<0.0270	U
Mercury	0.2	0.0007	<0.0005	U	<0.0005	U			<0.0005	U	<0.0005	U
Selenium	1	0.010	<0.0350	U	<0.0350	U			<0.0350	U	<0.0350	U
Silver	5	0.05	<0.0280	U	<0.0280	U			<0.0280	U	<0.0280	U
GENERAL CHEMISTRY												
Cyanide, Reactive (mg/kg)	-	-	<10	U	<10	U			<10	U	<10	U
pH (H) (S.U)	-	-	**8.42**		**11.5**				**11.5**		**11.8**	
Sulfide, Reactive (mg/kg)	-	-	<10	U	<10	U			<10	U	<10	U
Cyanide, Total (mg/kg)	-		**2.7**		**29**				**53**		**25**	
Ammonia as Nitrogen (mg/kg)	-	-	**920**		**9.9**				**150**		**20**	
IGNITABILITY OF SOLIDS												
Ignitability (mm/sec)			NI		NI				NI		NI	

* 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.
Qualifiers:
I - The lower value for the two columns has been reported due to obvious interference.
P - The RPD between the results for the two columns exceeds the method-specified criteria.
U - Not detected at the reported detection limit for the sample.
NJ - Presumptive evidence of compound.
NI - Not Ignitable
Bold - Compound is detected
Red Highlight - Exceeds EPA TCLP Standards
Yellow Highlight - Exceeds Class GA Groundwater Standards

ANALYTE	SAMPLE ID:		SS-BCP-25-07182023		SS-BCP-25-02-08172023		BCP-PH-03-07062023		SS-BCP-25-05-08172023		BCP-PH-06-07062023	
	LAB REPORT:		L2341132, 233456		233748		L2338426, 232929		233748		L2338426, 232929	
	COLLECTION DATE:		7/18/2023		8/17/2023		7/6/2023		8/17/2023		7/6/2023	
	DESCRIPTION:		Pump House Baseline		Pump House 10% Porland, 10% Breeze		Pump House 15% Portland, 10% Breeze		Pump House 10% LKD, 10% Breeze		Pump House 15% LKD, 10% Breeze	
	EPA-TCLP (mg/l)	NY Part 375 Class GA Standards (mg/L)	PUMP HOUSE - BELOW SLAB									
VOLATILE ORGANICS 8260D												
Benzene (mg/kg)	-		**71**		NS		NS		NS		NS	
TCLP VOLATILES BY EPA 1311												
1,1-Dichloroethene	0.7	0.005	<0.020	U	<0.020	U	<0.020	U	<0.020	U	<0.200	U
1,2-Dichloroethane	0.5	0.005	<0.020	U	<0.020	U	<0.020	U	<0.020	U	<0.200	U
1,4-Dichlorobenzene	7.5	0.003	NS		NS		NS		NS		NS	
2-Butanone	200	0.05	<0.100	U	<0.100	U	<0.100	U	<0.100	U	<1.000	U
Benzene	0.5	0.001	**0.985**		<0.020	U	**0.183**		<0.020	U	<0.200	U
Carbon tetrachloride	0.5	0.005	<0.020	U	<0.020	U	<0.020	U	<0.020	U	<0.200	U
Chlorobenzene	100	0.005	<0.020	U	<0.020	U	<0.020	U	<0.020	U	<0.200	U
Chloroform	6	0.007	<0.020	U	<0.020	U	<0.020	U	<0.020	U	<0.200	U
Tetrachloroethene	0.7	0.005	<0.020	U	**0.0334**		<0.020	U	<0.020	U	<0.200	U
Trichloroethene	0.5	0.005	<0.020	U	<0.020	U	<0.020	U	<0.020	U	<0.200	U
Vinyl chloride	0.2	0.002	<0.020	U	<0.020	U	<0.020	U	<0.020	U	<0.200	U
TCLP SEMIVOLATILES BY EPA 1311												
2,4,5-Trichlorophenol	400	-	<0.038	U	<0.500	U	<0.038	U	<1.000	U	<0.038	U
2,4,6-Trichlorophenol	2	-	<0.049	U	<0.500	U	<0.049	U	<1.000	U	<0.049	U
2,4-Dinitrotoluene	0.13	0.005	<0.038	U	<0.500	U	<0.038	U	<1.000	U	<0.038	U
2-Methylphenol	200	-	**8**		-		**6**		-		**6**	
3-Methylphenol/4-Methylphenol	200	-	**23**		**-**		**13**		**-**		**12**	
Total Cresols (2,3,4-Methylphenol)	200	-	NS		**4**		NS		**8**		NS	
Hexachlorobenzene	0.13	0.00004	<0.069	U	<0.500	U	<0.069	U	<1.000	U	<0.069	U
Hexachlorobutadiene	0.5	0.0005	<0.060	U	<0.500	U	<0.060	U	<1.000	U	<0.060	U
Hexachloroethane	3	0.005	<0.044	U	<0.500	U	<0.044	U	<1.000	U	<0.044	U
Nitrobenzene	2	0.0004	<0.066	U	<0.500	U	<0.066	U	<1.000	U	<0.066	U
Pentachlorophenol	100	0.001	<0.200	U	<2.500	U	<0.200	U	<5.000	U	<0.200	U
Pyridine	5	0.05	<0.090	U	<1.000	U	**0.130**	J	<2.000	U	**0.150**	J
TCLP HERBICIDES BY EPA 1311												
2,4,5-TP (Silvex)	1	0.00026	<0.001	U	<0.10	U	<0.001	U	<0.050	U	<0.001	U
2,4-D	10	0.050	<0.001	U	<0.10	U	<0.001	U	<0.050	U	<0.001	U
TCLP PESTICIDES BY EPA 1311												
Chlordane	0.03	0.00005	<0.000232	U	<0.010	U	<0.000165	U	<0.010	U	<0.000165	U
Endrin	0.02	ND	<0.000021	U	<0.0020	U	<0.000015	U	<0.0020	U	<0.000015	U
Heptachlor	0.008	0.00004	<0.000016	U	<0.0020	U	<0.000011	U	<0.0020	U	<0.000011	U
Heptachlor epoxide	0.008	0.00003	<0.000021	U	<0.0020	U	<0.000015	U	<0.0020	U	<0.000015	U
Lindane	0.4	0.00005	<0.000022	U	<0.0020	U	<0.000016	U	<0.0020	U	<0.000016	U
Methoxychlor	10	0.035	<0.000034	U	<0.010	U	<0.000024	U	<0.010	U	<0.000024	U
Toxaphene	0.5	0.00006	<0.000314	U	<0.020	U	<0.000224	U	<0.020	U	<0.000224	U
TCLP METALS BY EPA 1311												
Arsenic	5	0.025	<0.0190		<0.500	U	<0.0190	U	<0.500	U	**0.0355**	J
Barium	100	1	**0.627**		<0.500	U	**0.431**	J	<0.500	U	**0.216**	J
Cadmium	1	0.005	<0.0100		<0.0250	U	<0.0100	U	<0.0250	U	<0.0100	U
Chromium	5	0.050	<0.0210		<0.500	U	<0.0210	U	<0.500	U	<0.0210	U
Lead	5	0.025	**0.0291**	J	<0.500	U	<0.0270	U	<0.500	U	<0.0270	U
Mercury	0.2	0.0007	**0.0007**	J	<0.00200	U	<0.0005	U	<0.00200	U	<0.0005	U
Selenium	1	0.010	<0.0350		<0.200	U	<0.0350	U	<0.200	U	<0.0350	U
Silver	5	0.05	<0.0280		<0.500	U	<0.0280	U	<0.500	U	<0.0280	U
GENERAL CHEMISTRY												
Cyanide, Reactive (mg/kg)	-	-	<10	U	<1.0	U	<10	U	<1.0	U	<10	U
pH (H) (S.U)	-	-	**8.77**		**10.26**		**11.1**		**11.69**		**11.5**	
Sulfide, Reactive (mg/kg)	-	-	**31**		<10	U	<10	U	<10	U	<10	U
Cyanide, Total (mg/kg)	-		**2.5**		**24.9**		NS		**10.7**		NS	
Ammonia as Nitrogen (mg/kg)	-	-	**350**		<10.0	U	NS		<10.0	U	NS	
IGNITABILITY OF SOLIDS												
Ignitability (mm/sec)			NI		NI		NI		NI		NI	

Qualifiers:												
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.												
U - Not detected at the reported detection limit for the sample.												
NJ - Presumptive evidence of compound.												
NI - Not Ignitable												
Bold - Compound is detected												
Red Highlight - Exceeds EPA TCLP Standards												
Yellow Highlight - Exceeds Class GA Groundwater Standards												
* 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.												

Table 2-1
Bench-scale Mixtures
Production Area and Tar Seep No. 2
Riverview Innovation & Technology Campus, Inc.
Site No. C915353
Town of Tonwanda, New York

East End of TP-BCP-25 Area (Tar Seep 2)					
Mix #	Composition (Percent of Raw Sample)	Measured Weight of Raw Sample (oz)	Measured Weight of Portland/Lime Kilm Dust (oz)	Measured Weight of Breeze (oz)	Weight of Water Added (oz)
Portland Cement Bench Scale Compositions					
Mix 1:	5% Portland, 5% Breeze	35.0	1.8	1.8	0.0
Mix 2:	10% Portland, 10% Breeze	35.4	3.6	3.5	0.0
Mix 3:	15% Portland, 10% Breeze	35.0	5.5	3.6	0.0
Lime Kiln Dust (LKD) Bench Scale Compositions					
Mix 4:	5% LKD, 5% Breeze	33.4	1.7	1.7	0.0
Mix 5:	10% LKD, 10% Breeze	35.0	3.5	3.5	0.0
Mix 6:	**15% LDK, 10% Breeze**	**35.8**	**5.4**	**3.7**	**0.0**

Comments:
1. The selected mixture is highlighted.

Table 2-1
Bench-scale Mixtures
Production Area and Tar Seep No. 2
Riverview Innovation & Technology Campus, Inc.
Site No. C915353
Town of Tonwanda, New York

Below Light Oil Area Slab					
Mix #	Composition (Percent of Raw Sample)	Measured Weight of Raw Sample (oz)	Measured Weight of Portland/Lime Kilm Dust (oz)	Measured Weight of Breeze (oz)	Weight of Water Added (oz)
Portland Cement Bench Scale Compositions					
Mix 1:	5% Portland, 5% Breeze	34.7	1.7	1.8	0.0
Mix 2:	10% Portland, 10% Breeze	35.4	3.6	3.5	0.0
Mix 3:	15% Portland, 10% Breeze	35.9	5.4	3.6	0.0
Lime Kiln Dust (LKD) Bench Scale Compositions					
Mix 4:	5% LKD, 5% Breeze	35.2	1.8	1.9	0.0
Mix 5:	10% LKD, 10% Breeze	35.0	3.5	3.5	0.0
Mix 6:	15% LDK, 10% Breeze	35.7	5.4	3.6	0.0

Comments:
1. Material was beneath 6" of concrete slab, black sand and gravel, abundant light oil. Finished mixing at 9:55 on 7/14/2023
2. The selected mixture is highlighted.

Table 2-1
Bench-scale Mixtures
Production Area and Tar Seep No. 2
Riverview Innovation & Technology Campus, Inc.
Site No. C915353
Town of Tonwanda, New York

Below the Weak Ammonia Tank Slab					
Mix #	Composition (Percent of Raw Sample)	Measured Weight of Raw Sample (oz)	Measured Weight of Portland/Lime Kilm Dust (oz)	Measured Weight of Breeze (oz)	Weight of Water Added (oz)
Portland Cement Bench Scale Compositions					
Mix 1:	5% Portland, 5% Breeze	35.0	1.7	1.7	0.0
Mix 2:	10% Portland, 10% Breeze	35.0	3.5	3.5	0.0
Mix 3:	15% Portland, 10% Breeze	35.0	5.3	3.5	0.0
Lime Kiln Dust (LKD) Bench Scale Compositions					
Mix 4:	5% LKD, 5% Breeze	35.0	1.7	1.7	0.0
Mix 5:	10% LKD, 10% Breeze	35.0	3.5	3.5	0.0
Mix 6:	15% LDK, 10% Breeze	35.0	5.3	3.5	0.0
Comments: 1. Material was taken from 5' bgs, strong ammonia odors 2. The selected mixture is highlighted.					

Table 2-1
Bench-scale Mixtures
Production Area and Tar Seep No. 2
Riverview Innovation & Technology Campus, Inc.
Site No. C915353
Town of Tonwanda, New York

Below the Exhauster Building Slab					
Mix #	Composition (Percent of Raw Sample)	Measured Weight of Raw Sample (oz)	Measured Weight of Portland/Lime Kilm Dust (oz)	Measured Weight of Breeze (oz)	Weight of Water Added (oz)
Portland Cement Bench Scale Compositions					
Mix 1:	5% Portland, 5% Breeze	35.0	1.8	1.8	0.0
Mix 2:	10% Portland, 10% Breeze	35.3	3.5	3.6	3.6
Mix 3:	15% Portland, 10% Breeze	35.0	5.2	3.5	3.3
Lime KilN Dust (LKD) Bench Scale Compositions					
Mix 4:	5% LKD, 5% Breeze	35.2	1.8	1.8	0.0
Mix 5:	10% LKD, 10% Breeze	35.5	3.6	3.6	3.0
Mix 6:	15% LDK, 10% Breeze	35.2	5.3	3.6	3.1
Comments: 1. Material taken from 1' bgs, abundant light oil, flowable tar (low in abundance), clay visible at ~5' bgs, cobble, brick. Mixes 3, 5, and 6 were dry so DI water was added. Sample finished mixing at 10:30 on 7/14/2023.					

Table 2-1
Bench-scale Mixtures
Production Area and Tar Seep No. 2
Riverview Innovation & Technology Campus, Inc.
Site No. C915353
Town of Tonwanda, New York

Below the Tar Management Area Secondary Containment Slab					
Mix #	Composition (Percent of Raw Sample)	Measured Weight of Raw Sample (oz)	Measured Weight of Reagant (oz)	Measured Weight of Breeze (oz)	Weight of Water Added (oz)
Portland Cement Bench Scale Compositions					
Mix 1:	5% Portland, 5% Breeze	35.0	1.7	1.7	0.0
Mix 2:	10% Portland, 10% Breeze	35.0	3.5	3.5	0.0
Mix 3:	15% Portland, 10% Breeze	35.0	5.3	3.5	0.0
Lime Kiln Dust (LKD) Bench Scale Compositions					
Mix 4:	5% LKD, 5% Breeze	35.0	1.7	1.7	0.0
Mix 5:	10% LKD, 10% Breeze	35.0	3.5	3.5	0.0
Mix 6:	15% LDK, 10% Breeze	35.0	5.3	3.5	0.0

Comments:
1. Sample taken from test pit with abundant flowable tar, black fluid with sheen, abundant gravel at 2' bgs.
2. No samples elminated the characteristic of toxicity. Testing ongoing.

Table 2-1
Bench-scale Mixtures
Production Area and Tar Seep No. 2
Riverview Innovation & Technology Campus, Inc.
Site No. C915353
Town of Tonwanda, New York

Below the Pump House Slab					
Mix #	Composition (Percent of Raw Sample)	Measured Weight of Raw Sample (oz)	Measured Weight of Portland/Lime Kilm Dust (oz)	Measured Weight of Breeze (oz)	Weight of Water Added (oz)
Portland Cement Bench Scale Compositions					
Mix 1:	5% Portland, 5% Breeze	35.0	1.8	1.8	0.0
Mix 2:	10% Portland, 10% Breeze	35.0	3.6	3.5	0.0
Mix 3:	15% Portland, 10% Breeze	35.0	5.5	3.6	0.0
Lime Kilm Dust (LKD) Bench Scale Compositions					
Mix 4:	5% LKD, 5% Breeze	35.0	1.8	1.8	0.0
Mix 5:	10% LKD, 10% Breeze	35.0	3.6	3.5	0.0
Mix 6:	15% LDK, 10% Breeze	35.0	5.5	3.6	0.0

Comments:
1. The selected mixture is highlighted.

Figures

A

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SITE LOCATION MAP

RIVERVIEW INNOVATION & TECHNOLOGY CAMPUS, INC.
3875 RIVER ROAD
TONAWANDA, NEW YORK 14150
BCP SITE No. C915353

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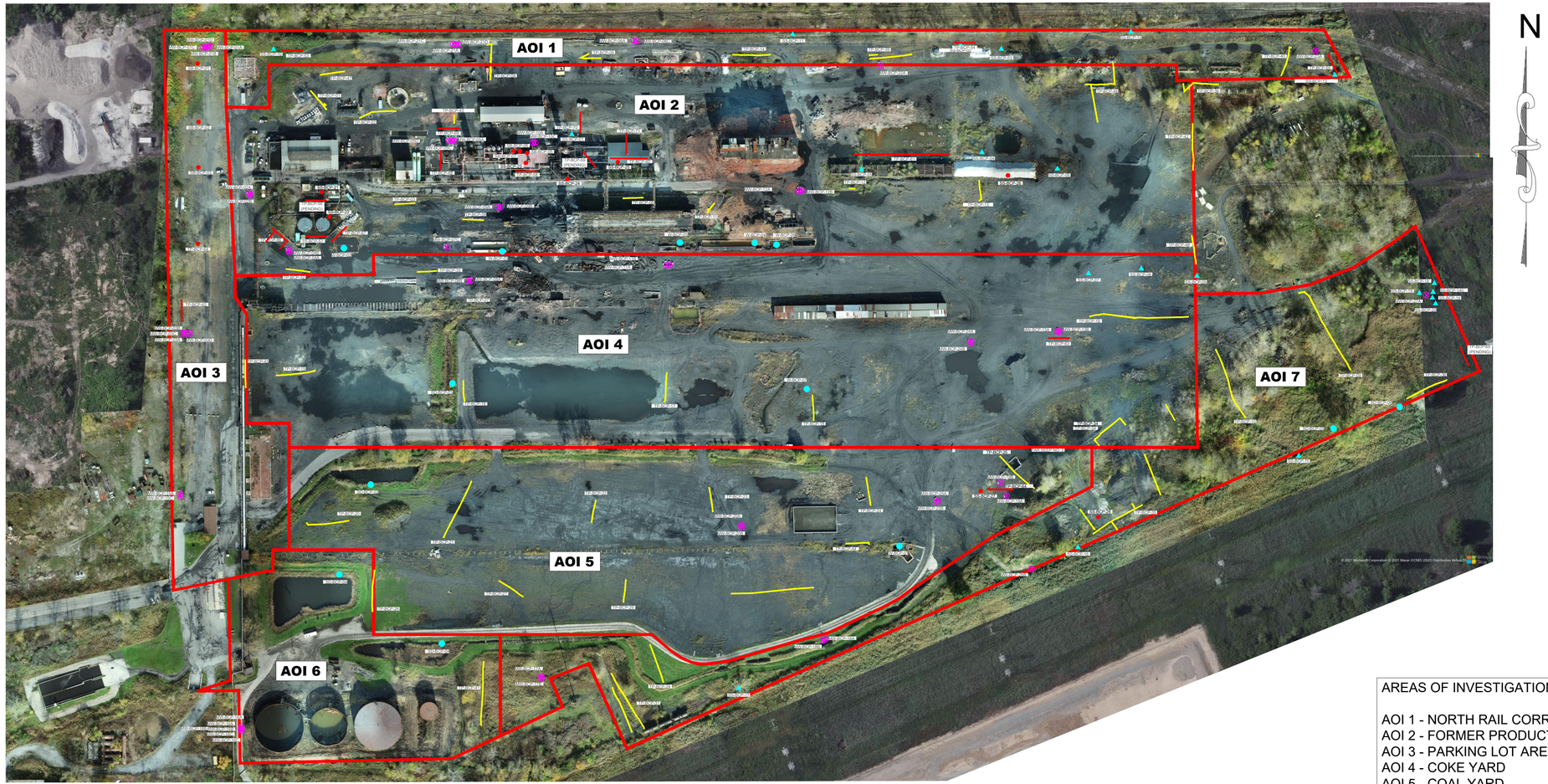
APPROVED	

FIGURE 1 - 1

DRAWING NUMBER
PDIWP ADDENDUM



AREAS OF INVESTIGATION

AOI 1 - NORTH RAIL CORRIDOR
AOI 2 - FORMER PRODUCTION AREA
AOI 3 - PARKING LOT AREA
AOI 4 - COKE YARD
AOI 5 - COAL YARD
AOI 6 - WATER TREATMENT
AOI 7 - SOUTH DRAINAGE

LEGEND

- MONITORING WELL
- REMEDIAL INVESTIGATION TEST PIT
- REMEDIAL INVESTIGATION SURFACE SAMPLE
- REMEDIAL INVESTIGATION SURFACE WATER SAMPLE
- PRE-DESIGN INVESTIGATION BENCH SCALE SAMPLE LOCATION - SS-BCP-XXX
- PRE-DESIGN INVESTIGATION SOIL BORING - SB-BCP-XXX
- PRE-DESIGN INVESTIGATION TEST PIT
- AREA OF INVESTIGATION (AOI)

Note:
The sample locations shown may be adjusted in the field to more completely observe and quantify site conditions.

D

150 0 75 150 300 600
1 INCH =150 FEET (22X34)

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SAMPLE LOCATIONS - RI AND PRE-DESIGN

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TONAWANDA, NEW YORK 14150
BCP SITE No. C915353

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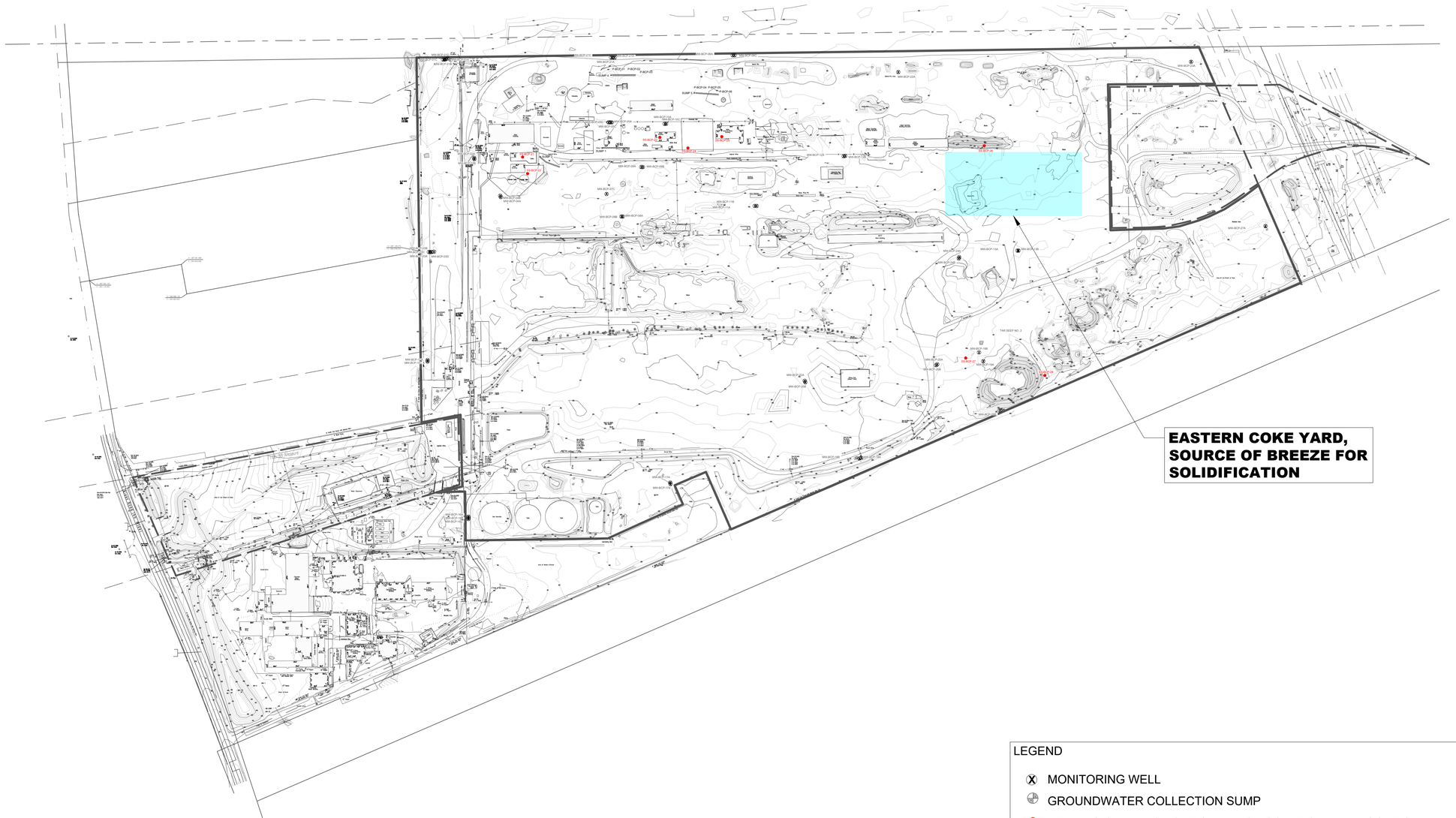
FIGURE 2 - 1

DRAWING NUMBER
PDIWP ADDENDUM



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

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BENCH SCALE SAMPLE LOCATIONS

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FIGURE 2 - 2

PDIWP ADDENDUM

ALL FILL UP TO THE BOX CULVERT WALL SHALL BE TREATED.

FORMER THINK SAFETY TANK (PT01) AREA (900 SF)

BOX CULVERT LOCATION

GROUNDWATER IRM SUMP No. 2

FORMER LIGHT OIL AREA (8,000 SF)

TWO VERIFICATION SAMPLES SHALL BE COLLECTED, ONE FROM THE INITIAL AREA OF TREATMENT

SIX VERIFICATION SAMPLES SHALL BE COLLECTED, ONE FROM THE INITIAL AREA OF TREATMENT

NINE VERIFICATION SAMPLES SHALL BE COLLECTED, ONE FROM THE INITIAL AREA OF TREATMENT

TYPICAL LOCATION, 18 CONFIRMATION SAMPLES SHALL BE COLLECTED AT 30-FT INTERVALS, BIASED TO ANY AREAS OF VISUAL OR OLFACTORY EVIDENCE OF IMPACT

FORMER WEAK AMMONIA TANK AREA (11,300 SF)

MW-BCP-02A

MW-BCP-02B

MW-BCP-04B

MW-BCP-04A

SUMP 2

SUMP 3

San MH (20038)
Rim: 604.33
Inv N: 595.53
Inv E: 595.53
Inv W: 595.53

San MH (20041)
Rim: 605.00
Inv N: 598.80
Inv S: 598.80

San MH (20040)
Rim: 604.40

San MH (5610)
Rim: 603.24
Inv N: 594.09
Inv S: 594.09
Inv E: 594.89

Brick Building
Concrete
Concrete Porch
Concrete Wall
Wood Shed
Tanks
Brick Building
Brick Building
Former Tank
Former Tank
Asphalt Drive
Overhead Pipes
(Debris Filled)
Rim: 604.50

12" PVC
2" PVC
4" PVC
4" PVC
6" PVC
6" SA
6" SA

160.9'
66.3'
4.3'
4.9'
8.1'
6.2'
8.1'
8.2'
17.6'
15.0'
50.7'
29.3'
11.9'
9.1'
40.9'
36.6'

603
604
605
606

N

1" = 20'
20' 10' 0' 20'

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

LEGEND

- MONITORING WELL
- GROUNDWATER COLLECTION SUMP
- CONFIRMATION SAMPLE LOCATION
- VERIFICATION SAMPLE LOCATION

D

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FORMER THINK SAFETY, WEAK AMMONIA, & LIGHT OIL TARGET AREAS

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FIGURE 2 - 3

PDIWP ADDENDUM

SUMP 4

SUMP 5

P-BCP-04 P-BCP-05 P-BCP-06

SUMP 1

N

SEVEN VERIFICATION SAMPLES SHALL BE COLLECTED, ONE FROM THE INITIAL AREA OF TREATMENT

MW-BCP-05 TARGET AREA (8,600 SF)

EXHAUSTER BUILDING AREA (10,600 SF)

EIGHT VERIFICATION SAMPLES SHALL BE COLLECTED, ONE FROM THE INITIAL AREA OF TREATMENT

TAR MANAGEMENT AREA (12,700 SF)

SIX VERIFICATION SAMPLES SHALL BE COLLECTED, ONE FROM THE INITIAL AREA OF TREATMENT

PUMP HOUSE AREA (7,800 SF)

FORMER SEEP LOCATION

BOX CULVERT

MW-BCP-05D MW-BCP-05A MW-BCP-05C MW-BCP-10A MW-BCP-10C MW-BCP-09A MW-BCP-09B

Debris

Debris Pile

Metal Building

HYD

Concrete Wall

Tank

Brick Building

Wood Shed

Pump 1

Overhead Pipes

Asphalt Drive

Heavy Equipment Rail

Brick Metal & Block Building

MP

LEGEND

- MONITORING WELL
- GROUNDWATER COLLECTION SUMP
- CONFIRMATION SAMPLE LOCATION
- VERIFICATION SAMPLE LOCATION

D

1" = 20'

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FORMER PRODUCTION TARGET AREA
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FIGURE 2 - 4

PDIWP ADDENDUM

N

TP-BCP-18

TP-BCP-34

FOUR CONFIRMATION SAMPLES SHALL BE COLLECTED, ONE FROM THE INITIAL AREA OF TREATMENT

TP-BCP-25

TAR SEEP NO. 2

TEN CONFIRMATION SAMPLES SHALL BE COLLECTED, AS THE LIMITS OF THE TAR SEEP ARE DEFINED

MW-BCP-19B

TP-BCP-64

SS-BCP-27

MW-BCP-19A

MW-BCP-25A

MW-BCP-25B

TP-BCP-24

SS-BCP-28

TP-BCP-35

TP-BCP-44

MW-BCP-26B

ESTIMATED EXTENT OF VISCOUS TAR (15,700 SF)

Water

Traveled Way

Gravel Drive

Debris Pile

Mixing Pad (Water Filled)

Conveyor Remai

Metal Shells

Storm CB (Debris Filled) Rim: 602.88

END PIPE INV = : 601.15

12" HDPE

10" ST

END PIPE INV 605.605.12

LEGEND

- MONITORING WELL
- TEST PIT
- PRE-DESIGN INVESTIGATION BENCH SCALE SAMPLE LOCATION

1" = 20'

20' 10' 0' 20'

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

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FIGURE 2 - 5

PDIWP ADDENDUM

Appendices

Appendix A – 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:

333 Ganson Street
Buffalo, NY 14203

October 2019

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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, President
OSC

10/22/19
Date

Dan Flanigan, Project Manager
OSC

10/22/19
Date

Matt Reardon, Superintendent
OSC

10/22/19
Date

Donald Dustin CIH, CSP, Director HS&E
OSC

10/22/2019
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.

Name	Affiliation	Date	Signature

Emergency Contact List

Tonawanda Coke

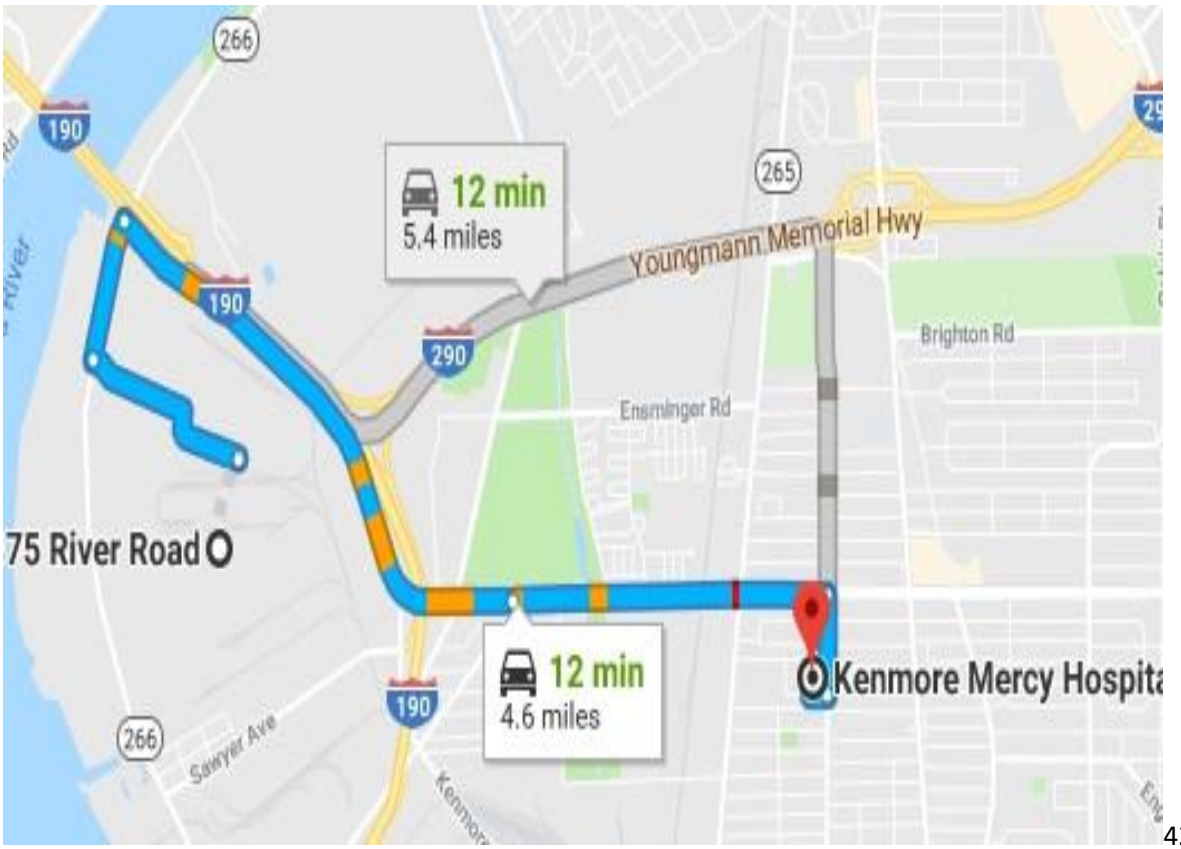
3875 River Road

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
	Donald Dustin Director HS&E	716-560-7542
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:

Company Health
1173 Sheridan Drive
Tonawanda, NY 14150
(716) 875-5495

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 any 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 involved parties 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 contaminates 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 VISTIOR 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 whom 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.

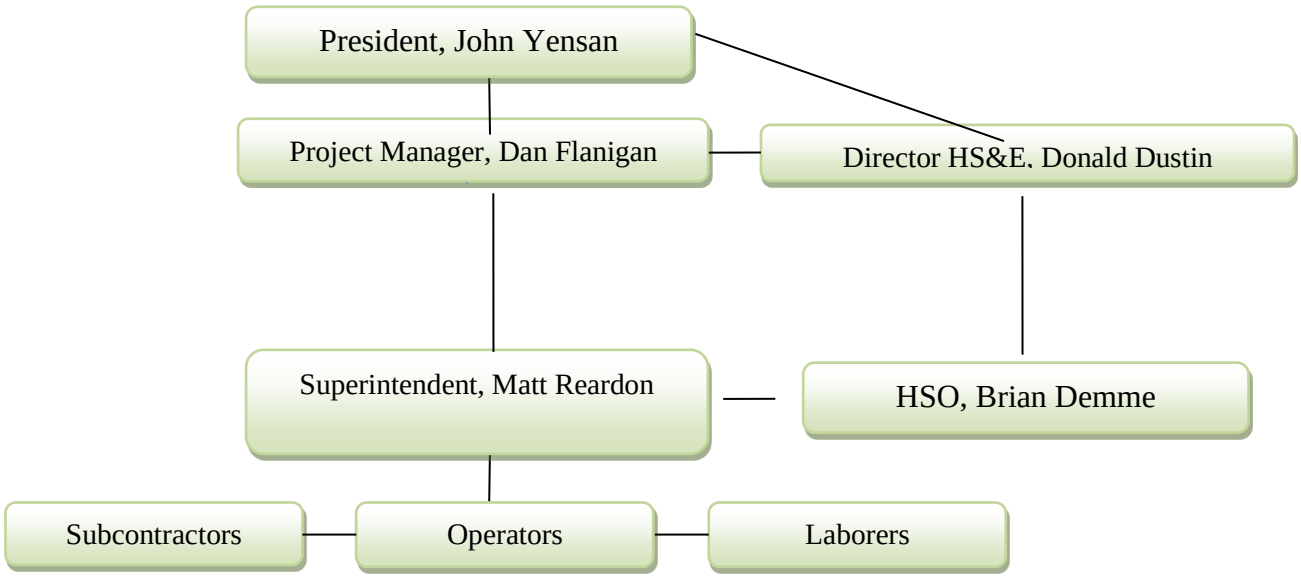
HEALTH and SAFETY ORGANIZATION

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 Demme
- Director HS&E – Donald Dustin

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 at 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 the incident 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 of 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

Company Health
1173 Sheridan Drive
Tonawanda, NY 14150
716-875-5495

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 contaminates (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 the 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 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 contaminates 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		Table 1a, 2 of 70
Suburface 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	GHD, 2018, Remedial Investigation/Feasibility Study Work Plan, Prepared for Tonawanda Coke Corporation, June.	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	GHD, 2018, Remedial Investigation/Feasibility Study Work Plan, Prepared for Tonawanda Coke Corporation, June.	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		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, manufacturers 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 below table) 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.	• Eyes: Irrigate immediately. • Skin: Flush with soap and water. • Inhalation: Remove victim to fresh air and provide respiratory support if needed. • Ingestion: 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.	• Eyes: Irrigate immediately. • Skin: Flush with soap and water. • Inhalation: Remove victim to fresh air and provide respiratory support if needed. • Ingestion: 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.	• Eyes: Irrigate immediately. • Skin: Flush with soap and water. • Inhalation: Remove victim to fresh air and provide respiratory support if needed. • Ingestion: Seek medical attention.	300ppm	500ppm STEL

GENERAL PHYSICAL HAZARDS AND STANDARD PROTECTIVE MEASURES

(See Attachment I, AHA for more specific detail):

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 area for hazards, overhead power lines, obstructions, slip, trip, fall hazards, uneven surfaces, and vermin. Manage work area; 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 setup 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 - 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 house keeping*
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 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 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 require by the approved contract requirements, 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 form elevated heights shall be performed as supervised by a competent person. In all cases proper fall protection shall be utilize; personal fall restraint systems. 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 spider 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 from 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 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 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 exits
- 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;

	Sound Level at Operator		
Equipment	Average, dB	Range	TWA, dBA
Earth Moving:			
Front End Loader	88	85-91	
Back Hoe	86.5	79-89	
Bull Dozer	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	
Power Units:			
Generators	<85		
Compressors	<85		
Impact:			
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		
Other Equipment			
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 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 affect 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 has heavy rain or snow, can loosen the soil and increase the risk of a 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 form 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 employee 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 had 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 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 incidences 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, package or letter that poses immediate risk to employees and has been;
- 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 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 a 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 heal, 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 comment, involved regulatory officials, or the project engineer has 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:

	Condition	Acceptable Parameter(s)
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 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 identifies 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 an 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 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 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, 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 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 object 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 include 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 require 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, quality, 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:

Ambient Temperature (°F)	Maximum Wear Time Per Excursion (Minutes)
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.

Type	Frequency
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 assure 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.

ATTACHMENT I: Forms

ACTIVITY HAZARD ANALYSIS (AHA)

Activity: **Date:**
Project: **Revision: 0**

Work Plan Summary:

PREREQUISITES		
EQUIPMENT TO BE USED	**INSPECTION REQUIREMENTS**	**TRAINING REQUIREMENTS**

ACTIVITY HAZARD ANALYSIS (AHA)

ACTIVITY	POTENTIAL HAZARD	PROTECTIVE METHODS AND CONTROLS
	•	•
		•
		•

Special Notes and Instructions: This AHA shall be reviewed by all project employees prior to commencing work and as warranted by; AHA revisions, safe work observations and improvement measures. All employees have the authority to stop work for safety concerns.

AHA Review and Training Acknowledgement:

Employees print name, sign and date in spaces provided below.

PRINT NAME	SIGNATURE	DATE

EMPLOYEE DAILY SIGN IN SHEET

DAY:_____DATE ____/____/____ PROJECT NAME: _____

				CHECK OFF TRADE CLASSIFICATION			
	Workers Name [Print}	TIME IN	TIME OUT	OPERATOR	LABORER	BURNER	PROJECT SUPERVISION
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

DESCRIPTION OF TODAY'S WORK ACTIVITIES:

_____

_____

_____

_____

DAILY SAFE WORK PERMIT

Supervisor Name		**H&S Worker Rep**		**Job Number**	
Lead Hand		**Client**		**Date**	
Job Description:					

Hazard Assessment

Ergonomic Hazards	Environmental Hazards Cont'd	Activity Hazards Continued	Access/Egress Hazards
☐ Working in Tight Area	☐ Ventilation Required	☐ Sensitive Equipment in Area	☐ Partially Obstructed
☐ Parts of Body in Line of Fire	☐ Heat Stress/Cold Exposure	☐ Burn / Heat Sources	☐ Slip/Trip Potential Identified
☐ Working Above Head Height	☐ Other Workers in Area	☐ Compressed Gasses	☐ Excavations
☐ Pinch Points Identified	☐ Inadequate Lighting	☐ Energized Equipment in Area	☐ Scaffold - Inspected and Tagged
☐ Repetitive Motion	☐ Asbestos	☐ Airborne Particles - ie; Chipping	☐ Overhead/Underground Obstruction
☐ Repetitive Awkward Work	☐ Lead	☐ Electrical Cords/Tools-Condition	☐ Other
Environmental Hazards	☐ Mould	☐ Equipment/Tools - Inspected	**Other Site Hazards**
☐ Spill Potential	☐ PCB___Liquid___Ballasts___	☐ Electrical Disconnects	
☐ Weather Conditions	**Activity Hazards**	☐ Mechanical Disconnects	
☐ MSDS Reviewed	☐ Lockout Procedure in Place	☐ Utilities Disconnects	
☐ Poor Housekeeping	☐ Welding / Grinding		

Hazard Control - PPE Requirement

Eyes	Ears	Respiratory	Body		Other PPE Required
☐ Safety Glasses	☐ Ear Plugs	☐ Full Face Mask	☐ Hard Hat	☐ Fire Rated Coveralls	☐ Harness
☐ Goggles	☐ Ear Muffs	☐ Half Face Mask	☐ Traffic Vest	☐ Tyvex Suit	☐ Lanyard
☐ Face Shield		☐ Cartridge _____	☐ Gloves	☐ Long Sleeves	
		☐ Dust Mask	☐ Foot Protection		

Hazard Control - Job Site

☐ Spotters	☐ Negative Air Machine (s)	☐ Air Monitoring	☐ Locates/ Disconnects	☐ Spill Kits	☐ Signage
☐ Guardrails	☐ Decontamination Facility	☐ GFCI Cords/Panels	☐ Safe Work Plan	☐ Enclosure	☐ Fall Protection
☐ Lighting	☐ Material Handling Proc.	☐ Hot Work Permit	☐ Communication (radios)	☐ Dust Control	☐ Portable Water
☐ Scaffold	☐ Good Housekeeping	☐ Lockout/Tagout	☐ Inspections Completed	☐ Scrubbers	☐ Safety Shower
☐ Fire Watch	☐ Overhead Protection	☐ Fall Protection Plan	☐ Engineering Controls	☐ Barricades	☐ Warning Signs
☐ Traffic Control	☐ Perimeter Fencing	☐ Proper Trenching	☐ Confined Space Plan	☐ Eye Wash	

Equipment

☐ Skid Steer	☐ Bulldozer	☐ Ladders	☐ Crane	☐ Mini Excavator	☐ Power Washer	☐ PEWP: Aerial or Scissor Lift
☐ Excavator	☐ Lift Truck	☐ Scaffold	☐ High Reach	☐ Generator	☐ Hepa Vacuum	☐ Vacuum Truck

Job Task Analysis

Job Step	Hazard	Control

All workers must sign below after they have read and understand the Daily Safe Work Permit

Print Name	Signature	Print Name	Signature

SUBCONTRACTOR DAILY SIGN IN SHEET

DAY:_____DATE ____/____/____

PROJECT NAME: _____

Company Name:_____

				CHECK OFF TRADE CLASSIFICATION			
	Workers Name [Print}	TIME IN	TIME OUT	OPERATOR	LABORER	ASBESTOS HANDLER	PROJECT SUPERVISION
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

DESCRIPTION OF TODAY'S WORK ACTIVITIES:

_____

_____

_____

_____

CO-WORKER OBSERVATIONS

- ◯ **COMPLACENT**
- ◯ **REPETITIVE MOTION**
- ◯ **POOR LIFTING POSTURE**
- ◯ **REACHING/STRETCHING**
- ◯ **TWISTING**
- ◯ **NEEDS ASSISTANCE**
- ◯ **OPERATOR NOT TRAINED**
- ◯ **BALANCE TRACTION**
- ◯ **BENDING**
- ◯ **LIFTING TOO MUCH**

DISCUSSED WITH CO-WORKER? **Y** **N** (Circle one)

OTHER/COMMENTS: _____

_____

_____

_____

_____

SAFETY TASK ANALYSIS CARD

NAME: _____

DATE: _____

PROJECT:

TASK (i.e. Burning, Equipment Operating, Lifting Etc.)

_____

DID YOU REVIEW A JSA? **Y** **N** (Circle One)

WHAT PPE IS REQUIRED?

- ◯ **HARD HAT**
- ◯ **HI-VIS VEST**
- ◯ **SAFETY SHOES**
- ◯ **FALL PROTECTION**
- ◯ **SAFETY GLASSES**
- ◯ **RESPIRATOR**

HAVE YOU INSPECTED YOUR EQUIPMENT & PPE? **Y** **N** (Circle one)

HAVE YOU TRAINED FOR THE TASK? **Y** **N** (Circle one)

DO YOU BELIEVE ALL HAZARDS HAVE BEEN ADEQUATELY ADDRESSED? **Y** **N** (Circle one)

SELF AWARENESS

WHAT OTHER HAZARDS ARE YOU WORRIED ABOUT?

_____

_____

IS YOUR PPE/EQUIPMENT FUNCTIONING OK? **Y N**

DID YOU NOTIFY YOUR SUPERVISOR? **Y N**

WAS IT CORRECTED? **Y N**

HOW? _____

_____

_____

DO YOU BELIEVE ALL HAZARDS HAVE BEEN ADEQUATELY ADDRESSED? **Y N** (Circle one)

IF NOT, STOP WORK AND REPORT TO SUPERVISOR.

CO-WORKER OBSERVATIONS

- ◯ **PPE USED INCORRECTLY**
- ◯ **RUSHING**
- ◯ **TOO... HOT COLD NOISY** (circle as appropriate)
- ◯ **EQUIPMENT: UNSAFETY CONDITION**
- ◯ **EQUIPMENT: INAPPROPRIATE FOR TASK**
- ◯ **EQUIPMENT: CAPACITY EXCEEDED/UNKNOWN**
- ◯ **MISSING/DEFICIENT SAFETY GUARD** (Guard Rail, Retainer, Fire Extin.)
- ◯ **ENERGY ISOLATION NEEDED** (Electricity, Hydraulic, Pneumatic, Etc.)
- ◯ **POOR WORKING SURFACE**
- ◯ **DUSTY**
- ◯ **ODORS SMELLED**
- ◯ **POOR HOUSEKEEPING**
- ◯ **DISTRACTED**
- ◯ **FATIGUED**

Daily Equipment Inspection

Contractor:_____ **Checked By**:_____

Type of Equipment:_____ **Date:**_____

Items Inspected/Maintained Daily	Mn	Tu	Wd	Th	Fri	St	Sn	**Remarks/Service**
As equipped check condition of tires or tracks								
Check all hoses/hydraulics/air								
Grease all fittings as required								
Check fluids(coolant, oil/hydraulic)								
Check brake function/steering and linkage								
Check for physical damage (welds, covers/guards)								
Check emergency brakes/stops/lockouts								
Check horn & backup alarm								
Safety belt (seated equip.)/tie-off point(man lifts)								
Check all windows and mirrors (if equipped)								
Check warning decals (legible in place)								
Equipment Warm-up (check instruments/indicator lights)								
Check control levers for proper operation								
Is Maintenance schedule current (see next scheduled maintenance hours)								

NOTES:

Powered Aerial Lift Inspection Form (Inspect Applicable Items Per Type of Lift)

CONTRACTOR	
RENTAL COMPANY	
JOBSITE	
INSPECTED BY (PRINT NAME)	
MAKE (Fuel Type) /SERIAL OR UNIT No.	
DATE (S) –WEEK ENDING	

ITEMS (= SATISFACTORY, X = NEEDS ATTENTION, NA = Not Applicable for type of lift)	MON	TUE	WED	THU	FRI	SAT	SUN
Brakes							
Operating Controls Labeled							
Operating and Emergency Controls							
Fuel System							
Guards and Handrails							
Entrance Gate (Safety Chain, Bar or Gate)							
Batteries							
Load Charts & Labels							
Muffler/Exhaust Pipes							
Operating Manual							
Engineered Tie Off Points							
Tires, Wheels or Tracks, Outriggers							
Cylinders, Lines, Hoses, Wires (air, fluid leaks, electrical wires cables intact)							
Loose, Missing/Damaged Parts, Physical Condition							
Air System Leaks Signs of Damage							

REMARKS:

Daily Safety Brief

Focused Safety Topic – _____

Attach focused safety topic material or use back of page for additional space "See Attached or Reverse" ➡

Summary of today's activities, identified hazards and protective measures.

ACTIVITIES: _____

_____

_____

EQUIPMENT REQUIRED: _____

_____

HAZARDS (circle, highlight or list): Traffic Struck by Caught Between/Pinched Head Eye Hand/Arm/Leg/Foot Slips/Trips/Falls Overhead/Drop Collapse/Cave-In Stored Energy Electrical/Shock Impalement Fire Weather Heat Cold Asphyxiation CO Lung Irritants Dust Asbestos LOPC Chemical PCB CO VOC's Gas Lightning Noise Vermin/Pests Rollover Other: _____

_____

PROTECTIVE MEASURES (circle, highlight or list): See Hot Work Permit See Confined Space Permit See AHA STAC MSDS Guards Barricades GFCI PPE Signs Spotter Alarms Warning Line Life Line Net Seat Belts ROP Shoring/Bracing Inspect "Auth. Stop Work" Fire Ext. Water/Misting Controlled Work Zone Ventilation Add Lighting Cones Covers De-energize Lockout/Tagout Air Gap Heat/Cold Stress Monitoring, Air Monitoring, Other/Remarks:

_____

APPROVED PPE REQUIRED (circle, highlight or list): Hardhat Safety Glasses Foot Protection Gloves High Visibility Vest or Equivalent High Visibility Clothing Hearing Protection Face Shield Mono-Goggles Respirator Special Protective Clothing (Burning Jacket & Shield, Gloves, Boots) Personal Fall Arrest/Restraint System Welding Hood Life Vest Metatarsals, Other: _____

Participants Print Name	Participants Print Name	Participants Print Name

Safety Talk Give by: _____ **DATE:** _____

Project/Location: _____

INCIDENT REPORT

Document Revision 6/16/15

GENERAL INFORMATION

Project Name: _____

Project Address: _____

Site Manager: _____ Phone No. _____ Work Shift: _____

Date of Incident: _____ Time: _____

Type of Incident: ☐ Injury ☐ Property Damage ☐ Spill ☐ Fire ☐ Other: _____

AFFECTED EMPLOYEE OR PROPERTY OWNER INFORMATION

Employee/Owner Name: _____

Date of Birth: _____ Male/Female: _____

Address: _____

Department: _____ Years/date Employed: _____

MEDICAL INFORMATION (NA If Not Applicable)

Name and Address of Doctor: _____

Hospital and Phone Number: _____

Substance Abuse Testing: As a result of this incident, was this employee?

Substance Abuse Tested? ☐ Yes ☐ No Alcohol Tested? ☐ Yes ☐ No

Was this a First Aid only incident? ☐ Yes ☐ No

Has the Employee returned to work? ☐ Yes ☐ No If Yes, Date: _____

INCIDENT DESCRIPTION (Facts and Findings)

What activity or task was performed at time of incident? (Please be specific, what was the employee doing, identify equipment or material the employee was using.)

_____

_____

_____

_____

INCIDENT REPORT

Document Revision 6/16/15

How did the incident occur? (Please describe fully the events that resulted in the incident. Tell what and how it happened. Employee and witness statements, finds fact, contributing factors, Use a separate sheet if necessary.)

Object or substance that directly injured the employee: _____

Object or substance that damaged property: _____

OSHA 300 INFORMATION (To be completed by Corporate Safety Department)

Does Incident Involve Fatality:	☐ Yes ☐ No	Was the Incident Medical Only:	☐ Yes ☐ No
Has the Employee Returned to Work:	☐ Yes ☐ No	Is Incident OSHA Recordable:	☐ Yes ☐ No
Date: _____		Involve Lost/Restricted Work Days:	☐ Yes ☐ No

Current Work Status: _____ OSHA File No. (or N/A): _____

CORRECTIVE ACTION AND COMMENTS:

IMPLEMENTATION DATE: _____

_____ _____

Completed by: Supervisor Print & Sign Name **Date**

_____ _____

Reviewed By – Corp. Safety **Date**

JOB SAFETY INSPECTION AND AUDIT

LOCATION/PROJECT: **Date:**

Audit and Inspection Report by:

OSC Summary of Findings and Improvement Measures:

DESCRIPTION	YES	NO	N/A	COMMENTS/ACTIONS
SAFETY ADMINISTRATION, POSTINGS, FIRST AID & EMG RESPONSE				
1. OSHA 300A form posted between February 1 and April 30				
2. LABOR POSTINGS (ALL IN ONE FEDERAL & STATE)				
3. Emergency Phone number for the nearest medical center posted				
4. Safety Briefs/Talks & AHA's current and up to date.				
5. Work areas properly delineated (barricaded) and hazard warning signs				
6. Appropriate First Aid Supplies and Trained Personal Available				
7. Training Documentation Complete (40 Hour, OSC BASIC 10/OSHA 10, NYS Asbestos Hard Card Supervisors/Handlers)				
HOUSEKEEPING				
1. Work area neat, debris picked up and free of trip hazards				
2. Projection and impalement hazards eliminated/protected (removed,				
3. Waste containers provided and used				
4. Passageways and walkways clear				
5. Cords and leads off of the floor				
6. Spill Kit Available & Stocked				
FIRE PREVENTION				
1. Adequate firefighting equipment (hoses, extinguishers, fire blanket)				Need additional fire extinguishers (Minimum 2A Rating).
2. Appropriate Flammable and Combustible Storage				
3. "No Smoking" signs posted and enforced near flammables				
ELECTRICAL AND CONTROL OF HAZARDOUS ENERGY				
1. Extension cords with bare wires or missing ground prongs taken out of				
2. Ground fault circuit interrupters being used				
3. Terminal boxes accessible and equipped with required covers				
4. Temporary Lighting (Guarded, Covered, No Exposed Sockets)				Corrected, light guard/cage closed, open sockets plugged.
5. Equipment wiring				Corrected, Romex connector for hot water tank missing.
6. Proper Hazardous Energy Controls (LOTO, Air Gapping, Blanks)				
HAND, POWER & POWDER-ACTUATED TOOLS				
1. Hand tools inspected regularly				
2. Guards in place on equipment				
3. Right tool being used for job at hand				

DESCRIPTION	YES	NO	N/A	COMMENTS/ACTIONS
4. Operators of powder-actuated tools are licensed				
FALL PROTECTION				
1. Safety guard rails properly installed and inspected.				
2. Employees exposed to fall hazards are protected (PFAS 100% Tie-off Guards, Covers, Nets)				Observed Burner torch cutting duct work from step ladder properly tied off. Observed abatement worker installing hard barricade on 2nd floor
3. Employees below protected from falling objects (Toe Boards or Guards)				Area barricaded from entry below with spotter.
LADDERS				
1. Straight Ladders extended at least 36 inches above the landing, proper				
2. Ladders inspected & properly use (secured, proper angel, type)				
3. Ladders with split or missing rungs taken out of service (tagged out)				
4. Stepladders used in fully open position				
SCAFFOLDING				
1. All scaffolding inspected daily by a competent person				
2. Erected on sound rigid footing				
3. Tied to structure as required				
4. Guardrails, intermediate rails, toe boards and screens in place				
5. Planking is sound and sturdy				
6. Baseplates and mudsills in place				
7. Proper access provided				
8. Employees below protected from falling objects				
FLOOR & WALL OPENINGS				
1. All floor or deck openings are planked over or barricaded				
2. Perimeter protection is in place				
3. Deck planks are secured				
4. Materials stored away from edge				
TRENCHES, EXCAVATION & SHORING				
1. Competent person on hand				
2. Excavation proper protective system (shored or sloped/benched)				
3. Materials and spoil piles are stored at least two feet from trench				
4. Ladders provided every 25 feet in trench > 4 ft depth				
5. Equipment safe distance from edge of trench or excavation				

DESCRIPTION	YES	NO	N/A	COMMENTS/ACTIONS
6. Warning system in place if operator cannot see edge of trench				
MATERIAL HANDLING & HAZARD COMMUNICATION				
1. Materials are properly stored or stacked				
2. Employees are using proper lifting methods				
3. MSDS/SDS Available/Proper Containers & Labels Noted				
4. Chemical Products properly used and stored per MSDS/SDS				
WELDING & BURNING				
1. Gas cylinders stored upright, securely, and in good condition				
2. Proper separation (20 ft) between fuels & oxygen or fire barrier				
3. Burning/welding/cutting goggles or shields are used				
4. Fire extinguishers are nearby (< 75ft				
5. Equipment & Hoses are in good condition. Flash arrestor equipped.				
RIGGING, HOISTING/LIFTING & PLACING ACTIVITIES (HOISTS, CHAINFALLS, CRANES & FORK TRUCKS)				
1. Proper setup of lifting/hoisting equipment, controlled work zone established, swing radius barricaded & spotter provided				Observed proper lifting of metal debris box by rough terrain fork truck to upper level for load out of copper wire.
2. Operator familiar with load chart (lifting capacity, weight of load <75% Max capacity of lifting/hoisting equipment & rigging components)				
3. Proper communication (radio communication, hand signals)				
4. Equipment & rigging inspected. Hoisting/Rigging by competent person.				
5. Employees kept from under suspended loads				
6. Chains and slings inspected (ANSI rated & properly tagged).				
7. Pick plan available and reviewed with crew				See AHA
8. Competent operator, rigger and flagman				
POWERED EQUIPMENT (Earth Moving, Fork Trucks, Aerial Lifts, ATV's				
1. Equipment Physical Condition, daily inspection current with equipment (Guards, Lights, Glass/Cage, Tires/Tracks, Lights, Frame)				
2. Operational and Safety Controls Functional				
3. Proper Operation and Use Observed				

DESCRIPTION	YES	NO	N/A	COMMENTS/ACTIONS
4. Operators Manual Available and Inspection Check List Available with Equipment				
PERSONAL PROTECTIVE EQUIPMENT				
1. Proper Head Protection used given task (ANSI Rated Hard Hats, Properly Worn)				
2. Proper Eye Protection given task (ANSI Rated Eye and Face Protection)				
3. Required Respirators given task (Proper Use, Care, Training & Medical)				
4. Proper Hearing protection is being worn as required (NR Rating)				
5. High-visibility vests or equivalent high vis clothing are being worn				
6. Proper Hand, Foot, Leg, face & Skin Protection given task (Gloves, Safety Boots, Chaps, Metatarsals, Clothing - FR, Chemical)				
ABATEMENT				
1. Decontamination unit properly installed and functioning (Shower, Filtration, Dirty Room, Clean Room & Waste Out).				
2. Proper negative air established, # units, monometer, backup units, temporary power, lighting, GFCI, exhaust, barricades & waste storage				
3. Containment properly installed (air locks, EMG egress, hazard signs)				
4. Proper abatement methods observed (PPE, Wet Methods & Handling)				
5. Entry exit log in use and properly completed				
6. Supervisors log and inspections current				

Select Site Photos

Select Site Photos Continued

ATTACHMENT II RESERVED: Site-Specific Activity Hazard Analysis

(To be revised and re-inserted as needed)

OSC	**ACTIVITY HAZARD ANALYSIS (AHA)**

Activity: Asbestos removal **Date:**
Project: Tonawanda Coke **Revision:**

Work Plan Summary:

PREREQUISITES		
EQUIPMENT TO BE USED/SITE ENTRY	**INSPECTION REQUIREMENTS**	**TRAINING REQUIREMENTS**
THIS AHA TO BE PREPARED BY SITE HSO BASED ON ACTUAL MEANS & METHODS		

OSC	**ACTIVITY HAZARD ANALYSIS (AHA)**

ACTIVITY	POTENTIAL HAZARD	PROTECTIVE METHODS AND CONTROLS

Special Notes and Instructions: This AHA shall be reviewed by all project employees prior to commencing work and as warranted by; AHA revisions, safe work observations and improvement measures. All employees have the authority to stop work for safety concerns.

AHA Review and Training Acknowledgement:

Employees print name, sign and date in spaces provided below.

PRINT NAME	SIGNATURE	DATE

Activity Hazard Analysis
Project: Tonawanda Coke

Demolition / Dismantling

Note: All printed copies of this document are uncontrolled. It is the responsibility of the user to assure that he has the latest revision by checking the electronic version in the HSE Document Library

Activity: Building/Structure Demolition and Dismantling	**Date:** October 9, 2019
Description of the Work: This AHA outlines the activities, hazards and associated hazard control with respect to Structure Demolition and Dismantling	**OSC Site Supervisors:** **OSC HSE Director:** Donald Dustin **OSC HSO**:
Project:	**Review for Latest Use:** Prior to beginning field work.

PLAN

1. Initial ground clearing / Creating access
    - 1.1. Loose Material Cleanup
    - 1.2. Equipment Sizing
        - 1.2.1. Torch Cutting (option)
        - 1.2.2. Shearing Equipment (option)
        - 1.2.3. Grapple Utilization / Loading for Disposal
2. Demolition/dismantling options
    - 2.1. Rotating Shear Utilization
    - 2.2. Mechanical Dismantling

      Utilizing a hydraulic excavator, the Operator will remove sections of the exterior walls, creating access to the roof structure and/or elevated floor structures. The Operator will continue structure dismantling by breaking free or "dropping" sections of building. Demolition in close proximity to utilities designated to remain in place: as approaching areas of critical wrecking, installation of barricades or protection of features requiring preservation will be put in place, a "drop" area away from the feature will be cleared and isolated, then the building section will be setup to fall or be pushed away from the specific feature.
    - 2.3. Torch Cutting
    - 2.4. Elevated Torch Cutting / Utilization of Aerial Lift. (option)
    - 2.5. Grapple Utilization / Control of Torch Cut Equipment (option)
    - 2.6. Equipment Sizing: Torch Cutting and Shear Utilization (option)
    - 2.7. Grapple Utilization / Sorting and Loading of Materials

Work Activity Sequence	Potential Health, Safety and Environment Hazards	Hazard Controls
Pre task inspection of work area and crew review/ walk through/General Site Conditions.	▪ Slips, Trips, and Falls ▪ Struck by ▪ Skin ▪ Eye Protection ▪ Hand injuries/cuts/bruises	▪ Trained personnel (HASP). ▪ All demolition will be conducted under the direction of an onsite demolition competent person. ▪ Minimum PPE includes hard hat; safety glasses, safety toed boots, high visibility vest/ Leather or cut resistant gloves when handling materials. ▪ Inspect all PPE, tools, and equipment each shift prior to use. ▪ Any sign of thunder, lightning, rain, high winds (>20 mph) immediately terminate all outside work activity, seek shelter and wait for 30 Minutes and for further instruction. ▪ Locate nearest shelter in place facility, eye wash, safety showers, alarm boxes, and point out windsock. ▪ Dress appropriately for conditions. Know the signs and symptoms of heat stress and cold stress. Stay hydrated and take breaks as needed in a cooled or heated area. ▪ Wear hearing protection (earplugs or muffs) if you have to shout to be heard at a distance of 3 feet or less.
Equipment setup inspection and operation	▪ Slips, Trips, and Falls ▪ Struck by ▪ Skin ▪ Eye Hazards ▪ Lacerations ▪ Equipment Failure	▪ Equipment operator to review traffic path of equipment within site to setup area. Inspect for traffic hazards, obstructions, overhead hazards, electric lines, chemical lines, gas lines, and surface hazards (potholes, voids, uneven surfaces, and unstable ground). ▪ Adequate clearance shall be maintained between the equipment and any obstructions. Minimum distance to be maintained from energized power line is 10 feet plus 0.4 feet for every 1 kV over 50 kV. ▪ If equipment becomes electrically energized, personnel shall be instructed not to touch any part of the lift or touch any person who may be in contact with the electrical current. ▪ Conduct a 360 degree walk around inspection of all equipment and vehicles before moving equipment/vehicles. ▪ Minimum of one spotter is required when driving equipment to setup area. Flagman is to assure path is clear and assist operator of equipment. ▪ Only one person shall signal the equipment operator. This person shall be thoroughly familiar with all of the equipment's operation and shall be able to communicate with the equipment operator with the appropriate hand signals. ▪ No personnel shall be permitted on or under the load lifted by equipment or hoist at any time. ▪ Equipment operator to review traffic path (drive path) of equipment within setup area. Inspect for traffic hazards, obstructions, overhead hazards,

		electric lines, chemical lines, gas lines, surface hazards (potholes, voids, uneven surfaces, unstable ground, etc.). ▪ A competent person shall inspect equipment, hoists, and rigging prior to each use. Frequency and method of inspection shall be completed according to manufacturer's specifications. Inspections should also occur after any particularly stressful lifts to all involved components. ▪ Swing area of equipment shall be barricaded. ▪ Accessible areas within the swing radius of the rotating parts of the equipment shall be barricaded to prevent an employee from being struck or crushed by the equipment. ▪ Only the operator may be on the equipment during operation. ▪ Always maintain three points of contact when inspecting equipment components or entering and exiting the equipment. Utilize safety steps and grab bars. Inspect steps and grab bars prior to use. ▪ Equipment operations shall end when wind speed is greater than 20 mph, or less as dictated by the equipment set up and operating conditions/manufacturer's recommendations. ▪ No cell phone use while operating any equipment. ▪ No eating, drinking, or use of tobacco products in equipment or machines. ▪ Inspect all PPE, tools, and equipment each shift prior to use.
Set up barricades and warning signs	▪ Slips, Trips, and Falls ▪ Struck by ▪ Skin ▪ Eye Protection ▪ Fire ▪ Heat Stress ▪ Cold Stress ▪ Lacerations	▪ Perform housekeeping in area of work. ▪ Keep all work areas free of debris and trip hazards. Clear work are periodically throughout the day and at the end of shift. ▪ Controlled work zone designed to keep personnel away from work equipment and other overhead hazards. ▪ RED Barricade tape shall be used to define boundaries of ALL overhead work. ▪ Use temporary lighting as necessary to properly illuminate work area. ▪ Inspect all corded tools and extension cords prior to use. ▪ GFCI with all temporary power and corded tools (at receptacle or attached to cord).. ▪ Utilize proper lifting procedures. Use mechanical means when available to lift material, and if you cannot lift the material mechanically ask for help from another co-worker. If you are unsure ask your supervisor for explanation.
Equipment Operations (demo, loading, and moving)	▪ Slips, Trips, and Falls ▪ Struck by ▪ Skin ▪ Eye Hazards ▪ Fire ▪ Heat Stress ▪ Lacerations	▪ Use only trained Heavy Equipment Operators. ▪ Operation per manufacturer specifications and instructions. o Equipment shall be inspected prior to use, and the inspections shall be documented. ▪ Do not approach or cross the path of any equipment until you have made eye contact with the operator and are granted permission.

		▪ No eating, drinking, or use of tobacco products in or near controlled work zones. ▪ Inspect all PPE, tools, and equipment each shift prior to use. Wear leather gloves if handling sharp or rough edged materials. ▪ Spotter required for all lifted and transported loads. ▪ Tag line with all suspended loads. Personnel are never permitted to work beneath suspended loads. ▪ Adequate clearance will be maintained between lift and any obstructions. Minimum distance to be maintained from energized power line is 10 feet plus 0.4 feet for every 1 kV over 50 kV. ▪ If equipment becomes electrically energized, do not touch any part of the lift or touch any person who may be in contact with the electrical current. ▪ Equipment shall never be left unattended with engine running. ▪ Equipment will be shut off, with buckets or forks lowered when the operator is not on the equipment. ▪ Additional passengers riding on the equipment is prohibited. ▪ All hoisted loads shall be from a level position. ▪ If any fire hazard is determined by supervision a fire watch will be available to watch for ignition of any fire. Fire watch will not have other duties and will remain in area for 30 minutes after hot work is completed. ▪ A hose, fire extinguisher, or other retardant will be available to extinguish these sparks. The work area around will remain wet as another line of defense against fire
Shear and Grapple Operation (optional)	▪ Fall ▪ Struck by ▪ Caught between ▪ Crushed ▪ Dropping materials ▪ Structural failure	• Inspect equipment prior to use. Document inspection. • Only trained and qualified workers will operate equipment. • Have spotter to ensure work area remains clear of employees and to spot potential discharge or any other danger that could occur as result of demolition. • Spotter shall be a safe distance from active demolition. ▪ Demonstrate pinch point areas to employees to ensure their knowledge of this potential. ▪ Cab doors and windows will be closed during demolition. ▪ Clear the tracking path of debris to preclude ends of debris from contacting the cab windows. ▪ Whenever possible, when moving debris, swing boom away from the cab to preclude debris from impacting the cab windows. ▪ Shear/Grapple equipment will be staged a sufficient distance away from any structure that is being dismantled so that if there is a structure failure, the resulting fall will not impact the equipment. ▪ Operator will maintain three points of contact when entering/exiting equipment. ▪ Remove mud or other slippery materials from the soles of shoes before climbing into/on the machine.
Metal cutting operations (optional)	▪ Slips, Trips, and Falls ▪ Struck by	▪ Obtain safe work permit and hot work permit prior to start of work. ▪ Inspect all PPE, tools, and equipment each shift prior to use.

	▪ Respiratory Hazards ▪ Skin ▪ Eye Hazards ▪ Fire ▪ Heat/Cold Stress ▪ Lacerations ▪ Burns ▪ Fall Protection	▪ Take breaks as necessary to prevent heat stress and cold stress. Drink plenty of fluids. ▪ Secure oxygen/LPG tanks. These tanks can become missiles if valves are damaged. ▪ Oxygen and propane (LPG) bottles will never be stored together. Tanks must be a **minimum** of 20 feet apart when stored.. ▪ A cage for each material will be used onsite for cylinder storage and transport. ▪ Flash arrestors shall be in use. ▪ At a minimum – all workers cutting shall wear OSC issued 'burn' jackets (or similar), over long sleeve shirts, pants and leather gloves to prevent burns to the skin. ▪ Proper eye protection shall be worn to protect the eyes from burns (cutting goggles/glasses). Shade 5 or more must be used to prevent burns while using the plasma cutter or torch cutting. ▪ A face shield or equivalent must be worn to prevent hot slag or metal from burning face. ▪ Inspect tools prior to use ▪ Barricade area around metal cutting operations. Also barricade below if on higher levels and ensure personnel on levels below are protected. ▪ Secure ladders and ensure they are 3 feet above upper landing. Inspect ladder prior to use. Do not use a broken or compromised ladder. Step ladders will be used in a full open and locked position. Only one person may use a ladder at a time. Do not carry tools or equipment up a ladder; use a rope to raise and lower tools and equipment. Tie off ladder to prevent movement. Do not lean off side of ladder, reposition the ladder. ▪ If worker is at 6 feet or higher on the ladder and cannot keep a three point stance use an appropriate means of doing the task (scissor lift, rolling platform, etc.). ▪ Monitor drains for LEL prior to commencing hot work. Do not proceed if there are any readings. Cover drains with fire blanket and wet blanket prior to beginning any hot work. ▪ A fire watch will be assigned to watch for ignition of any fire. Fire watches may be needed on multiple levels. ▪ Fire watch will not have any other assigned duties. Fire watch to remain a minimum of 30 minutes after the hot work/torch cutting is completed. A water hose or appropriate fire extinguisher will be available to extinguish these sparks. The work area around will remain wet as another line of defense against fire. ▪ Prior to starting any hot work, the supervisor and the person performing the torch cutting will inspect the area where the hot work will take place to ensure there are no flammable or combustible materials

Refueling equipment Equipment Maintenance	▪ Slips, Trips, and Falls ▪ Struck by ▪ Respiratory Hazards ▪ Skin ▪ Eye Hazards ▪ Fire ▪ Burn ▪ Heat/Colds Stress ▪ Lacerations ▪ Pinch points ▪ Spills	▪ Take breaks as necessary to prevent heat/cold stress. Drink plenty of fluids. ▪ Minimum standard site required PPE for inspection (ANSI approved safety glasses with side shields for eye protection, head protection, hearing protection (>85 dB), hand protection, steel toed boots, and high visibility reflective vests or clothing. Splash shield to be used for fueling. ▪ Portable fuel cans shall be metal (no plastic) with spark arrestor in place. ▪ Fuel cans, oils, greases, etc. shall be properly labeled. ▪ Turn off equipment prior to fueling, ▪ Fueler will remain at nozzle and latch open handle will not be used. ▪ 10 lb. ABC dry chemical fire extinguisher will be available at all times. ▪ If qualified, in the event of a spill, clean-up any material with absorbent pads and report incident to OSC Site Supervision. ▪ Verify areas and operation of safety showers and eyewash. ▪ Pads or drips pans shall be placed under fuel inlet to catch overflow or drips. ▪ Equipment will be shut down during any maintenance activity. ▪ Use mechanical blocking prior to working on equipment. ▪ Place plastic or spill material on the ground/area beneath the equipment if there is any potential for a spill (hydraulic hose repair, install/repair/change out attachments. ▪ Depending on repairs needed, a separate AHA may be required to address maintenance tasks. Review tasks with OSC Safety prior to starting maintenance to ensure tasks are addressed in this AHA.
		▪
Equipment to be used (Equipment to be used in the work activity)	**Inspection Requirements** (Inspection requirements for the work activity)	**Training Requirements** (Training requirements including hazard communication)
Hydraulic Excavators	▪ Daily (before each use) by certified, competent operator. ▪ Document daily	OSC Equipment Operator training documentation
Equipment: Shear/Grapple Hammer Attachments (optional)	▪ Daily (before each use) by certified, competent operator. ▪ Document daily	OSC Equipment Operator training documentation
Aerial Lift (optional)	▪ Daily inspection (before each use) by trained and authorized boom lift operator. ▪ Document daily inspections.	OSC Aerial lift training documentation
Torches/Gas Cylinders & Lines/Extinguisher/Hoses	▪ Daily inspection (before each use) by superintendent, supervisor, and workers.	

	▪ Jobsite inspection by superintendent, and SHSEO	Employee jobsite safety training is done through orientation, daily toolbox safety meetings, STAC cards and as needed on the jobsite
Hand tools	▪ Daily inspection (before each use) by superintendent, supervisor, and workers. Jobsite inspection by superintendent and, SHSO	

	PRINT	**SIGNATURE**	
Site Superintendent:	_____	_____	**Date/Time:** _____
Site HSE Officer:	_____	_____	**Date/Time:** _____
Employee Name(s):	_____	_____	**Date/Time:** _____
	_____	_____	**Date/Time:** _____
	_____	_____	**Date/Time:** _____
	_____	_____	**Date/Time:** _____
	_____	_____	**Date/Time:** _____
	_____	_____	**Date/Time:** _____
	_____	_____	**Date/Time:** _____
	_____	_____	**Date/Time:** _____
	_____	_____	**Date/Time:** _____
	_____	_____	**Date/Time:** _____

ACTIVITY HAZARD ANALYSIS (AHA)
Heavy Equipment Operation

Activity: Heavy Equipment Operation & Dirt Moving
Project: Tonawanda Coke

Date: October 2019
Revision:

PREREQUISITES		
EQUIPMENT TO BE USED	**INSPECTION REQUIREMENTS**	**TRAINING REQUIREMENTS**
Heavy Equipment: Excavators, Loaders, Dozers, Skid Steer, Rollers, etc. 5 – 20 lb. ABC Dry Chemical Fire Extinguishers.	Daily heavy equipment inspection prior to operation. Complete and turn in OSC inspection form to site superintendent. Deficiencies must be corrected prior to operation. Inspect all PPE equipment and extinguishers prior to operation/work.	Trained employees per the site HASP. OSC authorized and competent designated equipment operators

WORK ACTIVITY	POTENTIAL HAZARD	PROTECTIVE AND CONTROL MEASURES
Equipment operations; • Material handling • Grading • Rolling/compacting, • Excavating, moving & loading • Hauling	• Struck by • Roll over • Crush, • Fire/burn • Caught between	• Only OSC authorized and qualified personnel shall operate equipment. • Complete and submit daily inspections on the "Daily Equipment Inspection Checklist." • Back up alarms must be functional. • Equipment in need of repair, defective, or unsafe in any way, shall be taken out of service. Equipment shall not be placed back into service until repaired and inspected by competent person/operator. • UFPO clearance and mark out of underground utilities (see below). • Weather assessment for acceptable working conditions, no high winds, excessive rain, snow, ice or lighting/thunder. • Equipment, setup and operation and inspection by company trained and authorized operator. Step and walk with purpose, watch where you are placing your feet (pick them up and set them down). Use machine grips, rails and footsteps when accessing and leaving equipment (3 points of contact). • Ground personnel shall be kept clear of operating equipment and make eye contact with operator before entering line-of-fire.

		• Spotters must be used when moving into blind-spots or when overhead obstructions are present (see OSC Spotter Policy). • Personnel shall not pass under operating equipment attachments at any time, whether loaded or not. • Loads shall be lowered, and power shut off when equipment is left unattended. • Only stable, safely arranged loads, which do not exceed the equipment capacity, shall be handled.
	• Collision with personnel/property	• The operator shall slow down and sound the horn in areas of reduced visibility. Safe speeds shall be maintained. Speed shall be reduced in high traffic areas and across rough roadways.
	• Driving off elevated surface	• A safe distance shall be maintained from any edge such as berms, platforms or loading docks. If not visible to the operator, a spotter shall be used. • Seatbelts shall be worn when equipment is in operation.
Operation and refueling.	• Fire • Splash/eye contact	• Fire extinguishers shall be mounted on all powered mobile equipment as well as 20 lb ABC dry chemical in refueling area, w/ spill kit. • Splash shield shall be worn when handling liquid fuels. • Equipment shall be shut-off prior to refueling. • Flammable fuel containers must be grounded and bonded before fueling. • No smoking or spark sources shall be allowed near refueling or battery maintenance areas.
	• Electric shock	• No work may be performed within 20 ft of energized electrical lines. • Contact OSC superintendent if any work is to be conducted within 20ft of an energized electrical source.

Hand shoveling to uncover buried lines	• Slip, trip fall • Struck by • Strain • Electrocution • Fire, burn	• Use care during foot travel, and clear the area of slip and trip hazards, cover holes, make use of barricades, and guard rails as appropriate • Use good body mechanics when lifting and manual material handling; keep back straight, lift with legs, don't twist. Observe lifting limits & keep dead lifts < 40 lbs., get help when you need it, use the equipment. • When hand auger is required, use proper hand auguring techniques – do not over-force any auguring – auger using a smooth and easy pace – avoid contacting subsurface materials when not wearing protective clothing – leather work gloves with hand auger – nitrile gloves when touching potentially contaminated materials • UFPO identified lines shall be carefully hand shoveled (remove material in flat and angled layers without straight down picking to damage buried line, excavator digging is prohibited in these areas (UFPO mark outs & flagging/buried line tape).

AHA Review and Training Acknowledgement:

Employees print name, sign and date in spaces provided below.

PRINT NAME	SIGNITURE	DATE

OSC	**ACTIVITY HAZARD ANALYSIS (AHA)** **Enhanced Equipment Decontamination**

Date: October 2019

Activity: Decontamination of Equipment **Revision No.**

Work Plan Summary:
The need for this extended procedure shall be determined by the superintendent in conjunction with the project manager and client representative. Setup up controlled work zone for decontamination work area and containment system for collecting wash and rinse from decontamination process. The following double wash rinse process shall be followed:

1. First Wash – cover with (wipe, brush or spray) phosphate detergent and scrub with brush and pad, 1 minute per square foot
2. First Clean water rinse - 1 gallon per square foot
3. Second wash – cover with hexane solvent (small hand spray bottle or brush), scrub or brush, 1 minute per square foot
4. Second rinse – wet entire surface with clean hexane solvent for 1 minute.

PREREQUISITES		
EQUIPMENT TO BE USED	**INSPECTION REQUIREMENTS**	**TRAINING REQUIREMENTS**
Excavator w/attachments Various hand tools (shovels, rakes) ABS Dry Chemical Fire Extinguisher PPE – ANSI approved hard hat, safety glasses and face protection (face shield). Disposable poly coated tyvek coverall or equivalent disposable protective clothing. Hard toed rubber safety boots or equivalent protective footwear, impermeable cut resistant gloves or equivalent (Kevlar or Nitrile). Hearing protection as needed, Eye wash and washing station.	Work area inspection and work process inspection by competent person. Replace any defective equipment from use. Inspect hand tools, corded tools, GFCI, PPE, and extinguisher daily prior to use. Replace any defective PPE, extinguishers and tools. Daily equipment inspection (per MFG guidelines) prior to use by authorized and trained operator. Repair and or replace any defective equipment prior to use.	Trained operator and laborer. Site required training per SHSP. OSHA applicable training requirements (1926.20 - 1926.21); hazard awareness training, medical clearance, fit test/training for respirator use, and AHA review prior to start of the job. Use of detergent solvent.

WORK ACTIVITY	**POTENTIAL HAZARD**	**PROTECTIVE AND CONTROL MEASURES**
Establish controlled work zone for decontamination work and install collection system.	Slip, trip, fall, struck by, pinched, traffic, heat stress, cold stress, fire, burn, strain.	• Trained/authorized employees and site required modified level D PPE as defined above. Inspect equipment and tools before each use as required. Traffic spotter provided during loading, unloading operations and setup (back alarm equipped vehicles). • Fire extinguisher in immediate work area. Heat stress, drink before you get thirsty, stay well hydrated, heat stress monitoring per OSC HASP. Cold stress (< 30 degrees), dress in layers, recognize early symptoms – blue discolored tone, lips fingernails, shivering, and lethargic behavior. Take frequent breaks out of the cold and seek warm shelter. Maintain the buddy system, no one works alone, always working within line of sight of supervisor, all employees have stop work authority. Observe good body mechanics when lifting get help when needed, use equipment. Keep work area clear and uncluttered, free of debris and trip hazards.

OSC	**ACTIVITY HAZARD ANALYSIS (AHA)** **Enhanced Equipment Decontamination**

Date: October 2019

Activity: Decontamination of Equipment **Revision No.**

WORK ACTIVITY	**POTENTIAL HAZARD**	**PROTECTIVE AND CONTROL MEASURES**
Washing and rinsing 1st and 2nd.	Slip, trip, fall, struck by, pinched, traffic, heat stress, cold stress, chemical, eye, skin, hazards,	• Trained/authorized employees and site required modified level D PPE as defined above. Inspect equipment and tools before each use as required. Product use per SDS (see attached) • All decontamination to be done in prepared location (equipment decon pad or waste decon pad)
Special Notes and Instructions: This AHA shall be reviewed by all project employees prior to commencing work and as warranted by; AHA revisions, safe work observations and improvement measures. All employees have the authority to stop work for safety concerns. Any questions concerning the content of this AHA contact OSC Safety, Donald Dustin 716-560-7542.		

Field Notes:

Date: October 2019

Activity: Decontamination of Equipment

Revision No.

AHA Review and Training Acknowledgement:

Employees print name, sign and date in spaces provided below.

PRINT NAME	SIGNATURE	DATE

ACTIVITY HAZARD ANALYSIS (AHA)

Activity: General Procedures & Mobilization
Project: Tonawanda Coke

Date: October 2019
Revision:

Work Plan Summary: Standard procedures & administrative controls

PREREQUISITES		
EQUIPMENT TO BE USED/SITE ENTRY	**INSPECTION REQUIREMENTS**	**TRAINING REQUIREMENTS**
Project specific equipment: excavators and/or loaders, skid steers, forklifts, dozers, aerial lift	All equipment shall be inspected before use per manufacturer's specification. Inspections shall be documented and maintained on site.	Any equipment operator must be OSC certified competent for each specific class of equipment.
PPE: Hard hat, safety glasses w/side shield, safety shoes with boot covers or rubber over boots in wet conditions, gloves, including barrier/nitrile, hearing protection, splash shield as needed, coated disposable coveralls	PPE shall be inspected daily.	Per OSC HASP

ACTIVITY	POTENTIAL HAZARD	PROTECTIVE METHODS AND CONTROLS
General Construction Related Activities (see task specific AHA for detailed procedures)	Lack of training	• All site workers will have completed OSHA 40-hour HAZWOPER training with yearly updates. • Worker will be trained prior to performing new activities. • OSC will hold daily tailgate safety meetings prior to starting each shift. • New employees will be assigned a mentor per OSC Short Service Employee Program
	Stress/strain when lifting	• Workers will be instructed in safe lifting techniques (i.e., back straight, bend at knees, load close to body, lift smoothly, and do not twist. • Workers will utilize material handling devices such as forklifts, come-along, etc. • Two workers will be required for manual lifts of **over 50 pounds**. • Workers are encouraged to get help with any lift that appears excessive or awkward. • Split heavy loads into smaller loads whenever possible. • Make sure the path of travel is clear prior to the lift.
	Refueling of equipment	• Shutdown equipment during refueling. • Allow equipment to cool down before refueling. • Refuel from OSHA-compliant portable fuel container. • Personnel performing the refueling operation will exercise caution to avoid spillage. • Spill kits will be kept near the refueling operations. • A 10 lb. (minimum) fire extinguisher will be located in the immediate area during refueling operations.
	Injuries associated with hand tools	• Tools shall be carried in a safe and proper manner. • Tools shall not be carried up a ladder by hand; tools should be raised or lowered in a tool bag. • Defective tools shall be tagged immediately and removed from service. • Tools shall be used correctly and only for their intended purpose. • Hand tools to be inspected for mushroomed heads, broken/cracked handles, or loose heads prior to use. • Clean tools after every use when used in the regulated area to minimize contamination
General Construction Related Activities (see task specific AHA for detailed procedures)	Injuries associated with power tools	• Worker will inspect tools and electrical cords before use. • Defective tools will be tagged and removed from service. • A GFCI will protect all electrical cords and tools. • Portable generators of 5kW or larger, if used, will be grounded. • Electrical tools shall be unplugged when changing attachments or performing maintenance. • Electric tools with missing ground prongs, cut or frayed cords shall be removed from service. • Electric tools used in highly conductive locations, such as where employees may contact water, shall be approved for use in these locations. • Pneumatic tools shall be disconnected, and air pressure released before repairs are made. • Extension cords shall be inspected prior to and after use. Damaged cords will be tagged and taken out of service.

	Heavy equipment operations	• Operators are to know where the operations manual is kept for each piece of machinery they will use (typically in job trailer). • Operators will inspect machinery before use and complete the Daily Inspection checklist. • All operators will be certified for equipment operation. • Use three-point contact when climbing onto equipment. • All heavy equipment will be equipped with a functional backup alarm. • Operators will be instructed to maintain visual contact with personnel working in the immediate equipment area. • Passengers will be prohibited from equipment. • Seat belts shall be used in accordance with manufacturer's specifications. • Fire extinguishers will be mounted on all equipment. • Hearing protection will be worn by equipment operators when working in open cab equipment, or when doors/windows are open.	
	Chemical exposure	• SDSs are required for all chemicals brought to the site. • The SDS book will be kept at the field office trailer and will be available to all employees.	
	Tick exposure (Lyme disease)	• Use Permethrin on clothing and exposed skin. Keep skin, especially legs, covered. • Check clothing after being in woods for ticks. Wear light colored clothing to help spot ticks. • Look for ticks attached to skin and report immediately. Ask for removal instructions. • Shower after work and check whole body for ticks. Put clothing in dryer on hi heat for 10 min. • After a bite be aware of any rash (bulls' eye), fever, chills. Report immediately.	
	Airborne dust exposure	• OSC will use wet methods when activities occur to prevent airborne dust from being generated or when visible dust has been generated. If dust become visible, workers will notify the supervisor. • Workers will work-up wind whenever intrusive activities occur to minimize exposure (body or inhalation) to airborne dust. • Workers are to follow good hygiene procedures to prevent skin exposure and to prevent incidental ingestion of any contaminated materials.	
	Ingestion exposure	• Wear barrier gloves (nitrile or latex) when working with contaminated soil, hardware, equipment, or water. • Replace torn or damaged gloves immediately. Use proper technique when removing contaminated gloves • Always wash face and hands before eating, drinking or touching the mouth area.	
	Medical emergencies	• Maintain at least one person on each shift who has first aid, cardiopulmonary resuscitation and bloodborne pathogens training. • Ensure radio or phone communications capabilities area available to summon emergency response or report spills/ releases. • Ensure all personnel are familiar with emergency procedures and egress routes. • For emergency call 911	

OSC	**ACTIVITY HAZARD ANALYSIS (AHA)**

Special Notes and Instructions: This AHA shall be reviewed by all project employees prior to commencing work and as warranted by; AHA revisions, safe work observations and improvement measures. All employees have the authority to stop work for safety concerns.

AHA Review and Training Acknowledgement:

Employees print name, sign and date in spaces provided below.

PRINT NAME	SIGNATURE	DATE

ACTIVITY HAZARD ANALYSIS (AHA)
Grading & Compacting

Activity: Grading & Compacting

Date: October 2019
Revision:

PREREQUISITES		
EQUIPMENT & TOOLS TO BE USED	**INSPECTION REQUIREMENTS**	**TRAINING & PERMIT REQUIREMENTS**
Off-road truck Dozer Water truck Excavator PPE: per HASP	Daily heavy equipment inspection prior to operation. Complete and turn in OSC inspection form to site safety or superintendent. Deficiencies must be corrected prior to operation. Inspect all PPE equipment and extinguishers prior to operation/work.	Employee must be trained in proper use of powered equipment per MFG guidelines, OSC authorized & competent, and meet HASP training requirements.

ACTIVITY	POTENTIAL HAZARD	PROTECTIVE METHODS AND CONTROLS
Inspecting equipment	• Pinch point • Fall • Eye exposure • Animal bite	• Level D PPE including gloves, hard hat, safety glasses with side shields • Maintain 3-points of contact. Use ladder if necessary • Make noise and strike machine before putting hands in tight spaces • Lubrication & fuel use per products SDS

ACTIVITY HAZARD ANALYSIS (AHA)

Grading & Compacting

ACTIVITY	POTENTIAL HAZARD	PROTECTIVE METHODS AND CONTROLS
Compacting/grading	• Line strike • Struck by/crush • Pinch • Fall • Inhaling dust • Collision	• Do not break ground until buried lines have been identified and verified by owner/operator • Stay clear of operating machines and make eye contact with operator when entering line-of-fire • Watch hand placement • Use three points of contact • Alert superintendent/safety if dust becomes excessive • Spot for trucks & machines when blind spots are present. Use high vis-vest • Use caution on slopes, do not allow trucks to dump on unlevel ground, use spotter while grading when necessary
Dust suppression using water truck	• Propelled debris • Splashing • Roll over • Slips • Rolling truck	• Watch for people on foot. They have the right of way. • Don't spray people or vehicles • Use low speed • Use caution when walking on wet muddy surfaces, • Walk area before driving into high grass or when surface isn't visible • Remove key from truck while filling and chock wheels

Special Notes and Instructions: This AHA shall be reviewed by all project employees prior to commencing work and as warranted by; AHA revisions, safe work observations and improvement measures. All employees have the authority to stop work for safety concerns.

AHA Review and Training Acknowledgement:

Employees print name, sign and date in spaces provided below.

PRINT NAME	SIGNATURE	DATE

ACTIVITY HAZARD ANALYSIS
Sediment Control

ACTIVITY: Sediment control
PROJECT: Tonawanda Coke

Date: October 2019
Revision: 0

WORK PLAN SUMMARY: Trench, install, and back fill silt fence, install filter sock, put in stakes

PREREQUISITES		
EQUIPMENT TOOLS TO BE USED	**INSPECTION REQUIREMENTS**	**TRAINING REQUIREMENTS**
Ditchwitch trencher	OSC pre-use inspection	OSC designated competency
Mini excavator	OSC pre-use inspection	OSC designated competency
Hand tools	Visual inspection	
Skid steer	OSC pre-use inspection	OSC designated competency
Mapping		

ACTIVITY/STEP	POTENTIAL HAZARD	PROTECTIVE AND CONTROL MEASURES
Haul material to specific location on site with skid steer	• Pinch points • Struck by / Line of Fire • Slips trips and falls • Loss of elevated load / Rollover • Injury due to lack of training • Equipment noise • Equipment fires • Blind spot injuries • Struck by from excavator • Swing radius • Inclement weather	• Communication between Ground crew and equipment operator • Body placement / know your surroundings / Eye Contact with operator - bucket or blade is locked out and secured. • Seatbelts to be used to manufacturers specifications at all time. No cell phone use or texting at any time while operating equipment. • 3 points of contact to enter - exit equipment • Maintain lowest possible lift prior to travel • OSC operators to be certified / evaluated prior to equipment operation – Certs will be submitted to Honeywell / Jacobs • Hearing protection will be worn by operators in open cab equipment or when doors and windows are propped in the open position • Fire Extinguishers to be equipped and certified in all equipment with monthly Inspections. Additional ABC 20 lb. fire Extinguisher shall be placed near the work area. Monthly inspections to be completed and reviewed • Eye contact and communication with equipment operator and utilize equipment spotter when necessary. Functional backup alert system on all equipment required • Manage non-essential / untrained personnel from entering the swing radius of any moving equipment • Refer to AHA General

ACTIVITY HAZARD ANALYSIS

Sediment Control

ACTIVITY/STEP	POTENTIAL HAZARD	PROTECTIVE AND CONTROL MEASURES
Trenching, digging, hand clearing surfaces for silt fence	• Buried utilities • Equipment failure • Property damage • Obstacles • Subsurface structures, findings • Line of fire • Swing radius • Uneven terrain • Trip hazards • Open trench • Pedestrians • Communication	• ALL PARTIES MUST REVIEW AND UNDERSTAND UTILITY MARK OUT REPORT BEFORE ANY SUBSURFACE WORK BEGANS • Daily Inspection performed before use – while in operation operators will monitor, gauges, and look for indications of failure to hydraulic hoses and guards • Stay clear of all heavy equipment in your work area. If you can relocate do so, until work is complete • Use spotters when the operator's visibility is impaired, or equipment is approaching congested areas or blind corners. As needed. • Review the Blood hound utility information – if the trencher or mini E • Keep clear of moving parts on equipment stay clear of chance of flying debris or line of fire • Do not stand directly in front of the trencher or either side follow all operating • If the chain needs to be cleaned with a shovel shut off the trencher and lock it out • Keep 20 ft away from any part of the equipment • Plan your path, make sure you have proper footing before carrying or walking in uncleared areas • Pick up your feet walk with purpose, remove any trip hazards needed to be safe • Secure your work area with a delineated barrier or spotter to keep unauthorized personnel out • Personnel not covered under the AHA are not permitted in the work area • Use your radios, keep everyone aware of upcoming hazards you have prepared for during your task.
Installing silt fence	• Splinters • Pinch points • Sprains and strains • Ergonomics • Trip hazards • punctures • Tight/remote areas • Damaged materials • Biologicals	• Wear leather gloves while handling wooden stakes • Watch hand placement when swinging hammer to post • Position yourself correctly with firm grip on hammer • Keep feet planted firmly use fabric to hold stake in place • Again, plan your path keep footing clear while carrying materials or tools • Stakes have pointed edges keep them away from your body and keep points to the ground • Give yourself as much space as possible when swinging hammer if area is congested take small swings with the hammer • Weathered or rotten stakes may be in your bundle please keep an eye out for them replace when needed or discard bundle and notify supervisor immediately

ACTIVITY HAZARD ANALYSIS

Sediment Control

ACTIVITY/STEP	POTENTIAL HAZARD	PROTECTIVE AND CONTROL MEASURES
Backfilling trench line/burying silt fabric	• Incorrect install • Sprains and strains • Dehydration • Trips and falls • House keeping	• Make sure the silt fence stakes are installed correctly, water flow goes against the fabric then stakes are driven behind • Proper ergonomics when shoveling fill material back into trench, use equipment properly and when possible let the machine do the work • Take breaks make sure you stay hydrated, watch out for your fellow man ask when the last time was you had a water. • Keep all tools and equipment clear and free of debris, your work area must be clutter free as well. Housekeeping is a must with all task
Refueling Equipment	• Ignition source • Fire • Leaks due to faulty container • Slips, Trips, Falls • Spills	• Shutdown equipment during refueling. • Allow equipment to cool down before refueling. • Refuel from OSHA-compliant portable fuel container. • Personnel performing the refueling operation will exercise caution to avoid spillage. • Spill kits will be kept near the refueling operations. • Prior to fueling, personnel shall bond the heavy equipment to fueling equipment. • A minimum 10 lb. (minimum) fire extinguisher will be located in the immediate area during refueling • Spill kit

ACTIVITY HAZARD ANALYSIS
Sediment Control

SPECIAL NOTES AND INSTRUCTIONS: This AHA shall be reviewed by all project employees prior to commencing work and as warranted by; AHA revisions, safe work observations and improvement measures. All employees have authority to stop work for safety concerns.

AHA REVIEW AND TRAINING ACKNOWLEDGEMENT

DATE	NAME	SIGNATURE

ACTIVITY HAZARD ANALYSIS (AHA)

Activity: Soil/debris loadout **Date: October 2019**
Project: Tonawanda Coke **Revision:**

Work Plan Summary: Load soil material into trucks for off-site disposal

PREREQUISITES		
EQUIPMENT TO BE USED/SITE ENTRY	**INSPECTION REQUIREMENTS**	**TRAINING REQUIREMENTS**
Excavators equipped with bucket	All equipment shall be inspected before use per manufacturer's specification. Inspections shall be documented and maintained on site.	Any equipment operator must be OSC certified competent for each specific class of equipment.
Over-the-road haul trucks (subcontractor). Trucks to be equipped with ground level tarping system and pre-lined	Trucks shall be inspected before leaving site for lose material that may become dislodged off site.	Each driver upon initial site entry shall be instructed on safety requirements, signals, and traffic controls
PPE: Hard hat, high visibility clothing, safety glasses w/side shield, safety shoes with boot covers or rubber over boots in wet conditions, gloves, hearing protection.	PPE shall be inspected daily.	PPE basic training

ACTIVITY HAZARD ANALYSIS (AHA)

ACTIVITY	POTENTIAL HAZARD	PROTECTIVE METHODS AND CONTROLS
Truck arrives on-site and goes through bed lining inspection	Collision with object Collision with pedestrian Driver distraction/injury Liner not installed properly Fall	• Site shall be laid out in advance for truck maneuvering and traffic controls • All site personnel shall have hi-visibility clothing • Driver shall be instructed on site rules; remain in truck except designated area, PPE, signals • OSC to inspect bed for proper liner installation • Maintain 3-points of contact on ladder during inspection
Truck loading	Collision with object Material spill	• Spotter to direct truck as needed (i.e., blind spot, tight maneuvering/quarters) • Excavator operator to signal truck for correct position and when load is completed
Truck tarping	Fall Struck by	• Only ground-level tarp system to be used. Driver to maintain 3-points of contact entering & exiting cab. • Tarping and pre-departure inspection only to be done in designated area •
		•

Special Notes and Instructions: This AHA shall be reviewed by all project employees prior to commencing work and as warranted by; AHA revisions, safe work observations and improvement measures. All employees have the authority to stop work for safety concerns.

AHA Review and Training Acknowledgement:

Employees print name, sign and date in spaces provided below.

PRINT NAME	SIGNATURE	DATE

ATTACHMENT III: Safety Data Sheets

Safety Data Sheet (SDS)

Date Prepared/Revised: 1/6/2015 Version no.: 02 Supersedes: (9/11/2014)

1.) Identification of the Mixture and of the Company

Product identifier**: Aervoe Construction Marking Paint - Aerosol**

Product name: **Construction Marking Paint**

Fluorescent Colors	Non-Fluorescent Colors	16 oz. I.A.C.
246 Red	251 Black	261 Red
247 Orange	252 Yellow	262 Yellow
248 Green	254 Blue	263 Blue
249 Pink	255 White	265 Orange
250 Blue	256 Red	267 White
253 Yellow	257 Orange	270 Fluorescent Red
283 Red-Orange	258 Hi Vis Yellow	272 Fluorescent Orange
	259 Green	274 Fluorescent Green
	260 Purple	275 Fluorescent Red/Orange
		279 Fluorescent Pink

Relevant identified uses of the substance: Designed to adhere to most surfaces, including pavement, gravel, and soil.
Uses advised against: Do not apply if surface is wet, or if rain is imminent within 4 hours of application.

CAS No:	**Not Applicable (mixture)**
EC No:	**Not Applicable (mixture)**
Index No:	**Not Applicable (mixture)**
Manufacturer/Supplier:	**Aervoe Industries Incorporated**
Street address/P.O. Box:	**1100 Mark Circle**
Country ID/Postcode/Place	**Gardnerville, Nevada 89410**
Telephone number:	**001 (0) 1-775-782-0100**
e-mail:	**mailbox@aervoe.com**
National contact:	**Aervoe Industries Incorporated**
For Product Information:	00**1 (0) 1-800-227-0196**
Emergency telephone number:	**001 (0) 1-800-424-9300 (CHEMTREC – 24 hrs)**
	English Language Service

2. Hazards identification

Classifications

Physical Hazards:	Aerosol - Category 1
	Flam. Gas. 1
	Press. Gas
	Flam. Liq. 2
Health Hazards:	
	Car 1B
	Muta 1B
	Asp Tox. 1

Eye Irrit. - 2
Rep. 2
Skin. Irr. 2
STOT SE3

Environmental Hazards: Aquatic Chronic 2

Labeling

Signal Word: Danger

Hazard Statements:
H220 – Extremely flammable gas
H222 – Extremely flammable aerosol
H225 – Highly flammable liquid and vapour.
H229 - Pressurized container: may burst if heated
H304 – May be fatal if swallowed and enters airways.
H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H336 – May cause drowsiness or dizziness.
H340 – May cause genetic defects
H350 – May cause cancer
H361 – Suspected of damaging fertility or the unborn child .
H373 – May cause damage to organs through prolonged or repeated exposure
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements:
P101 - If medical advice is needed, have product container or label at hand
P102 - Keep out of reach of children
P103 - Read label before use
P210 - Keep away from heat/sparks/open flames/hot surfaces - no smoking
P211 - Do not spray on an open flame or other ignition source
P251 - Pressurized container: Do not pierce or burn, even after use
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P262 - Do not get in eyes, on skin, or on clothing
P264 - Wash … thoroughly after handling
P280 - Wear protective gloves/eye protection/face protection

P303+P361+P353 - If on skin or hair, remove/takeoff immediately all contaminated clothing. Rinse skin with water/shower.
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50ºC/122ºF
P501 - Dispose of contents/container in accordance with local/regional/national/international regulation

Date Prepared/Revised: 1/6/2015 Version no.: 02 Supersedes: (9/11/2014)

Symbols/Pictograms:

3. Composition / Information on Ingredients

Composition

Chemical	Synonyms	CAS Number	EINECS Number	Weight Percent	Hazard Category	H-Code
Hydrocarbon Propellant	LPG	68476-86-8	270-705-8	10-30%	Press. Gas Flam. Gas 1 Carc. 1B Muta. 1B	H220 H350 H340
Hexane	n-Hexane	110-54-3	203-777-6	5-10%	Flam. Liq. 2 Repr. 2 Asp. Tox. 1 STOT RE 2 * Skin Irrit. 2 STOT SE 3 Aquatic Chronic 2	H225 H361f *** H304 H373 ** H315 H336 H411
Aliphatic Petroleum Distillates	Solvent Naphtha	64742-89-8	265-192-2	5-10%	Carc. 1B Muta. 1B Asp. Tox. 1	H350 H340 H304
Aliphatic Petroleum Distillates	Solvent Naphtha	64742-88-7	265-191-7	1-5%	Asp. Tox. 1	H304
Aliphatic Petroleum Distillates	Solvent Naphtha	8032-32-4	232-453-7	1-5%	Carc. 1B Muta. 1B Asp. Tox. 1	H350 H340 H304
Non-fluorescent colors also contain:						
Acetone	Propanone	67-64-1	200-662-2	1-5%	Flam. Liq. 2 Eye Irrit. 2 STOT SE 3	H225, H319, H336

Other Product Information

Chemical Identity: Mixture

4.) First Aid Measures

General Advice:	If symptoms persist, always call a doctor.
Inhalation First Aid:	Remove victim to fresh air and provide oxygen if breathing is difficult. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention immediately.
Skin Contact First Aid:	Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.
Eye Contact First Aid:	If contact with eyes, immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids open. Get medical attention immediately.
Ingestion First Aid:	If swallowed, wash out mouth with water provided the person is conscious. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Most Important Symptoms/Effects:	Exposure may cause slight irritation to the skin, eyes, and respiratory tract. Excessive exposure may cause central nervous system effects.

5. Fire Fighting Measures

Flammable Properties:	Aerosol
Auto Ignition Temperature:	Not Available
Suitable extinguishing media:	Carbon dioxide, dry chemical, water spray.
Unsuitable extinguishing media:	None known
Special hazards arising from the substance or mixture:	None known
Hazardous combustion products:	Carbon dioxide, Carbon monoxide
Fire & Explosion Hazards:	Closed Containers may rupture due to the buildup of pressure from extreme temperatures.
Precautions for fire-fighters:	Use water spray to cool containers exposed to heat or fire to prevent pressure build up. In the event of a fire, wear full protective clothing and NIOSH- approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

PERSONAL PRECAUTIONARY MEASURES:

1) Follow personal protective equipment recommendations found in section 8.
2) Maintain adequate ventilation.

SPILL CLEAN-UP PROCEDURES:
1.) Evacuate unprotected personnel from the area.
2.) Remove sources of ignition if safe to do so.
3.) Pickup spilled materials using non-sparking tools and place in an appropriate container for disposal.
4.) Contain spill to prevent material from entering sewage or ground water systems.
5.) Always dispose of waste materials in accordance with all EU, National and Local Regulations.

7. Handling and Storage

Handling:

Flammable Aerosol, use in a well ventilated area.
Do not use near sources of ignition.
Do not to eat, drink and smoke while working with this material.
Wash hands after use.

Conditions for safe storage, including any incompatibilities:

Store out of direct sunlight.
Storage Temperature: 32° to 120°F (0° to 49°C).
No known incompatibilities.

8. Exposure Controls / Personal Protection

Appropriate engineering controls:
Ensure adequate ventilation. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.
Keep away from sources of ignition.
Take precautionary measures against static discharge.

Personal Protection:
Eye & face protection devices such as safety glasses, safety goggles or face shield are recommended.

Skin protection
Wear the appropriate protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection:
Use only in an adequately ventilated area. For unknown vapor concentrations use a positive-pressure, pressure-demand, self-contained breathing apparatus (SCBA).

Hazardous Ingredient	CAS Number	ACGIH TLV (TWA)	ACGIH TLV (STEL)	OSHA PEL (TWA)	OSHA PEL (STEL)

Aliphatic Petroleum Distillates	64742-88-7	N/AV	N/AV	N/AV	N/AV
Aliphatic Petroleum Distillates	64742-89-8	N/AV	N/AV	N/AV	N/AV
Hydrocarbon Propellant	68476-86-8	N/AV	N/AV	N/AV	N/AV
Aliphatic Petroleum Distillates	8032-32-4	200ppm	300ppm	200ppm	N/AV
Hexane	110-54-3	50ppm	N/AV	500ppm	N/AV
Acetone	67-64-1	500ppm	750ppm	1000ppm	N/AV

***Values are based on the 2014 Guide to Occupational Exposure Values by ACGIH**

9. Information on Basic Physical and Chemical Properties

Appearance: Color varies by product.	Odor: Hydrocarbon Odor
Odor Threshold: N/AV	pH: Not Applicable (solvent Base)
Melting Point: N/AV	Freezing Point: N/AV
Initial Boiling Point: N/AV	Boiling Point Range: N/AV
Flash Point: <0° F (-18° C)	Evaporation Rate: Faster than n-Butyl Acetate
Flammability Solid/Gas: Flammable gas	LEL: 0.9% UEL: 13%
Vapor Pressure: N/AV	Vapor Density: Heavier Than Air
Relative Density: N/AV	Solubility: Negligible
Partition Coefficient: n-octanol/ water: N/AV	Auto-ignition Temperature: N/AV
Decomposition Temperature: N/AV	Viscosity: N/AV
Explosive Properties: N/AV	Oxidizing Properties: N/AV

10. Stability & Reactivity

Possibility of hazardous reactions: Hazardous polymerization will not occur under normal conditions
Chemical stability: Stable under normal conditions
Conditions to avoid: Heat and ignition sources
Incompatible materials: Strong Oxidizing Agents
Hazardous decomposition products: Will not occur

11. Toxicological Information

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart and blood

Routes of exposure: Eyes, skin, ingestion, and/or inhalation

Acute toxicological data: (Acetone) Acute oral LD50: 5800mg/kg(rat)

	(Acetone) LC50: 21000 ppm / 8 hr (rat) (Hexane) LD50: 2870 mg/kg (Rat-Oral)
Eye irritation data:	N/AV
Skin irritation/sensitization/absorption data:	N/AV
Reproductive toxicity data:	N/AV
Mutagenicity data:	Muta 1B
Symptoms associated with physical contact:	N/AV
Acute/chronic effects from short/long term exposure:	Irritating to skin. Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis. Not expected to be a skin sensitizer.
Known reportable carcinogens via the following agencies:	
NTP:	N/AV
IARC:	IARC3:Classification not possible from current data
OSHA:	TLV-A4

* Petroleum distillates may contain chemical carcinogens in limited quantities (< 0.01%). These quantities are determined by the supplier/fraction/purity of the distillate during the manufacturing process. Chemicals that may be present within distillates are listed on California's prop 65 list such as ETHYLBENZENE, BENZENE, and TOLUENE.

12. Ecological Information

Ecotoxicity: **No Data Available**
Persistence and degradability: **No Data Available**
Bioaccumulative potential: **No Data Available**
Mobility in soil: **No Data Available**
Results of PBT and vPvB assessment: **No Data Available**
Other adverse effects: **No Data Available**

13. Disposal Considerations

Waste Disposal: Dispose of material in accordance with EU, national and local requirements. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or

laws governing your location.
Product / Packaging disposal: Dispose of packaging in accordance with federal, state and local requirements, regulations and/or laws governing your location.

14. Transportation Information

US DOT

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1950	Aerosols	2.1	Not Applicable	Not Applicable	Reference 49 CFR 172.101

IMDG

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1950	Aerosols	2.1	Not Applicable	Not Applicable	Reference IMDG code part 3

IATA:

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1950	Aerosols, Flammable	2.1	Not Applicable	Not Applicable	Reference IATA Dangerous Goods Regulation

15. Regulatory Information

Workplace classification:
This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200). The Occupational Safety and Health Administration's interpretation of the product's hazard to workers.
SARA Title 3:
Section 311/312 Categorizations (40 CFR 372): This product is a hazardous chemical under 29 CFR 1910.1200, and is categorized as an immediate and delayed health, and flammability physical hazard. Superfund Amendment and Reauthorization Act (SARA) category. SARA requires reporting any spill of any hazardous substance.
TSCA status: All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.
WHMIS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the (M)SDS contains all of the information required by the CPR.
PROP 65 (CA): WARNING: This product may contain chemicals know to the state of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

Safety Data Sheet (SDS)

Date Prepared/Revised: 1/6/2015 Version no.: 02 Supersedes: (9/11/2014)

This SDS has been completed in accordance with GHS Rev04 (2011): U.S OSHA, CMA, ANSI, Canadian WHMIS standards, and European Directives.

Date of Preparation/Revision: 1-6-2015
Supersedes: (9/11/2014)

To the best of our knowledge, the information contained herein is believed to be accurate. However, the above data does not imply any guarantee or warranty of any kind, expressed or implied. The final determination of the suitability of any material is the sole responsibility of the user. All materials made present un-known hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee these are the only hazards existing.

Safety Data Sheet

Material Name: Diesel Fuel, All Types

SDS No. 9909
US GHS

Synonyms: Ultra Low Sulfur Diesel; Low Sulfur Diesel; No. 2 Diesel; Motor Vehicle Diesel Fuel; Non-Road Diesel Fuel; Locomotive/Marine Diesel Fuel

* * * Section 1 - Product and Company Identification * * *

Manufacturer Information

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS
Emergency # 800-424-9300 CHEMTREC
www.hess.com (Environment, Health, Safety Internet Website)

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Flammable Liquids - Category 3
Skin Corrosion/Irritation – Category 2
Germ Cell Mutagenicity – Category 2
Carcinogenicity - Category 2
Specific Target Organ Toxicity (Single Exposure) - Category 3 (respiratory irritation, narcosis)
Aspiration Hazard – Category 1
Hazardous to the Aquatic Environment, Acute Hazard – Category 3

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

DANGER

Hazard Statements

Flammable liquid and vapor.
Causes skin irritation.
Suspected of causing genetic defects.
Suspected of causing cancer.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.
Harmful to aquatic life.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep container tightly closed.
Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and forearms thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/mist/vapours/spray.

Response

In case of fire: Use water spray, fog or foam to extinguish.
IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
If swallowed: Immediately call a poison center or doctor. Do NOT induce vomiting.
IF exposed or concerned: Get medical advice/attention.

Storage

Store in a well-ventilated place. Keep cool.
Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
68476-34-6	Fuels, diesel, no. 2	100
91-20-3	Naphthalene	<0.1

A complex mixture of hydrocarbons with carbon numbers in the range C9 and higher.

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

First Aid: Skin

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or with waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

First Aid: Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, and other gaseous agents.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Handle as a combustible liquid. Keep away from heat, sparks, excessive temperatures and open flame! No smoking or open flame in storage, use or handling areas. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks."

Incompatibilities

Keep away from strong oxidizers.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

Fuels, diesel, no. 2 (68476-34-6)

ACGIH: 100 mg/m3 TWA (inhalable fraction and vapor, as total hydrocarbons, listed under Diesel fuel)
Skin - potential significant contribution to overall exposure by the cutaneous route (listed under Diesel fuel)

Naphthalene (91-20-3)

ACGIH: 10 ppm TWA
15 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 10 ppm TWA; 50 mg/m3 TWA
NIOSH: 10 ppm TWA; 50 mg/m3 TWA
15 ppm STEL; 75 mg/m3 STEL

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Personal Protective Equipment: Hands

Gloves constructed of nitrile, neoprene, or PVC are recommended.

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Clear, straw-yellow.	**Odor:**	Mild, petroleum distillate odor
Physical State:	Liquid	**pH:**	ND
Vapor Pressure:	0.009 psia @ 70 °F (21 °C)	**Vapor Density:**	>1.0
Boiling Point:	320 to 690 °F (160 to 366 °C)	**Melting Point:**	ND
Solubility (H2O):	Negligible	**Specific Gravity:**	0.83-0.876 @ 60°F (16°C)
Evaporation Rate:	Slow; varies with conditions	**VOC:**	ND
Percent Volatile:	100%	**Octanol/H2O Coeff.:**	ND
Flash Point:	>125 °F (>52 °C) minimum	**Flash Point Method:**	PMCC
Upper Flammability Limit (UFL):	7.5	**Lower Flammability Limit (LFL):**	0.6
Burning Rate:	ND	**Auto Ignition:**	494°F (257°C)

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible Products

Keep away from strong oxidizers.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

Harmful if swallowed.

B: Component Analysis - LD50/LC50

Naphthalene (91-20-3)

Inhalation LC50 Rat >340 mg/m3 1 h; Oral LD50 Rat 490 mg/kg; Dermal LD50 Rat >2500 mg/kg; Dermal LD50 Rabbit >20 g/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Contact with eyes may cause mild irritation.

Potential Health Effects: Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

Potential Health Effects: Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This material has been positive in a mutagenicity study.

Carcinogenicity

A: General Product Information

Suspected of causing cancer.

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

B: Component Carcinogenicity

Fuels, diesel, no. 2 (68476-34-6)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans (listed under Diesel fuel)

Naphthalene (91-20-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)
IARC: Monograph 82 [2002] (Group 2B (possibly carcinogenic to humans))

Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

Specified Target Organ General Toxicity: Single Exposure

This product is not reported to have any specific target organ general toxicity single exposure effects.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ general toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Fuels, diesel, no. 2 (68476-34-6)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	35 mg/L [flow-through]	

Naphthalene (91-20-3)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	5.74-6.44 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	1.6 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	0.91-2.82 mg/L [static]	
96 Hr LC50 Pimephales promelas	1.99 mg/L [static]	

96 Hr LC50 Lepomis macrochirus	31.0265 mg/L [static]
72 Hr EC50 Skeletonema costatum	0.4 mg/L
48 Hr LC50 Daphnia magna	2.16 mg/L
48 Hr EC50 Daphnia magna	1.96 mg/L [Flow through]
48 Hr EC50 Daphnia magna	1.09 - 3.4 mg/L [Static]

Persistence/Degradability
No information available.

Bioaccumulation
No information available.

Mobility in Soil
No information available.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions
See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging
Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

DOT Information
Shipping Name: Diesel Fuel
NA #: 1993 **Hazard Class:** 3 **Packing Group:** III
Placard:

* * * Section 15 - Regulatory Information * * *

Regulatory Information

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Naphthalene (91-20-3)

CERCLA: 100 lb final RQ; 45.4 kg final RQ

SARA Section 311/312 – Hazard Classes

Acute Health	Chronic Health	Fire	Sudden Release of Pressure	Reactive
X	X	X	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product may contain listed chemicals below the de minimis levels which therefore are not subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right- To-Know Act (EPCRA) of 1986 and of 40 CFR 372. If you may be required to report releases of chemicals listed in 40 CFR 372.28, you may contact Hess Corporate Safety if you require additional information regarding this product.

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Fuels, diesel, no. 2	68476-34-6	No	No	No	Yes	No	No
Naphthalene	91-20-3	Yes	Yes	Yes	Yes	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Additional Regulatory Information

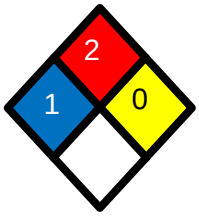
Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Fuels, diesel, no. 2	68476-34-6	Yes	DSL	EINECS
Naphthalene	91-20-3	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

NFPA® Hazard Rating

Health	1
Fire	2
Reactivity	0



HMIS® Hazard Rating

Health	1*	Slight
Fire	2	Moderate
Physical	0	Minimal
		*Chronic

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; AS = Standards Australia; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NOHSC = National Occupational Health & Safety Commission; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

Literature References

None

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet

EnviroBlend
Metal Waste Treatment

SAFETY DATA SHEET

Issue Date 02-Dec-2014 **Revision Date** 20-April-2017 **Version** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Product Name ENVIROBLEND® SP

Other means of identification
Product Code ENVIROBLEND® SP
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Heavy metals remediation product.
Uses advised against No information available

Details of the supplier of the safety data sheet
Manufacturer Address
Premier Magnesia, LLC, 75 Giles Place, Waynesville, NC 28786

Emergency telephone number
Company Phone Number 828-452-4784
24 Hour Emergency Phone Number Chemtrec 1-800-424-9300
Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
Product dust is classified as a "nuisance particulate, not otherwise regulated" as specified by ACGHI and OSHA. The excessive, long-term inhalation of mineral dusts may contribute to the development of industrial bronchitis, reduced breathing capacity, and may lead to the increased susceptibility to lung disease. This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Granular **Physical state** Solid **Odor** Odorless

Causes mild irritation to the eyes
Low toxicity by skin contact.
Chronic overexposure by inhalation of airborne particulate may irritate upper respiratory system as well as the throat.
Ingestion is an unlikely route of exposure. If ingested in large amounts it may cause irritation, nausea, vomiting, diarrhea, abdominal pain, black stool, pink urine, coma and possibly death.

Hazards not otherwise classified (HNOC)
Other Information
Unknown Acute Toxicity 100% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Common name Magnesium Oxide # 1309-48-4/Magnesium Carbonate CAS# 546-93-0
Synonyms None

Chemical Name	CAS No.	Weight-%	Trade Secret
Magnesium Oxide/Magnesium Carbonate	1309-48-4/546-93-0	50/50	

4. FIRST AID MEASURES

First aid measures

Eye contact Rinse thoroughly with plenty of water, also under the eyelids. (Get medical attention immediately if irritation persists.).

Skin Contact Wash skin with soap and water.

Inhalation Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately.

Ingestion Not an expected route of exposure. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Immediate medical attention is required.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Water reacts with magnesium oxide producing magnesium hydroxide and heat. Do not allow water to get inside containers: reaction with water will cause product to swell, generate heat, and burst its container. If contact is unavoidable, use sufficient water to safely absorb the heat that may be generated.

Specific hazards arising from the chemical
No information available.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Carefully clean up and place material into a suitable container, being careful to avoid creating excessive dust. If conditions warrant, clean up personnel should wear approved respiratory protection, gloves and goggles to prevent irritation from contact and/or inhalation.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Avoid generation of dust. Do not allow contact with water.

Incompatible materials Interhalogens, bromine pentafluoride, chlorine trifluoride. Contact with aluminum metal may release hydrogen gas. Incandescent reaction wtih phosphorus pentachloride. Water will react with magnesium oxide to form magnesium hydroxide and release heat and steam.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Magnesium Oxide 1309-48-4	TWA: 10 mg/m³ inhalable fraction	TWA: 15 mg/m³ fume, total particulate (vacated) TWA: 10 mg/m³ fume and total particulate	IDLH: 750 mg/m³ fume

NIOSH IDLH Provide workers with NIOSH approved respirators in accordance with requirements of 29 CFR 1910. 134 for level of exposure incurred.

Appropriate engineering controls

Engineering Controls Provide sufficient ventilation, in both volume and air flow patterns to control mist/dust concentrations below allowable exposure limits. Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes. The use of eye protection is recommended.

Skin and body protection The use of eye protection, gloves and long sleeve clothing is recommended.

Respiratory protection Provide workers with NIOSH approved respirators in accordance with requirements of 29 CFR 1910. 134 for level of exposure incurred.

General Hygiene Considerations Wash hands thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Solid

Appearance	Granular	**Odor**	Odorless
Color	Brownish	**Odor threshold**	No information available

Property	**Values**	**Remarks • Method**
pH	10-11	
Melting point/freezing point	>2100 °C >3800 °F	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	Not Applicable	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	3.56	
Water solubility	Slight <1%	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	70-90 lb/ft3

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid
Extremes of temperature and direct sunlight.

Incompatible materials
Interhalogens, bromine pentafluoride, chlorine trifluoride. Contact with aluminum metal may release hydrogen gas. Incandescent reaction wtih phosphorus pentachloride. Water will react with magnesium oxide to form magnesium hydroxide and release heat and steam.

Hazardous Decomposition Products
Heat and steam.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Magnesium Oxide # 1309-48-4

Inhalation Inhalation of fume (not MgO dust particulate) produced upon decomposition of magnesium compounds can produce a febrile reaction and leukocytosis in humans.

Eye contact No data available.

Skin Contact No data available.

Ingestion No data available.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.
Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 100% of the mixture consists of ingredient(s) of unknown toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available on any adverse effects of this material on the environment

100% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes This produce does not exhibit any characteristics of a hazardous waste. The product is suitable for landfill disposal once the free water component is evaporated or absorbed by a suitable absorbent (earth). Follow all applicable federal, state and local regulations for safe disposal.

Contaminated packaging Do not reuse container.

14. TRANSPORT INFORMATION

DOT Not regulated Not regulated by DOT as a hazardous material. No hazard class, label or placard required, no UN or NA number assigned.

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

Chemical Name	TSCA	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Magnesium Oxide	X	X	X	X	X	X	X	X

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
This product does not contain any substances reportable under Sections 302, 304 or 313. Sections 311 and 312 do apply. (Routine Reporting and Chemical Inventories)

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product does not contain chemicals known to the State of California to cause cancer, birthdefects or other reproductive toxins.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania

Magnesium Oxide 1309-48-4	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

NFPA	**Health hazards** 1	**Flammability** 0	**Instability** 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** 0	**Flammability** 0	**Physical hazards** 0	**Personal protection** X

Issue Date 02-Dec-2014
Revision Date 20-April-2017
Revision Note
No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Conforms to HazCom 2012/United States

SAFETY DATA SHEET

131 Neutra™ Fuel Stabilizer

Section 1. Identification

GHS product identifier : 131 Neutra™ Fuel Stabilizer

Other means of identification : Not available.

Product type : Liquid.

Identified uses

Fuel additive for gasoline, diesel and biodiesel fuels.

Supplier's details :

Schaeffer Mfg. Company
102 Barton Street
Saint Louis, Missouri 63104
Tel: 314-865-4100
Fax: 314-865-4107
Toll Free: 1-800-325-9962
E-Mail: safety@schaefferoil.com
Web: http://www.schaefferoil.com

Emergency telephone number (with hours of operation) : +1 314 865-4105 (24-hour response number)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Flammable liquid and vapor.
Causes serious eye irritation.
Causes skin irritation.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Wash hands thoroughly after handling.

Section 2. Hazards identification

Response : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store in a well-ventilated place. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Butan-1-ol	10 - 30	71-36-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Continue to rinse for at least 20 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation.

Ingestion : Irritating to mouth, throat and stomach.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No known significant effects or critical hazards.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet or water-based fire extinguishers.

Specific hazards arising from the chemical : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Butan-1-ol	**ACGIH TLV (United States, 6/2013).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 4/2013). Absorbed through skin.** CEIL: 150 mg/m³ CEIL: 50 ppm **OSHA PEL (United States, 2/2013).** TWA: 300 mg/m³ 8 hours. TWA: 100 ppm 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Clear.

Odor : Amine-like.

Odor threshold : Not available.

pH : 9.5 to 10.7

Melting point/ Dropping Point : Not available.

Boiling point : 64.44 to 92.22°C (148 to 198°F)

Flash point : Closed cup: 38°C (100.4°F) [Pensky-Martens.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : 0.2 kPa (1.5 mm Hg) [room temperature]

Vapor density : >1 [Air = 1]

Relative density : 0.896

Solubility : Insoluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials and reducing materials.
Slightly reactive or incompatible with the following materials: organic materials, acids and alkalis.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Butan-1-ol	LC50 Inhalation Vapor LD50 Dermal LD50 Oral	Rat Rabbit Rat	24000 mg/m³ 3400 mg/kg 790 mg/kg	4 hours - -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Butan-1-ol	Eyes - Severe irritant Skin - Moderate irritant Eyes - Severe irritant	Rabbit Rabbit Rabbit	- - -	0.005 mL 24 hours 20 mg 24 hours 2 mg	- - -

Sensitization

There is no data available.

Carcinogenicity

There is no data available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Butan-1-ol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation.

Ingestion : Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No known significant effects or critical hazards.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No known significant effects or critical hazards.

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral Dermal	7232.4 mg/kg 31127 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Butan-1-ol	Acute EC50 1983000 to 2072000 µg/l Fresh water Acute LC50 1910000 µg/l Fresh water	Daphnia - Daphnia magna Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	48 hours 96 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Butan-1-ol	1	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Butan-1-ol	71-36-3	Listed	U031

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1993	FLAMMABLE LIQUIDS, N. O.S. (Contains Butan-1-ol) RQ (Butan-1-ol)	3	III		This product may be re-classified as "Combustible Liquid," unless transported by vessel or aircraft. Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials in package sizes less than the product reportable quantity. **Reportable quantity** At all time please check for possible RQ (Reportable Quantities)
IMDG Class	UN1993	FLAMMABLE LIQUIDS, N. O.S. (Contains Butan-1-ol)	3	III		-
IATA-DGR Class	UN1993	FLAMMABLE LIQUIDS, N. O.S. (Contains Butan-1-ol)	3	III		-

PG* : Packing group

AERG : 128

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: Naphthalene

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 307: Phenol; Naphthalene; Ethylbenzene

Clean Water Act (CWA) 311: P-cresol; M-cresol; Xylenol; O-cresol; Phenol; Naphthalene; Xylene; Ethylbenzene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ (lbs)	SARA 302 TPQ (gallons)	SARA 304 RQ (lbs)	SARA 304 RQ (gallons)
O-cresol	0.1 - 1	Yes.	1000 / 10000	-	100	-
Phenol	0 - 0.1	Yes.	500 / 10000	-	1000	-

SARA 304 RQ : 96153.8 lbs / 43653.8 kg [12870.7 gal / 48720.8 L]

SARA 311/312

Classification : Fire hazard
Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Butan-1-ol	10 - 30	Yes.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Butan-1-ol	71-36-3	10 - 30
Supplier notification	Butan-1-ol	71-36-3	10 - 30

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: Butan-1-ol

New York : The following components are listed: Butan-1-ol

Section 15. Regulatory information

New Jersey : The following components are listed: Distillates (petroleum), hydrotreated heavy naphthenic; Butan-1-ol

Pennsylvania : The following components are listed: Butan-1-ol

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Ethylbenzene	Yes.	No.	41 µg/day (ingestion) 54 µg/day (inhalation)	No.
Naphthalene	Yes.	No.	Yes.	No.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability :** 2 **Physical hazards :** 0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability :** 2 **Instability :** 0

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

US Tariff Heading Number : 3811.90.0000

Schedule B Code : 3811.90.0000

History

Date of issue mm/dd/yyyy : 05/15/2014

Version : 1

Revised Section(s) : Not applicable.

Prepared by : KMK Regulatory Services Inc.

Although the information and recommendations set forth herein (hereafter referred to as information) are presented in good faith and believed to be accurate and factual as of the date hereof, Schaeffer Mfg. Company makes no representation as to the completeness or accuracy thereof. Information is supplied upon the condition that the person receiving the same will make their own determination as to its safety and suitability for their purposes prior to use. In no event will Schaeffer Mfg. Company be responsible for damages of any natures whatsoever resulting from the use or reliance upon information. **No representation or warranty, either expressed or implied, of merchantability or fitness for a particular purpose is made with respect to information of the product to which the information refers. Compliance with all applicable federal, state, and local regulations remains the responsibility of the user**.

SAFETY DATA SHEET

SDS ID NO.: 0298MAR019
Revision Date: 05/22/2015

1. IDENTIFICATION

Product Name: Marathon Petroleum Premium AW II Hydraulic Oil

Synonym: Premium AW II ISO 32 Hydraulic Oil; Premium AW II ISO 46 Hydraulic Oil; Premium AW II ISO 68 Hydraulic Oil; Premium AW II ISO 100 Hydraulic Oil; ISO 32 Premium AW II Hydraulic Oil; ISO 46 Premium AW II Hydraulic Oil; ISO 68 Premium AW II Hydraulic Oil; ISO 100 Premium AW II Hydraulic Oil

Chemical Family: Hydrocarbon Mixture

Recommended Use: Hydraulic Fluid.
Use Restrictions: All others.

Supplier Name and Address:

MARATHON PETROLEUM COMPANY LP
539 South Main Street
Findlay, OH 45840

SDS information: 1-419-421-3070

Emergency Telephone: 1-877-627-5463

2. HAZARD IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3

Hazards Not Otherwise Classified (HNOC)
Not applicable

Label elements

EMERGENCY OVERVIEW

Harmful to aquatic life with long lasting effects

Appearance Clear Liquid **Physical State** Liquid **Odor** Petroleum

Precautionary Statements - Prevention
Avoid release to the environment

Precautionary Statements - Response
Not applicable

Precautionary Statements - Storage
Not applicable

Precautionary Statements - Disposal
Dispose of contents/container at an approved waste disposal plant

Additional Information
Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Lube oil is a complex mixture of highly refined lubricating base stocks and additives.

Composition Information:

Name	CAS Number	Weight %
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate	64742-54-7	98-99
2,6-di-tert-butylphenol	128-39-2	0.1-1

4. FIRST AID MEASURES

First Aid Measures

General advice In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).

Inhalation: Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear, give oxygen and continue to monitor. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If symptoms occur get medical attention.

Skin Contact: Wash skin with plenty of soap and water. If irritation or other symptoms occur get medical attention. Wash contaminated clothing and clean shoes before reuse. Any injection injury from high pressure equipment should be evaluated immediately by a physician as potentially serious (See NOTES TO PHYSICIAN).

Eye Contact: Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. Get medical attention if irritation persists.

Ingestion: Rinse mouth out with water. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. If symptoms develop, seek medical attention.

Most important signs and symptoms, both short-term and delayed with overexposure

Adverse Effects: Preexisting skin conditions and/or respiratory disorders may be aggravated by exposure to this product.

Indication of any immediate medical attention and special treatment needed

NOTES TO PHYSICIAN: SKIN: Leaks or accidents involving high-pressure equipment may inject a stream of material through the skin and initially produce an injury that may not appear serious. Only a small puncture wound may appear on the skin surface but, without proper treatment and depending on the nature, original pressure, volume, and location of the injected material, can compromise blood supply to an affected body part. Prompt surgical debridement of the wound may be necessary to prevent irreversible loss of function and/or the affected body part. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Unsuitable extinguishing media
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
The product is not combustible per the OSHA Hazard Communication Standard, but will ignite and burn at temperatures exceeding the flash point.

Hazardous combustion products
Smoke, carbon monoxide, and other products of incomplete combustion.

Explosion data
Sensitivity to Mechanical Impact No.
Sensitivity to Static Discharge No.

Special protective equipment and precautions for firefighters
Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Use water spray to cool exposed surfaces from as far a distance as possible. Keep run-off water out of sewers and water sources.

NFPA:	Health 1	Flammability 1	Instability 0	Special Hazards -

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Keep public away. Isolate and evacuate area. Shut off source if safe to do so.

Protective Equipment: Use personal protection measures as recommended in Section 8.

Emergency Procedures: Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.

Environmental precautions: Avoid release to the environment. Avoid subsoil penetration.

Methods and materials for containment: Prevent further leakage or spillage if safe to do so.

Methods and materials for cleaning up: Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers.

7. HANDLING AND STORAGE

Safe Handling Precautions: Avoid contact with skin, eyes and clothing. Do not swallow. Avoid breathing vapors or mists. Use good personal hygiene practices. Wash thoroughly after handling. Use personal protection measures as recommended in Section 8. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.

High-pressure injection of any material through the skin is a serious medical emergency even though the small entrance wound at the injection site may not initially appear serious. These injection injuries can occur from high-pressure equipment such as paint spray or grease or guns, fuel injectors, or pinhole leaks in hoses or hydraulic lines and should all be considered serious. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES (See First Aid Section 4).

Storage Conditions: Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store away from incompatible materials.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELS:	OSHA - Vacated PELs	NIOSH IDLH
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate 64742-54-7	Mineral oil, highly/severely refined, inhalable fraction 5 mg/m³ TWA	-	-	-
2,6-di-tert-butylphenol 128-39-2	-	-	-	-

Notes: The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

Engineering measures: Local or general exhaust required when using at elevated temperatures that generate vapors or mists.

Personal protective equipment

Eye protection: Use goggles or face-shield if the potential for splashing exists.

Skin and body protection: Wear neoprene, nitrile or PVA gloves to prevent skin contact. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times. Wear appropriate protective clothing.

Respiratory protection: Use an approved organic vapor chemical cartridge or supplied air respirators when material produces vapors that exceed permissible exposure limits or excessive vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear Liquid
Color	Clear
Odor	Petroleum
Odor Threshold	No available data.

Property	Values (Method)
Melting Point / Freezing Point	No available data.
Initial Boiling Point / Boiling Range	No available data.
Flash Point	> 220 °C / > 428 °F (Cleveland Open-Cup)
Evaporation Rate	No available data.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%)	
Upper Flammability Limit:	No available data.
Lower Flammability Limit:	No available data.
Vapor Pressure	No available data.
Vapor Density	No available data.
Specific Gravity / Relative Density	0.86-0.88
Water Solubility	No available data.
Solubility in other solvents	No available data.
Partition Coefficient	No available data.
Decomposition temperature:	No available data.
pH:	No available data.
Autoignition Temperature	No available data.
Kinematic Viscosity	≥ 28.8 mm2/s @ 40°C / 104°F (ASTM D445)
Dynamic Viscosity	No available data.
Explosive Properties	No available data.
Softening Point	No available data.
VOC Content (%)	0.12-37.7 (w/w)
Density	No available data.
Bulk Density	Not applicable.

10. STABILITY AND REACTIVITY

Reactivity The product is non-reactive under normal conditions.

Chemical stability Stable under recommended storage conditions.

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization Will not occur.

Conditions to avoid Sources of heat or ignition.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products None known under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

Inhalation Overheating may produce vapors which may cause respiratory irritation, dizziness and nausea.

Eye contact Exposure to vapor or contact with liquid may cause mild eye irritation.

Skin contact Prolonged or repeated exposure may cause dermatitis, folliculitis or oil acne.

Ingestion May cause irritation of the mouth, throat and gastrointestinal tract.

Acute Toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50

Solvent Refined, Hydrotreated Heavy Paraffinic Distillate 64742-54-7	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.5 mg/l (Rat) 4 h
2,6-di-tert-butylphenol 128-39-2	> 5000 mg/kg (Rat)	> 10 g/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

This product is considered to have a low order of acute and chronic oral and dermal toxicity.

Adverse effects related to the physical, chemical and toxicological characteristics

Signs & Symptoms Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

Sensitization Not expected to be a skin or respiratory sensitizer.

Mutagenic effects None known.

Carcinogenicity Cancer designations are listed in the table below.

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate 64742-54-7	Mineral oil, poorly/mildly refined Suspected Human Carcinogen (A2) Mineral oil, highly/severely refined, inhalable fraction Not Classifiable (A4)	Mineral oil, untreated or mildly treated Carcinogenic to humans (1) Mineral oil, highly refined Not Classifiable (3)	Mineral oil, poorly/mildly refined Known to be human carcinogen	Not Listed
2,6-di-tert-butylphenol 128-39-2	Not Listed	Not Listed	Not Listed	Not Listed

Reproductive toxicity None known.

Specific Target Organ Toxicity (STOT) - single exposure Not classified.

Specific Target Organ Toxicity (STOT) - repeated exposure Not classified.

Aspiration hazard Not classified.

12. ECOLOGICAL INFORMATION

Ecotoxicity Harmful to aquatic life with long lasting effects.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate 64742-54-7	-	96-hr LC50 = 5000 mg/L Rainbow trout	-	48-hr EC50 = 1000 mg/L Daphnia magna
2,6-di-tert-butylphenol 128-39-2	-	-	-	48-hr EC50 = 0.45 mg/l Daphnia magna

Persistence and degradability No information available.

Bioaccummulation Contains component(s) with the potential to bioaccumulate.

Mobility in soil No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Description of Waste Residues
No information available.

Safe Handling of Wastes
Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required.

Disposal of Wastes / Methods of Disposal
The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Methods of Contaminated Packaging Disposal
Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (49 CFR 172.101):

UN Proper shipping name:	Not Regulated
UN/Identification No:	Not applicable
Transport Hazard Class(es):	Not applicable
Packing group:	Not applicable

TDG (Canada):

UN Proper shipping name:	Not Regulated
UN/Identification No:	Not applicable
Transport Hazard Class(es):	Not applicable
Packing group:	Not applicable

15. REGULATORY INFORMATION

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product may contain component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate	NA
2,6-di-tert-butylphenol	NA

SARA Section 304: This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate	NA
2,6-di-tert-butylphenol	NA

SARA: The following EPA hazard categories apply to this product:

None

SARA Section 313: This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting:
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate	None
2,6-di-tert-butylphenol	None

State and Community Right-To-Know Regulations:
The following component(s) of this material are identified on the regulatory lists below:

Solvent Refined, Hydrotreated Heavy Paraffinic Distillate

Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Not Listed.
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed.
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Carcinogen
New Jersey - Environmental Hazardous Substances List:	Not Listed.
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed.

2,6-di-tert-butylphenol

Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Not Listed.
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed.
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Not Listed.
New Jersey - Environmental Hazardous Substances List:	Not Listed.
Illinois - Toxic Air Contaminants	Not Listed.
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed.

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Canadian Regulatory Information: "This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the (M)SDS contains all the information required by the Controlled Products Regulations."

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
2,6-di-tert-butylphenol	D2B	1%

NOTE: Uncontrolled product according to WHMIS classification criteria.

16. OTHER INFORMATION

Prepared By Toxicology and Product Safety
Revision Date: 05/22/2015

Revision Note:

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Safety Data Sheet

Material Name: Hess 10W30 Motor Oil

SDS No. 8957
US GHS

Synonyms: Valvoline Product Code 52670413

* * * Section 1 - Product and Company Identification * * *

Manufacturer Information

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS
Emergency # 800-424-9300 CHEMTREC
www.hess.com (Environment, Health, Safety Internet Website)

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Skin Corrosion/Irritation – Category 2
Specific Target Organ Toxicity – Category 3 (narcosis)
Carcinogenicity - Category 1B

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

WARNING

Hazard Statements

Causes skin irritation.
May cause cancer.
May cause drowsiness or dizziness.

Precautionary Statements

Prevention

Wash hands and forearms thoroughly after handling.
Wear protective gloves/protective clothing/eye protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.

Response

If on skin: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
If exposed or concerned: Get medical advice/attention.
If inhaled: Remove person to fresh air and keep in a position comfortable for breathing. Call poison center or doctor if you feel unwell.

Storage

Store locked up.
Store in a well-ventilated place.
Keep container tightly closed.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
64742-65-0	Petroleum distillates, solvent dewaxed heavy paraffinic	83-93

Petroleum-based lubricating oil with detergent/dispersant engine oil package with zinc compounds.

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is visual difficulty, seek medical attention.

First Aid: Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

First Aid: Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

First Aid: Inhalation

Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

First Aid: Notes to Physician

Acute aspiration of large amounts of oil-laden material may produce a serious aspiration hazard. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.
Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. No special fire hazards are known to be associated with this product. Dense smoke may be generated while burning.

Hazardous Combustion Products

May form: carbon dioxide and carbon monoxide, oxides of sulfur, nitrogen and phosphorous, various hydrocarbons.

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or gaseous extinguishing agent.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

SMALL SPILL: Absorb liquid on vermiculite, floor absorbent or other absorbent material. Persons not wearing proper personal protective equipment should be excluded from area of spill.

LARGE SPILL: Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify authorities as required, that a spill has occurred. Persons not wearing proper personal protective equipment should be excluded from area of spill until clean-up has been completed.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Handle as a combustible liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents.

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks."

Incompatibilities

Avoid contact with: acids, halogens, strong oxidizing agents.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Personal Protective Equipment: Hands

Not normally required. However, wear resistant gloves such as nitrile rubber to prevent irritation which may result from prolonged or repeated skin contact with product.

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

To prevent repeated or prolonged skin contact, wear impervious clothing and boots. Wear normal work clothing covering arms and legs.

Hygiene Measures

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Dry, clear and bright	**Odor:**	None
Physical State:	Liquid	**pH:**	ND
Vapor Pressure:	ND	**Vapor Density:**	ND
Boiling Point:	>425 °F (218.3°C) @ 760.00 mmHg	**Melting Point:**	ND
Solubility (H2O):	Negligible	**Specific Gravity:**	0.881 @ 60°F (16°C)
Evaporation Rate:	Slower than ethyl ether	**VOC:**	ND
Viscosity:	<= 3300.0 cps @ -20°C; 10.0 - 11.0 cst @ 100°C	**Octanol/H2O Coeff.:**	ND
Flash Point:	430 °F (221.1 °C)	**Flash Point Method:**	COC
Upper Flammability Limit (UFL):	ND	**Lower Flammability Limit (LFL):**	ND
Burning Rate:	ND	**Auto Ignition:**	ND

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

None

Incompatible Products

Avoid contact with: acids, halogens, strong oxidizing agents.

Hazardous Decomposition Products

May form: aldehydes, carbon dioxide and carbon monoxide, hydrogen sulfide, oxides of sulfur, nitrogen and phosphorus, toxic fumes, various hydrocarbons.

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

Harmful if large amounts are swallowed.

B: Component Analysis - LD50/LC50

Petroleum distillates, solvent dewaxed heavy paraffinic (64742-65-0)

Inhalation LC50 Rat >4.7 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >5000 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms include redness, burning, drying and cracking of the skin, and skin burns. Additional symptoms of skin contact include: acne. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Potential Health Effects: Ingestion

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Potential Health Effects: Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This product is not reported to have any mutagenic effects.

Carcinogenicity

A: General Product Information

May cause cancer.

Used motor oil has been shown to cause skin cancer in laboratory animal continually exposed by repeated applications.

B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

Specified Target Organ General Toxicity: Single Exposure

This product is not reported to have any specific target organ general toxicity single exposure effects.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ general toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

Acute aspiration of large amounts of oil-laden material may produce a serious aspiration hazard.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Petroleum distillates, solvent dewaxed heavy paraffinic (64742-65-0)

Test & Species		Conditions
96 Hr LC50 Oncorhynchus mykiss	>5000 mg/L	
48 Hr EC50 Daphnia magna	>1000 mg/L	

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Soil

No information available.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

DOT Information

Shipping Name: Not Regulated

* * * Section 15 - Regulatory Information * * *

Regulatory Information

Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

SARA Section 311/312 – Hazard Classes

Acute Health	Chronic Health	Fire	Sudden Release of Pressure	Reactive
X	X	--	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

ZINC C1-C14 ALKYLDITHIOPHOSPHATE (CAS No. 68649-42-3)

State Regulations

Component Analysis - State

None of this product's components are listed on the state lists from CA, MA, MN, NJ, PA, or RI.

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Additional Regulatory Information

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Petroleum distillates, solvent dewaxed heavy paraffinic	64742-65-0	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

NFPA® Hazard Rating

Health	1
Fire	1
Reactivity	0

HMIS® Hazard Rating

Health	1*	Slight
Fire	1	Slight
Physical	0	Minimal
		*Chronic

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet

OFF!® DEEP WOODS® INSECT REPELLENT VIII (DRY)

Version *2*.0 Print Date 09/08/2016

Revision Date 07/12/2016 SDS Number 350000015104

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Product name : **OFF!® DEEP WOODS® INSECT REPELLENT VIII (DRY)**

Recommended use : Insect Repellent

Manufacturer, importer, supplier : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Telephone : +18005585252

Emergency telephone number : 24 Hour Medical Emergency Phone: (866)231-5406
24 Hour International Emergency Phone: (703)527-3887
24 Hour Transport Emergency Phone: (800)424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System (GHS) Classification

Hazard classification	Hazard category	Hazards identification
Aerosol	Category 1	Extremely flammable aerosol.
Eye irritation	Category 2A	Causes serious eye irritation.
Gases under pressure	Liquefied gas	Contains gas under pressure; may explode if heated.

Labelling

Hazard symbols
Flame
Gas cylinder
Exclamation mark

Signal word
Danger

Hazard statements
Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation.

Precautionary statements
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/ attention.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
Protect from sunlight. Store in a well-ventilated place.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Do not spray on an open flame or other ignition source.
Do not pierce or burn, even after use.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Wash hands thoroughly after handling.
Other hazards : None identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight percent
N,N-Diethyl-m-toluamide	134-62-3	10.00 - 30.00
Ethyl alcohol	64-17-5	10.00 - 30.00
Butane	106-97-8	10.00 - 30.00
Corn starch	9005-25-8	10.00 - 30.00
Propane	74-98-6	5.00 - 10.00
Isobutane	75-28-5	5.00 - 10.00
Isopropyl Myristate	110-27-0	1.00 - 5.00
Magnesium carbonate	546-93-0	1.00 - 5.00

The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

Skin contact	:	If you suspect a reaction to this product, discontinue use and remove contaminated clothing.
Inhalation	:	No special requirements.
Ingestion	:	No special requirements

5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific hazards during firefighting	:	Aerosol Product - Containers may rocket or explode in heat of fire. Do not allow run-off from fire fighting to enter drains or water courses.
Further information	:	Fight fire from maximum distance or protected area. Cool and use caution when approaching or handling fire-exposed containers. Wear full protective clothing and positive pressure self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.
NFPA Classification	:	NFPA Level 2 Aerosol

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Remove all sources of ignition. Wear personal protective equipment. Wash thoroughly after handling.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Use appropriate containment to avoid environmental contamination. Outside of normal use, avoid release to the environment.
Methods and materials for containment and cleaning up	:	If damage occurs to aerosol can: Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Use only non-sparking equipment.
Dike large spills.
Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Precautions for safe handling : Avoid contact with eyes and lips.
For personal protection see section 8.
Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.
Pressurized container.
Do not pierce or burn, even after use.
Wash thoroughly after handling.

Advice on protection against fire and explosion : Keep away from sources of ignition - No smoking.
Do not spray on an open flame or other ignition source.

Storage

Requirements for storage areas and containers : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
Keep away from food, drink and animal feedingstuffs.
Keep in a dry, cool and well-ventilated place.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Ethyl alcohol	64-17-5	1,900 mg/m3	1,000 ppm	-	OSHA TWA
Ethyl alcohol	64-17-5	-	1,000 ppm	-	ACGIH STEL
Butane	106-97-8	-	1,000 ppm	-	ACGIH STEL
Corn starch	9005-25-8	5 mg/m3	-	-	OSHA TWA
Corn starch	9005-25-8	15 mg/m3	-	-	OSHA TWA
Corn starch	9005-25-8	10 mg/m3	-	-	ACGIH TWA
Propane	74-98-6	1,800 mg/m3	1,000 ppm	-	OSHA TWA
Propane	74-98-6	-	-	-	ACGIH TWA
Isobutane	75-28-5	-	1,000 ppm	-	ACGIH STEL
Magnesium carbonate	546-93-0	15 mg/m3	-	-	OSHA TWA
Magnesium carbonate	546-93-0	5 mg/m3	-	-	OSHA TWA

Personal protective equipment

Respiratory protection : Do not spray in enclosed areas.

Hand protection : No special requirements.

Eye protection : Safety glasses with side-shields

Skin and body protection	:	No special requirements.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	aerosol
Form	:	Compressed gas
Color	:	white
Odor	:	pleasant
Odour Threshold	:	No data available
pH	:	10.3 (as aqueous solution)
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	< -7 °C < 19.4 °F Propellant
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Sustains combustion
Upper/lower flammability or explosive limits	:	No data available

Vapour pressure	:	No data available
Vapour density	:	No data available
Relative density	:	0.82 g/cm3
Solubility(ies)	:	dispersible
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	Test not applicable for this product type
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available
Volatile Organic Compounds Total VOC (wt. %)*	:	52.6 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations
Other information	:	None identified :

10. STABILITY AND REACTIVITY

Possibility of hazardous	:	If accidental mixing occurs and toxic gas is formed, exit area

reactions immediately. Do not return until well ventilated.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Strong oxidizing agents
Do not mix with bleach or any other household cleaners.
Strong bases

Hazardous decomposition products : Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Emergency Overview : Danger

Acute oral toxicity :
Acute inhalation toxicity :

Acute dermal toxicity :

GHS Properties	Classification	Routes of entry
Acute toxicity	No classification proposed	-
Skin corrosion/irritation	No classification proposed	-
Eye irritation	Category 2A	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-
Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	No classification proposed	-
Reproductive toxicity	No classification proposed	-
Specific target organ	No classification proposed	-

toxicity - single exposure		
Specific target organ toxicity - repeated exposure	No classification proposed	-
Aspiration hazard	No classification proposed	-

Aggravated Medical Condition : Do not apply to cuts or irritated skin.

12. ECOLOGICAL INFORMATION

Product : The product itself has not been tested.

Toxicity
The ingredients in this formula have been reviewed and no adverse impact to the environment is expected when used according to label directions.

Toxicity to fish

Components	End point	Species	Value	Exposure time
N,N-Diethyl-m-toluamide	static test LC50	Oncorhynchus mykiss (rainbow trout)	71.25 mg/l	96 h
Ethyl alcohol	LC50	Fish	11,200 mg/l	96 h
Butane	LC50 QSAR	Fish	27.98 mg/l	96 h
Corn starch	static test LC50 Measured No information	Fish	5,000 mg/l	96 h

	available.			
Propane	LC50	Fish	27.98 mg/l	96 h
Isobutane	LC50 QSAR	Fish	27.98 mg/l	96 h
Isopropyl Myristate	LC50	Danio rerio (zebra fish)	8,400 mg/l	96 h
Magnesium carbonate	static test LC50	Pimephales promelas (fathead minnow)	2,800 mg/l	96 h

Toxicity to aquatic invertebrates

Components	**End point**	**Species**	**Value**	**Exposure time**
N,N-Diethyl-m-toluamide	LC50	Daphnia magna (Water flea)	75 mg/l	51 h
	semi-static test NOEC Measured OECD Guideline 211 (Daphnia magna Reproduction Test)	Daphnia magna	3.7 mg/l	21 d
Ethyl alcohol	static test LC50	Ceriodaphnia dubia		48 h

	NOEC	Daphnia magna	5,012 mg/l 9.6 mg/l	9 d
Butane	No data available			
Corn starch	No data available			
Propane	LC50	Daphnid	14.22 mg/l	48 h
Isobutane	LC50 QSAR	Daphnid	16.33 mg/l	48 h
Isopropyl Myristate	EC50	Daphnia magna (Water flea)	100 mg/l	48 h
Magnesium carbonate	No data available			

Toxicity to aquatic plants

Components	End point	Species	Value	Exposure time
N,N-Diethyl-m-toluamide	NOEC	Pseudokirchneriella subcapitata (green algae)	0.521 mg/l	96 h
Ethyl alcohol	Static EC50	Chlorella vulgaris (Fresh water algae)	275 mg/l	72 h

Butane	EC50 QSAR	Green algae	7.71 mg/l	96 h
Corn starch	No data available			
Propane	No data available			
Isobutane	EC50 QSAR	Green algae	8.57 mg/l	96 h
Isopropyl Myristate	EC50	Desmodesmus subspicatus	> 100 mg/l	72 h
Magnesium carbonate	static test EC50 Read-across (Analogy)	Desmodesmus subspicatus (green algae)	> 100 mg/l	72 h

Persistence and degradability

Component	Biodegradation	Exposure time	Summary
N,N-Diethyl-m-toluamide	83.8 %	28 d	Readily biodegradable
Ethyl alcohol	97 %	28 d	Readily biodegradable
Butane	100 %	385.5 h	Readily biodegradable
Corn starch	No data available		Readily biodegradable
Propane	70 %	< 10 d	Readily biodegradable
Isobutane	70 %	< 10 d	Readily biodegradable
Isopropyl Myristate	91.4 %	28 d	Readily biodegradable
Magnesium carbonate	No data available		

Bioaccumulative potential

Component	Bioconcentration	Partition Coefficient n-

	factor (BCF)	Octanol/water (log)
N,N-Diethyl-m-toluamide	21.9 estimated	2.4
Ethyl alcohol	3.2 estimated	-0.35 Measured
Butane	No data available	2.89
Corn starch	No data available	No data available
Propane	No data available	2.36
Isobutane	1.57 - 1.97	2.8
Isopropyl Myristate	1,220.1	7.71
Magnesium carbonate	0.89 QSAR	-2.12 QSAR

Mobility

Component	End point	Value
N,N-Diethyl-m-toluamide	Koc	43.3
Ethyl alcohol	No data available	
Butane	No data available	
Corn starch	No data available	
Propane	No data available	
Isobutane	No data available	
Isopropyl Myristate	log Koc	4.08
Magnesium carbonate	No data available	

PBT and vPvB assessment

Component	Results
N,N-Diethyl-m-toluamide	Not fulfilling PBT and vPvB criteria
Ethyl alcohol	Not fulfilling PBT and vPvB criteria
Butane	Not fulfilling PBT and vPvB criteria
Corn starch	Not fulfilling PBT and vPvB criteria
Propane	Not fulfilling PBT and vPvB criteria
Isobutane	Not fulfilling PBT and vPvB criteria
Isopropyl Myristate	Not fulfilling PBT and vPvB criteria

Magnesium carbonate	Not fulfilling PBT and vPvB criteria

Other adverse effects **:** No data available

13. DISPOSAL CONSIDERATIONS

PESTICIDAL WASTE:
For disposal information, please read and follow Disposal instructions on the pesticide label.
Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

	Land transport	**Sea transport**	**Air transport**
UN number	1950	1950	1950
UN proper shipping name	AEROSOLS, Flammable	AEROSOLS, Flammable	AEROSOLS, Flammable
Transport hazard class(es)	2.1	2	2.1
Packing group	-	-	-
Environmental hazards	-	-	-
Special precautions for user	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.

15. REGULATORY INFORMATION

FIFRA Labeling

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This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.

Following is the hazard information as required on the pesticide label:

WARNING:
Causes substantial but temporary eye injury.
Harmful if swallowed.
Use of this product may cause skin reactions in rare cases.
Extremely flammable
Contents under pressure.
Exposure to temperatures above 120° F may cause bursting.

Notification status	:	All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
Notification status	:	All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).
California Prop. 65	:	This product is not subject to the reporting requirements under California's Proposition 65.

Registration # / Agency
4822-572/US/EPA
30598/PMRA

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16. OTHER INFORMATION

HMIS Ratings

Health	2
Flammability	4
Reactivity	0

NFPA Ratings

Health	2
Fire	4
Reactivity	0
Special	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

Safety Data Sheet

Material Name: Gasoline All Grades

SDS No. 9950
US GHS

Synonyms: Hess Conventional (Oxygenated and Non-oxygenated) Gasoline; Reformulated Gasoline (RFG); Reformulated Gasoline Blendstock for Oxygenate Blending (RBOB); Unleaded Motor or Automotive Gasoline

* * * Section 1 - Product and Company Identification * * *

Manufacturer Information

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS
Emergency # 800-424-9300 CHEMTREC
www.hess.com (Environment, Health, Safety Internet Website)

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Flammable Liquid - Category 2
Skin Corrosion/Irritation - Category 2
Germ Cell Mutagenicity - Category 1B
Carcinogenicity - Category 1B
Toxic to Reproduction - Category 1A
Specific Target Organ Toxicity (Single Exposure) - Category 3 (respiratory irritation, narcosis)
Specific Target Organ Toxicity (Repeat Exposure) - Category 1 (liver, kidneys, bladder, blood, bone marrow, nervous system)
Aspiration Hazard - Category 1
Hazardous to the Aquatic Environment – Acute Hazard - Category 3

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

DANGER

Hazard Statements

Highly flammable liquid and vapour.
Causes skin irritation.
May cause genetic defects.
May cause cancer.
May damage fertility or the unborn child.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs (liver, kidneys, bladder, blood, bone marrow, nervous system) through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.
Harmful to aquatic life.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and forearms thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist/vapours/spray.
Use only outdoors or in well-ventilated area.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.

Response

In case of fire: Use water spray, fog, dry chemical fire extinguishers or hand held fire extinguisher.
IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.
IF exposed or concerned: Get medical advice/attention.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Get medical advice/attention if you feel unwell.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.

Storage

Store in a well-ventilated place.
Keep cool. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
86290-81-5	Gasoline, motor fuel	100
108-88-3	Toluene	1-25
106-97-8	Butane	<10
1330-20-7	Xylenes (o-, m-, p- isomers)	1-15
95-63-6	Benzene, 1,2,4-trimethyl-	<6
64-17-5	Ethyl alcohol	0-10
100-41-4	Ethylbenzene	<3
71-43-2	Benzene	0.1-4.9

110-54-3	Hexane	0.5-4

A complex blend of petroleum-derived normal and branched-chain alkane, cycloalkane, alkene, and aromatic hydrocarbons. May contain antioxidant and multifunctional additives. Non-oxygenated Conventional Gasoline and RBOB do not have oxygenates (Ethanol). Oxygenated Conventional and Reformulated Gasoline will have oxygenates for octane enhancement or as legally required.

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

First Aid: Skin

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or with waterless hand cleanser. Obtain medical attention if irritation or redness develops.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

First Aid: Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or gaseous extinguishing agent.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Firefighting foam suitable for polar solvents is recommended for fuel with greater than 10% oxygenate concentration.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

USE ONLY AS A MOTOR FUEL.
DO NOT SIPHON BY MOUTH

Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

Incompatibilities

Keep away from strong oxidizers.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

Gasoline, motor fuel (86290-81-5)

ACGIH: 300 ppm TWA
500 ppm STEL

Toluene (108-88-3)

ACGIH: 20 ppm TWA
OSHA: 200 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL
NIOSH: 100 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL

Butane (106-97-8)

ACGIH: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)
OSHA: 800 ppm TWA; 1900 mg/m3 TWA
NIOSH: 800 ppm TWA; 1900 mg/m3 TWA

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: 100 ppm TWA
150 ppm STEL
OSHA: 100 ppm TWA; 435 mg/m3 TWA
150 ppm STEL; 655 mg/m3 STEL

Benzene, 1,2,4-trimethyl- (95-63-6)

NIOSH: 25 ppm TWA; 125 mg/m3 TWA

Ethyl alcohol (64-17-5)

ACGIH: 1000 ppm STEL
OSHA: 1000 ppm TWA; 1900 mg/m3 TWA
NIOSH: 1000 ppm TWA; 1900 mg/m3 TWA

Ethylbenzene (100-41-4)

ACGIH: 20 ppm TWA
OSHA: 100 ppm TWA; 435 mg/m3 TWA
125 ppm STEL; 545 mg/m3 STEL
NIOSH: 100 ppm TWA; 435 mg/m3 TWA
125 ppm STEL; 545 mg/m3 STEL

Benzene (71-43-2)

ACGIH: 0.5 ppm TWA
2.5 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 5 ppm STEL (Cancer hazard, Flammable, See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA
NIOSH: 0.1 ppm TWA
1 ppm STEL

Hexane (110-54-3)

ACGIH: 50 ppm TWA
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 500 ppm TWA; 1800 mg/m3 TWA
NIOSH: 50 ppm TWA; 180 mg/m3 TWA

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Personal Protective Equipment: Hands

Gloves constructed of nitrile, neoprene, or PVC are recommended.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Translucent, straw-colored or light yellow	**Odor:**	Strong, characteristic aromatic hydrocarbon odor. Sweet-ether like
Physical State:	Liquid	**pH:**	ND
Vapor Pressure:	6.4 - 15 RVP @ 100 °F (38 °C) (275-475 mm Hg @ 68 °F (20 °C)	**Vapor Density:**	AP 3-4
Boiling Point:	85-437 °F (39-200 °C)	**Melting Point:**	ND
Solubility (H2O):	Negligible to Slight	**Specific Gravity:**	0.70-0.78
Evaporation Rate:	10-11	**VOC:**	ND
Percent Volatile:	100%	**Octanol/H2O Coeff.:**	ND
Flash Point:	-45 °F (-43 °C)	**Flash Point Method:**	PMCC
Upper Flammability Limit (UFL):	7.6%	**Lower Flammability Limit (LFL):**	1.4%
Burning Rate:	ND	**Auto Ignition:**	>530°F (>280°C)

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible Products

Keep away from strong oxidizers.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

Harmful if swallowed.

B: Component Analysis - LD50/LC50

Gasoline, motor fuel (86290-81-5)

Inhalation LC50 Rat >5.2 mg/L 4 h; Oral LD50 Rat 14000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Toluene (108-88-3)

Inhalation LC50 Rat 12.5 mg/L 4 h; Inhalation LC50 Rat >26700 ppm 1 h; Oral LD50 Rat 636 mg/kg; Dermal LD50 Rabbit 8390 mg/kg; Dermal LD50 Rat 12124 mg/kg

Butane (106-97-8)

Inhalation LC50 Rat 658 mg/L 4 h

Xylenes (o-, m-, p- isomers) (1330-20-7)
Inhalation LC50 Rat 5000 ppm 4 h; Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg; Dermal LD50 Rabbit >1700 mg/kg

Benzene, 1,2,4-trimethyl- (95-63-6)
Inhalation LC50 Rat 18 g/m3 4 h; Oral LD50 Rat 3400 mg/kg; Dermal LD50 Rabbit >3160 mg/kg

Ethyl alcohol (64-17-5)
Oral LD50 Rat 7060 mg/kg; Inhalation LC50 Rat 124.7 mg/L 4 h

Ethylbenzene (100-41-4)
Inhalation LC50 Rat 17.2 mg/L 4 h; Oral LD50 Rat 3500 mg/kg; Dermal LD50 Rabbit 15354 mg/kg

Benzene (71-43-2)
Inhalation LC50 Rat 13050-14380 ppm 4 h; Oral LD50 Rat 1800 mg/kg

Hexane (110-54-3)
Inhalation LC50 Rat 48000 ppm 4 h; Oral LD50 Rat 25 g/kg; Dermal LD50 Rabbit 3000 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Moderate irritant. Contact with liquid or vapor may cause irritation.

Potential Health Effects: Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

Potential Health Effects: Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This product may cause genetic defects.

Carcinogenicity

A: General Product Information

May cause cancer.

IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

B: Component Carcinogenicity

Gasoline, motor fuel (86290-81-5)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Toluene (108-88-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Ethyl alcohol (64-17-5)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC: Monograph 100E [in preparation] (in alcoholic beverages); Monograph 96 [2010] (in alcoholic beverages) (Group 1 (carcinogenic to humans))

Ethylbenzene (100-41-4)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC: Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))

Benzene (71-43-2)

ACGIH: A1 - Confirmed Human Carcinogen
OSHA: 5 ppm STEL (Cancer hazard, Flammable, See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA
NIOSH: potential occupational carcinogen
NTP: Known Human Carcinogen (Select Carcinogen)
IARC: Monograph 100F [in preparation]; Supplement 7 [1987]; Monograph 29 [1982] (Group 1 (carcinogenic to humans))

Reproductive Toxicity

This product is suspected of damaging fertility or the unborn child.

Specified Target Organ General Toxicity: Single Exposure

This product may cause drowsiness or dizziness.

Specified Target Organ General Toxicity: Repeated Exposure

This product causes damage to organs through prolonged or repeated exposure.

Aspiration Respiratory Organs Hazard

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Very toxic to aquatic life with long lasting effects. Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Gasoline, motor fuel (86290-81-5)

Test & Species		Conditions
96 Hr LC50 Alburnus alburnus	119 mg/L [static]	
96 Hr LC50 Cyprinodon variegatus	82 mg/L [static]	
72 Hr EC50 Pseudokirchneriella subcapitata	56 mg/L	
24 Hr EC50 Daphnia magna	170 mg/L	

Toluene (108-88-3)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	15.22-19.05 mg/L [flow-through]	1 day old
96 Hr LC50 Pimephales promelas	12.6 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.89-7.81 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	14.1-17.16 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.8 mg/L [semi-static]	
96 Hr LC50 Lepomis macrochirus	11.0-15.0 mg/L [static]	
96 Hr LC50 Oryzias latipes	54 mg/L [static]	
96 Hr LC50 Poecilia reticulata	28.2 mg/L [semi-static]	
96 Hr LC50 Poecilia reticulata	50.87-70.34 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	>433 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	12.5 mg/L [static]	
48 Hr EC50 Daphnia magna	5.46 - 9.83 mg/L [Static]	
48 Hr EC50 Daphnia magna	11.5 mg/L	

Xylenes (o-, m-, p- isomers) (1330-20-7)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	13.4 mg/L [flow-through]	

96 Hr LC50 Oncorhynchus mykiss	2.661-4.093 mg/L [static]
96 Hr LC50 Oncorhynchus mykiss	13.5-17.3 mg/L
96 Hr LC50 Lepomis macrochirus	13.1-16.5 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	19 mg/L
96 Hr LC50 Lepomis macrochirus	7.711-9.591 mg/L [static]
96 Hr LC50 Pimephales promelas	23.53-29.97 mg/L [static]
96 Hr LC50 Cyprinus carpio	780 mg/L [semi-static]
96 Hr LC50 Cyprinus carpio	>780 mg/L
96 Hr LC50 Poecilia reticulata	30.26-40.75 mg/L [static]
48 Hr EC50 water flea	3.82 mg/L
48 Hr LC50 Gammarus lacustris	0.6 mg/L

Benzene, 1,2,4-trimethyl- (95-63-6)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	7.19-8.28 mg/L [flow-through]
48 Hr EC50 Daphnia magna	6.14 mg/L

Ethyl alcohol (64-17-5)

Test & Species	Conditions
96 Hr LC50 Oncorhynchus mykiss	12.0 - 16.0 mL/L [static]
96 Hr LC50 Pimephales promelas	>100 mg/L [static]
96 Hr LC50 Pimephales promelas	13400 - 15100 mg/L [flow-through]
48 Hr LC50 Daphnia magna	9268 - 14221 mg/L
24 Hr EC50 Daphnia magna	10800 mg/L
48 Hr EC50 Daphnia magna	2 mg/L [Static]

Ethylbenzene (100-41-4)

Test & Species	Conditions
96 Hr LC50 Oncorhynchus mykiss	11.0-18.0 mg/L [static]
96 Hr LC50 Oncorhynchus mykiss	4.2 mg/L [semi-static]
96 Hr LC50 Pimephales promelas	7.55-11 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	32 mg/L [static]
96 Hr LC50 Pimephales promelas	9.1-15.6 mg/L [static]
96 Hr LC50 Poecilia reticulata	9.6 mg/L [static]
72 Hr EC50 Pseudokirchneriella subcapitata	4.6 mg/L
96 Hr EC50 Pseudokirchneriella subcapitata	>438 mg/L
72 Hr EC50 Pseudokirchneriella subcapitata	2.6 - 11.3 mg/L [static]

96 Hr EC50 Pseudokirchneriella subcapitata	1.7 - 7.6 mg/L [static]
48 Hr EC50 Daphnia magna	1.8 - 2.4 mg/L

Benzene (71-43-2)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	10.7-14.7 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	5.3 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	22.49 mg/L [static]
96 Hr LC50 Poecilia reticulata	28.6 mg/L [static]
96 Hr LC50 Pimephales promelas	22330-41160 µg/L [static]
96 Hr LC50 Lepomis macrochirus	70000-142000 µg/L [static]
72 Hr EC50 Pseudokirchneriella subcapitata	29 mg/L
48 Hr EC50 Daphnia magna	8.76 - 15.6 mg/L [Static]
48 Hr EC50 Daphnia magna	10 mg/L

Hexane (110-54-3)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	2.1-2.98 mg/L [flow-through]
24 Hr EC50 Daphnia magna	>1000 mg/L

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Soil

No information available.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Component	CAS #	
Gasoline, motor fuel	86290-81-5	DOT regulated marine pollutant

DOT Information

Shipping Name: Gasoline
UN #: 1203 **Hazard Class:** 3 **Packing Group:** II
Placard:

* * * Section 15 - Regulatory Information * * *

Regulatory Information

A: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Toluene (108-88-3)
SARA 313: 1.0 % de minimis concentration
CERCLA: 1000 lb final RQ; 454 kg final RQ

Xylenes (o-, m-, p- isomers) (1330-20-7)
SARA 313: 1.0 % de minimis concentration
CERCLA: 100 lb final RQ; 45.4 kg final RQ

Benzene, 1,2,4-trimethyl- (95-63-6)
SARA 313: 1.0 % de minimis concentration

Ethylbenzene (100-41-4)
SARA 313: 0.1 % de minimis concentration
CERCLA: 1000 lb final RQ; 454 kg final RQ

Benzene (71-43-2)
SARA 313: 0.1 % de minimis concentration
CERCLA: 10 lb final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule); 4.54 kg final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule)

Hexane (110-54-3)

SARA 313: 1.0 % de minimis concentration
CERCLA: 5000 lb final RQ; 2270 kg final RQ

SARA Section 311/312 – Hazard Classes

Acute Health	Chronic Health	Fire	Sudden Release of Pressure	Reactive
X	X	X	--	--

Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Component	CAS #	
Gasoline, motor fuel	86290-81-5	DOT regulated marine pollutant

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	**CAS**	**CA**	**MA**	**MN**	**NJ**	**PA**	**RI**
Gasoline, motor fuel	86290-81-5	No	No	No	No	Yes	No
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes	No
Butane	106-97-8	Yes	Yes	Yes	Yes	Yes	No
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes	No
Benzene, 1,2,4-trimethyl-	95-63-6	No	Yes	Yes	Yes	Yes	No
Ethyl alcohol	64-17-5	Yes	Yes	Yes	Yes	Yes	No
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	Yes	No
Benzene	71-43-2	Yes	Yes	Yes	Yes	Yes	No
Hexane	110-54-3	No	Yes	Yes	Yes	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.
WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Toluene	108-88-3	1 %
Butane	106-97-8	1 %
Benzene, 1,2,4-trimethyl-	95-63-6	0.1 %
Ethyl alcohol	64-17-5	0.1 %
Ethylbenzene	100-41-4	0.1 %
Benzene	71-43-2	0.1 %
Hexane	110-54-3	1 %

Additional Regulatory Information

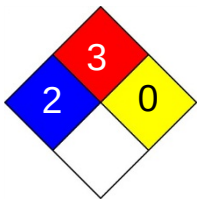
Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Gasoline, motor fuel	86290-81-5	No	DSL	EINECS
Toluene	108-88-3	Yes	DSL	EINECS
Butane	106-97-8	Yes	DSL	EINECS
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	DSL	EINECS
Benzene, 1,2,4-trimethyl-	95-63-6	Yes	DSL	EINECS
Ethyl alcohol	64-17-5	Yes	DSL	EINECS
Ethylbenzene	100-41-4	Yes	DSL	EINECS
Benzene	71-43-2	Yes	DSL	EINECS
Hexane	110-54-3	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

NFPA® Hazard Rating

Health	2
Fire	3
Reactivity	0



HMIS® Hazard Rating

Health	2	Moderate
Fire	3	Serious
Physical	0	Minimal
		*Chronic

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet

ATTACHMENT IV RESERVED: Site Safety Audits

(To be developed and inserted)

Appendix B – Quality Assurance Project Plan

INVENTUM ENGINEERING, PC

Quality Assurance Project Plan

Riverview Innovation & Technology Campus, Inc.

Brownfield Cleanup Program Site No. 915353

3875 River Road

Tonawanda, NY 14150

February 7, 2023

441 CARLISLE DRIVE
SUITE C
HERNDON, VA 20170
WWW.INVENTUMENG.COM

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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 Pre-design Investigation (PDRI) for the Riverview Innovation & Technology Campus (RITC), Brownfield Cleanup Program Site (BCP Site) located at 3875 River Road in Tonawanda, Erie County, New York. The PDRI is being conducted in accordance with the BCP Agreement (Index No. C915353-02-20) between the New York Statement 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 RI Work Plan (RIWP) 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

	Perimeter Length feet	Area sf	Depth feet	Volume tons		Confirmation Samples each	Verification Samples each
Think Safety Tank Area	80	900	4.5	280		4	2
Light Oil Area	480	8000	4.5	2430		8	5
Weak Ammonia Liquor Area	1200	11300	4.5	3440		20	7
MW-BCP-05A Area	500	8600	4.5	2620		9	6
Exhauster Building Area	500	10600	4.5	3220		9	7
Tar Management Area	600	12700	4.5	3860		10	8
Pump House Area	440	7800	4.5	2370		8	5
Tar Seep No. 2	600	15700	1.5	1590		10	4
Analyses							
Ammonia					E350.1	78	44
Cyanide					9012D	78	44
Mercury					7470A	78	44
pH (Corrosivity)					9045D	78	44
Reactivity					7.3.3.2	78	44
					7.3.4.2	78	44
TCLP (VOCs, SVOCs and metals only)					1311		16
Geotechnical							
Suite 1							
Moisture Contant					D2216-19	78	28
Unit Weight					D7263-21	78	28
Suite 2							
Moisture Contant					D2216-19		16
Unit Weight					D7263-21		16
Unconfined Compressive Strength					WK27337		16

The analytical laboratory utilized will be a certified NYSDOH ELAP laboratory for the appropriates 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 investigation is to establish a baseline of current conditions in order to aid in the development of an Alternatives Analysis (AA) for the BCP Site.

Within the context of the purpose stated above, the project DQOs for data collected during the pre-design investigation are:

- To assess the characteristics of groundwater for treatment.
- To assess the current extent of impacted fill below slabs in the former production area.
- To assess the current nature and extent of materials in areas proposed for rain garden and perimeter development.
- To assess the effectiveness of stabilization/solidification of viscous materials.

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 exceeds 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, representative-ness, completeness, comparability), because only when precision and accuracy are known can data sets be compared with confidence. In order for data sets may 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

Samples locations and procedures are discussed in the RI Scope of Work and the accompanying Tables and Figures of the BCP Site RIWP. 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).

In addition, for the emerging contaminants, the laboratory must meet the detection limits for PFAS specified in the NYSDEC's January 2020 *Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs* and 0.28 micrograms per liter (µg/L) for 1,4-Dioxane.

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 property. 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.

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:

$$\text{Accuracy (\%R)} = \frac{(Xs - Xu) \times 100\%}{K}$$

Where:

Xs- Measured value of the spike sample
Xu- 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:

$$\text{Completeness (\%C)} = \frac{(Xv - Xn) \times 100\%}{N}$$

Where:

Xv- Number of valid measurements
Xn- 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 method's particular analysis and knowledgeable of requirements will perform data reduction.

8.2 Data Validation

Data validation is a systematic procedure of reviewing a body of data against a set of established criteria to provide a specified level of assurance of validity prior to its intended use. All analytical samples collected will receive a limited data review. The data validation will be limited to a review of holding times and completeness of all required deliverables.

Where possible, discrepancies will be resolved by the project manager (i.e., no letters will be written to laboratories). A complete analytical data validation is not anticipated. However, if the initial limited data audit reveals significant deviations and problems with the analytical data, project personnel may recommend a complete validation of the data.

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 C – Community Air Monitoring Plan

INVENTUM ENGINEERING, PC

Appendix D
Community Air Monitoring Plan

Brownfield Cleanup Program Site No. C915353

3875 River Road

Tonawanda, NY 14150

November 10, 2022

Revised September 8, 2023

441 CARLISLE DRIVE
SUITE C
HERNDON, VA 20170
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1 Overview

This 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 the Riverview Innovation & Technology Campus, Inc. (RITC) Brownfield Cleanup Program (BCP) Site. 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 RITC Site will have a perimeter air monitoring program before and during the PDRI. If there are detections at the property line, additional monitoring requirements will be considered*[1].

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 that 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.

It must also be noted that monitoring and dust control related to asbestos and asbestos abatement will be completed following New York State Department of Labor requirements.

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, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

[1] The text in *italic font* are comments inserted by Riverview in addition to the standard CAMP Template.

- *VOC and particulate monitoring will be incorporated into the RI and IRM activities.*

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, 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.*

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.

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/m3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/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.

Appendix D-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 :ug/m^3);

(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m^3 for one second averaging; and +/- 1.5 g/m^3 for sixty second averaging;

(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);

(e) Resolution: 0.1% of reading or 1g/m^3, whichever is larger;

(f) Particle Size Range of Maximum Response: 0.1-10;

(g) Total Number of Data Points in Memory: 10,000;

(h) Logged Data: Each data point with average concentration, time/date and data point number

(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;

(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;

(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;

(l) Operating Temperature: -10 to 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 construction 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 150ug/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 D – Laboratory Reports

ANALYTICAL REPORT

Lab Number:	L2324292
Client:	Inventum Engineering 441 Carlisle Drive Suite C Herndon, VA 20170
ATTN:	Peter Zaffram
Phone:	(585) 734-5255
Project Name:	RITC
Project Number:	PDIWP-SURFACE SAMP
Report Date:	05/17/23

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

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

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

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2324292-01	SS-BCP-26 (GRAB)	SEDIMENT	3875 RIVER ROAD, TONAWANDA	05/02/23 16:15	05/03/23
L2324292-02	SS-BCP-26 (COMPOSITE)	SEDIMENT	3875 RIVER ROAD, TONAWANDA	05/02/23 16:15	05/03/23
L2324292-03	SS-BCP-27	SEDIMENT	3875 RIVER ROAD, TONAWANDA	05/02/23 15:45	05/03/23
L2324292-04	SS-BCP-28	SEDIMENT	3875 RIVER ROAD, TONAWANDA	05/02/23 15:00	05/03/23

Project Name:	RITC	**Lab Number:**	L2324292
Project Number:	PDIWP-SURFACE SAMP	**Report Date:**	05/17/23

Case Narrative

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

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

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

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

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

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

Project Name:	RITC	**Lab Number:**	L2324292
Project Number:	PDIWP-SURFACE SAMP	**Report Date:**	05/17/23

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.

Volatile Organics

L2324292-03: 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.

L2324292-03D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Semivolatile Organics

L2324292-03D: The sample has elevated detection limits due to the limited sample volume utilized during extraction, as required by the sample matrix.

L2324292-03D: The surrogate recoveries are below the acceptance criteria for 2-fluorophenol (0%), phenol-d6 (0%), nitrobenzene-d5 (0%), 2-fluorobiphenyl (0%), 2,4,6-tribromophenol (0%) and 4-terphenyl-d14 (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

L2324292-04D: The sample has elevated detection limits due to the dilution required by the sample matrix.

Total Metals

L2324292-01, -03, and -04: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by the sample matrix.

Cyanide, Total

The WG1778308-3 LCSD recovery for cyanide, total (74%), associated with L2324292-02 and -03, is outside our in-house acceptance criteria, but within the vendor-certified acceptance limits. The results of the original analyses 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: Tiffani Morrissey

Title: Technical Director/Representative Date: 05/17/23

ORGANICS

VOLATILES

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

SAMPLE RESULTS

Lab ID: L2324292-03 D
Client ID: SS-BCP-27
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 05/02/23 15:45
Date Received: 05/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8260D
Analytical Date: 05/15/23 13:35
Analyst: AJK
Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	34000	16000	100
1,1-Dichloroethane	ND		ug/kg	6800	980	100
Chloroform	ND		ug/kg	10000	950	100
Carbon tetrachloride	ND		ug/kg	6800	1600	100
1,2-Dichloropropane	ND		ug/kg	6800	850	100
Dibromochloromethane	ND		ug/kg	6800	950	100
1,1,2-Trichloroethane	ND		ug/kg	6800	1800	100
Tetrachloroethene	ND		ug/kg	3400	1300	100
Chlorobenzene	ND		ug/kg	3400	860	100
Trichlorofluoromethane	ND		ug/kg	27000	4700	100
1,2-Dichloroethane	ND		ug/kg	6800	1700	100
1,1,1-Trichloroethane	ND		ug/kg	3400	1100	100
Bromodichloromethane	ND		ug/kg	3400	740	100
trans-1,3-Dichloropropene	ND		ug/kg	6800	1800	100
cis-1,3-Dichloropropene	ND		ug/kg	3400	1100	100
Bromoform	ND		ug/kg	27000	1700	100
1,1,2,2-Tetrachloroethane	ND		ug/kg	3400	1100	100
Benzene	13000		ug/kg	3400	1100	100
Toluene	9300		ug/kg	6800	3700	100
Ethylbenzene	ND		ug/kg	6800	960	100
Chloromethane	ND		ug/kg	27000	6300	100
Bromomethane	ND		ug/kg	14000	3900	100
Vinyl chloride	ND		ug/kg	6800	2300	100
Chloroethane	ND		ug/kg	14000	3100	100
1,1-Dichloroethene	ND		ug/kg	6800	1600	100
trans-1,2-Dichloroethene	ND		ug/kg	10000	930	100
Trichloroethene	ND		ug/kg	3400	930	100
1,2-Dichlorobenzene	ND		ug/kg	14000	980	100

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

SAMPLE RESULTS

Lab ID: L2324292-03 D
Client ID: SS-BCP-27
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 05/02/23 15:45
Date Received: 05/03/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	14000	1000	100
1,4-Dichlorobenzene	ND		ug/kg	14000	1200	100
Methyl tert butyl ether	ND		ug/kg	14000	1400	100
p/m-Xylene	10000	J	ug/kg	14000	3800	100
o-Xylene	4500	J	ug/kg	6800	2000	100
cis-1,2-Dichloroethene	ND		ug/kg	6800	1200	100
Styrene	4200	J	ug/kg	6800	1300	100
Dichlorodifluoromethane	ND		ug/kg	68000	6200	100
Acetone	ND		ug/kg	68000	33000	100
Carbon disulfide	ND		ug/kg	68000	31000	100
2-Butanone	ND		ug/kg	68000	15000	100
4-Methyl-2-pentanone	ND		ug/kg	68000	8700	100
2-Hexanone	ND		ug/kg	68000	8000	100
Bromochloromethane	ND		ug/kg	14000	1400	100
1,2-Dibromoethane	ND		ug/kg	6800	1900	100
1,2-Dibromo-3-chloropropane	ND		ug/kg	20000	6800	100
Isopropylbenzene	ND		ug/kg	6800	740	100
1,2,3-Trichlorobenzene	ND		ug/kg	14000	2200	100
1,2,4-Trichlorobenzene	ND		ug/kg	14000	1800	100
Methyl Acetate	ND		ug/kg	27000	6400	100
Cyclohexane	ND		ug/kg	68000	3700	100
1,4-Dioxane	ND		ug/kg	540000	240000	100
Freon-113	ND		ug/kg	27000	4700	100
Methyl cyclohexane	ND		ug/kg	27000	4100	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	84		70-130
Dibromofluoromethane	127		70-130

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 05/15/23 10:27
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1779118-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		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
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	ND		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
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 05/15/23 10:27
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1779118-5					
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.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
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
4-Methyl-2-pentanone	ND		ug/kg	500	64.
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Isopropylbenzene	ND		ug/kg	50	5.4
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
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.
Methyl cyclohexane	ND		ug/kg	200	30.

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 05/15/23 10:27
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1779118-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	85		70-130
Dibromofluoromethane	114		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1779118-3 WG1779118-4								
Methylene chloride	80		80		70-130	0		30
1,1-Dichloroethane	85		84		70-130	1		30
Chloroform	90		88		70-130	2		30
Carbon tetrachloride	98		100		70-130	2		30
1,2-Dichloropropane	92		93		70-130	1		30
Dibromochloromethane	87		94		70-130	8		30
1,1,2-Trichloroethane	82		89		70-130	8		30
Tetrachloroethene	79		82		70-130	4		30
Chlorobenzene	86		90		70-130	5		30
Trichlorofluoromethane	87		90		70-139	3		30
1,2-Dichloroethane	88		89		70-130	1		30
1,1,1-Trichloroethane	95		95		70-130	0		30
Bromodichloromethane	102		103		70-130	1		30
trans-1,3-Dichloropropene	83		90		70-130	8		30
cis-1,3-Dichloropropene	98		100		70-130	2		30
Bromoform	85		93		70-130	9		30
1,1,2,2-Tetrachloroethane	**68**	Q	73		70-130	7		30
Benzene	89		92		70-130	3		30
Toluene	78		82		70-130	5		30
Ethylbenzene	81		85		70-130	5		30
Chloromethane	70		69		52-130	1		30
Bromomethane	85		83		57-147	2		30
Vinyl chloride	74		75		67-130	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1779118-3 WG1779118-4								
Chloroethane	89		92		50-151	3		30
1,1-Dichloroethene	78		76		65-135	3		30
trans-1,2-Dichloroethene	81		79		70-130	3		30
Trichloroethene	90		92		70-130	2		30
1,2-Dichlorobenzene	81		87		70-130	7		30
1,3-Dichlorobenzene	80		87		70-130	8		30
1,4-Dichlorobenzene	80		86		70-130	7		30
Methyl tert butyl ether	88		89		66-130	1		30
p/m-Xylene	87		90		70-130	3		30
o-Xylene	86		90		70-130	5		30
cis-1,2-Dichloroethene	85		85		70-130	0		30
Styrene	86		90		70-130	5		30
Dichlorodifluoromethane	43		42		30-146	2		30
Acetone	91		96		54-140	5		30
Carbon disulfide	71		72		59-130	1		30
2-Butanone	94		98		70-130	4		30
4-Methyl-2-pentanone	78		85		70-130	9		30
2-Hexanone	78		86		70-130	10		30
Bromochloromethane	88		92		70-130	4		30
1,2-Dibromoethane	74		78		70-130	5		30
1,2-Dibromo-3-chloropropane	84		91		68-130	8		30
Isopropylbenzene	76		80		70-130	5		30
1,2,3-Trichlorobenzene	80		86		70-130	7		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1779118-3 WG1779118-4								
1,2,4-Trichlorobenzene	81		88		70-130	8		30
Methyl Acetate	86		89		51-146	3		30
Cyclohexane	82		83		59-142	1		30
1,4-Dioxane	102		103		65-136	1		30
Freon-113	82		82		50-139	0		30
Methyl cyclohexane	87		86		70-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		100		70-130
Toluene-d8	94		94		70-130
4-Bromofluorobenzene	86		86		70-130
Dibromofluoromethane	105		102		70-130

SEMIVOLATILES

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

SAMPLE RESULTS

Lab ID: L2324292-03 D
Client ID: SS-BCP-27
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 05/02/23 15:45
Date Received: 05/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E
Analytical Date: 05/17/23 17:27
Analyst: JG
Percent Solids: 84%

Extraction Method: EPA 3546
Extraction Date: 05/15/23 08:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	430000		ug/kg	56000	7200	25
Hexachlorobenzene	ND		ug/kg	42000	7800	25
Bis(2-chloroethyl)ether	ND		ug/kg	63000	9500	25
2-Chloronaphthalene	ND		ug/kg	70000	6900	25
3,3'-Dichlorobenzidine	ND		ug/kg	70000	18000	25
2,4-Dinitrotoluene	ND		ug/kg	70000	14000	25
2,6-Dinitrotoluene	ND		ug/kg	70000	12000	25
Fluoranthene	6800000	E	ug/kg	42000	8000	25
4-Chlorophenyl phenyl ether	ND		ug/kg	70000	7500	25
4-Bromophenyl phenyl ether	ND		ug/kg	70000	11000	25
Bis(2-chloroisopropyl)ether	ND		ug/kg	84000	12000	25
Bis(2-chloroethoxy)methane	ND		ug/kg	75000	7000	25
Hexachlorobutadiene	ND		ug/kg	70000	10000	25
Hexachlorocyclopentadiene	ND		ug/kg	200000	63000	25
Hexachloroethane	ND		ug/kg	56000	11000	25
Isophorone	ND		ug/kg	63000	9100	25
Naphthalene	10000000	E	ug/kg	70000	8500	25
Nitrobenzene	ND		ug/kg	63000	10000	25
NDPA/DPA	ND		ug/kg	56000	8000	25
n-Nitrosodi-n-propylamine	ND		ug/kg	70000	11000	25
Bis(2-ethylhexyl)phthalate	ND		ug/kg	70000	24000	25
Butyl benzyl phthalate	ND		ug/kg	70000	18000	25
Di-n-butylphthalate	ND		ug/kg	70000	13000	25
Di-n-octylphthalate	ND		ug/kg	70000	24000	25
Diethyl phthalate	ND		ug/kg	70000	6500	25
Dimethyl phthalate	ND		ug/kg	70000	15000	25
Benzo(a)anthracene	3600000	E	ug/kg	42000	7900	25
Benzo(a)pyrene	3900000	E	ug/kg	56000	17000	25

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

SAMPLE RESULTS

Lab ID: L2324292-03 D
Client ID: SS-BCP-27
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 05/02/23 15:45
Date Received: 05/03/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	4200000	E	ug/kg	42000	12000	25
Benzo(k)fluoranthene	1300000		ug/kg	42000	11000	25
Chrysene	3500000	E	ug/kg	42000	7300	25
Acenaphthylene	5100000	E	ug/kg	56000	11000	25
Anthracene	3800000	E	ug/kg	42000	14000	25
Benzo(ghi)perylene	2100000		ug/kg	56000	8200	25
Fluorene	4500000	E	ug/kg	70000	6800	25
Phenanthrene	8100000	E	ug/kg	42000	8500	25
Dibenzo(a,h)anthracene	440000		ug/kg	42000	8100	25
Indeno(1,2,3-cd)pyrene	2600000		ug/kg	56000	9700	25
Pyrene	5800000	E	ug/kg	42000	6900	25
Biphenyl	880000		ug/kg	160000	9100	25
4-Chloroaniline	ND		ug/kg	70000	13000	25
2-Nitroaniline	ND		ug/kg	70000	13000	25
3-Nitroaniline	ND		ug/kg	70000	13000	25
4-Nitroaniline	ND		ug/kg	70000	29000	25
Dibenzofuran	3300000	E	ug/kg	70000	6600	25
2-Methylnaphthalene	2800000	E	ug/kg	84000	8400	25
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	70000	7300	25
Acetophenone	ND		ug/kg	70000	8600	25
2,4,6-Trichlorophenol	ND		ug/kg	42000	13000	25
p-Chloro-m-cresol	ND		ug/kg	70000	10000	25
2-Chlorophenol	ND		ug/kg	70000	8200	25
2,4-Dichlorophenol	ND		ug/kg	63000	11000	25
2,4-Dimethylphenol	67000	J	ug/kg	70000	23000	25
2-Nitrophenol	ND		ug/kg	150000	26000	25
4-Nitrophenol	ND		ug/kg	98000	28000	25
2,4-Dinitrophenol	ND		ug/kg	340000	32000	25
4,6-Dinitro-o-cresol	ND		ug/kg	180000	34000	25
Pentachlorophenol	ND		ug/kg	56000	15000	25
Phenol	140000		ug/kg	70000	10000	25
2-Methylphenol	86000		ug/kg	70000	11000	25
3-Methylphenol/4-Methylphenol	230000		ug/kg	100000	11000	25
2,4,5-Trichlorophenol	ND		ug/kg	70000	13000	25
Carbazole	2300000		ug/kg	70000	6800	25
Atrazine	ND		ug/kg	56000	24000	25
Benzaldehyde	ND		ug/kg	92000	19000	25

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

SAMPLE RESULTS

Lab ID: L2324292-03 D
Client ID: SS-BCP-27
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 05/02/23 15:45
Date Received: 05/03/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	70000	21000	25
2,3,4,6-Tetrachlorophenol	ND		ug/kg	70000	14000	25

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

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 05/16/23 02:05
Analyst: JG

Extraction Method: EPA 3546
Extraction Date: 05/13/23 17:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01,04 Batch: WG1778684-1					
Acenaphthene	ND		ug/kg	130	17.
Hexachlorobenzene	ND		ug/kg	98	18.
Bis(2-chloroethyl)ether	ND		ug/kg	150	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
3,3'-Dichlorobenzidine	ND		ug/kg	160	43.
2,4-Dinitrotoluene	ND		ug/kg	160	32.
2,6-Dinitrotoluene	ND		ug/kg	160	28.
Fluoranthene	ND		ug/kg	98	19.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	17.
4-Bromophenyl phenyl ether	ND		ug/kg	160	25.
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	28.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	16.
Hexachlorobutadiene	ND		ug/kg	160	24.
Hexachlorocyclopentadiene	ND		ug/kg	460	150
Hexachloroethane	ND		ug/kg	130	26.
Isophorone	ND		ug/kg	150	21.
Naphthalene	ND		ug/kg	160	20.
Nitrobenzene	ND		ug/kg	150	24.
NDPA/DPA	ND		ug/kg	130	18.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	25.
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	56.
Butyl benzyl phthalate	ND		ug/kg	160	41.
Di-n-butylphthalate	ND		ug/kg	160	31.
Di-n-octylphthalate	ND		ug/kg	160	55.
Diethyl phthalate	ND		ug/kg	160	15.
Dimethyl phthalate	ND		ug/kg	160	34.
Benzo(a)anthracene	ND		ug/kg	98	18.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	98	27.

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 05/16/23 02:05
Analyst: JG

Extraction Method: EPA 3546
Extraction Date: 05/13/23 17:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01,04 Batch: WG1778684-1					
Benzo(k)fluoranthene	ND		ug/kg	98	26.
Chrysene	ND		ug/kg	98	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	98	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	98	20.
Dibenzo(a,h)anthracene	ND		ug/kg	98	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	98	16.
Biphenyl	ND		ug/kg	370	21.
4-Chloroaniline	ND		ug/kg	160	30.
2-Nitroaniline	ND		ug/kg	160	31.
3-Nitroaniline	ND		ug/kg	160	31.
4-Nitroaniline	ND		ug/kg	160	67.
Dibenzofuran	ND		ug/kg	160	15.
2-Methylnaphthalene	ND		ug/kg	200	20.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	17.
Acetophenone	ND		ug/kg	160	20.
2,4,6-Trichlorophenol	ND		ug/kg	98	31.
p-Chloro-m-cresol	ND		ug/kg	160	24.
2-Chlorophenol	ND		ug/kg	160	19.
2,4-Dichlorophenol	ND		ug/kg	150	26.
2,4-Dimethylphenol	ND		ug/kg	160	54.
2-Nitrophenol	ND		ug/kg	350	61.
4-Nitrophenol	ND		ug/kg	230	66.
2,4-Dinitrophenol	ND		ug/kg	780	76.
4,6-Dinitro-o-cresol	ND		ug/kg	420	78.
Pentachlorophenol	ND		ug/kg	130	36.

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 05/16/23 02:05
Analyst: JG

Extraction Method: EPA 3546
Extraction Date: 05/13/23 17:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01,04 Batch: WG1778684-1					
Phenol	ND		ug/kg	160	24.
2-Methylphenol	ND		ug/kg	160	25.
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	25.
2,4,5-Trichlorophenol	ND		ug/kg	160	31.
Carbazole	ND		ug/kg	160	16.
Atrazine	ND		ug/kg	130	57.
Benzaldehyde	ND		ug/kg	210	44.
Caprolactam	ND		ug/kg	160	49.
2,3,4,6-Tetrachlorophenol	ND		ug/kg	160	33.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		25-120
Phenol-d6	65		10-120
Nitrobenzene-d5	58		23-120
2-Fluorobiphenyl	72		30-120
2,4,6-Tribromophenol	76		10-136
4-Terphenyl-d14	74		18-120

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 05/16/23 15:38
Analyst: JG

Extraction Method: EPA 3546
Extraction Date: 05/15/23 08:14

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1778913-1					
Acenaphthene	ND		ug/kg	130	17.
Hexachlorobenzene	ND		ug/kg	98	18.
Bis(2-chloroethyl)ether	ND		ug/kg	150	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
3,3'-Dichlorobenzidine	ND		ug/kg	160	43.
2,4-Dinitrotoluene	ND		ug/kg	160	33.
2,6-Dinitrotoluene	ND		ug/kg	160	28.
Fluoranthene	ND		ug/kg	98	19.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	17.
4-Bromophenyl phenyl ether	ND		ug/kg	160	25.
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	28.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	16.
Hexachlorobutadiene	ND		ug/kg	160	24.
Hexachlorocyclopentadiene	ND		ug/kg	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	18.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	25.
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	56.
Butyl benzyl phthalate	ND		ug/kg	160	41.
Di-n-butylphthalate	ND		ug/kg	160	31.
Di-n-octylphthalate	ND		ug/kg	160	55.
Diethyl phthalate	ND		ug/kg	160	15.
Dimethyl phthalate	ND		ug/kg	160	34.
Benzo(a)anthracene	ND		ug/kg	98	18.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	98	27.

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 05/16/23 15:38
Analyst: JG

Extraction Method: EPA 3546
Extraction Date: 05/15/23 08:14

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1778913-1					
Benzo(k)fluoranthene	ND		ug/kg	98	26.
Chrysene	ND		ug/kg	98	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	98	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	98	20.
Dibenzo(a,h)anthracene	ND		ug/kg	98	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	98	16.
Biphenyl	ND		ug/kg	370	21.
4-Chloroaniline	ND		ug/kg	160	30.
2-Nitroaniline	ND		ug/kg	160	31.
3-Nitroaniline	ND		ug/kg	160	31.
4-Nitroaniline	ND		ug/kg	160	68.
Dibenzofuran	ND		ug/kg	160	15.
2-Methylnaphthalene	ND		ug/kg	200	20.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	17.
Acetophenone	ND		ug/kg	160	20.
2,4,6-Trichlorophenol	ND		ug/kg	98	31.
p-Chloro-m-cresol	ND		ug/kg	160	24.
2-Chlorophenol	ND		ug/kg	160	19.
2,4-Dichlorophenol	ND		ug/kg	150	26.
2,4-Dimethylphenol	ND		ug/kg	160	54.
2-Nitrophenol	ND		ug/kg	350	61.
4-Nitrophenol	ND		ug/kg	230	66.
2,4-Dinitrophenol	ND		ug/kg	780	76.
4,6-Dinitro-o-cresol	ND		ug/kg	420	78.
Pentachlorophenol	ND		ug/kg	130	36.

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP
Lab Number: L2324292
Report Date: 05/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 05/16/23 15:38
Analyst: JG

Extraction Method: EPA 3546
Extraction Date: 05/15/23 08:14

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1778913-1					
Phenol	ND		ug/kg	160	25.
2-Methylphenol	ND		ug/kg	160	25.
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	26.
2,4,5-Trichlorophenol	ND		ug/kg	160	31.
Carbazole	ND		ug/kg	160	16.
Atrazine	ND		ug/kg	130	57.
Benzaldehyde	ND		ug/kg	220	44.
Caprolactam	ND		ug/kg	160	50.
2,3,4,6-Tetrachlorophenol	ND		ug/kg	160	33.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	85		25-120
Phenol-d6	82		10-120
Nitrobenzene-d5	74		23-120
2-Fluorobiphenyl	87		30-120
2,4,6-Tribromophenol	112		10-136
4-Terphenyl-d14	103		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG1778684-2 WG1778684-3								
Acenaphthene	66		75		31-137	13		50
Hexachlorobenzene	76		91		40-140	18		50
Bis(2-chloroethyl)ether	58		62		40-140	7		50
2-Chloronaphthalene	72		83		40-140	14		50
3,3'-Dichlorobenzidine	49		56		40-140	13		50
2,4-Dinitrotoluene	70		83		40-132	17		50
2,6-Dinitrotoluene	79		88		40-140	11		50
Fluoranthene	68		79		40-140	15		50
4-Chlorophenyl phenyl ether	69		80		40-140	15		50
4-Bromophenyl phenyl ether	75		86		40-140	14		50
Bis(2-chloroisopropyl)ether	47		50		40-140	6		50
Bis(2-chloroethoxy)methane	63		70		40-117	11		50
Hexachlorobutadiene	66		72		40-140	9		50
Hexachlorocyclopentadiene	82		95		40-140	15		50
Hexachloroethane	65		69		40-140	6		50
Isophorone	62		69		40-140	11		50
Naphthalene	65		72		40-140	10		50
Nitrobenzene	62		65		40-140	5		50
NDPA/DPA	70		81		36-157	15		50
n-Nitrosodi-n-propylamine	59		65		32-121	10		50
Bis(2-ethylhexyl)phthalate	68		81		40-140	17		50
Butyl benzyl phthalate	68		81		40-140	17		50
Di-n-butylphthalate	68		80		40-140	16		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG1778684-2 WG1778684-3								
Di-n-octylphthalate	70		82		40-140	16		50
Diethyl phthalate	68		79		40-140	15		50
Dimethyl phthalate	74		86		40-140	15		50
Benzo(a)anthracene	68		79		40-140	15		50
Benzo(a)pyrene	74		84		40-140	13		50
Benzo(b)fluoranthene	70		79		40-140	12		50
Benzo(k)fluoranthene	68		79		40-140	15		50
Chrysene	67		78		40-140	15		50
Acenaphthylene	79		90		40-140	13		50
Anthracene	68		80		40-140	16		50
Benzo(ghi)perylene	66		74		40-140	11		50
Fluorene	68		79		40-140	15		50
Phenanthrene	66		76		40-140	14		50
Dibenzo(a,h)anthracene	67		76		40-140	13		50
Indeno(1,2,3-cd)pyrene	72		81		40-140	12		50
Pyrene	68		79		35-142	15		50
Biphenyl	72		82		37-127	13		50
4-Chloroaniline	45		53		40-140	16		50
2-Nitroaniline	79		90		47-134	13		50
3-Nitroaniline	54		62		26-129	14		50
4-Nitroaniline	69		81		41-125	16		50
Dibenzofuran	67		78		40-140	15		50
2-Methylnaphthalene	72		81		40-140	12		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG1778684-2 WG1778684-3								
1,2,4,5-Tetrachlorobenzene	71		81		40-117	13		50
Acetophenone	66		71		14-144	7		50
2,4,6-Trichlorophenol	79		92		30-130	15		50
p-Chloro-m-cresol	74		85		26-103	14		50
2-Chlorophenol	69		76		25-102	10		50
2,4-Dichlorophenol	78		87		30-130	11		50
2,4-Dimethylphenol	73		81		30-130	10		50
2-Nitrophenol	72		78		30-130	8		50
4-Nitrophenol	63		74		11-114	16		50
2,4-Dinitrophenol	64		76		4-130	17		50
4,6-Dinitro-o-cresol	80		94		10-130	16		50
Pentachlorophenol	76		90		17-109	17		50
Phenol	66		72		26-90	9		50
2-Methylphenol	69		76		30-130.	10		50
3-Methylphenol/4-Methylphenol	68		77		30-130	12		50
2,4,5-Trichlorophenol	81		94		30-130	15		50
Carbazole	67		78		54-128	15		50
Atrazine	74		83		40-140	11		50
Benzaldehyde	54		55		40-140	2		50
Caprolactam	60		70		15-130	15		50
2,3,4,6-Tetrachlorophenol	73		85		40-140	15		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG1778684-2 WG1778684-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	70		72		25-120
Phenol-d6	67		72		10-120
Nitrobenzene-d5	64		65		23-120
2-Fluorobiphenyl	71		81		30-120
2,4,6-Tribromophenol	83		95		10-136
4-Terphenyl-d14	68		77		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1778913-2 WG1778913-3								
Acenaphthene	80		74		31-137	8		50
Hexachlorobenzene	88		80		40-140	10		50
Bis(2-chloroethyl)ether	73		68		40-140	7		50
2-Chloronaphthalene	74		66		40-140	11		50
3,3'-Dichlorobenzidine	82		73		40-140	12		50
2,4-Dinitrotoluene	67		59		40-132	13		50
2,6-Dinitrotoluene	62		56		40-140	10		50
Fluoranthene	89		82		40-140	8		50
4-Chlorophenyl phenyl ether	84		72		40-140	15		50
4-Bromophenyl phenyl ether	89		77		40-140	14		50
Bis(2-chloroisopropyl)ether	67		63		40-140	6		50
Bis(2-chloroethoxy)methane	74		66		40-117	11		50
Hexachlorobutadiene	78		76		40-140	3		50
Hexachlorocyclopentadiene	105		106		40-140	1		50
Hexachloroethane	59		57		40-140	3		50
Isophorone	68		61		40-140	11		50
Naphthalene	73		69		40-140	6		50
Nitrobenzene	67		65		40-140	3		50
NDPA/DPA	83		75		36-157	10		50
n-Nitrosodi-n-propylamine	74		68		32-121	8		50
Bis(2-ethylhexyl)phthalate	85		67		40-140	24		50
Butyl benzyl phthalate	88		77		40-140	13		50
Di-n-butylphthalate	84		70		40-140	18		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1778913-2 WG1778913-3								
Di-n-octylphthalate	88		71		40-140	21		50
Diethyl phthalate	79		70		40-140	12		50
Dimethyl phthalate	72		64		40-140	12		50
Benzo(a)anthracene	88		75		40-140	16		50
Benzo(a)pyrene	100		85		40-140	16		50
Benzo(b)fluoranthene	90		78		40-140	14		50
Benzo(k)fluoranthene	92		78		40-140	16		50
Chrysene	86		74		40-140	15		50
Acenaphthylene	77		70		40-140	10		50
Anthracene	86		75		40-140	14		50
Benzo(ghi)perylene	103		87		40-140	17		50
Fluorene	80		73		40-140	9		50
Phenanthrene	84		74		40-140	13		50
Dibenzo(a,h)anthracene	100		83		40-140	19		50
Indeno(1,2,3-cd)pyrene	102		86		40-140	17		50
Pyrene	90		85		35-142	6		50
Biphenyl	79		71		37-127	11		50
4-Chloroaniline	**25**	Q	**23**	Q	40-140	8		50
2-Nitroaniline	80		69		47-134	15		50
3-Nitroaniline	79		68		26-129	15		50
4-Nitroaniline	93		86		41-125	8		50
Dibenzofuran	83		75		40-140	10		50
2-Methylnaphthalene	79		72		40-140	9		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1778913-2 WG1778913-3								
1,2,4,5-Tetrachlorobenzene	77		72		40-117	7		50
Acetophenone	77		72		14-144	7		50
2,4,6-Trichlorophenol	86		78		30-130	10		50
p-Chloro-m-cresol	75		67		26-103	11		50
2-Chlorophenol	76		70		25-102	8		50
2,4-Dichlorophenol	78		67		30-130	15		50
2,4-Dimethylphenol	72		64		30-130	12		50
2-Nitrophenol	58		52		30-130	11		50
4-Nitrophenol	103		94		11-114	9		50
2,4-Dinitrophenol	19		19		4-130	0		50
4,6-Dinitro-o-cresol	16		17		10-130	6		50
Pentachlorophenol	**142**	Q	**140**	Q	17-109	1		50
Phenol	73		70		26-90	4		50
2-Methylphenol	70		65		30-130.	7		50
3-Methylphenol/4-Methylphenol	74		64		30-130	14		50
2,4,5-Trichlorophenol	78		75		30-130	4		50
Carbazole	88		80		54-128	10		50
Atrazine	85		75		40-140	13		50
Benzaldehyde	66		70		40-140	6		50
Caprolactam	79		74		15-130	7		50
2,3,4,6-Tetrachlorophenol	95		88		40-140	8		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1778913-2 WG1778913-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	76		76		25-120
Phenol-d6	72		70		10-120
Nitrobenzene-d5	69		65		23-120
2-Fluorobiphenyl	74		67		30-120
2,4,6-Tribromophenol	102		99		10-136
4-Terphenyl-d14	93		83		18-120

METALS

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

SAMPLE RESULTS

Lab ID: L2324292-03 Date Collected: 05/02/23 15:45

Client ID: SS-BCP-27 Date Received: 05/03/23

Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth:

Matrix: Sediment

Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	373		mg/kg	9.43	2.55	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Antimony, Total	ND		mg/kg	4.72	0.358	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Arsenic, Total	6.26		mg/kg	0.943	0.196	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Barium, Total	8.84		mg/kg	0.943	0.164	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Beryllium, Total	0.099	J	mg/kg	0.472	0.031	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Cadmium, Total	ND		mg/kg	0.943	0.092	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Calcium, Total	518		mg/kg	9.43	3.30	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Chromium, Total	1.78		mg/kg	0.943	0.091	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Cobalt, Total	0.388	J	mg/kg	1.89	0.156	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Copper, Total	1.99		mg/kg	0.943	0.243	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Iron, Total	498		mg/kg	4.72	0.852	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Lead, Total	9.59		mg/kg	4.72	0.253	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Magnesium, Total	36.7		mg/kg	9.43	1.45	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Manganese, Total	8.15		mg/kg	0.943	0.150	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Mercury, Total	ND		mg/kg	0.083	0.054	1	05/17/23 00:19	05/17/23 10:20	EPA 7471B	1,7471B	DMB
Nickel, Total	1.83	J	mg/kg	2.36	0.228	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Potassium, Total	48.6	J	mg/kg	236	13.6	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Selenium, Total	2.04		mg/kg	1.89	0.243	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Silver, Total	ND		mg/kg	0.472	0.267	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Sodium, Total	27.0	J	mg/kg	189	2.97	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Thallium, Total	ND		mg/kg	1.89	0.297	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Vanadium, Total	1.71		mg/kg	0.943	0.192	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL
Zinc, Total	4.96		mg/kg	4.72	0.276	2	05/16/23 23:26	05/17/23 08:33	EPA 3050B	1,6010D	DHL

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01,03-04 Batch: WG1777915-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Antimony, Total	ND		mg/kg	2.00	0.152	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Arsenic, Total	ND		mg/kg	0.400	0.083	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Barium, Total	ND		mg/kg	0.400	0.070	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Beryllium, Total	ND		mg/kg	0.200	0.013	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Cadmium, Total	ND		mg/kg	0.400	0.039	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Calcium, Total	ND		mg/kg	4.00	1.40	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Chromium, Total	ND		mg/kg	0.400	0.038	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Cobalt, Total	ND		mg/kg	0.800	0.066	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Copper, Total	ND		mg/kg	0.400	0.103	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Iron, Total	ND		mg/kg	2.00	0.361	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Lead, Total	ND		mg/kg	2.00	0.107	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Magnesium, Total	ND		mg/kg	4.00	0.616	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Manganese, Total	ND		mg/kg	0.400	0.064	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Nickel, Total	ND		mg/kg	1.00	0.097	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Potassium, Total	ND		mg/kg	100	5.76	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Selenium, Total	ND		mg/kg	0.800	0.103	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Silver, Total	ND		mg/kg	0.200	0.113	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Sodium, Total	3.09	J	mg/kg	80.0	1.26	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Thallium, Total	ND		mg/kg	0.800	0.126	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Vanadium, Total	ND		mg/kg	0.400	0.081	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL
Zinc, Total	ND		mg/kg	2.00	0.117	1	05/16/23 23:26	05/17/23 07:26	1,6010D	DHL

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01,03-04 Batch: WG1777917-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	05/17/23 00:19	05/17/23 09:20	1,7471B	DMB

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP
Lab Number: L2324292
Report Date: 05/17/23

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292

Report Date: 05/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 Batch: WG1777915-2 SRM Lot Number: D119-540								
Aluminum, Total	74		-		48-152	-		
Antimony, Total	141		-		10-190	-		
Arsenic, Total	106		-		83-117	-		
Barium, Total	96		-		82-118	-		
Beryllium, Total	100		-		83-117	-		
Cadmium, Total	105		-		82-117	-		
Calcium, Total	97		-		81-118	-		
Chromium, Total	100		-		82-119	-		
Cobalt, Total	103		-		83-117	-		
Copper, Total	100		-		84-116	-		
Iron, Total	91		-		60-140	-		
Lead, Total	104		-		82-118	-		
Magnesium, Total	92		-		76-124	-		
Manganese, Total	96		-		82-118	-		
Nickel, Total	104		-		82-117	-		
Potassium, Total	87		-		70-130	-		
Selenium, Total	109		-		79-121	-		
Silver, Total	101		-		80-120	-		
Sodium, Total	101		-		74-126	-		
Thallium, Total	110		-		81-119	-		
Vanadium, Total	98		-		79-121	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 Batch: WG1777915-2 SRM Lot Number: D119-540					
Zinc, Total	100	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 Batch: WG1777917-2 SRM Lot Number: D119-540					
Mercury, Total	94	-	73-127	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1777915-3 QC Sample: L2324225-01 Client ID: MS Sample												
Aluminum, Total	7980	210	7120	**0**	Q	-	-		75-125	-		20
Antimony, Total	0.905J	52.4	46.0	88		-	-		75-125	-		20
Arsenic, Total	7.95	12.6	19.3	90		-	-		75-125	-		20
Barium, Total	83.8	210	281	94		-	-		75-125	-		20
Beryllium, Total	1.20	5.24	6.42	100		-	-		75-125	-		20
Cadmium, Total	0.218J	5.55	5.39	97		-	-		75-125	-		20
Calcium, Total	926	1050	2050	107		-	-		75-125	-		20
Chromium, Total	14.3	21	31.8	83		-	-		75-125	-		20
Cobalt, Total	10.6	52.4	59.4	93		-	-		75-125	-		20
Copper, Total	12.6	26.2	37.9	96		-	-		75-125	-		20
Iron, Total	20300	105	15700	**0**	Q	-	-		75-125	-		20
Lead, Total	14.9	55.5	61.6	84		-	-		75-125	-		20
Magnesium, Total	1740	1050	2390	**62**	Q	-	-		75-125	-		20
Manganese, Total	318	52.4	309	**0**	Q	-	-		75-125	-		20
Nickel, Total	20.0	52.4	66.7	89		-	-		75-125	-		20
Potassium, Total	408	1050	1400	95		-	-		75-125	-		20
Selenium, Total	0.734J	12.6	13.2	105		-	-		75-125	-		20
Silver, Total	ND	5.24	5.37	102		-	-		75-125	-		20
Sodium, Total	2190	1050	3880	**161**	Q	-	-		75-125	-		20
Thallium, Total	0.648J	12.6	11.8	94		-	-		75-125	-		20
Vanadium, Total	15.4	52.4	63.1	91		-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1777915-3 QC Sample: L2324225-01 Client ID: MS Sample										
Zinc, Total	59.4	52.4	95.9	**70**	Q	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1777917-3 QC Sample: L2324225-01 Client ID: MS Sample										
Mercury, Total	ND	2.02	1.91	94		-	-	80-120	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1777915-4 QC Sample: L2324225-01 Client ID: DUP Sample						
Arsenic, Total	7.95	7.52	mg/kg	6		20
Barium, Total	83.8	94.7	mg/kg	12		20
Cadmium, Total	0.218J	0.254J	mg/kg	NC		20
Chromium, Total	14.3	14.8	mg/kg	3		20
Lead, Total	14.9	15.0	mg/kg	1		20
Selenium, Total	0.734J	0.530J	mg/kg	NC		20
Silver, Total	ND	ND	mg/kg	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1777917-4 QC Sample: L2324225-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/kg	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

SAMPLE RESULTS

Lab ID: L2324292-03
Client ID: SS-BCP-27
Sample Location: 3875 RIVER ROAD, TONAWANDA

Sample Depth:
Matrix: Sediment

Date Collected: 05/02/23 15:45
Date Received: 05/03/23
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.6		%	0.100	NA	1	-	05/05/23 10:41	121,2540G	ROI
Cyanide, Total	1.7		mg/kg	1.1	0.23	1	05/12/23 18:30	05/15/23 12:59	1,9010C/9012B	JER
Nitrogen, Ammonia	15		mg/kg	6.3	2.4	1	05/12/23 20:24	05/15/23 12:36	121,4500NH3-BH	KEP

Project Name: RITC **Lab Number:** L2324292

Project Number: PDIWP-SURFACE SAMP **Report Date:** 05/17/23

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): 04 Batch: WG1777554-1										
Cyanide, Total	ND		mg/kg	0.92	0.20	1	05/11/23 13:30	05/11/23 16:46	1,9010C/9012B	JER
General Chemistry - Westborough Lab for sample(s): 02-03 Batch: WG1778308-1										
Cyanide, Total	ND		mg/kg	0.91	0.19	1	05/12/23 18:30	05/15/23 12:46	1,9010C/9012B	JER
General Chemistry - Westborough Lab for sample(s): 03-04 Batch: WG1778397-1										
Nitrogen, Ammonia	3.2	J	mg/kg	7.5	0.02	1	05/12/23 20:24	05/15/23 12:12	121,4500NH3-BH	KEP

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292

Report Date: 05/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 04 Batch: WG1777554-2 WG1777554-3								
Cyanide, Total	106		98		80-120	8		35
General Chemistry - Westborough Lab Associated sample(s): 02-03 Batch: WG1778308-2 WG1778308-3								
Cyanide, Total	95		**74**	Q	80-120	25		35
General Chemistry - Westborough Lab Associated sample(s): 03-04 Batch: WG1778397-2								
Nitrogen, Ammonia	101		-		83-115	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

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): 04 QC Batch ID: WG1777554-4 WG1777554-5 QC Sample: L2324538-06 Client ID: MS Sample												
Cyanide, Total	ND	14	15	110		13	100		75-125	10		35
General Chemistry - Westborough Lab Associated sample(s): 02-03 QC Batch ID: WG1778308-4 WG1778308-5 QC Sample: L2325058-01 Client ID: MS Sample												
Cyanide, Total	ND	11	12	110		11	100		75-125	10		35
General Chemistry - Westborough Lab Associated sample(s): 03-04 QC Batch ID: WG1778397-4 QC Sample: L2322555-18 Client ID: MS Sample												
Nitrogen, Ammonia	778	350	1100	91		-	-		55-144	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: RITC

Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292

Report Date: 05/17/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1775105-1 QC Sample: L2324201-33 Client ID: DUP Sample						
Solids, Total	84.4	82.6	%	2		20
General Chemistry - Westborough Lab Associated sample(s): 03-04 QC Batch ID: WG1778397-3 QC Sample: L2322555-18 Client ID: DUP Sample						
Nitrogen, Ammonia	778	720	mg/kg	8		20

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2324292-01A	Plastic 2oz unpreserved for TS	B	NA		3.8	Y	Absent		TS(7)
L2324292-01B	Metals Only-Glass 60mL/2oz unpreserved	B	NA		3.8	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),NI-TI(180),CR-TI(180),TL-TI(180),AL-TI(180),CU-TI(180),SB-TI(180),PB-TI(180),ZN-TI(180),SE-TI(180),V-TI(180),CO-TI(180),MG-TI(180),HG-T(28),FE-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),NA-TI(180),K-TI(180)
L2324292-01C	Glass 250ml/8oz unpreserved	B	NA		3.8	Y	Absent		NYTCL-8270(14)
L2324292-02A	Plastic 2oz unpreserved for TS	B	NA		3.8	Y	Absent		TCN-9010(14),TS(7)
L2324292-03A	Plastic 2oz unpreserved for TS	B	NA		3.8	Y	Absent		TS(7)
L2324292-03B	Metals Only-Glass 60mL/2oz unpreserved	B	NA		3.8	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),AL-TI(180),CU-TI(180),PB-TI(180),ZN-TI(180),SE-TI(180),SB-TI(180),V-TI(180),CO-TI(180),MG-TI(180),FE-TI(180),HG-T(28),MN-TI(180),K-TI(180),CD-TI(180),CA-TI(180),NA-TI(180)
L2324292-03C	Glass 60mL/2oz unpreserved	B	NA		3.8	Y	Absent		NYTCL-8270(14),TCN-9010(14),NH3-4500(28)
L2324292-03D	Vial Large Septa unpreserved (4oz)	B	NA		3.8	Y	Absent		NYTCL-8260-R2(14)
L2324292-03E	Glass 120ml/4oz unpreserved	B	NA		3.8	Y	Absent		NYTCL-8270(14),TCN-9010(14),NH3-4500(28)
L2324292-03X	Vial MeOH preserved split	B	NA		3.8	Y	Absent		NYTCL-8260-R2(14)
L2324292-03Y	Vial Water preserved split	B	NA		3.8	Y	Absent	**12-MAY-23 14:00**	NYTCL-8260-R2(14)
L2324292-03Z	Vial Water preserved split	B	NA		3.8	Y	Absent	**12-MAY-23 14:00**	NYTCL-8260-R2(14)
L2324292-04A	Metals Only-Glass 60mL/2oz unpreserved	B	NA		3.8	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),AL-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),V-TI(180),CO-TI(180),HG-T(28),FE-TI(180),MN-TI(180),MG-TI(180),CA-TI(180),NA-TI(180),K-TI(180),CD-TI(180)
L2324292-04B	Glass 60mL/2oz unpreserved	B	NA		3.8	Y	Absent		NYTCL-8270(14),TCN-9010(14),TS(7),NH3-4500(28)
L2324292-04C	Glass 120ml/4oz unpreserved	B	NA		3.8	Y	Absent		NYTCL-8270(14),TCN-9010(14),TS(7),NH3-4500(28)

*Values in parentheses indicate holding time in days

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2324292
Report Date: 05/17/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)

*Values in parentheses indicate holding time in days

Project Name:	RITC	**Lab Number:**	L2324292
Project Number:	PDIWP-SURFACE SAMP	**Report Date:**	05/17/23

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	RITC	**Lab Number:**	L2324292
Project Number:	PDIWP-SURFACE SAMP	**Report Date:**	05/17/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	RITC	**Lab Number:**	L2324292
Project Number:	PDIWP-SURFACE SAMP	**Report Date:**	05/17/23

Data Qualifiers

Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	RITC	**Lab Number:**	L2324292
Project Number:	PDIWP-SURFACE SAMP	**Report Date:**	05/17/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

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 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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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 1 of 1

Date Rec'd in Lab: 5/4/23

ALPHA Job #: L2324292

Client Information

Client: INVENTUM ENG
Address: 441 CARLISLE DR
HERNDON VA 20170
Phone: 585-734-5255
Fax:
Email: roxanne.birx@inventumeng.com

Project Information

Project Name: RITC
Project Location: 3875 RIVER ROAD, TONAWANDA
Project # PDI WP-SURFACE SAMPLES
(Use Project name as Project #) ☐
Project Manager:
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☒ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information

☒ Same as Client Info
PO #

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:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL 8260	TCL 8270	T. CN	TAL METALS	T. MERCURY	T. AMMONIA			Total Bottle
24292-01	SS-BCP-26 (GRAB)	5/2/23	16:15	SD	RB		X		X	X				
02	SS-BCP-26 (COMPOSITE)	5/2/23	16:15	SD	RB			X						
03	SS-BCP-27	5/2/23	15:45	SD	RB	X	X	X	X	X	X			
04	SS-BCP-28	5/2/23	15:00	SD	RB		X	X	X	X	X			

Sample Specific Comments

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
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									

Relinquished By:	Date/Time	Received By:	Date/Time
	5/3/2023 1615		5/3/23 1613
	5/3/23 1615		05104123

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.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2332797
Client:	Inventum Engineering 441 Carlisle Drive Suite C Herndon, VA 20170
ATTN:	Peter Zaffram
Phone:	(585) 734-5255
Project Name:	RITC
Project Number:	PDIWP-SURFACE SAMP
Report Date:	06/26/23

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

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

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

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2332797
Report Date: 06/26/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2332797-01	SS-BCP-26 (GRAB)	SEDIMENT	3875 RIVER ROAD, TONAWANDA	05/02/23 16:15	05/03/23
L2332797-02	SS-BCP-27	SEDIMENT	3875 RIVER ROAD, TONAWANDA	05/02/23 15:45	05/03/23
L2332797-03	SS-BCP-28	SEDIMENT	3875 RIVER ROAD, TONAWANDA	05/02/23 15:00	05/03/23

Project Name:	RITC	**Lab Number:**	L2332797
Project Number:	PDIWP-SURFACE SAMP	**Report Date:**	06/26/23

Case Narrative

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

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

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

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

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

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

Project Name:	RITC	**Lab Number:**	L2332797
Project Number:	PDIWP-SURFACE SAMP	**Report Date:**	06/26/23

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

L2332797-01, -02, and -03: The sample was received in an inappropriate container for the TCLP Extraction Non-Volatile - EPA 1311,TCLP Extraction VOC - EPA 1311 analysis.

TCLP Volatiles

L2332797-01, -02, and -03: The sample was analyzed with the method required holding time exceeded.

TCLP Semivolatiles

L2332797-01, -02, and -03: With the client's authorization, the sample was extracted with the method required holding time exceeded.

The WG1792391-3 LCS recoveries, associated with L2332797-01 through -03, are below the acceptance criteria for pyridine (6%); 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: Ashaley Moynihan

Title: Technical Director/Representative Date: 06/26/23

ORGANICS

VOLATILES

Project Name: RITC **Lab Number:** L2332797

Project Number: PDIWP-SURFACE SAMP **Report Date:** 06/26/23

SAMPLE RESULTS

Lab ID: L2332797-02
Client ID: SS-BCP-27
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 05/02/23 15:45
Date Received: 05/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8260D
Analytical Date: 06/21/23 11:07
Analyst: LAC

TCLP/SPLP Ext. Date: 06/20/23 11:08

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	61		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	90		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	96		70-130
dibromofluoromethane	99		70-130

Project Name: RITC **Lab Number:** L2332797

Project Number: PDIWP-SURFACE SAMP **Report Date:** 06/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 06/21/23 07:27
Analyst: MCM
TCLP/SPLP Extraction Date: 06/20/23 11:08

Extraction Date: 06/20/23 11:08

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Volatiles by EPA 1311 - Westborough Lab for sample(s): 01-03 Batch: WG1794146-5					
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	87		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	95		70-130
dibromofluoromethane	98		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: PDIWP-SURFACE SAMP

Lab Number: L2332797

Report Date: 06/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Volatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-03 Batch: WG1794146-3 WG1794146-4								
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	120		110		63-132	9		20
Tetrachloroethene	120		110		70-130	9		20
Chlorobenzene	110		100		75-130	10		25
1,2-Dichloroethane	110		110		70-130	0		20
Benzene	120		110		70-130	9		25
Vinyl chloride	110		100		55-140	10		20
1,1-Dichloroethene	110		110		61-145	0		25
Trichloroethene	110		110		70-130	0		25
1,4-Dichlorobenzene	110		110		70-130	0		20
2-Butanone	98		93		63-138	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	91		90		70-130
Toluene-d8	99		98		70-130
4-Bromofluorobenzene	94		93		70-130
dibromofluoromethane	100		100		70-130

SEMIVOLATILES

Project Name: RITC **Lab Number:** L2332797

Project Number: PDIWP-SURFACE SAMP **Report Date:** 06/26/23

SAMPLE RESULTS

Lab ID: L2332797-02
Client ID: SS-BCP-27
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 05/02/23 15:45
Date Received: 05/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E
Analytical Date: 06/20/23 19:03
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 06/16/23 15:46

TCLP/SPLP Ext. Date: 06/13/23 20:48

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	890		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	56		21-120
Phenol-d6	56		10-120
Nitrobenzene-d5	57		23-120
2-Fluorobiphenyl	46		15-120
2,4,6-Tribromophenol	62		10-120
4-Terphenyl-d14	60		33-120

Project Name: RITC **Lab Number:** L2332797

Project Number: PDIWP-SURFACE SAMP **Report Date:** 06/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/18/23 16:07
Analyst: IM
TCLP/SPLP Extraction Date: 06/13/23 20:48

Extraction Method: EPA 3510C
Extraction Date: 06/16/23 15:06

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Semivolatiles by EPA 1311 - Westborough Lab for sample(s): 01-03 Batch: WG1792391-1					
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	72		21-120
Phenol-d6	68		10-120
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	76		15-120
2,4,6-Tribromophenol	85		10-120
4-Terphenyl-d14	80		33-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2332797
Report Date: 06/26/23

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 Batch: WG1792391-2 WG1792391-3								
Hexachlorobenzene	70		60		40-140	15		30
2,4-Dinitrotoluene	82		73		40-132	12		30
Hexachlorobutadiene	69		57		28-111	19		30
Hexachloroethane	67		58		21-105	14		30
Nitrobenzene	75		65		40-140	14		30
2,4,6-Trichlorophenol	85		73		30-130	15		30
Pentachlorophenol	73		64		9-103	13		30
2-Methylphenol	71		63		30-130	12		30
3-Methylphenol/4-Methylphenol	72		63		30-130	13		30
2,4,5-Trichlorophenol	83		73		30-130	13		30
Pyridine	26		**6**	Q	10-66	**125**	Q	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	73		62		21-120
Phenol-d6	69		59		10-120
Nitrobenzene-d5	85		71		23-120
2-Fluorobiphenyl	76		62		15-120
2,4,6-Tribromophenol	83		71		10-120
4-Terphenyl-d14	72		61		33-120

Project Name: RITC
Project Number: PDIWP-SURFACE SAMP

Lab Number: L2332797
Report Date: 06/26/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2332797-01C	Glass 120ml/4oz unpreserved	B	NA		3.8	Y	Absent		TCLP-EXT-ZHE(14)
L2332797-01W	Amber 1000ml unpreserved Extracts	B	NA		3.8	Y	Absent		TCLP-8270(14)
L2332797-01X9	Tumble Vessel	B	NA		3.8	Y	Absent		-
L2332797-01Y	Vial unpreserved Extracts	B	NA		3.8	Y	Absent		TCLP-VOA(14)
L2332797-01Z	Vial unpreserved Extracts	B	NA		3.8	Y	Absent		TCLP-VOA(14)
L2332797-02E	Glass 120ml/4oz unpreserved	B	NA		3.8	Y	Absent		TCLP-EXT-ZHE(14)
L2332797-02W	Amber 1000ml unpreserved Extracts	B	NA		3.8	Y	Absent		TCLP-8270(14)
L2332797-02X9	Tumble Vessel	B	NA		3.8	Y	Absent		-
L2332797-02Y	Vial unpreserved Extracts	B	NA		3.8	Y	Absent		TCLP-VOA(14)
L2332797-02Z	Vial unpreserved Extracts	B	NA		3.8	Y	Absent		TCLP-VOA(14)
L2332797-03C	Glass 120ml/4oz unpreserved	B	NA		3.8	Y	Absent		TCLP-EXT-ZHE(14)
L2332797-03W	Amber 1000ml unpreserved Extracts	B	NA		3.8	Y	Absent		TCLP-8270(14)
L2332797-03X9	Tumble Vessel	B	NA		3.8	Y	Absent		-
L2332797-03Y	Vial unpreserved Extracts	B	NA		3.8	Y	Absent		TCLP-VOA(14)
L2332797-03Z	Vial unpreserved Extracts	B	NA		3.8	Y	Absent		TCLP-VOA(14)

*Values in parentheses indicate holding time in days

Project Name:	RITC	**Lab Number:**	L2332797
Project Number:	PDIWP-SURFACE SAMP	**Report Date:**	06/26/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

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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

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Data Qualifiers

Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	RITC	**Lab Number:**	L2332797
Project Number:	PDIWP-SURFACE SAMP	**Report Date:**	06/26/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

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, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-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, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L2332797

NEW YORK CHAIN OF CUSTODY

ALPHA

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

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 1 of 1

Date Rec'd in Lab: 5/4/23

ALPHA Job #: ~~L2332797~~ 6/9/23 amc

Client Information

Client: INVENTUM ENG
Address: 441 CARLISLE DR
HERNDON VA 20170
Phone: 585-234-5255
Fax:
Email: roxanne.birx@inventumeng.com

Project Information

Project Name: RITC
Project Location: 3875 RIVER ROAD, TONAWANDA
Project #: PDI WP-SURFACE SAMPLES
(Use Project name as Project #)
Project Manager:
ALPHAQuote #:

Turn-Around Time

Standard: X — Due Date:
Rush (only if pre approved): ☐ — # of Days:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

Deliverables

☐ ASP-A ☐ ASP-B
☒ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information

☒ Same as Client Info
PO #

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:

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	Collection Time	Sample Matrix	Sampler's Initials	TCL 8260	TCL 8270	T-CN	TAL METALS	T-MERCURY	T-AMMONIA	TCLP 8260	TCLP 8270	Total Bottles
~~24092~~ 01	SS-BCP-26 (GRAB)	5/2/23	16:15	SD	RB		X		X	X		X	X	
32797 ~~02~~	SS-BCP-26 (COMPOSITE)	5/2/23	16:15	SD	RB			X						
02 ~~03~~	SS-BCP-27	5/2/23	15:45	SD	RB	X	X	X	X	X	X	X	X	
03 ~~04~~	SS-BCP-28	5/2/23	~~[illegible]~~ 15:00	SD	RB		X	X	X	X	X	X	X	

Preservative Code: A = None; B = HCl; C = HNO_3; D = H_2SO_4; E = NaOH; F = MeOH; G = $NaHSO_4$; H = $Na_2S_2O_3$; 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

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	5/3/2023 1615	[signature]	5/3/23 1613
[signature]	5/3/23 1103	[signature]	05104123

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.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2330702
Client:	Inventum Engineering 441 Carlisle Drive Suite C Herndon, NY 20170
ATTN:	John Black
Phone:	(571) 752-6562
Project Name:	RITC
Project Number:	BENCH SCALE-TAR SEEP
Report Date:	06/22/23

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

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

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

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702
Report Date: 06/22/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2330702-01	SS-BCP-27-02-06012023	SOIL	3875 RIVER ROAD, TONAWANDA	06/01/23 13:20	06/01/23
L2330702-02	SS-BCP-27-03-06012023	SOIL	3875 RIVER ROAD, TONAWANDA	06/01/23 13:20	06/01/23
L2330702-03	SS-BCP-27-05-06012023	SOIL	3875 RIVER ROAD, TONAWANDA	06/01/23 13:30	06/01/23
L2330702-04	SS-BCP-27-06-06012023	SOIL	3875 RIVER ROAD, TONAWANDA	06/01/23 13:30	06/01/23

Project Name:	RITC	**Lab Number:**	L2330702
Project Number:	BENCH SCALE-TAR SEEP	**Report Date:**	06/22/23

Case Narrative

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

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

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

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

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

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

Project Name:	RITC	**Lab Number:**	L2330702
Project Number:	BENCH SCALE-TAR SEEP	**Report Date:**	06/22/23

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.

Volatile Organics

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.

L2330702-01D, -02D, -03D, and -04D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

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: 06/22/23

ORGANICS

VOLATILES

Project Name: RITC **Lab Number:** L2330702

Project Number: BENCH SCALE-TAR SEE **Report Date:** 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-01 D
Client ID: SS-BCP-27-02-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 06/15/23 10:58
Analyst: AJK
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chloroform	ND		ug/kg	3500	320	50
Carbon tetrachloride	ND		ug/kg	2300	530	50
Tetrachloroethene	ND		ug/kg	1200	450	50
Chlorobenzene	ND		ug/kg	1200	290	50
1,2-Dichloroethane	ND		ug/kg	2300	590	50
Benzene	5400		ug/kg	1200	380	50
Vinyl chloride	ND		ug/kg	2300	780	50
1,1-Dichloroethene	ND		ug/kg	2300	550	50
Trichloroethene	ND		ug/kg	1200	320	50
1,4-Dichlorobenzene	ND		ug/kg	4600	400	50
2-Butanone	ND		ug/kg	23000	5100	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	97		70-130

Project Name: RITC **Lab Number:** L2330702

Project Number: BENCH SCALE-TAR SEE **Report Date:** 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-02 D
Client ID: SS-BCP-27-03-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 06/15/23 10:32
Analyst: AJK
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chloroform	ND		ug/kg	3400	320	50
Carbon tetrachloride	ND		ug/kg	2300	520	50
Tetrachloroethene	ND		ug/kg	1100	450	50
Chlorobenzene	ND		ug/kg	1100	290	50
1,2-Dichloroethane	ND		ug/kg	2300	590	50
Benzene	4000		ug/kg	1100	380	50
Vinyl chloride	ND		ug/kg	2300	760	50
1,1-Dichloroethene	ND		ug/kg	2300	540	50
Trichloroethene	ND		ug/kg	1100	310	50
1,4-Dichlorobenzene	ND		ug/kg	4600	390	50
2-Butanone	ND		ug/kg	23000	5100	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	98		70-130

Project Name: RITC **Lab Number:** L2330702

Project Number: BENCH SCALE-TAR SEE **Report Date:** 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-03 D
Client ID: SS-BCP-27-05-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 06/15/23 10:06
Analyst: AJK
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chloroform	ND		ug/kg	1800	170	20
Carbon tetrachloride	ND		ug/kg	1200	280	20
Tetrachloroethene	ND		ug/kg	610	240	20
Chlorobenzene	ND		ug/kg	610	150	20
1,2-Dichloroethane	ND		ug/kg	1200	310	20
Benzene	5600		ug/kg	610	200	20
Vinyl chloride	ND		ug/kg	1200	410	20
1,1-Dichloroethene	ND		ug/kg	1200	290	20
Trichloroethene	ND		ug/kg	610	170	20
1,4-Dichlorobenzene	ND		ug/kg	2400	210	20
2-Butanone	ND		ug/kg	12000	2700	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	97		70-130

Project Name: RITC **Lab Number:** L2330702

Project Number: BENCH SCALE-TAR SEE **Report Date:** 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-04 D
Client ID: SS-BCP-27-06-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 06/15/23 09:40
Analyst: AJK
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chloroform	ND		ug/kg	1800	170	20
Carbon tetrachloride	ND		ug/kg	1200	280	20
Tetrachloroethene	ND		ug/kg	600	240	20
Chlorobenzene	ND		ug/kg	600	150	20
1,2-Dichloroethane	ND		ug/kg	1200	310	20
Benzene	1900		ug/kg	600	200	20
Vinyl chloride	ND		ug/kg	1200	400	20
1,1-Dichloroethene	ND		ug/kg	1200	290	20
Trichloroethene	ND		ug/kg	600	160	20
1,4-Dichlorobenzene	ND		ug/kg	2400	210	20
2-Butanone	ND		ug/kg	12000	2700	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	97		70-130

Project Name: RITC **Lab Number:** L2330702

Project Number: BENCH SCALE-TAR SEEP **Report Date:** 06/22/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 06/15/23 09:14
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1791814-5					
Chloroform	ND		ug/kg	75	7.0
Carbon tetrachloride	ND		ug/kg	50	12.
Tetrachloroethene	ND		ug/kg	25	9.8
Chlorobenzene	ND		ug/kg	25	6.4
1,2-Dichloroethane	ND		ug/kg	50	13.
Benzene	ND		ug/kg	25	8.3
Vinyl chloride	ND		ug/kg	50	17.
1,1-Dichloroethene	ND		ug/kg	50	12.
Trichloroethene	ND		ug/kg	25	6.8
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
2-Butanone	ND		ug/kg	500	110

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	95		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702
Report Date: 06/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1791814-3 WG1791814-4								
Chloroform	94		92		70-130	2		30
Carbon tetrachloride	86		86		70-130	0		30
Tetrachloroethene	96		94		70-130	2		30
Chlorobenzene	96		95		70-130	1		30
1,2-Dichloroethane	94		93		70-130	1		30
Benzene	96		95		70-130	1		30
Vinyl chloride	92		88		67-130	4		30
1,1-Dichloroethene	89		88		65-135	1		30
Trichloroethene	92		91		70-130	1		30
1,4-Dichlorobenzene	96		96		70-130	0		30
2-Butanone	87		86		70-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		99		70-130
Toluene-d8	102		102		70-130
4-Bromofluorobenzene	99		99		70-130
Dibromofluoromethane	96		97		70-130

SEMIVOLATILES

Project Name: RITC **Lab Number:** L2330702

Project Number: BENCH SCALE-TAR SEE **Report Date:** 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-01
Client ID: SS-BCP-27-02-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/13/23 15:18
Analyst: EJL
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00

Extraction Method: EPA 3510C
Extraction Date: 06/10/23 20:43

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	310		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	890		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	67		21-120
Phenol-d6	61		10-120
Nitrobenzene-d5	70		23-120
2-Fluorobiphenyl	65		15-120
2,4,6-Tribromophenol	64		10-120
4-Terphenyl-d14	62		33-120

Project Name: RITC **Lab Number:** L2330702

Project Number: BENCH SCALE-TAR SEE **Report Date:** 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-02
Client ID: SS-BCP-27-03-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/13/23 15:53
Analyst: EJL
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00

Extraction Method: EPA 3510C
Extraction Date: 06/10/23 20:43

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	950		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	68		21-120
Phenol-d6	62		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	63		10-120
4-Terphenyl-d14	61		33-120

Project Name: RITC **Lab Number:** L2330702

Project Number: BENCH SCALE-TAR SEE **Report Date:** 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-03
Client ID: SS-BCP-27-05-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/13/23 16:10
Analyst: EJL
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/07/23 01:48

Extraction Method: EPA 3510C
Extraction Date: 06/10/23 20:43

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	390		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	1000	E	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	65		10-120
Nitrobenzene-d5	76		23-120
2-Fluorobiphenyl	74		15-120
2,4,6-Tribromophenol	71		10-120
4-Terphenyl-d14	68		33-120

Project Name: RITC
Lab Number: L2330702
Project Number: BENCH SCALE-TAR SEE
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-03 D
Client ID: SS-BCP-27-05-060120 23
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/17/23 15:07
Analyst: CMM
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/07/23 01:48

Extraction Method: EPA 3510C
Extraction Date: 06/10/23 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
3-Methylphenol/4-Methylphenol	1200		ug/l	120	14.	5

Project Name: RITC **Lab Number:** L2330702

Project Number: BENCH SCALE-TAR SEE **Report Date:** 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-04
Client ID: SS-BCP-27-06-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/13/23 16:28
Analyst: EJL
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00

Extraction Method: EPA 3510C
Extraction Date: 06/10/23 20:43

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	500		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	ND		ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		21-120
Phenol-d6	67		10-120
Nitrobenzene-d5	80		23-120
2-Fluorobiphenyl	73		15-120
2,4,6-Tribromophenol	75		10-120
4-Terphenyl-d14	72		33-120

Project Name: RITC
Lab Number: L2330702
Project Number: BENCH SCALE-TAR SEE
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-04 D
Client ID: SS-BCP-27-06-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/17/23 15:31
Analyst: CMM
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00

Extraction Method: EPA 3510C
Extraction Date: 06/10/23 20:43

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 **Lab Number:** L2330702

Project Number: BENCH SCALE-TAR SEEP **Report Date:** 06/22/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/13/23 12:40
Analyst: EJL
TCLP/SPLP Extraction Date: 06/05/23 12:00

Extraction Method: EPA 3510C
Extraction Date: 06/10/23 20:43

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Semivolatiles by EPA 1311 - Westborough Lab for sample(s): 01-04 Batch: WG1789776-1					
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	87		21-120
Phenol-d6	78		10-120
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	81		15-120
2,4,6-Tribromophenol	75		10-120
4-Terphenyl-d14	74		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702

Report Date: 06/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Semivolatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-04 Batch: WG1789776-2 WG1789776-3								
Hexachlorobenzene	46		53		40-140	14		30
2,4-Dinitrotoluene	55		62		40-132	12		30
Hexachlorobutadiene	48		57		28-111	17		30
Hexachloroethane	46		56		21-105	20		30
Nitrobenzene	56		64		40-140	13		30
2,4,6-Trichlorophenol	59		64		30-130	8		30
Pentachlorophenol	38		45		9-103	17		30
2-Methylphenol	56		60		30-130	7		30
3-Methylphenol/4-Methylphenol	58		65		30-130	11		30
2,4,5-Trichlorophenol	60		67		30-130	11		30
Pyridine	12		31		10-66	**88**	Q	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	60		69		21-120
Phenol-d6	57		61		10-120
Nitrobenzene-d5	58		69		23-120
2-Fluorobiphenyl	57		65		15-120
2,4,6-Tribromophenol	53		62		10-120
4-Terphenyl-d14	51		57		33-120

PESTICIDES

Project Name: RITC
Project Number: BENCH SCALE-TAR SEE
Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-01
Client ID: SS-BCP-27-02-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 06/12/23 16:13
Analyst: JM
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00

Extraction Method: EPA 3510C
Extraction Date: 06/11/23 18:02

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	82		30-150	A
Decachlorobiphenyl	97		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	92		30-150	B

Project Name: RITC
Lab Number: L2330702
Project Number: BENCH SCALE-TAR SEE
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-01
Client ID: SS-BCP-27-02-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 06/11/23 18:31
Analyst: ER
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00
Methylation Date: 06/10/23 21:32

Extraction Method: EPA 8151A
Extraction Date: 06/10/23 09:55

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	80		30-150	A
DCAA	74		30-150	B

Project Name: RITC
Lab Number: L2330702
Project Number: BENCH SCALE-TAR SEE
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-02
Client ID: SS-BCP-27-03-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 06/12/23 16:26
Analyst: JM
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00

Extraction Method: EPA 3510C
Extraction Date: 06/11/23 18:02

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	86		30-150	A
Decachlorobiphenyl	99		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	98		30-150	B

Project Name: RITC
Lab Number: L2330702
Project Number: BENCH SCALE-TAR SEE
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-02
Client ID: SS-BCP-27-03-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 06/11/23 18:50
Analyst: ER
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00
Methylation Date: 06/10/23 21:32

Extraction Method: EPA 8151A
Extraction Date: 06/10/23 09:55

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	80		30-150	A
DCAA	75		30-150	B

Project Name: RITC
Project Number: BENCH SCALE-TAR SEE
Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-03
Client ID: SS-BCP-27-05-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 06/12/23 16:38
Analyst: JM
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/07/23 01:48

Extraction Method: EPA 3510C
Extraction Date: 06/11/23 18:02

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	76		30-150	A
Decachlorobiphenyl	89		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	88		30-150	B

Project Name: RITC
Lab Number: L2330702
Project Number: BENCH SCALE-TAR SEE
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-03
Client ID: SS-BCP-27-05-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 06/11/23 19:08
Analyst: ER
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/07/23 01:48
Methylation Date: 06/10/23 21:32

Extraction Method: EPA 8151A
Extraction Date: 06/10/23 09:55

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	82		30-150	A
DCAA	75		30-150	B

Project Name: RITC
Lab Number: L2330702
Project Number: BENCH SCALE-TAR SEE
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-04
Client ID: SS-BCP-27-06-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 06/12/23 16:51
Analyst: JM
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00

Extraction Method: EPA 3510C
Extraction Date: 06/11/23 18:02

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	90		30-150	A
Decachlorobiphenyl	105		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	102		30-150	B

Project Name: RITC
Lab Number: L2330702
Project Number: BENCH SCALE-TAR SEE
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-04
Client ID: SS-BCP-27-06-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 06/11/23 19:45
Analyst: ER
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00
Methylation Date: 06/10/23 21:32

Extraction Method: EPA 8151A
Extraction Date: 06/10/23 09:55

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	83		30-150	A
DCAA	72		30-150	B

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP
Lab Number: L2330702
Report Date: 06/22/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 06/11/23 13:18
Analyst: ER
TCLP/SPLP Extraction Date: 06/05/23 12:00
Methylation Date: 06/10/23 21:32

Extraction Method: EPA 8151A
Extraction Date: 06/10/23 08:14

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Herbicides by EPA 1311 - Westborough Lab for sample(s): 01-04 Batch: WG1789620-1						
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	81		30-150	A
DCAA	75		30-150	B

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP
Lab Number: L2330702
Report Date: 06/22/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 06/12/23 14:58
Analyst: JM
TCLP/SPLP Extraction Date: 06/05/23 12:00

Extraction Method: EPA 3510C
Extraction Date: 06/11/23 18:02

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Pesticides by EPA 1311 - Westborough Lab for sample(s): 01-04 Batch: WG1789900-1						
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	85		30-150	A
Decachlorobiphenyl	109		30-150	A
2,4,5,6-Tetrachloro-m-xylene	86		30-150	B
Decachlorobiphenyl	104		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702
Report Date: 06/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Herbicides by EPA 1311 - Westborough Lab Associated sample(s): 01-04 Batch: WG1789620-2 WG1789620-3									
2,4-D	128		110		30-150	15		25	A
2,4,5-TP (Silvex)	86		69		30-150	22		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	92		79		30-150	A
DCAA	104		91		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702
Report Date: 06/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Pesticides by EPA 1311 - Westborough Lab Associated sample(s): 01-04 Batch: WG1789900-2 WG1789900-3									
Lindane	102		95		30-150	7		20	A
Heptachlor	98		91		30-150	8		20	A
Heptachlor epoxide	97		88		30-150	9		20	A
Endrin	96		88		30-150	9		20	A
Methoxychlor	113		101		30-150	11		20	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	100		83		30-150	A
Decachlorobiphenyl	125		98		30-150	A
2,4,5,6-Tetrachloro-m-xylene	103		85		30-150	B
Decachlorobiphenyl	119		100		30-150	B

METALS

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP
Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-01
Client ID: SS-BCP-27-02-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: Results are reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00

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	0.0636	J	mg/l	1.00	0.0190	1	06/09/23 04:10	06/21/23 18:41	EPA 3015	1,6010D	AMW
Barium, TCLP	0.234	J	mg/l	0.500	0.0210	1	06/09/23 04:10	06/21/23 18:41	EPA 3015	1,6010D	AMW
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/09/23 04:10	06/21/23 18:41	EPA 3015	1,6010D	AMW
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/09/23 04:10	06/21/23 18:41	EPA 3015	1,6010D	AMW
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/09/23 04:10	06/21/23 18:41	EPA 3015	1,6010D	AMW
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/09/23 01:49	06/09/23 18:25	EPA 7470A	1,7470A	DJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/09/23 04:10	06/21/23 18:41	EPA 3015	1,6010D	AMW
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/09/23 04:10	06/21/23 18:41	EPA 3015	1,6010D	AMW

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP
Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-02
Client ID: SS-BCP-27-03-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: Results are reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00

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	0.0475	J	mg/l	1.00	0.0190	1	06/09/23 04:10	06/21/23 18:46	EPA 3015	1,6010D	AMW
Barium, TCLP	0.204	J	mg/l	0.500	0.0210	1	06/09/23 04:10	06/21/23 18:46	EPA 3015	1,6010D	AMW
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/09/23 04:10	06/21/23 18:46	EPA 3015	1,6010D	AMW
Chromium, TCLP	0.0268	J	mg/l	0.200	0.0210	1	06/09/23 04:10	06/21/23 18:46	EPA 3015	1,6010D	AMW
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/09/23 04:10	06/21/23 18:46	EPA 3015	1,6010D	AMW
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/09/23 01:49	06/09/23 18:28	EPA 7470A	1,7470A	DJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/09/23 04:10	06/21/23 18:46	EPA 3015	1,6010D	AMW
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/09/23 04:10	06/21/23 18:46	EPA 3015	1,6010D	AMW

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP
Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-03
Client ID: SS-BCP-27-05-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: Results are reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00

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	0.0449	J	mg/l	1.00	0.0190	1	06/09/23 04:10	06/21/23 18:50	EPA 3015	1,6010D	AMW
Barium, TCLP	0.0868	J	mg/l	0.500	0.0210	1	06/09/23 04:10	06/21/23 18:50	EPA 3015	1,6010D	AMW
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/09/23 04:10	06/21/23 18:50	EPA 3015	1,6010D	AMW
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/09/23 04:10	06/21/23 18:50	EPA 3015	1,6010D	AMW
Lead, TCLP	0.0410	J	mg/l	0.500	0.0270	1	06/09/23 04:10	06/21/23 18:50	EPA 3015	1,6010D	AMW
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/09/23 01:49	06/09/23 18:32	EPA 7470A	1,7470A	DJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/09/23 04:10	06/21/23 18:50	EPA 3015	1,6010D	AMW
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/09/23 04:10	06/21/23 18:50	EPA 3015	1,6010D	AMW

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP
Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-04
Client ID: SS-BCP-27-06-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: Results are reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 06/05/23 12:00

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	0.0560	J	mg/l	1.00	0.0190	1	06/09/23 04:10	06/21/23 18:55	EPA 3015	1,6010D	AMW
Barium, TCLP	0.0890	J	mg/l	0.500	0.0210	1	06/09/23 04:10	06/21/23 18:55	EPA 3015	1,6010D	AMW
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/09/23 04:10	06/21/23 18:55	EPA 3015	1,6010D	AMW
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/09/23 04:10	06/21/23 18:55	EPA 3015	1,6010D	AMW
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/09/23 04:10	06/21/23 18:55	EPA 3015	1,6010D	AMW
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/09/23 01:49	06/09/23 18:35	EPA 7470A	1,7470A	DJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/09/23 04:10	06/21/23 18:55	EPA 3015	1,6010D	AMW
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/09/23 04:10	06/21/23 18:55	EPA 3015	1,6010D	AMW

Project Name: RITC
Project Number: BENCH SCALE-TAR SEE

Lab Number: L2330702
Report Date: 06/22/23

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): 01-04 Batch: WG1788957-1										
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	06/09/23 04:10	06/09/23 18:28	1,6010D	BJM
Barium, TCLP	ND		mg/l	0.500	0.0210	1	06/09/23 04:10	06/09/23 18:28	1,6010D	BJM
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	06/09/23 04:10	06/09/23 18:28	1,6010D	BJM
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	06/09/23 04:10	06/09/23 18:28	1,6010D	BJM
Lead, TCLP	ND		mg/l	0.500	0.0270	1	06/09/23 04:10	06/09/23 18:28	1,6010D	BJM
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	06/09/23 04:10	06/09/23 18:28	1,6010D	BJM
Silver, TCLP	ND		mg/l	0.100	0.0280	1	06/09/23 04:10	06/09/23 18:28	1,6010D	BJM

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 06/05/23 12:00

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): 01-04 Batch: WG1788958-1										
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/09/23 01:49	06/09/23 17:42	1,7470A	DJR

Prep Information

Digestion Method: EPA 7470A
TCLP/SPLP Extraction Date: 06/05/23 12:00

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702

Report Date: 06/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-04 Batch: WG1788957-2								
Arsenic, TCLP	92		-		75-125	-		20
Barium, TCLP	90		-		75-125	-		20
Cadmium, TCLP	93		-		75-125	-		20
Chromium, TCLP	92		-		75-125	-		20
Lead, TCLP	90		-		75-125	-		20
Selenium, TCLP	98		-		75-125	-		20
Silver, TCLP	88		-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-04 Batch: WG1788958-2								
Mercury, TCLP	88		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702
Report Date: 06/22/23

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): 01-04 QC Batch ID: WG1788957-3 QC Sample: L2331614-01 Client ID: MS Sample												
Arsenic, TCLP	0.0234J	1.2	1.08	90		-	-		75-125	-		20
Barium, TCLP	0.647	20	18.8	91		-	-		75-125	-		20
Cadmium, TCLP	ND	0.53	0.504	95		-	-		75-125	-		20
Chromium, TCLP	ND	2	1.83	92		-	-		75-125	-		20
Lead, TCLP	0.0577J	5.3	4.69	88		-	-		75-125	-		20
Selenium, TCLP	ND	1.2	1.14	95		-	-		75-125	-		20
Silver, TCLP	ND	0.5	0.443	89		-	-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1788958-3 QC Sample: L2331614-01 Client ID: MS Sample												
Mercury, TCLP	ND	0.025	0.0218	87		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702
Report Date: 06/22/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1788957-4 QC Sample: L2331614-01 Client ID: DUP Sample						
Arsenic, TCLP	0.0234J	ND	mg/l	NC		20
Barium, TCLP	0.647	0.651	mg/l	1		20
Cadmium, TCLP	ND	ND	mg/l	NC		20
Chromium, TCLP	ND	ND	mg/l	NC		20
Lead, TCLP	0.0577J	0.0358J	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): 01-04 QC Batch ID: WG1788958-4 QC Sample: L2331614-01 Client ID: DUP Sample						
Mercury, TCLP	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP
Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-01
Client ID: SS-BCP-27-02-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Dry Soil
Particle Size:	Coarse
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/14/23 14:07	1,1030	MMJ

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP
Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-02
Client ID: SS-BCP-27-03-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Dry Soil
Particle Size:	Coarse
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/14/23 14:07	1,1030	MMJ

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP
Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-03
Client ID: SS-BCP-27-05-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Dry Soil
Particle Size:	Coarse
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/14/23 14:07	1,1030	MMJ

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP
Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-04
Client ID: SS-BCP-27-06-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Sample Depth:
Matrix: Soil

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Dry Soil
Particle Size:	Coarse
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/14/23 14:07	1,1030	MMJ

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-01
Client ID: SS-BCP-27-02-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
pH (H)	11.1		SU	-	NA	1	-	06/15/23 13:45	1,9045D	SRB
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/12/23 14:10	06/12/23 15:59	125,7.3	MMJ
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/12/23 14:10	06/12/23 15:35	125,7.3	MMJ

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-02
Client ID: SS-BCP-27-03-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:20
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
pH (H)	11.2		SU	-	NA	1	-	06/15/23 13:45	1,9045D	SRB
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/12/23 14:10	06/12/23 16:00	125,7.3	MMJ
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/12/23 14:10	06/12/23 15:35	125,7.3	MMJ

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-03
Client ID: SS-BCP-27-05-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
pH (H)	11.2		SU	-	NA	1	-	06/15/23 13:45	1,9045D	SRB
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/12/23 11:35	06/12/23 13:24	125,7.3	MMJ
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/12/23 11:35	06/12/23 12:56	125,7.3	MMJ

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702
Report Date: 06/22/23

SAMPLE RESULTS

Lab ID: L2330702-04
Client ID: SS-BCP-27-06-06012023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/01/23 13:30
Date Received: 06/01/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
pH (H)	11.7		SU	-	NA	1	-	06/15/23 13:45	1,9045D	SRB
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/12/23 11:35	06/12/23 13:25	125,7.3	MMJ
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/12/23 11:35	06/12/23 12:57	125,7.3	MMJ

Project Name: RITC **Lab Number:** L2330702

Project Number: BENCH SCALE-TAR SEEP **Report Date:** 06/22/23

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): 01-02 Batch: WG1790069-1										
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/12/23 14:10	06/12/23 15:29	125,7.3	MMJ
General Chemistry - Westborough Lab for sample(s): 03-04 Batch: WG1790072-1										
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/12/23 11:35	06/12/23 12:50	125,7.3	MMJ
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1790077-1										
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/12/23 14:10	06/12/23 15:54	125,7.3	MMJ
General Chemistry - Westborough Lab for sample(s): 03-04 Batch: WG1790081-1										
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/12/23 11:35	06/12/23 13:19	125,7.3	MMJ

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702
Report Date: 06/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1790069-2								
Sulfide, Reactive	67		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 03-04 Batch: WG1790072-2								
Sulfide, Reactive	78		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1790077-2								
Cyanide, Reactive	94		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 03-04 Batch: WG1790081-2								
Cyanide, Reactive	93		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1791617-1								
pH	100		-		99-101	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: RITC

Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702

Report Date: 06/22/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1790069-3 QC Sample: L2330517-01 Client ID: DUP Sample						
Sulfide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 03-04 QC Batch ID: WG1790072-3 QC Sample: L2330373-01 Client ID: DUP Sample						
Sulfide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1790077-3 QC Sample: L2330517-01 Client ID: DUP Sample						
Cyanide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 03-04 QC Batch ID: WG1790081-3 QC Sample: L2330373-01 Client ID: DUP Sample						
Cyanide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1791617-2 QC Sample: L2330506-01 Client ID: DUP Sample						
pH	6.24	6.53	SU	5		5

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702
Report Date: 06/22/23

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(*)
L2330702-01A	Vial Large Septa unpreserved (4oz)	A	NA		4.7	Y	Absent		NYTCL-8260-R2(14)
L2330702-01B	Glass 500ml/16oz unpreserved	A	NA		4.7	Y	Absent		REACTS(14),IGNIT-1030(14),PH-9045(1),REACTCN(14)
L2330702-01T	Vial MeOH preserved split	A	NA		4.7	Y	Absent		NYTCL-8260-R2(14)
L2330702-01U	Vial Water preserved split	A	NA		4.7	Y	Absent	**14-JUN-23 04:22**	NYTCL-8260-R2(14)
L2330702-01V	Vial Water preserved split	A	NA		4.7	Y	Absent	**14-JUN-23 04:22**	NYTCL-8260-R2(14)
L2330702-01W	Amber 1000ml unpreserved Extracts	A	NA		4.7	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2330702-01X	Plastic 120ml HNO3 preserved Extracts	A	NA		4.7	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)
L2330702-01X9	Tumble Vessel	A	NA		4.7	Y	Absent		-
L2330702-02A	Vial Large Septa unpreserved (4oz)	A	NA		4.7	Y	Absent		NYTCL-8260-R2(14)
L2330702-02B	Glass 500ml/16oz unpreserved	A	NA		4.7	Y	Absent		REACTS(14),IGNIT-1030(14),PH-9045(1),REACTCN(14)
L2330702-02T	Vial MeOH preserved split	A	NA		4.7	Y	Absent		NYTCL-8260-R2(14)
L2330702-02U	Vial Water preserved split	A	NA		4.7	Y	Absent	**14-JUN-23 04:22**	NYTCL-8260-R2(14)
L2330702-02V	Vial Water preserved split	A	NA		4.7	Y	Absent	**14-JUN-23 04:22**	NYTCL-8260-R2(14)
L2330702-02W	Amber 1000ml unpreserved Extracts	A	NA		4.7	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2330702-02X	Plastic 120ml HNO3 preserved Extracts	A	NA		4.7	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)
L2330702-02X9	Tumble Vessel	A	NA		4.7	Y	Absent		-
L2330702-03A	Vial Large Septa unpreserved (4oz)	A	NA		4.7	Y	Absent		NYTCL-8260-R2(14)
L2330702-03B	Glass 500ml/16oz unpreserved	A	NA		4.7	Y	Absent		REACTS(14),IGNIT-1030(14),PH-9045(1),REACTCN(14)
L2330702-03T	Vial MeOH preserved split	A	NA		4.7	Y	Absent		NYTCL-8260-R2(14)
L2330702-03U	Vial Water preserved split	A	NA		4.7	Y	Absent	**14-JUN-23 04:22**	NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

Project Name: RITC
Project Number: BENCH SCALE-TAR SEEP

Lab Number: L2330702
Report Date: 06/22/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2330702-03V	Vial Water preserved split	A	NA		4.7	Y	Absent	**14-JUN-23 04:22**	NYTCL-8260-R2(14)
L2330702-03W	Amber 1000ml unpreserved Extracts	A	NA		4.7	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2330702-03X	Plastic 120ml HNO3 preserved Extracts	A	NA		4.7	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)
L2330702-03X9	Tumble Vessel	A	NA		4.7	Y	Absent		-
L2330702-04A	Vial Large Septa unpreserved (4oz)	A	NA		4.7	Y	Absent		NYTCL-8260-R2(14)
L2330702-04B	Glass 500ml/16oz unpreserved	A	NA		4.7	Y	Absent		REACTS(14),IGNIT-1030(14),PH-9045(1),REACTCN(14)
L2330702-04T	Vial MeOH preserved split	A	NA		4.7	Y	Absent		NYTCL-8260-R2(14)
L2330702-04U	Vial Water preserved split	A	NA		4.7	Y	Absent	**14-JUN-23 04:22**	NYTCL-8260-R2(14)
L2330702-04V	Vial Water preserved split	A	NA		4.7	Y	Absent	**14-JUN-23 04:22**	NYTCL-8260-R2(14)
L2330702-04W	Amber 1000ml unpreserved Extracts	A	NA		4.7	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2330702-04X	Plastic 120ml HNO3 preserved Extracts	A	NA		4.7	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)
L2330702-04X9	Tumble Vessel	A	NA		4.7	Y	Absent		-

*Values in parentheses indicate holding time in days

Project Name:	RITC	**Lab Number:**	L2330702
Project Number:	BENCH SCALE-TAR SEEP	**Report Date:**	06/22/23

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	RITC	**Lab Number:**	L2330702
Project Number:	BENCH SCALE-TAR SEEP	**Report Date:**	06/22/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	RITC	**Lab Number:**	L2330702
Project Number:	BENCH SCALE-TAR SEEP	**Report Date:**	06/22/23

Data Qualifiers

Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	RITC	**Lab Number:**	L2330702
Project Number:	BENCH SCALE-TAR SEEP	**Report Date:**	06/22/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

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, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-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, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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

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 1 of 1

Date Rec'd in Lab: 6/2/23

ALPHA Job #: L2330702

Client Information
Client: INVENTUM ENG
Address: 4411 CARLISLE DR
HERNDON VA 20170
Phone: 585-734-5255
Fax: roxanne.birx@
Email: inventumeng.com

Project Information
Project Name: RITC
Project Location: 3875 RIVER ROAD, TONAWANDA NY
Project # BENCH SCALE - TAR SEEP
(Use Project name as Project #) ☐
Project Manager: JOHN BLACK
ALPHAQuote #:

Turn-Around Time
Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☑ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☑ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☑ Same as Client Info
PO #

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:

FULL TCLP = VOCs, SVOCs, METALS + Hg ; Pest; Herb

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	FULL TCLP	REACTIVITY	CORROSIVITY	IGNITABILITY	Sample Specific Comments	Total Bottle
30702-01	SS-BCP-27-02-01601202 3	6/1	13:20	SD	RB	✓	✓	✓	✓		
-02	SS-BCP-27-03-01601202 3		13:20								
-03	SS-BCP-27-05-01601202 3		13:30								
-04	SS-BCP-27-06-01601202 3		13:30								

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
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									

Relinquished By:	Date/Time	Received By:	Date/Time
	6/1/23 1542		6/1/23 1542
	6/1/23 1542		6/2/23 0030

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.)

Form No: 01-25 HC (rev. 30-Sept-2013)

PARADIGM

Analytical Report For

Inventum Engineering, P.C.

For Lab Project ID

232727

Referencing

Bench Scale - Tar Seep

Prepared

Wednesday, July 5, 2023

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below.

Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

LAB PROJECT NARRATIVE

CLIENT: Inventum Engineering, P.C.
PROJECT REFERENCE: Bench Scale – Tar Seep
LAB PROJECT NUMBER: 232727
DATE: July 5, 2023

Four samples were received at Paradigm on June 23 requesting analysis of TCLP Volatile Organic Compounds. The samples were a tar matrix and were unable to be removed from their jars when refrigerated. At the client's request, samples were left at room temperature prior to extraction so that the sample would be more pliable and therefore able to be weighed for analysis. Due to the headspace in the sample jar and the samples being stored at room temperature, the results of the analysis could be biased low.

Steven DeVito
Environmental Technical Director

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 232727

Client: **Inventum Engineering, P.C.**

Project Reference: Bench Scale - Tar Seep

Sample Identifier:	SS-BCP-27-02-06012023		
Lab Sample ID:	232727-01	**Date Sampled:** 6/1/2023	13:20
Matrix:	TCLP Extract	**Date Received** 6/23/2023	

TCLP Volatile Organics

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
1,1-Dichloroethene	< 20.0	ug/L	700		6/29/2023 19:15
1,2-Dichloroethane	< 20.0	ug/L	500		6/29/2023 19:15
2-Butanone	< 100	ug/L	200000		6/29/2023 19:15
Benzene	**25.4**	ug/L	500		6/29/2023 19:15
Carbon Tetrachloride	< 20.0	ug/L	500		6/29/2023 19:15
Chlorobenzene	< 20.0	ug/L	100000		6/29/2023 19:15
Chloroform	< 20.0	ug/L	6000		6/29/2023 19:15
Tetrachloroethene	< 20.0	ug/L	700		6/29/2023 19:15
Trichloroethene	< 20.0	ug/L	500		6/29/2023 19:15
Vinyl chloride	< 20.0	ug/L	200		6/29/2023 19:15

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**104**	79.7 - 118		6/29/2023 19:15
4-Bromofluorobenzene	**95.4**	80.1 - 112		6/29/2023 19:15
Pentafluorobenzene	**97.7**	88 - 115		6/29/2023 19:15
Toluene-D8	**99.3**	88.2 - 113		6/29/2023 19:15

Method Reference(s): EPA 8260C
EPA 1311 / 5030C

Data File: z17879.D

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 232727

Client: **Inventum Engineering, P.C.**

Project Reference: Bench Scale - Tar Seep

Sample Identifier:	SS-BCP-27-03-06012023		
Lab Sample ID:	232727-02	**Date Sampled:** 6/1/2023	13:20
Matrix:	TCLP Extract	**Date Received** 6/23/2023	

TCLP Volatile Organics

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
1,1-Dichloroethene	< 20.0	ug/L	700		6/29/2023 19:34
1,2-Dichloroethane	< 20.0	ug/L	500		6/29/2023 19:34
2-Butanone	< 100	ug/L	200000		6/29/2023 19:34
Benzene	**47.5**	ug/L	500		6/29/2023 19:34
Carbon Tetrachloride	< 20.0	ug/L	500		6/29/2023 19:34
Chlorobenzene	< 20.0	ug/L	100000		6/29/2023 19:34
Chloroform	< 20.0	ug/L	6000		6/29/2023 19:34
Tetrachloroethene	< 20.0	ug/L	700		6/29/2023 19:34
Trichloroethene	< 20.0	ug/L	500		6/29/2023 19:34
Vinyl chloride	< 20.0	ug/L	200		6/29/2023 19:34

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**105**	79.7 - 118		6/29/2023 19:34
4-Bromofluorobenzene	**96.9**	80.1 - 112		6/29/2023 19:34
Pentafluorobenzene	**100**	88 - 115		6/29/2023 19:34
Toluene-D8	**99.8**	88.2 - 113		6/29/2023 19:34

Method Reference(s): EPA 8260C
EPA 1311 / 5030C

Data File: z17880.D

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 232727

Client: **Inventum Engineering, P.C.**

Project Reference: Bench Scale - Tar Seep

Sample Identifier:	SS-BCP-27-05-06012023		
Lab Sample ID:	232727-03	**Date Sampled:** 6/1/2023	13:30
Matrix:	TCLP Extract	**Date Received** 6/23/2023	

TCLP Volatile Organics

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
1,1-Dichloroethene	< 20.0	ug/L	700		6/29/2023 19:54
1,2-Dichloroethane	< 20.0	ug/L	500		6/29/2023 19:54
2-Butanone	< 100	ug/L	200000		6/29/2023 19:54
Benzene	**68.6**	ug/L	500		6/29/2023 19:54
Carbon Tetrachloride	< 20.0	ug/L	500		6/29/2023 19:54
Chlorobenzene	< 20.0	ug/L	100000		6/29/2023 19:54
Chloroform	< 20.0	ug/L	6000		6/29/2023 19:54
Tetrachloroethene	< 20.0	ug/L	700		6/29/2023 19:54
Trichloroethene	< 20.0	ug/L	500		6/29/2023 19:54
Vinyl chloride	< 20.0	ug/L	200		6/29/2023 19:54

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**98.9**	79.7 - 118		6/29/2023 19:54
4-Bromofluorobenzene	**93.3**	80.1 - 112		6/29/2023 19:54
Pentafluorobenzene	**103**	88 - 115		6/29/2023 19:54
Toluene-D8	**103**	88.2 - 113		6/29/2023 19:54

Method Reference(s): EPA 8260C
EPA 1311 / 5030C

Data File: z17881.D

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 232727

Client: **Inventum Engineering, P.C.**

Project Reference: Bench Scale - Tar Seep

Sample Identifier:	SS-BCP-27-06-06012023		
Lab Sample ID:	232727-04	**Date Sampled:** 6/1/2023	13:30
Matrix:	TCLP Extract	**Date Received** 6/23/2023	

TCLP Volatile Organics

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
1,1-Dichloroethene	< 20.0	ug/L	700		6/29/2023 20:13
1,2-Dichloroethane	< 20.0	ug/L	500		6/29/2023 20:13
2-Butanone	< 100	ug/L	200000		6/29/2023 20:13
Benzene	**65.8**	ug/L	500		6/29/2023 20:13
Carbon Tetrachloride	< 20.0	ug/L	500		6/29/2023 20:13
Chlorobenzene	< 20.0	ug/L	100000		6/29/2023 20:13
Chloroform	< 20.0	ug/L	6000		6/29/2023 20:13
Tetrachloroethene	< 20.0	ug/L	700		6/29/2023 20:13
Trichloroethene	< 20.0	ug/L	500		6/29/2023 20:13
Vinyl chloride	< 20.0	ug/L	200		6/29/2023 20:13

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**98.0**	79.7 - 118		6/29/2023 20:13
4-Bromofluorobenzene	**91.8**	80.1 - 112		6/29/2023 20:13
Pentafluorobenzene	**99.9**	88 - 115		6/29/2023 20:13
Toluene-D8	**102**	88.2 - 113		6/29/2023 20:13

Method Reference(s): EPA 8260C
EPA 1311 / 5030C

Data File: z17882.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**
Project Reference: Bench Scale - Tar Seep
Lab Project ID: 232727
Matrix: TCLP Fluid

TCLP Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Dichloroethene	<20.0	ug/L		6/29/2023 11:32
1,2-Dichloroethane	<20.0	ug/L		6/29/2023 11:32
2-Butanone	<100	ug/L		6/29/2023 11:32
Benzene	<20.0	ug/L		6/29/2023 11:32
Carbon Tetrachloride	<20.0	ug/L		6/29/2023 11:32
Chlorobenzene	<20.0	ug/L		6/29/2023 11:32
Chloroform	<20.0	ug/L		6/29/2023 11:32
Tetrachloroethene	<20.0	ug/L		6/29/2023 11:32
Trichloroethene	<20.0	ug/L		6/29/2023 11:32
Vinyl chloride	<20.0	ug/L		6/29/2023 11:32

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**98.7**	79.7 - 118		6/29/2023 11:32
4-Bromofluorobenzene	**90.3**	80.1 - 112		6/29/2023 11:32
Pentafluorobenzene	**98.9**	88 - 115		6/29/2023 11:32
Toluene-D8	**98.6**	88.2 - 113		6/29/2023 11:32

Method Reference(s): EPA 8260C
EPA 5030
Data File: z17856.D
QC Batch ID: voax230629
QC Number: Blk 1

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Wednesday, July 5, 2023

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Bench Scale - Tar Seep

Lab Project ID: 232727

Matrix: TCLP Fluid

TCLP Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
1,1-Dichloroethene	20.0	ug/L	18.8	93.9	70.1 - 114		6/29/2023
1,2-Dichloroethane	20.0	ug/L	19.2	96.1	76.2 - 113		6/29/2023
Benzene	20.0	ug/L	18.4	92.2	82.6 - 111		6/29/2023
Carbon Tetrachloride	20.0	ug/L	18.7	93.7	69.7 - 115		6/29/2023
Chlorobenzene	20.0	ug/L	19.1	95.3	88.3 - 111		6/29/2023
Chloroform	20.0	ug/L	18.6	93.2	77.1 - 112		6/29/2023
Tetrachloroethene	20.0	ug/L	18.5	92.7	74.7 - 113		6/29/2023
Trichloroethene	20.0	ug/L	19.1	95.7	82.4 - 113		6/29/2023
Vinyl chloride	20.0	ug/L	21.0	105	63 - 120		6/29/2023

Method Reference(s): EPA 8260C
EPA 5030
Data File: z17855.D
QC Number: LCS 1
QC Batch ID: voax230629

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Wednesday, July 5, 2023

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.
"E" = Result has been estimated, calibration limit exceeded.
"H" = Denotes a parameter analyzed outside of holding time.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*
"(1)" = Indicates data from primary column used for QC calculation.
"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.
"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.

GENERAL TERMS AND CONDITIONS
LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty. Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB wi use LAB default method for all tests unless specified otherwise on the Work Order.
Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices. Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability. In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.
LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.
All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.
Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure. Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling. Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.
Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on th final report.
Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.
LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment. LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure. LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law. This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PARADIGM
ENVIRONMENTAL SERVICES

REPORT TO:	INVOICE TO:	
COMPANY: INVENTUM ENG.	COMPANY: SAME	LAB PROJECT ID: 232727
address: 441 CARLISE DR.	ADDRESS:	
CITY: HERNDON STATE: VA ZIP:	CITY: STATE: ZIP:	Quotation #:
PHONE: 716-553-5129 FAX:	PHONE: FAX:	Email: ←
ATTN: Peter.Zaffram@inventumeng.com	ATTN: JOHN BLACK	

PROJECT REFERENCE

BENCH SCALE - TAR SEEP.

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	TCLP 8260	REMARKS	PARADIGM LAB SAMPLE NUMBER
6/1/23	13:20	X		SS-BCP-27-02-06012023	SD		X	RUN TCLP 8260 ONLY. THESE ARE RETURN SAMPLES FROM ALPHA.	01
	13:20	X		SS-BCP-27-03-06012023	SD		X		02
	13:30	X		SS-BCP-27-05-06012023	SD		X		03
	13:30	X		SS-BCP-27-06-06012023	SD		X		04

Turnaround Time		Report Supplements		
Availability contingent upon lab approval; additional fees may apply.				
Standard 5 day	☒	None Required	☐	None Required ☐
10 day	☐	Batch QC	☒	Basic EDD ☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD ☒
Rush 2 day	☐	Category B	☐	
Rush 1 day	☐			
Other please indicate date needed:	☐	Other please indicate package needed:	☐	Other EDD please indicate EDD needed: ☐

Peter Zaffram 6/23/2023 0800
Sampled By — Date/Time

Relinquished By — 6/23/2023 0800 — Date/Time

Brian Tuck 6/23/23 9:50
Received By — Date/Time — P.I.F.

Received @ Lab By — 6/23/23 1602 — Date/Time

Total Cost:

By signing this form, client agrees to Paradigm Terms and Conditions (reverse).

5°C iced 6/23/23 16:01

See additional page for sample conditions.

Chain of Custody Supplement

Client: Inventum **Completed by:** SDeVito

Lab Project ID: 232727 **Date:** 6/29/23

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	☑	☐	☐
Comments			
Transferred to method-compliant container	☐	☐	☑
Headspace (<1 mL)	☐	☑	☐
Comments			
Preservation	☐	☐	☑
Comments			
Chlorine Absent (<0.10 ppm per test strip)	☐	☐	☑
Comments			
Holding Time	☐	☑	☐
Comments			
Temperature	☑	☐	☐
Comments	5°C iced		
Compliant Sample Quantity/Type	☑	☐	☐
Comments			

PARADIGM

PARADIGM
ENVIRONMENTAL SERVICES, INC

Analytical Report For

Inventum Engineering, P.C.

For Lab Project ID

232929

Referencing

Pump House Bench Scale

Prepared

Thursday, July 13, 2023

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below.

Emily Farmer

Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958

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PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 232929

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale

Sample Identifier:	BCP-PH-03-07062023		
Lab Sample ID:	232929-01	**Date Sampled:** 7/6/2023	11:30
Matrix:	TCLP Extract	**Date Received** 7/6/2023	

TCLP Volatile Organics

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
1,1-Dichloroethene	< 20.0	ug/L	700		7/11/2023 18:57
1,2-Dichloroethane	< 20.0	ug/L	500		7/11/2023 18:57
2-Butanone	< 100	ug/L	200000		7/11/2023 18:57
Benzene	**183**	ug/L	500		7/11/2023 18:57
Carbon Tetrachloride	< 20.0	ug/L	500		7/11/2023 18:57
Chlorobenzene	< 20.0	ug/L	100000		7/11/2023 18:57
Chloroform	< 20.0	ug/L	6000		7/11/2023 18:57
Tetrachloroethene	< 20.0	ug/L	700		7/11/2023 18:57
Trichloroethene	< 20.0	ug/L	500		7/11/2023 18:57
Vinyl chloride	< 20.0	ug/L	200		7/11/2023 18:57

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**103**	79.7 - 118		7/11/2023 18:57
4-Bromofluorobenzene	**97.2**	80.1 - 112		7/11/2023 18:57
Pentafluorobenzene	**99.1**	88 - 115		7/11/2023 18:57
Toluene-D8	**97.8**	88.2 - 113		7/11/2023 18:57

Method Reference(s): EPA 8260C
EPA 1311 / 5030C

Data File: z18099.D

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PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 232929

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale

Sample Identifier:	BCP-PH-06-07062023		
Lab Sample ID:	232929-02	**Date Sampled:** 7/6/2023	11:30
Matrix:	TCLP Extract	**Date Received** 7/6/2023	

TCLP Volatile Organics

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
1,1-Dichloroethene	< 200	ug/L	700		7/11/2023 19:16
1,2-Dichloroethane	< 200	ug/L	500		7/11/2023 19:16
2-Butanone	< 1000	ug/L	200000		7/11/2023 19:16
Benzene	< 200	ug/L	500		7/11/2023 19:16
Carbon Tetrachloride	< 200	ug/L	500		7/11/2023 19:16
Chlorobenzene	< 200	ug/L	100000		7/11/2023 19:16
Chloroform	< 200	ug/L	6000		7/11/2023 19:16
Tetrachloroethene	< 200	ug/L	700		7/11/2023 19:16
Trichloroethene	< 200	ug/L	500		7/11/2023 19:16
Vinyl chloride	< 200	ug/L	200		7/11/2023 19:16

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**102**	79.7 - 118		7/11/2023 19:16
4-Bromofluorobenzene	**95.6**	80.1 - 112		7/11/2023 19:16
Pentafluorobenzene	**101**	88 - 115		7/11/2023 19:16
Toluene-D8	**97.6**	88.2 - 113		7/11/2023 19:16

Reporting limit elevated due to non-target compounds

Method Reference(s): EPA 8260C
EPA 1311 / 5030C

Data File: z18100.D

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**
Project Reference: Pump House Bench Scale
Lab Project ID: 232929
Matrix: TCLP Fluid

TCLP Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Dichloroethene	<20.0	ug/L		7/11/2023 18:18
1,2-Dichloroethane	<20.0	ug/L		7/11/2023 18:18
2-Butanone	<100	ug/L		7/11/2023 18:18
Benzene	<20.0	ug/L		7/11/2023 18:18
Carbon Tetrachloride	<20.0	ug/L		7/11/2023 18:18
Chlorobenzene	<20.0	ug/L		7/11/2023 18:18
Chloroform	<20.0	ug/L		7/11/2023 18:18
Tetrachloroethene	<20.0	ug/L		7/11/2023 18:18
Trichloroethene	<20.0	ug/L		7/11/2023 18:18
Vinyl chloride	<20.0	ug/L		7/11/2023 18:18

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**102**	79.7 - 118		7/11/2023 18:18
4-Bromofluorobenzene	**94.1**	80.1 - 112		7/11/2023 18:18
Pentafluorobenzene	**97.8**	88 - 115		7/11/2023 18:18
Toluene-D8	**97.2**	88.2 - 113		7/11/2023 18:18

Method Reference(s): EPA 8260C
EPA 5030
Data File: z18097.D
QC Batch ID: voax230711
QC Number: Blk 1

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale

Lab Project ID: 232929

Matrix: TCLP Fluid

TCLP Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
1,1-Dichloroethene	20.0	ug/L	17.5	87.4	70.1 - 114		7/11/2023
1,2-Dichloroethane	20.0	ug/L	18.6	92.8	76.2 - 113		7/11/2023
Benzene	20.0	ug/L	17.9	89.3	82.6 - 111		7/11/2023
Carbon Tetrachloride	20.0	ug/L	17.6	87.9	69.7 - 115		7/11/2023
Chlorobenzene	20.0	ug/L	18.8	94.0	88.3 - 111		7/11/2023
Chloroform	20.0	ug/L	18.0	89.8	77.1 - 112		7/11/2023
Tetrachloroethene	20.0	ug/L	18.2	91.0	74.7 - 113		7/11/2023
Trichloroethene	20.0	ug/L	18.5	92.7	82.4 - 113		7/11/2023
Vinyl chloride	20.0	ug/L	19.3	96.6	63 - 120		7/11/2023

Method Reference(s): EPA 8260C
EPA 5030
Data File: z18096.D
QC Number: LCS 1
QC Batch ID: voax230711

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Wednesday, July 12, 2023

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

Each page of this document is part of a multipage report. This document may not be reproduced except in its entirety, without the prior consent of Paradigm Environmental Services, Inc.

All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.
"E" = Result has been estimated, calibration limit exceeded.
"H" = Denotes a parameter analyzed outside of holding time.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*
"(1)" = Indicates data from primary column used for QC calculation.
"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.
"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.

GENERAL TERMS AND CONDITIONS
LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty. Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB wi use LAB default method for all tests unless specified otherwise on the Work Order.
Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices. Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability. In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.
LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.
All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.
Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure. Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling. Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.
Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on th final report.
Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.
LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment. LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure. LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law. This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

1 of 2

PARADIGM
ENVIRONMENTAL SERVICES

REPORT TO:		INVOICE TO:	
COMPANY:	INVENTUM ENG	COMPANY:	SAME
address:	441 CARLISE DRIVE C	ADDRESS:	
CITY:	HERNDON STATE: VA ZIP:	CITY: STATE: ZIP:	
PHONE:	716 553 5729 FAX:	PHONE: FAX:	
ATTN:	Peter.Zaffram@INVENTUMENG.COM	ATTN:	RoxaMe.BIRK@INVENTUMENG.com

LAB PROJECT ID: 232929

Quotation #:

Email:

PROJECT REFERENCE
PUMP HOUSE
BENCH SCALE

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	TCLP 8260	REMARKS	PARADIGM LAB SAMPLE NUMBER
07/06/23	1130		X	BCP-PH-03-07062023	SD	1	X		01
07/06/23	1130		X	BCP-PH-06-07062023	SD	1	X		02
					Per Visual				
					@	7/6/23			

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	X	None Required		None Required	
10 day		Batch QC	X	Basic EDD	
Rush 3 day		Category A		NYSDEC EDD	X
Rush 2 day		Category B			
Rush 1 day					
Other		Other		Other EDD	
please indicate date needed:		please indicate package needed:		please indicate EDD needed :	

Peter Zaffram — Sampled By — 7/6/2023 1130 — Date/Time

Relinquished By — 7/6/2023 1130 — Date/Time

Received By — 7/6/23 13:20 — Date/Time

Received @ Lab By — 7/6/23 16:13 — Date/Time

Total Cost:

P.I.F.

11°C iced in field 7/6/23 16:08

By signing this form, client agrees to Paradigm Terms and Conditions (reverse).

See additional page for sample conditions.

PARADIGM

Chain of Custody Supplement

Client: Inventum Engineering **Completed by:** Glenn Pezzulo

Lab Project ID: 232929 **Date:** 7/6/23

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)	X		
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature	X		
Comments	11°C iced in field		
Compliant Sample Quantity/Type	X		
Comments			

ANALYTICAL REPORT

Lab Number:	L2338426
Client:	Inventum Engineering 441 Carlisle Drive Suite C Herndon, VA 20170
ATTN:	Peter Zaffram
Phone:	(585) 734-5255
Project Name:	RITC
Project Number:	PUMP HOUSE BENCH
Report Date:	07/19/23

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

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

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

Project Name: RITC
Project Number: PUMP HOUSE BENCH

Lab Number: L2338426
Report Date: 07/19/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2338426-01	BCP-PH-03-07062023	SOIL	3875 RIVER ROAD.	07/06/23 11:30	07/06/23
L2338426-02	BCP-PH-06-07062023	SOIL	3875 RIVER ROAD.	07/06/23 11:30	07/06/23

Project Name:	RITC	**Lab Number:**	L2338426
Project Number:	PUMP HOUSE BENCH	**Report Date:**	07/19/23

Case Narrative

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

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

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

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

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

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

Project Name:	RITC	**Lab Number:**	L2338426
Project Number:	PUMP HOUSE BENCH	**Report Date:**	07/19/23

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.

TCLP Semivolatiles

L2338426-01D and -02D: The surrogate recoveries are below the acceptance criteria for 2-fluorophenol (0%), phenol-d6 (0%), nitrobenzene-d5 (0%), 2-fluorobiphenyl (0%), 2,4,6-tribromophenol (0%) and 4-terphenyl-d14 (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

TCLP Mercury

The WG1801364-2 LCS recovery, associated with L2338426-01 and -02, is above the acceptance criteria for mercury (147%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis 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: Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative Date: 07/19/23

ORGANICS

SEMIVOLATILES

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

SAMPLE RESULTS

Lab ID: L2338426-01 D
Client ID: BCP-PH-03-07062023
Sample Location: 3875 RIVER ROAD.

Date Collected: 07/06/23 11:30
Date Received: 07/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/13/23 16:01
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/10/23 15:00

TCLP/SPLP Ext. Date: 07/08/23 15:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	200	69.	20
2,4-Dinitrotoluene	ND		ug/l	500	38.	20
Hexachlorobutadiene	ND		ug/l	200	60.	20
Hexachloroethane	ND		ug/l	200	44.	20
Nitrobenzene	ND		ug/l	200	66.	20
2,4,6-Trichlorophenol	ND		ug/l	500	49.	20
Pentachlorophenol	ND		ug/l	1000	200	20
2-Methylphenol	5600		ug/l	500	110	20
3-Methylphenol/4-Methylphenol	13000		ug/l	500	55.	20
2,4,5-Trichlorophenol	ND		ug/l	500	38.	20
Pyridine	130	J	ug/l	350	90.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	**0**	Q	21-120
Phenol-d6	**0**	Q	10-120
Nitrobenzene-d5	**0**	Q	23-120
2-Fluorobiphenyl	**0**	Q	15-120
2,4,6-Tribromophenol	**0**	Q	10-120
4-Terphenyl-d14	**0**	Q	33-120

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

SAMPLE RESULTS

Lab ID: L2338426-02 D
Client ID: BCP-PH-06-07062023
Sample Location: 3875 RIVER ROAD.

Date Collected: 07/06/23 11:30
Date Received: 07/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/13/23 16:25
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/10/23 15:00

TCLP/SPLP Ext. Date: 07/08/23 15:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	200	69.	20
2,4-Dinitrotoluene	ND		ug/l	500	38.	20
Hexachlorobutadiene	ND		ug/l	200	60.	20
Hexachloroethane	ND		ug/l	200	44.	20
Nitrobenzene	ND		ug/l	200	66.	20
2,4,6-Trichlorophenol	ND		ug/l	500	49.	20
Pentachlorophenol	ND		ug/l	1000	200	20
2-Methylphenol	5500		ug/l	500	110	20
3-Methylphenol/4-Methylphenol	12000		ug/l	500	55.	20
2,4,5-Trichlorophenol	ND		ug/l	500	38.	20
Pyridine	150	J	ug/l	350	90.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	**0**	Q	21-120
Phenol-d6	**0**	Q	10-120
Nitrobenzene-d5	**0**	Q	23-120
2-Fluorobiphenyl	**0**	Q	15-120
2,4,6-Tribromophenol	**0**	Q	10-120
4-Terphenyl-d14	**0**	Q	33-120

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/11/23 19:46
Analyst: DV
TCLP/SPLP Extraction Date: 07/07/23 15:30

Extraction Method: EPA 3510C
Extraction Date: 07/10/23 15:00

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Semivolatiles by EPA 1311 - Westborough Lab for sample(s): 01-02 Batch: WG1801463-1					
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	52		21-120
Phenol-d6	47		10-120
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	46		15-120
2,4,6-Tribromophenol	48		10-120
4-Terphenyl-d14	53		33-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PUMP HOUSE BENCH

Lab Number: L2338426
Report Date: 07/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Semivolatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-02 Batch: WG1801463-2 WG1801463-3								
Hexachlorobenzene	59		66		40-140	11		30
2,4-Dinitrotoluene	62		71		40-132	14		30
Hexachlorobutadiene	44		50		28-111	13		30
Hexachloroethane	53		57		21-105	7		30
Nitrobenzene	71		74		40-140	4		30
2,4,6-Trichlorophenol	54		60		30-130	11		30
Pentachlorophenol	60		64		9-103	6		30
2-Methylphenol	66		73		30-130	10		30
3-Methylphenol/4-Methylphenol	68		76		30-130	11		30
2,4,5-Trichlorophenol	59		63		30-130	7		30
Pyridine	48		51		10-66	6		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	65		72		21-120
Phenol-d6	63		71		10-120
Nitrobenzene-d5	66		74		23-120
2-Fluorobiphenyl	57		63		15-120
2,4,6-Tribromophenol	62		68		10-120
4-Terphenyl-d14	64		68		33-120

PESTICIDES

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

SAMPLE RESULTS

Lab ID: L2338426-01
Client ID: BCP-PH-03-07062023
Sample Location: 3875 RIVER ROAD.

Date Collected: 07/06/23 11:30
Date Received: 07/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/11/23 14:17
Analyst: MMG

Extraction Method: EPA 3510C
Extraction Date: 07/10/23 15:01

TCLP/SPLP Ext. Date: 07/08/23 15:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.071	0.016	1	A
Heptachlor	ND		ug/l	0.071	0.011	1	A
Heptachlor epoxide	ND		ug/l	0.071	0.015	1	A
Endrin	ND		ug/l	0.143	0.015	1	A
Methoxychlor	ND		ug/l	0.714	0.024	1	A
Toxaphene	ND		ug/l	0.714	0.224	1	A
Chlordane	ND		ug/l	0.714	0.165	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	76		30-150	A
Decachlorobiphenyl	110		30-150	A
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	89		30-150	B

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

SAMPLE RESULTS

Lab ID: L2338426-01
Client ID: BCP-PH-03-07062023
Sample Location: 3875 RIVER ROAD.

Date Collected: 07/06/23 11:30
Date Received: 07/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/10/23 15:34
Analyst: MMG

Extraction Method: EPA 8151A
Extraction Date: 07/09/23 14:54

TCLP/SPLP Ext. Date: 07/08/23 15:00
Methylation Date: 07/10/23 06:15

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	51		30-150	A
DCAA	51		30-150	B

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

SAMPLE RESULTS

Lab ID: L2338426-02
Client ID: BCP-PH-06-07062023
Sample Location: 3875 RIVER ROAD.

Date Collected: 07/06/23 11:30
Date Received: 07/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/11/23 14:28
Analyst: MMG

Extraction Method: EPA 3510C
Extraction Date: 07/10/23 15:01

TCLP/SPLP Ext. Date: 07/08/23 15:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.071	0.016	1	A
Heptachlor	ND		ug/l	0.071	0.011	1	A
Heptachlor epoxide	ND		ug/l	0.071	0.015	1	A
Endrin	ND		ug/l	0.143	0.015	1	A
Methoxychlor	ND		ug/l	0.714	0.024	1	A
Toxaphene	ND		ug/l	0.714	0.224	1	A
Chlordane	ND		ug/l	0.714	0.165	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	A
Decachlorobiphenyl	117		30-150	A
2,4,5,6-Tetrachloro-m-xylene	73		30-150	B
Decachlorobiphenyl	102		30-150	B

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

SAMPLE RESULTS

Lab ID: L2338426-02
Client ID: BCP-PH-06-07062023
Sample Location: 3875 RIVER ROAD.

Date Collected: 07/06/23 11:30
Date Received: 07/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/10/23 15:52
Analyst: MMG

Extraction Method: EPA 8151A
Extraction Date: 07/09/23 14:54

TCLP/SPLP Ext. Date: 07/08/23 15:00
Methylation Date: 07/10/23 06:15

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	53		30-150	A
DCAA	52		30-150	B

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 07/10/23 11:54
Analyst: MMG
TCLP/SPLP Extraction Date: 07/07/23 15:30
Methylation Date: 07/10/23 06:15

Extraction Method: EPA 8151A
Extraction Date: 07/09/23 14:54

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Herbicides by EPA 1311 - Westborough Lab for sample(s): 01-02 Batch: WG1801159-1						
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	52		30-150	A
DCAA	53		30-150	B

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 07/11/23 12:25
Analyst: MMG
TCLP/SPLP Extraction Date: 07/07/23 15:30

Extraction Method: EPA 3510C
Extraction Date: 07/10/23 15:01

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Pesticides by EPA 1311 - Westborough Lab for sample(s): 01-02 Batch: WG1801464-1						
Lindane	ND		ug/l	0.071	0.016	A
Heptachlor	ND		ug/l	0.071	0.011	A
Heptachlor epoxide	ND		ug/l	0.071	0.015	A
Endrin	ND		ug/l	0.143	0.015	A
Methoxychlor	ND		ug/l	0.714	0.024	A
Toxaphene	ND		ug/l	0.714	0.224	A
Chlordane	ND		ug/l	0.714	0.165	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		30-150	A
Decachlorobiphenyl	95		30-150	A
2,4,5,6-Tetrachloro-m-xylene	82		30-150	B
Decachlorobiphenyl	81		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: PUMP HOUSE BENCH

Lab Number: L2338426

Report Date: 07/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Herbicides by EPA 1311 - Westborough Lab Associated sample(s): 01-02 Batch: WG1801159-2 WG1801159-3									
2,4-D	69		80		30-150	15		25	A
2,4,5-TP (Silvex)	38		44		30-150	15		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	45		47		30-150	A
DCAA	42		46		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: PUMP HOUSE BENCH

Lab Number: L2338426

Report Date: 07/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Pesticides by EPA 1311 - Westborough Lab Associated sample(s): 01-02 Batch: WG1801464-2 WG1801464-3									
Lindane	87		86		30-150	1		20	A
Heptachlor	90		89		30-150	1		20	A
Heptachlor epoxide	85		83		30-150	2		20	A
Endrin	82		82		30-150	1		20	A
Methoxychlor	99		98		30-150	1		20	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		77		30-150	A
Decachlorobiphenyl	92		96		30-150	A
2,4,5,6-Tetrachloro-m-xylene	78		76		30-150	B
Decachlorobiphenyl	79		78		30-150	B

METALS

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

SAMPLE RESULTS

Lab ID: L2338426-01
Client ID: BCP-PH-03-07062023
Sample Location: 3875 RIVER ROAD.
Sample Depth:
Matrix: Soil

Date Collected: 07/06/23 11:30
Date Received: 07/06/23
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 07/08/23 13:20

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	07/10/23 16:03	07/13/23 17:40	EPA 3015	1,6010D	MRC
Barium, TCLP	0.431	J	mg/l	0.500	0.0210	1	07/10/23 16:03	07/13/23 17:40	EPA 3015	1,6010D	MRC
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/10/23 16:03	07/13/23 17:40	EPA 3015	1,6010D	MRC
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/10/23 16:03	07/13/23 17:40	EPA 3015	1,6010D	MRC
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/10/23 16:03	07/13/23 17:40	EPA 3015	1,6010D	MRC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/10/23 17:09	07/11/23 20:00	EPA 7470A	1,7470A	DMB
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/10/23 16:03	07/13/23 17:40	EPA 3015	1,6010D	MRC
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/10/23 16:03	07/13/23 19:04	EPA 3015	1,6010D	MRC

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

SAMPLE RESULTS

Lab ID: L2338426-02
Client ID: BCP-PH-06-07062023
Sample Location: 3875 RIVER ROAD.
Sample Depth:
Matrix: Soil

Date Collected: 07/06/23 11:30
Date Received: 07/06/23
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 07/08/23 13:20

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	0.0355	J	mg/l	1.00	0.0190	1	07/10/23 16:03	07/13/23 17:45	EPA 3015	1,6010D	MRC
Barium, TCLP	0.216	J	mg/l	0.500	0.0210	1	07/10/23 16:03	07/13/23 17:45	EPA 3015	1,6010D	MRC
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/10/23 16:03	07/13/23 17:45	EPA 3015	1,6010D	MRC
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/10/23 16:03	07/13/23 17:45	EPA 3015	1,6010D	MRC
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/10/23 16:03	07/13/23 17:45	EPA 3015	1,6010D	MRC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/10/23 17:09	07/11/23 20:04	EPA 7470A	1,7470A	DMB
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/10/23 16:03	07/13/23 17:45	EPA 3015	1,6010D	MRC
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/10/23 16:03	07/13/23 19:07	EPA 3015	1,6010D	MRC

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

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): 01-02 Batch: WG1801363-1										
Arsenic, TCLP	0.0190	J	mg/l	1.00	0.0190	1	07/10/23 16:03	07/13/23 17:26	1,6010D	MRC
Barium, TCLP	ND		mg/l	0.500	0.0210	1	07/10/23 16:03	07/13/23 17:26	1,6010D	MRC
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/10/23 16:03	07/13/23 17:26	1,6010D	MRC
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/10/23 16:03	07/13/23 17:26	1,6010D	MRC
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/10/23 16:03	07/13/23 17:26	1,6010D	MRC
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/10/23 16:03	07/13/23 17:26	1,6010D	MRC
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/10/23 16:03	07/13/23 18:56	1,6010D	MRC

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 07/07/23 15:30

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): 01-02 Batch: WG1801364-1										
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/10/23 17:09	07/11/23 19:41	1,7470A	DMB

Prep Information

Digestion Method: EPA 7470A
TCLP/SPLP Extraction Date: 07/07/23 15:30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: PUMP HOUSE BENCH

Lab Number: L2338426

Report Date: 07/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 Batch: WG1801363-2								
Arsenic, TCLP	98		-		75-125	-		20
Barium, TCLP	98		-		75-125	-		20
Cadmium, TCLP	96		-		75-125	-		20
Chromium, TCLP	96		-		75-125	-		20
Lead, TCLP	87		-		75-125	-		20
Selenium, TCLP	100		-		75-125	-		20
Silver, TCLP	97		-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 Batch: WG1801364-2								
Mercury, TCLP	**147**	Q	-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: PUMP HOUSE BENCH

Lab Number: L2338426
Report Date: 07/19/23

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): 01-02 QC Batch ID: WG1801363-3 QC Sample: L2338892-01 Client ID: MS Sample												
Arsenic, TCLP	0.0236J	1.2	1.12	93		-	-		75-125	-		20
Barium, TCLP	0.110J	20	18.6	93		-	-		75-125	-		20
Cadmium, TCLP	ND	0.53	0.474	89		-	-		75-125	-		20
Chromium, TCLP	ND	2	1.81	90		-	-		75-125	-		20
Lead, TCLP	ND	5.3	4.33	82		-	-		75-125	-		20
Selenium, TCLP	ND	1.2	1.14	95		-	-		75-125	-		20
Silver, TCLP	ND	0.5	0.461	92		-	-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1801364-3 QC Sample: L2338892-01 Client ID: MS Sample												
Mercury, TCLP	ND	0.025	0.0324	**130**	Q	-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: RITC
Project Number: PUMP HOUSE BENCH

Lab Number: L2338426
Report Date: 07/19/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1801363-4 QC Sample: L2338892-01 Client ID: DUP Sample						
Silver, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1801363-4 QC Sample: L2338892-01 Client ID: DUP Sample						
Arsenic, TCLP	0.0236J	0.0198J	mg/l	NC		20
Barium, TCLP	0.110J	0.106J	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
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1801364-4 QC Sample: L2338892-01 Client ID: DUP Sample						
Mercury, TCLP	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

SAMPLE RESULTS

Lab ID: L2338426-01
Client ID: BCP-PH-03-07062023
Sample Location: 3875 RIVER ROAD.

Date Collected: 07/06/23 11:30
Date Received: 07/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/17/23 21:29	1,1030	TLH

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

SAMPLE RESULTS

Lab ID: L2338426-02
Client ID: BCP-PH-06-07062023
Sample Location: 3875 RIVER ROAD.

Date Collected: 07/06/23 11:30
Date Received: 07/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/17/23 21:29	1,1030	TLH

Project Name: RITC
Project Number: PUMP HOUSE BENCH

Lab Number: L2338426
Report Date: 07/19/23

SAMPLE RESULTS

Lab ID: L2338426-01
Client ID: BCP-PH-03-07062023
Sample Location: 3875 RIVER ROAD.

Date Collected: 07/06/23 11:30
Date Received: 07/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
pH (H)	11.1		SU	-	NA	1	-	07/19/23 13:00	1,9045D	KEP
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/12/23 13:20	07/12/23 14:56	125,7.3	MMJ
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/12/23 13:20	07/12/23 14:32	125,7.3	MMJ

Project Name: RITC
Project Number: PUMP HOUSE BENCH

Lab Number: L2338426
Report Date: 07/19/23

SAMPLE RESULTS

Lab ID: L2338426-02
Client ID: BCP-PH-06-07062023
Sample Location: 3875 RIVER ROAD.

Date Collected: 07/06/23 11:30
Date Received: 07/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
pH (H)	11.5		SU	-	NA	1	-	07/19/23 13:00	1,9045D	KEP
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/12/23 13:20	07/12/23 14:56	125,7.3	MMJ
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/12/23 13:20	07/12/23 14:32	125,7.3	MMJ

Project Name: RITC
Project Number: PUMP HOUSE BENCH
Lab Number: L2338426
Report Date: 07/19/23

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): 01-02 Batch: WG1801925-1										
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/12/23 13:20	07/12/23 14:28	125,7.3	MMJ
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1802393-1										
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/12/23 13:20	07/12/23 14:54	125,7.3	MMJ

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: PUMP HOUSE BENCH

Lab Number: L2338426

Report Date: 07/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1801925-2								
Sulfide, Reactive	66		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1802393-2								
Cyanide, Reactive	73		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1805099-1								
pH	100		-		99-101	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: RITC

Project Number: PUMP HOUSE BENCH

Lab Number: L2338426

Report Date: 07/19/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1801925-3 QC Sample: L2337915-05 Client ID: DUP Sample						
Sulfide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1802393-3 QC Sample: L2337915-05 Client ID: DUP Sample						
Cyanide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1805099-2 QC Sample: L2340662-01 Client ID: DUP Sample						
pH	8.64	8.71	SU	1		5

Project Name: RITC
Project Number: PUMP HOUSE BENCH

Lab Number: L2338426
Report Date: 07/19/23

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(*)
L2338426-01A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		HOLD-8260(14)
L2338426-01B	Glass 500ml/16oz unpreserved	A	NA		3.6	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14)
L2338426-01W	Amber 1000ml unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2338426-01X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.6	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)
L2338426-01X9	Tumble Vessel	A	NA		3.6	Y	Absent		-
L2338426-02A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		HOLD-8260(14)
L2338426-02B	Glass 500ml/16oz unpreserved	A	NA		3.6	Y	Absent		REACTS(14),IGNIT-1030(14),PH-9045(1),REACTCN(14)
L2338426-02W	Amber 1000ml unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2338426-02X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.6	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)
L2338426-02X9	Tumble Vessel	A	NA		3.6	Y	Absent		-

*Values in parentheses indicate holding time in days

Project Name:	RITC	**Lab Number:**	L2338426
Project Number:	PUMP HOUSE BENCH	**Report Date:**	07/19/23

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	RITC	**Lab Number:**	L2338426
Project Number:	PUMP HOUSE BENCH	**Report Date:**	07/19/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	RITC	**Lab Number:**	L2338426
Project Number:	PUMP HOUSE BENCH	**Report Date:**	07/19/23

Data Qualifiers

Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	RITC	**Lab Number:**	L2338426
Project Number:	PUMP HOUSE BENCH	**Report Date:**	07/19/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

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, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-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, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
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TEL: 508-822-9300
FAX: 508-822-3288

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 1 of 1

Date Rec'd in Lab: 7/7/23

ALPHA Job #: L2338426

Client Information
Client: INVENTUM ENG
Address: 441 Carlisle Drive
HERNDON VA.
Phone: 716 553-5729
Fax:
Email: Peter.Zaffam@inventumeng.com

Project Information
Project Name: RITC
Project Location: 3875 River Road.
Project #: PUMP House Beach Scale
(Use Project name as Project #) ☐
Project Manager:
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☒ EQuIS (4 File)
☐ Other

Billing Information
☒ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☒ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☒ Other EPA 1311
☐ 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:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Full TCL?	Reactivity	Ignitability	Corrosivity					Total Bottle	Sample Specific Comments
38426-01	BCP-PH-03-0706 2023	7/6/23	11:30	Solid	P.Z.	X	X	X	X						DO NOT RUN
02	BCP-PH-06-0706 2023	7/6/23	11:30	Solid	P.Z.	X	X	X	X						8260 TCLP

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
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	A	A	A	A										
Preservative	A	A	A	A										

Relinquished By:	Date/Time	Received By:	Date/Time
Peter Zaffam	7/6/23 1232	[signature] RMC	7/7/23 1232
[signature] RMC	7/7/23 1232		7/7/23 0910

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.)

Form No: 01-25 HC (rev. 30-Sept-2013)

PARADIGM

PARADIGM
ENVIRONMENTAL SERVICES, INC

Analytical Report For

Inventum Engineering, P.C.

For Lab Project ID

233456

Referencing

PDI WP Bench Scales

Prepared

Friday, August 11, 2023

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below.

Emily Farmer

Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 233456

Client: **Inventum Engineering, P.C.**

Project Reference: PDI WP Bench Scales

Sample Identifier:	SS-BCP-25-07182023		
Lab Sample ID:	233456-01	**Date Sampled:**	7/18/2023 14:00
Matrix:	TCLP Extract	**Date Received**	8/4/2023

TCLP Volatile Organics

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
1,1-Dichloroethene	< 20.0	ug/L	700		8/7/2023 20:49
1,2-Dichloroethane	< 20.0	ug/L	500		8/7/2023 20:49
2-Butanone	< 100	ug/L	200000		8/7/2023 20:49
Benzene	**985**	ug/L	500		8/7/2023 20:49
Carbon Tetrachloride	< 20.0	ug/L	500		8/7/2023 20:49
Chlorobenzene	< 20.0	ug/L	100000		8/7/2023 20:49
Chloroform	< 20.0	ug/L	6000		8/7/2023 20:49
Tetrachloroethene	< 20.0	ug/L	700		8/7/2023 20:49
Trichloroethene	< 20.0	ug/L	500		8/7/2023 20:49
Vinyl chloride	< 20.0	ug/L	200		8/7/2023 20:49

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**97.9**	79.7 - 118		8/7/2023 20:49
4-Bromofluorobenzene	**101**	80.1 - 112		8/7/2023 20:49
Pentafluorobenzene	**98.3**	88 - 115		8/7/2023 20:49
Toluene-D8	**96.6**	88.2 - 113		8/7/2023 20:49

Method Reference(s): EPA 8260C
EPA 1311 / 5030C

Data File: z18623.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 233456

Client: **Inventum Engineering, P.C.**

Project Reference: PDI WP Bench Scales

Sample Identifier:	SS-BCP-22-04-07182023		
Lab Sample ID:	233456-02	**Date Sampled:** 7/18/2023	15:02
Matrix:	TCLP Extract	**Date Received** 8/4/2023	

TCLP Volatile Organics

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
1,1-Dichloroethene	< 20.0	ug/L	700		8/7/2023 21:08
1,2-Dichloroethane	< 20.0	ug/L	500		8/7/2023 21:08
2-Butanone	< 100	ug/L	200000		8/7/2023 21:08
Benzene	**138**	ug/L	500		8/7/2023 21:08
Carbon Tetrachloride	< 20.0	ug/L	500		8/7/2023 21:08
Chlorobenzene	< 20.0	ug/L	100000		8/7/2023 21:08
Chloroform	< 20.0	ug/L	6000		8/7/2023 21:08
Tetrachloroethene	< 20.0	ug/L	700		8/7/2023 21:08
Trichloroethene	< 20.0	ug/L	500		8/7/2023 21:08
Vinyl chloride	< 20.0	ug/L	200		8/7/2023 21:08

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**101**	79.7 - 118		8/7/2023 21:08
4-Bromofluorobenzene	**97.3**	80.1 - 112		8/7/2023 21:08
Pentafluorobenzene	**98.5**	88 - 115		8/7/2023 21:08
Toluene-D8	**99.3**	88.2 - 113		8/7/2023 21:08

Method Reference(s): EPA 8260C
EPA 1311 / 5030C

Data File: z18624.D

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 233456

Client: **Inventum Engineering, P.C.**

Project Reference: PDI WP Bench Scales

Sample Identifier:	SS-BCP-22-06-07182023		
Lab Sample ID:	233456-03	**Date Sampled:**	7/18/2023 15:06
Matrix:	TCLP Extract	**Date Received**	8/4/2023

TCLP Volatile Organics

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
1,1-Dichloroethene	< 20.0	ug/L	700		8/10/2023 14:13
1,2-Dichloroethane	< 20.0	ug/L	500		8/10/2023 14:13
2-Butanone	< 100	ug/L	200000		8/10/2023 14:13
Benzene	**75.7**	ug/L	500		8/10/2023 14:13
Carbon Tetrachloride	< 20.0	ug/L	500		8/10/2023 14:13
Chlorobenzene	< 20.0	ug/L	100000		8/10/2023 14:13
Chloroform	< 20.0	ug/L	6000		8/10/2023 14:13
Tetrachloroethene	< 20.0	ug/L	700		8/10/2023 14:13
Trichloroethene	< 20.0	ug/L	500		8/10/2023 14:13
Vinyl chloride	< 20.0	ug/L	200		8/10/2023 14:13

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**104**	79.7 - 118		8/10/2023 14:13
4-Bromofluorobenzene	**91.1**	80.1 - 112		8/10/2023 14:13
Pentafluorobenzene	**98.1**	88 - 115		8/10/2023 14:13
Toluene-D8	**98.3**	88.2 - 113		8/10/2023 14:13

Method Reference(s): EPA 8260C
EPA 1311 / 5030C

Data File: z18713.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 233456

Client: **Inventum Engineering, P.C.**

Project Reference: PDI WP Bench Scales

Sample Identifier:	SS-BCP-24-04-07182023		
Lab Sample ID:	233456-04	**Date Sampled:** 7/18/2023	15:38
Matrix:	TCLP Extract	**Date Received** 8/4/2023	

TCLP Volatile Organics

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
1,1-Dichloroethene	< 20.0	ug/L	700		8/10/2023 14:33
1,2-Dichloroethane	< 20.0	ug/L	500		8/10/2023 14:33
2-Butanone	< 100	ug/L	200000		8/10/2023 14:33
Benzene	**1070**	ug/L	500		8/10/2023 14:33
Carbon Tetrachloride	< 20.0	ug/L	500		8/10/2023 14:33
Chlorobenzene	< 20.0	ug/L	100000		8/10/2023 14:33
Chloroform	< 20.0	ug/L	6000		8/10/2023 14:33
Tetrachloroethene	< 20.0	ug/L	700		8/10/2023 14:33
Trichloroethene	< 20.0	ug/L	500		8/10/2023 14:33
Vinyl chloride	< 20.0	ug/L	200		8/10/2023 14:33

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**106**	79.7 - 118		8/10/2023 14:33
4-Bromofluorobenzene	**99.1**	80.1 - 112		8/10/2023 14:33
Pentafluorobenzene	**97.6**	88 - 115		8/10/2023 14:33
Toluene-D8	**96.3**	88.2 - 113		8/10/2023 14:33

Method Reference(s): EPA 8260C
EPA 1311 / 5030C

Data File: z18714.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

Each page of this document is part of a multipage report. This document may not be reproduced except in its entirety, without the prior consent of Paradigm Environmental Services, Inc.

All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.
"E" = Result has been estimated, calibration limit exceeded.
"H" = Denotes a parameter analyzed outside of holding time.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*
"(1)" = Indicates data from primary column used for QC calculation.
"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.
"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.

GENERAL TERMS AND CONDITIONS
LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty. Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB wi use LAB default method for all tests unless specified otherwise on the Work Order.
Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices. Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability. In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.
LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.
All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.
Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure. Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling. Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.
Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on th final report.
Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.
LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment. LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure. LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law. This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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

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 1 of 2

Date Rec'd in Lab: 7/19/23

ALPHA Job #: L2341132

Client Information

Client: INVENTUM ENG
Address: 441 CARLISLE DR HERNDON VA, 20170
Phone: 585-734-5255
Fax: john.black@inventumeng.com
Email: roxanne.birx@ [illegible]

Project Information

Project Name: RITC
Project Location: 3875 RIVER ROAD, TONAWANDA
Project #: PDI WP BENCH SCALES
(Use Project name as Project #): ☐
Project Manager: JOHN BLACK
ALPHAQuote #:

Turn-Around Time

Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☒ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information

☒ Same as Client Info
PO #

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:

HAZCAT - REACTIVITY, CORROSIVITY, IGNITEABILITY

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL VOCs 8260	TCL SVOCs 8270	TOTAL CYANIDE	TAL METALS, Hg	AMMONIA	FULL TCLP	HAZ CAT	Total Bottle	Sample Specific Comments
L1132- 01	SS-BCP-21-07182023	7/18/23	11:55	SD	RB	X	X	X	X	X	X	X		
02	SS-BCP-22-07182023		11:15			X	X	X	X	X	X	X		TCLP 8260
03	SS-BCP-23-07182023		12:00			X	X	X	X	X	X	X		per email 2F 8/4/23
04	SS-BCP-24-07182023		11:35			X	X	X	X	X	X	X		
05	SS-BCP-25-07182023		14:00			X	X	X	X	X	X	X	2	01
06	SS-BCP-21-02-07182023		14:45								X	X		
07	SS-BCP-21-04-07182023		14:50								X	X		Okay past HT per email 2F 8/4/23
08	SS-BCP-21-06-07182023		14:55								X	X		per email 2F 8/4/23
09	SS-BCP-22-02-07182023		15:00								X	X		
10	SS-BCP-22-04-07182023		15:02								X	X	1	02
					Container Type									
					Preservative									

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
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

Relinquished By:	Date/Time	Received By:	Date/Time
Corey Bingham	4:32 07/19/2023	[illegible]	7/19/23 16:32
[illegible]	7/18/23 1732		7/19/23 0930
[illegible]	8/3/23	2F	8/4/23 10:17

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.)

1°C iced 8/4/23 10:15

Form No: 01-25 HC (rev. 30-Sept-2013)

233456 2 of 3

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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

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 2 of 2

Date Rec'd in Lab: 7/19/23

ALPHA Job #: L2341132

Client Information

Client: INVENTUM ENG
Address: 411 CARLISLE DR HERNDON, VA 20170
Phone: 585-734-5255
Fax: john.black@inventumeng.com
Email: roxanne.birx@inventumeng.com

Project Information

Project Name: RITC
Project Location: 3875 RIVER ROAD, TONAWANDA
Project #: PDI WP BENCH SCALES
(Use Project name as Project #) ☐
Project Manager: JOHN BLACK
ALPHAQuote #:

Turn-Around Time

Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☒ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information

☒ Same as Client Info
PO #

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:

Please specify Metals or TAL.

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	HAZ CAT	FULL TCLP							Sample Specific Comments	Total Bottle
41132-11	SS-BCP-22-06-07182023	7/18/23	15:06	SO	RB	X	X							03	1
12	SS-BCP-23-02-07182023	7/18/23	15:39			X	X								
13	SS-BCP-23-04-07182023	7/18/23	15:41			X	X							TCLP 8260 per email ZF 8/4/23	per email 8/4/23
14	SS-BCP-23-06-07182023	7/18/23	15:44			X	X								
15	SS-BCP-24-02-07182023	7/18/23	15:35			X	X								
16	SS-BCP-24-04-07182023	7/18/23	15:38			X	X							04	1
17	SS-BCP-24-06-07182023	7/18/23	15:40	↓	↓	X	X								
														Okay past HT per email ZF 8/4/23	

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
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								

Relinquished By:	Date/Time	Received By:	Date/Time
Corey Bryerton	4:32 07/18/23	MM/RC AMC	7/19/23 1632
MM/RC AMC	7/19/23 1632		7/19/23 0030
	8/3/23		8/4/23 10:17

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.)

Form No: 01-25 HC (rev. 30-Sept-2013)

8/4/2023
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Chain of Custody Supplement

Client: Inventum
Completed by: ZF
Lab Project ID: 233456
Date: 8/4/23

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)	X TCLP VOA		
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time		X	
Comments	okay past hold trueper client email		
Temperature	X		
Comments	1°C iced		
Compliant Sample Quantity/Type	X		
Comments			

ANALYTICAL REPORT

Lab Number:	L2341132
Client:	Inventum Engineering 441 Carlisle Drive Suite C Herndon, NY 20170
ATTN:	John Black
Phone:	(571) 752-6562
Project Name:	RITC
Project Number:	PD1WP BENCH SCALES
Report Date:	08/10/23

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

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

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

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2341132-01	SS-BCP-21-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 11:55	07/18/23
L2341132-02	SS-BCP-22-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 11:15	07/18/23
L2341132-03	SS-BCP-23-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 12:00	07/18/23
L2341132-04	SS-BCP-24-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 11:35	07/18/23
L2341132-05	SS-BCP-25-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 14:00	07/18/23
L2341132-06	SS-BCP-21-02-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 14:45	07/18/23
L2341132-07	SS-BCP-21-04-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 14:50	07/18/23
L2341132-08	SS-BCP-21-06-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 14:55	07/18/23
L2341132-09	SS-BCP-22-02-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 15:00	07/18/23
L2341132-10	SS-BCP-22-04-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 15:02	07/18/23
L2341132-11	SS-BCP-22-06-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 15:06	07/18/23
L2341132-12	SS-BCP-23-02-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 15:39	07/18/23
L2341132-13	SS-BCP-23-04-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 15:41	07/18/23
L2341132-14	SS-BCP-23-06-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 15:44	07/18/23
L2341132-15	SS-BCP-24-02-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 15:35	07/18/23
L2341132-16	SS-BCP-24-04-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 15:38	07/18/23
L2341132-17	SS-BCP-24-06-07182023	SOIL	3875 RIVER ROAD, TONAWANDA	07/18/23 15:40	07/18/23

Project Name:	RITC	**Lab Number:**	L2341132
Project Number:	PD1WP BENCH SCALES	**Report Date:**	08/10/23

Case Narrative

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

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

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

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

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

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

Project Name:	RITC	**Lab Number:**	L2341132
Project Number:	PD1WP BENCH SCALES	**Report Date:**	08/10/23

Case Narrative (continued)

Report Submission

August 10, 2023: This final report includes the results of all requested analyses.

August 03, 2023: This is a preliminary report.

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

Sample Receipt

L2341132-05, -10, -11, and -16: Due to the sample matrix, the analysis of Volatile Organics was performed instead of TCLP Volatiles.

Volatile Organics

L2341132-01 through -05: 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.

L2341132-02D through -05D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Semivolatile Organics

L2341132-01D through -05D: The surrogate recoveries are below the acceptance criteria for 2-fluorophenol (0%), phenol-d6 (0%), nitrobenzene-d5 (0%), 2-fluorobiphenyl (0%), 2,4,6-tribromophenol (0%) and 4-terphenyl-d14 (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

L2341132-02D, -03D, and -05D: The sample has elevated detection limits due to the limited sample volume utilized during extraction, as required by the sample matrix.

TCLP Semivolatiles

L2341132-05D: The surrogate recoveries are below the acceptance criteria for 2-fluorophenol (0%), phenol-

Project Name:	RITC	**Lab Number:**	L2341132
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Case Narrative (continued)

d6 (0%), nitrobenzene-d5 (0%), 2-fluorobiphenyl (0%), 2,4,6-tribromophenol (0%) and 4-terphenyl-d14 (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

Total Metals

L2341132-01 through -05: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by the sample matrix.

Cyanide, Total

The WG1809606-2 LCS recovery for cyanide, total (72%), associated with L2341132-01 through -05, is outside our in-house acceptance criteria, but within the vendor-certified acceptance limits. The results of the original analyses 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: Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative Date: 08/10/23

ORGANICS

VOLATILES

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01
Client ID: SS-BCP-21-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/27/23 10:45
Analyst: MCM
Percent Solids: 74%
TCLP/SPLP Ext. Date: 07/26/23 10:19

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	1600		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	2.2	J	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	109		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	87		70-130
dibromofluoromethane	111		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01
Client ID: SS-BCP-21-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/01/23 11:37
Analyst: AJK
Percent Solids: 74%

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	76	11.	1
Chloroform	ND		ug/kg	110	11.	1
Carbon tetrachloride	ND		ug/kg	76	18.	1
1,2-Dichloropropane	ND		ug/kg	76	9.6	1
Dibromochloromethane	ND		ug/kg	76	11.	1
1,1,2-Trichloroethane	ND		ug/kg	76	20.	1
Tetrachloroethene	68		ug/kg	38	15.	1
Chlorobenzene	ND		ug/kg	38	9.7	1
Trichlorofluoromethane	ND		ug/kg	300	53.	1
1,2-Dichloroethane	ND		ug/kg	76	20.	1
1,1,1-Trichloroethane	ND		ug/kg	38	13.	1
Bromodichloromethane	ND		ug/kg	38	8.3	1
trans-1,3-Dichloropropene	ND		ug/kg	76	21.	1
cis-1,3-Dichloropropene	ND		ug/kg	38	12.	1
Bromoform	ND		ug/kg	300	19.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	38	13.	1
Benzene	95000	E	ug/kg	38	13.	1
Toluene	13000		ug/kg	76	42.	1
Ethylbenzene	14000		ug/kg	76	11.	1
Chloromethane	ND		ug/kg	300	71.	1
Bromomethane	ND		ug/kg	150	44.	1
Vinyl chloride	ND		ug/kg	76	26.	1
Chloroethane	ND		ug/kg	150	34.	1
1,1-Dichloroethene	ND		ug/kg	76	18.	1
trans-1,2-Dichloroethene	ND		ug/kg	110	10.	1
Trichloroethene	ND		ug/kg	38	10.	1
1,2-Dichlorobenzene	ND		ug/kg	150	11.	1

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01 Date Collected: 07/18/23 11:55

Client ID: SS-BCP-21-07182023 Date Received: 07/18/23

Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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	22000		ug/kg	150	43.	1
o-Xylene	4800		ug/kg	76	22.	1
cis-1,2-Dichloroethene	ND		ug/kg	76	13.	1
Styrene	2000		ug/kg	76	15.	1
Dichlorodifluoromethane	ND		ug/kg	760	70.	1
Acetone	ND		ug/kg	760	370	1
Carbon disulfide	ND		ug/kg	760	350	1
2-Butanone	ND		ug/kg	760	170	1
4-Methyl-2-pentanone	ND		ug/kg	760	98.	1
2-Hexanone	ND		ug/kg	760	90.	1
Bromochloromethane	ND		ug/kg	150	16.	1
1,2-Dibromoethane	ND		ug/kg	76	21.	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	230	76.	1
Isopropylbenzene	620		ug/kg	76	8.3	1
1,2,3-Trichlorobenzene	ND		ug/kg	150	25.	1
1,2,4-Trichlorobenzene	ND		ug/kg	150	21.	1
Methyl Acetate	190	J	ug/kg	300	73.	1
Cyclohexane	74	J	ug/kg	760	42.	1
1,4-Dioxane	ND		ug/kg	6100	2700	1
Freon-113	ND		ug/kg	300	53.	1
Methyl cyclohexane	190	J	ug/kg	300	46.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	113		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01 D
Client ID: SS-BCP-21-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/29/23 03:30
Analyst: AJK
Percent Solids: 74%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Benzene	71000		ug/kg	760	250	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	102		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/27/23 11:08
Analyst: MCM
Percent Solids: 78%
TCLP/SPLP Ext. Date: 07/26/23 10:19

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	200		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	115		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	86		70-130
dibromofluoromethane	118		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02 D
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/01/23 11:58
Analyst: AJK
Percent Solids: 78%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	3700	1700	10
1,1-Dichloroethane	ND		ug/kg	740	110	10
Chloroform	ND		ug/kg	1100	100	10
Carbon tetrachloride	ND		ug/kg	740	170	10
1,2-Dichloropropane	ND		ug/kg	740	92.	10
Dibromochloromethane	ND		ug/kg	740	100	10
1,1,2-Trichloroethane	ND		ug/kg	740	200	10
Tetrachloroethene	ND		ug/kg	370	140	10
Chlorobenzene	ND		ug/kg	370	94.	10
Trichlorofluoromethane	ND		ug/kg	3000	510	10
1,2-Dichloroethane	ND		ug/kg	740	190	10
1,1,1-Trichloroethane	ND		ug/kg	370	120	10
Bromodichloromethane	ND		ug/kg	370	81.	10
trans-1,3-Dichloropropene	ND		ug/kg	740	200	10
cis-1,3-Dichloropropene	ND		ug/kg	370	120	10
Bromoform	ND		ug/kg	3000	180	10
1,1,2,2-Tetrachloroethane	ND		ug/kg	370	120	10
Benzene	17000		ug/kg	370	120	10
Toluene	17000		ug/kg	740	400	10
Ethylbenzene	1700		ug/kg	740	100	10
Chloromethane	ND		ug/kg	3000	690	10
Bromomethane	ND		ug/kg	1500	430	10
Vinyl chloride	ND		ug/kg	740	250	10
Chloroethane	ND		ug/kg	1500	330	10
1,1-Dichloroethene	ND		ug/kg	740	180	10
trans-1,2-Dichloroethene	ND		ug/kg	1100	100	10
Trichloroethene	ND		ug/kg	370	100	10
1,2-Dichlorobenzene	ND		ug/kg	1500	110	10

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02 D
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1500	110	10
1,4-Dichlorobenzene	ND		ug/kg	1500	130	10
Methyl tert butyl ether	ND		ug/kg	1500	150	10
p/m-Xylene	25000		ug/kg	1500	410	10
o-Xylene	6100		ug/kg	740	220	10
cis-1,2-Dichloroethene	ND		ug/kg	740	130	10
Styrene	7200		ug/kg	740	140	10
Dichlorodifluoromethane	ND		ug/kg	7400	680	10
Acetone	ND		ug/kg	7400	3600	10
Carbon disulfide	ND		ug/kg	7400	3400	10
2-Butanone	ND		ug/kg	7400	1600	10
4-Methyl-2-pentanone	ND		ug/kg	7400	950	10
2-Hexanone	ND		ug/kg	7400	870	10
Bromochloromethane	ND		ug/kg	1500	150	10
1,2-Dibromoethane	ND		ug/kg	740	210	10
1,2-Dibromo-3-chloropropane	ND		ug/kg	2200	740	10
Isopropylbenzene	ND		ug/kg	740	81.	10
1,2,3-Trichlorobenzene	ND		ug/kg	1500	240	10
1,2,4-Trichlorobenzene	ND		ug/kg	1500	200	10
Methyl Acetate	1500	J	ug/kg	3000	700	10
Cyclohexane	ND		ug/kg	7400	400	10
1,4-Dioxane	ND		ug/kg	59000	26000	10
Freon-113	ND		ug/kg	3000	510	10
Methyl cyclohexane	ND		ug/kg	3000	450	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	121		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03
Client ID: SS-BCP-23-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 12:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/27/23 11:31
Analyst: MCM
Percent Solids: 76%
TCLP/SPLP Ext. Date: 07/26/23 10:19

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	210		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	117		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	89		70-130
dibromofluoromethane	115		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03 D
Client ID: SS-BCP-23-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 12:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/01/23 12:19
Analyst: AJK
Percent Solids: 76%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	3700	1700	10
1,1-Dichloroethane	ND		ug/kg	740	110	10
Chloroform	ND		ug/kg	1100	100	10
Carbon tetrachloride	ND		ug/kg	740	170	10
1,2-Dichloropropane	ND		ug/kg	740	93.	10
Dibromochloromethane	ND		ug/kg	740	100	10
1,1,2-Trichloroethane	ND		ug/kg	740	200	10
Tetrachloroethene	ND		ug/kg	370	140	10
Chlorobenzene	ND		ug/kg	370	94.	10
Trichlorofluoromethane	ND		ug/kg	3000	520	10
1,2-Dichloroethane	ND		ug/kg	740	190	10
1,1,1-Trichloroethane	ND		ug/kg	370	120	10
Bromodichloromethane	ND		ug/kg	370	81.	10
trans-1,3-Dichloropropene	ND		ug/kg	740	200	10
cis-1,3-Dichloropropene	ND		ug/kg	370	120	10
Bromoform	ND		ug/kg	3000	180	10
1,1,2,2-Tetrachloroethane	ND		ug/kg	370	120	10
Benzene	16000		ug/kg	370	120	10
Toluene	20000		ug/kg	740	400	10
Ethylbenzene	1500		ug/kg	740	100	10
Chloromethane	ND		ug/kg	3000	690	10
Bromomethane	ND		ug/kg	1500	430	10
Vinyl chloride	ND		ug/kg	740	250	10
Chloroethane	ND		ug/kg	1500	340	10
1,1-Dichloroethene	ND		ug/kg	740	180	10
trans-1,2-Dichloroethene	ND		ug/kg	1100	100	10
Trichloroethene	ND		ug/kg	370	100	10
1,2-Dichlorobenzene	ND		ug/kg	1500	110	10

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03 D
Client ID: SS-BCP-23-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 12:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1500	110	10
1,4-Dichlorobenzene	ND		ug/kg	1500	130	10
Methyl tert butyl ether	ND		ug/kg	1500	150	10
p/m-Xylene	35000		ug/kg	1500	420	10
o-Xylene	12000		ug/kg	740	220	10
cis-1,2-Dichloroethene	ND		ug/kg	740	130	10
Styrene	7300		ug/kg	740	140	10
Dichlorodifluoromethane	ND		ug/kg	7400	680	10
Acetone	ND		ug/kg	7400	3600	10
Carbon disulfide	ND		ug/kg	7400	3400	10
2-Butanone	ND		ug/kg	7400	1600	10
4-Methyl-2-pentanone	ND		ug/kg	7400	950	10
2-Hexanone	ND		ug/kg	7400	880	10
Bromochloromethane	ND		ug/kg	1500	150	10
1,2-Dibromoethane	ND		ug/kg	740	210	10
1,2-Dibromo-3-chloropropane	ND		ug/kg	2200	740	10
Isopropylbenzene	91	J	ug/kg	740	81.	10
1,2,3-Trichlorobenzene	ND		ug/kg	1500	240	10
1,2,4-Trichlorobenzene	ND		ug/kg	1500	200	10
Methyl Acetate	ND		ug/kg	3000	710	10
Cyclohexane	ND		ug/kg	7400	400	10
1,4-Dioxane	ND		ug/kg	60000	26000	10
Freon-113	ND		ug/kg	3000	520	10
Methyl cyclohexane	580	J	ug/kg	3000	450	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	124		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/27/23 11:54
Analyst: MCM
Percent Solids: 76%
TCLP/SPLP Ext. Date: 07/26/23 10:19

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	500		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	112		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	94		70-130
dibromofluoromethane	108		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04 D
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/01/23 12:40
Analyst: AJK
Percent Solids: 76%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	8300	3800	20
1,1-Dichloroethane	ND		ug/kg	1700	240	20
Chloroform	ND		ug/kg	2500	230	20
Carbon tetrachloride	ND		ug/kg	1700	380	20
1,2-Dichloropropane	ND		ug/kg	1700	210	20
Dibromochloromethane	ND		ug/kg	1700	230	20
1,1,2-Trichloroethane	ND		ug/kg	1700	440	20
Tetrachloroethene	640	J	ug/kg	830	320	20
Chlorobenzene	ND		ug/kg	830	210	20
Trichlorofluoromethane	ND		ug/kg	6600	1200	20
1,2-Dichloroethane	ND		ug/kg	1700	430	20
1,1,1-Trichloroethane	ND		ug/kg	830	280	20
Bromodichloromethane	ND		ug/kg	830	180	20
trans-1,3-Dichloropropene	ND		ug/kg	1700	450	20
cis-1,3-Dichloropropene	ND		ug/kg	830	260	20
Bromoform	ND		ug/kg	6600	410	20
1,1,2,2-Tetrachloroethane	ND		ug/kg	830	280	20
Benzene	120000		ug/kg	830	280	20
Toluene	83000		ug/kg	1700	900	20
Ethylbenzene	10000		ug/kg	1700	230	20
Chloromethane	ND		ug/kg	6600	1500	20
Bromomethane	ND		ug/kg	3300	960	20
Vinyl chloride	ND		ug/kg	1700	560	20
Chloroethane	ND		ug/kg	3300	750	20
1,1-Dichloroethene	ND		ug/kg	1700	400	20
trans-1,2-Dichloroethene	ND		ug/kg	2500	230	20
Trichloroethene	ND		ug/kg	830	230	20
1,2-Dichlorobenzene	ND		ug/kg	3300	240	20

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04 D
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	3300	240	20
1,4-Dichlorobenzene	ND		ug/kg	3300	280	20
Methyl tert butyl ether	ND		ug/kg	3300	330	20
p/m-Xylene	150000		ug/kg	3300	930	20
o-Xylene	55000		ug/kg	1700	480	20
cis-1,2-Dichloroethene	ND		ug/kg	1700	290	20
Styrene	22000		ug/kg	1700	320	20
Dichlorodifluoromethane	ND		ug/kg	17000	1500	20
Acetone	ND		ug/kg	17000	8000	20
Carbon disulfide	ND		ug/kg	17000	7600	20
2-Butanone	ND		ug/kg	17000	3700	20
4-Methyl-2-pentanone	ND		ug/kg	17000	2100	20
2-Hexanone	ND		ug/kg	17000	2000	20
Bromochloromethane	ND		ug/kg	3300	340	20
1,2-Dibromoethane	ND		ug/kg	1700	460	20
1,2-Dibromo-3-chloropropane	ND		ug/kg	5000	1600	20
Isopropylbenzene	1000	J	ug/kg	1700	180	20
1,2,3-Trichlorobenzene	ND		ug/kg	3300	530	20
1,2,4-Trichlorobenzene	ND		ug/kg	3300	450	20
Methyl Acetate	ND		ug/kg	6600	1600	20
Cyclohexane	ND		ug/kg	17000	900	20
1,4-Dioxane	ND		ug/kg	130000	58000	20
Freon-113	ND		ug/kg	6600	1200	20
Methyl cyclohexane	1600	J	ug/kg	6600	1000	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	117		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05 D
Client ID: SS-BCP-25-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/01/23 13:00
Analyst: AJK
Percent Solids: 72%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	8900	4100	20
1,1-Dichloroethane	ND		ug/kg	1800	260	20
Chloroform	ND		ug/kg	2700	250	20
Carbon tetrachloride	ND		ug/kg	1800	410	20
1,2-Dichloropropane	ND		ug/kg	1800	220	20
Dibromochloromethane	ND		ug/kg	1800	250	20
1,1,2-Trichloroethane	ND		ug/kg	1800	470	20
Tetrachloroethene	ND		ug/kg	890	350	20
Chlorobenzene	ND		ug/kg	890	220	20
Trichlorofluoromethane	ND		ug/kg	7100	1200	20
1,2-Dichloroethane	ND		ug/kg	1800	460	20
1,1,1-Trichloroethane	ND		ug/kg	890	300	20
Bromodichloromethane	ND		ug/kg	890	190	20
trans-1,3-Dichloropropene	ND		ug/kg	1800	480	20
cis-1,3-Dichloropropene	ND		ug/kg	890	280	20
Bromoform	ND		ug/kg	7100	440	20
1,1,2,2-Tetrachloroethane	ND		ug/kg	890	300	20
Benzene	71000		ug/kg	890	300	20
Toluene	56000		ug/kg	1800	960	20
Ethylbenzene	6700		ug/kg	1800	250	20
Chloromethane	ND		ug/kg	7100	1600	20
Bromomethane	ND		ug/kg	3600	1000	20
Vinyl chloride	ND		ug/kg	1800	600	20
Chloroethane	ND		ug/kg	3600	800	20
1,1-Dichloroethene	ND		ug/kg	1800	420	20
trans-1,2-Dichloroethene	ND		ug/kg	2700	240	20
Trichloroethene	ND		ug/kg	890	240	20
1,2-Dichlorobenzene	ND		ug/kg	3600	260	20

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05 D
Client ID: SS-BCP-25-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	3600	260	20
1,4-Dichlorobenzene	ND		ug/kg	3600	300	20
Methyl tert butyl ether	ND		ug/kg	3600	360	20
p/m-Xylene	74000		ug/kg	3600	1000	20
o-Xylene	22000		ug/kg	1800	520	20
cis-1,2-Dichloroethene	ND		ug/kg	1800	310	20
Styrene	27000		ug/kg	1800	350	20
Dichlorodifluoromethane	ND		ug/kg	18000	1600	20
Acetone	ND		ug/kg	18000	8600	20
Carbon disulfide	ND		ug/kg	18000	8100	20
2-Butanone	ND		ug/kg	18000	3900	20
4-Methyl-2-pentanone	ND		ug/kg	18000	2300	20
2-Hexanone	ND		ug/kg	18000	2100	20
Bromochloromethane	ND		ug/kg	3600	360	20
1,2-Dibromoethane	ND		ug/kg	1800	500	20
1,2-Dibromo-3-chloropropane	ND		ug/kg	5300	1800	20
Isopropylbenzene	610	J	ug/kg	1800	190	20
1,2,3-Trichlorobenzene	ND		ug/kg	3600	570	20
1,2,4-Trichlorobenzene	ND		ug/kg	3600	480	20
Methyl Acetate	ND		ug/kg	7100	1700	20
Cyclohexane	ND		ug/kg	18000	970	20
1,4-Dioxane	ND		ug/kg	140000	62000	20
Freon-113	ND		ug/kg	7100	1200	20
Methyl cyclohexane	ND		ug/kg	7100	1100	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	120		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-06
Client ID: SS-BCP-21-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:45
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/28/23 08:30
Analyst: MKS
Percent Solids: 90%
TCLP/SPLP Ext. Date: 07/27/23 09:15

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	77		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	116		70-130
Toluene-d8	88		70-130
4-Bromofluorobenzene	83		70-130
dibromofluoromethane	123		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-07 Date Collected: 07/18/23 14:50
Client ID: SS-BCP-21-04-07182023 Date Received: 07/18/23
Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/28/23 08:53
Analyst: MKS
Percent Solids: 86%
TCLP/SPLP Ext. Date: 07/27/23 09:15

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	98		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	114		70-130
Toluene-d8	88		70-130
4-Bromofluorobenzene	83		70-130
dibromofluoromethane	121		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-08
Client ID: SS-BCP-21-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/28/23 09:16
Analyst: MKS
Percent Solids: 89%
TCLP/SPLP Ext. Date: 07/27/23 09:15

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	50		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	114		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	83		70-130
dibromofluoromethane	117		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-09 Date Collected: 07/18/23 15:00
Client ID: SS-BCP-22-02-07182023 Date Received: 07/18/23
Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/28/23 09:39
Analyst: MKS
Percent Solids: 84%
TCLP/SPLP Ext. Date: 07/27/23 09:15

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	130		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	114		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	84		70-130
dibromofluoromethane	117		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-10
Client ID: SS-BCP-22-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:02
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/01/23 03:17
Analyst: JIC
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	330	150	1
1,1-Dichloroethane	ND		ug/kg	66	9.6	1
Chloroform	ND		ug/kg	99	9.2	1
Carbon tetrachloride	ND		ug/kg	66	15.	1
1,2-Dichloropropane	ND		ug/kg	66	8.2	1
Dibromochloromethane	ND		ug/kg	66	9.2	1
1,1,2-Trichloroethane	ND		ug/kg	66	18.	1
Tetrachloroethene	ND		ug/kg	33	13.	1
Chlorobenzene	ND		ug/kg	33	8.4	1
Trichlorofluoromethane	ND		ug/kg	260	46.	1
1,2-Dichloroethane	ND		ug/kg	66	17.	1
1,1,1-Trichloroethane	ND		ug/kg	33	11.	1
Bromodichloromethane	ND		ug/kg	33	7.2	1
trans-1,3-Dichloropropene	ND		ug/kg	66	18.	1
cis-1,3-Dichloropropene	ND		ug/kg	33	10.	1
Bromoform	ND		ug/kg	260	16.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	33	11.	1
Benzene	9100		ug/kg	33	11.	1
Toluene	13000		ug/kg	66	36.	1
Ethylbenzene	1500		ug/kg	66	9.3	1
Chloromethane	ND		ug/kg	260	61.	1
Bromomethane	ND		ug/kg	130	38.	1
Vinyl chloride	ND		ug/kg	66	22.	1
Chloroethane	ND		ug/kg	130	30.	1
1,1-Dichloroethene	ND		ug/kg	66	16.	1
trans-1,2-Dichloroethene	ND		ug/kg	99	9.0	1
Trichloroethene	ND		ug/kg	33	9.0	1
1,2-Dichlorobenzene	ND		ug/kg	130	9.5	1

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-10 Date Collected: 07/18/23 15:02

Client ID: SS-BCP-22-04-07182023 Date Received: 07/18/23

Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	130	9.8	1
1,4-Dichlorobenzene	ND		ug/kg	130	11.	1
Methyl tert butyl ether	ND		ug/kg	130	13.	1
p/m-Xylene	26000		ug/kg	130	37.	1
o-Xylene	6000		ug/kg	66	19.	1
cis-1,2-Dichloroethene	ND		ug/kg	66	12.	1
Styrene	6900		ug/kg	66	13.	1
Dichlorodifluoromethane	ND		ug/kg	660	60.	1
Acetone	440	J	ug/kg	660	320	1
Carbon disulfide	ND		ug/kg	660	300	1
2-Butanone	ND		ug/kg	660	150	1
4-Methyl-2-pentanone	ND		ug/kg	660	84.	1
2-Hexanone	ND		ug/kg	660	78.	1
Bromochloromethane	ND		ug/kg	130	14.	1
1,2-Dibromoethane	ND		ug/kg	66	18.	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	200	66.	1
Isopropylbenzene	56	J	ug/kg	66	7.2	1
1,2,3-Trichlorobenzene	ND		ug/kg	130	21.	1
1,2,4-Trichlorobenzene	ND		ug/kg	130	18.	1
Methyl Acetate	3800		ug/kg	260	63.	1
Cyclohexane	96	J	ug/kg	660	36.	1
1,4-Dioxane	ND		ug/kg	5300	2300	1
Freon-113	ND		ug/kg	260	46.	1
Methyl cyclohexane	220	J	ug/kg	260	40.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	127		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	110		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-11
Client ID: SS-BCP-22-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:06
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/01/23 03:42
Analyst: JIC
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	320	150	1
1,1-Dichloroethane	ND		ug/kg	64	9.3	1
Chloroform	ND		ug/kg	96	9.0	1
Carbon tetrachloride	ND		ug/kg	64	15.	1
1,2-Dichloropropane	ND		ug/kg	64	8.0	1
Dibromochloromethane	ND		ug/kg	64	9.0	1
1,1,2-Trichloroethane	ND		ug/kg	64	17.	1
Tetrachloroethene	ND		ug/kg	32	12.	1
Chlorobenzene	ND		ug/kg	32	8.2	1
Trichlorofluoromethane	ND		ug/kg	260	45.	1
1,2-Dichloroethane	ND		ug/kg	64	16.	1
1,1,1-Trichloroethane	ND		ug/kg	32	11.	1
Bromodichloromethane	ND		ug/kg	32	7.0	1
trans-1,3-Dichloropropene	ND		ug/kg	64	18.	1
cis-1,3-Dichloropropene	ND		ug/kg	32	10.	1
Bromoform	ND		ug/kg	260	16.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	32	11.	1
Benzene	11000		ug/kg	32	11.	1
Toluene	13000		ug/kg	64	35.	1
Ethylbenzene	1400		ug/kg	64	9.1	1
Chloromethane	ND		ug/kg	260	60.	1
Bromomethane	ND		ug/kg	130	37.	1
Vinyl chloride	ND		ug/kg	64	22.	1
Chloroethane	ND		ug/kg	130	29.	1
1,1-Dichloroethene	ND		ug/kg	64	15.	1
trans-1,2-Dichloroethene	ND		ug/kg	96	8.8	1
Trichloroethene	ND		ug/kg	32	8.8	1
1,2-Dichlorobenzene	ND		ug/kg	130	9.2	1

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-11 Date Collected: 07/18/23 15:06

Client ID: SS-BCP-22-06-07182023 Date Received: 07/18/23

Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	130	9.5	1
1,4-Dichlorobenzene	ND		ug/kg	130	11.	1
Methyl tert butyl ether	ND		ug/kg	130	13.	1
p/m-Xylene	22000		ug/kg	130	36.	1
o-Xylene	5500		ug/kg	64	19.	1
cis-1,2-Dichloroethene	ND		ug/kg	64	11.	1
Styrene	6300		ug/kg	64	12.	1
Dichlorodifluoromethane	ND		ug/kg	640	59.	1
Acetone	520	J	ug/kg	640	310	1
Carbon disulfide	ND		ug/kg	640	290	1
2-Butanone	ND		ug/kg	640	140	1
4-Methyl-2-pentanone	ND		ug/kg	640	82.	1
2-Hexanone	ND		ug/kg	640	76.	1
Bromochloromethane	ND		ug/kg	130	13.	1
1,2-Dibromoethane	ND		ug/kg	64	18.	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	190	64.	1
Isopropylbenzene	57	J	ug/kg	64	7.0	1
1,2,3-Trichlorobenzene	ND		ug/kg	130	21.	1
1,2,4-Trichlorobenzene	ND		ug/kg	130	17.	1
Methyl Acetate	4700		ug/kg	260	61.	1
Cyclohexane	83	J	ug/kg	640	35.	1
1,4-Dioxane	ND		ug/kg	5100	2200	1
Freon-113	ND		ug/kg	260	44.	1
Methyl cyclohexane	190	J	ug/kg	260	39.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	127		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	121		70-130
Dibromofluoromethane	111		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-12
Client ID: SS-BCP-23-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:39
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/28/23 10:02
Analyst: MKS
Percent Solids: 89%
TCLP/SPLP Ext. Date: 07/27/23 09:15

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	50		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	115		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	83		70-130
dibromofluoromethane	120		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-13
Client ID: SS-BCP-23-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:41
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/28/23 10:25
Analyst: MKS
Percent Solids: 91%
TCLP/SPLP Ext. Date: 07/27/23 09:15

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	66		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	112		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	84		70-130
dibromofluoromethane	117		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-14
Client ID: SS-BCP-23-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:44
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/28/23 10:48
Analyst: MKS
Percent Solids: 87%
TCLP/SPLP Ext. Date: 07/27/23 09:15

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	42		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	94		70-130
4-Bromofluorobenzene	88		70-130
dibromofluoromethane	111		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-15
Client ID: SS-BCP-24-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/28/23 11:11
Analyst: MKS
Percent Solids: 87%
TCLP/SPLP Ext. Date: 07/27/23 09:15

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	660		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	92		70-130
4-Bromofluorobenzene	89		70-130
dibromofluoromethane	107		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-16 D2 Date Collected: 07/18/23 15:38
Client ID: SS-BCP-24-04-07182023 Date Received: 07/18/23
Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/01/23 11:17
Analyst: AJK
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Benzene	120000		ug/kg	1500	510	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	122		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-16 D
Client ID: SS-BCP-24-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:38
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/01/23 04:08
Analyst: JIC
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	1500	710	5
1,1-Dichloroethane	ND		ug/kg	310	45.	5
Chloroform	ND		ug/kg	460	43.	5
Carbon tetrachloride	ND		ug/kg	310	71.	5
1,2-Dichloropropane	ND		ug/kg	310	38.	5
Dibromochloromethane	ND		ug/kg	310	43.	5
1,1,2-Trichloroethane	ND		ug/kg	310	82.	5
Tetrachloroethene	93	J	ug/kg	150	60.	5
Chlorobenzene	ND		ug/kg	150	39.	5
Trichlorofluoromethane	ND		ug/kg	1200	210	5
1,2-Dichloroethane	ND		ug/kg	310	79.	5
1,1,1-Trichloroethane	ND		ug/kg	150	52.	5
Bromodichloromethane	ND		ug/kg	150	34.	5
trans-1,3-Dichloropropene	ND		ug/kg	310	84.	5
cis-1,3-Dichloropropene	ND		ug/kg	150	49.	5
Bromoform	ND		ug/kg	1200	76.	5
1,1,2,2-Tetrachloroethane	ND		ug/kg	150	51.	5
Benzene	110000	E	ug/kg	150	51.	5
Toluene	76000		ug/kg	310	170	5
Ethylbenzene	7400		ug/kg	310	43.	5
Chloromethane	ND		ug/kg	1200	290	5
Bromomethane	ND		ug/kg	620	180	5
Vinyl chloride	ND		ug/kg	310	100	5
Chloroethane	ND		ug/kg	620	140	5
1,1-Dichloroethene	ND		ug/kg	310	73.	5
trans-1,2-Dichloroethene	ND		ug/kg	460	42.	5
Trichloroethene	ND		ug/kg	150	42.	5
1,2-Dichlorobenzene	ND		ug/kg	620	44.	5

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-16 D
Client ID: SS-BCP-24-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:38
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	620	46.	5
1,4-Dichlorobenzene	ND		ug/kg	620	53.	5
Methyl tert butyl ether	ND		ug/kg	620	62.	5
p/m-Xylene	100000		ug/kg	620	170	5
o-Xylene	35000		ug/kg	310	90.	5
cis-1,2-Dichloroethene	ND		ug/kg	310	54.	5
Styrene	19000		ug/kg	310	60.	5
Dichlorodifluoromethane	ND		ug/kg	3100	280	5
Acetone	ND		ug/kg	3100	1500	5
Carbon disulfide	ND		ug/kg	3100	1400	5
2-Butanone	ND		ug/kg	3100	680	5
4-Methyl-2-pentanone	ND		ug/kg	3100	390	5
2-Hexanone	ND		ug/kg	3100	360	5
Bromochloromethane	ND		ug/kg	620	63.	5
1,2-Dibromoethane	ND		ug/kg	310	86.	5
1,2-Dibromo-3-chloropropane	ND		ug/kg	920	310	5
Isopropylbenzene	580		ug/kg	310	34.	5
1,2,3-Trichlorobenzene	ND		ug/kg	620	99.	5
1,2,4-Trichlorobenzene	ND		ug/kg	620	84.	5
Methyl Acetate	ND		ug/kg	1200	290	5
Cyclohexane	190	J	ug/kg	3100	170	5
1,4-Dioxane	ND		ug/kg	25000	11000	5
Freon-113	ND		ug/kg	1200	210	5
Methyl cyclohexane	460	J	ug/kg	1200	190	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	108		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-17
Client ID: SS-BCP-24-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:40
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/28/23 11:34
Analyst: MKS
Percent Solids: 86%
TCLP/SPLP Ext. Date: 07/27/23 09:15

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	1300		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	93		70-130
4-Bromofluorobenzene	90		70-130
dibromofluoromethane	105		70-130

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/27/23 04:40
Analyst: MCM
TCLP/SPLP Extraction Date: 07/26/23 10:19

Extraction Date: 07/26/23 10:19

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Volatiles by EPA 1311 - Westborough Lab for sample(s): 01-04 Batch: WG1808391-5					
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	108		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	91		70-130
dibromofluoromethane	116		70-130

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/28/23 06:13
Analyst: MCM
TCLP/SPLP Extraction Date: 07/27/23 09:15

Extraction Date: 07/27/23 09:15

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Volatiles by EPA 1311 - Westborough Lab for sample(s): 06-09,12-15,17 Batch: WG1808926-5					
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	114		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	87		70-130
dibromofluoromethane	120		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/28/23 20:59
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1809589-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		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
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	ND		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
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/28/23 20:59
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1809589-5					
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.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
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
4-Methyl-2-pentanone	ND		ug/kg	500	64.
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Isopropylbenzene	ND		ug/kg	50	5.4
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
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.
Methyl cyclohexane	ND		ug/kg	200	30.

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/28/23 20:59
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1809589-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	96		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/31/23 22:32
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 10-11,16 Batch: WG1810287-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		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
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	ND		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
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/31/23 22:32
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 10-11,16 Batch: WG1810287-5					
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.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
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
4-Methyl-2-pentanone	ND		ug/kg	500	64.
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Isopropylbenzene	ND		ug/kg	50	5.4
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
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.
Methyl cyclohexane	ND		ug/kg	200	30.

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/31/23 22:32
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 10-11,16 Batch: WG1810287-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	128		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	112		70-130

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/01/23 10:56
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05,16 Batch: WG1810425-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		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
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	41	J	ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
Chloromethane	ND		ug/kg	200	47.
Bromomethane	ND		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
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/01/23 10:56
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05,16 Batch: WG1810425-5					
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.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
Styrene	12	J	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
4-Methyl-2-pentanone	ND		ug/kg	500	64.
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Isopropylbenzene	ND		ug/kg	50	5.4
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
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.
Methyl cyclohexane	ND		ug/kg	200	30.

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/01/23 10:56
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05,16 Batch: WG1810425-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	122		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Volatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-04 Batch: WG1808391-3 WG1808391-4								
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	120		120		63-132	0		20
Tetrachloroethene	120		110		70-130	9		20
Chlorobenzene	100		100		75-130	0		25
1,2-Dichloroethane	100		110		70-130	10		20
Benzene	110		110		70-130	0		25
Vinyl chloride	87		87		55-140	0		20
1,1-Dichloroethene	120		100		61-145	18		25
Trichloroethene	120		110		70-130	9		25
1,4-Dichlorobenzene	98		97		70-130	1		20
2-Butanone	77		78		63-138	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	100		103		70-130
Toluene-d8	99		98		70-130
4-Bromofluorobenzene	86		88		70-130
dibromofluoromethane	108		110		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Volatiles by EPA 1311 - Westborough Lab Associated sample(s): 06-09,12-15,17 Batch: WG1808926-3 WG1808926-4								
Chloroform	100		110		70-130	10		20
Carbon tetrachloride	120		120		63-132	0		20
Tetrachloroethene	110		110		70-130	0		20
Chlorobenzene	95		98		75-130	3		25
1,2-Dichloroethane	100		110		70-130	10		20
Benzene	100		100		70-130	0		25
Vinyl chloride	80		83		55-140	4		20
1,1-Dichloroethene	120		120		61-145	0		25
Trichloroethene	110		110		70-130	0		25
1,4-Dichlorobenzene	93		93		70-130	0		20
2-Butanone	78		82		63-138	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	112		105		70-130
Toluene-d8	96		96		70-130
4-Bromofluorobenzene	87		87		70-130
dibromofluoromethane	113		111		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

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: WG1809589-3 WG1809589-4								
Methylene chloride	101		104		70-130	3		30
1,1-Dichloroethane	102		102		70-130	0		30
Chloroform	100		101		70-130	1		30
Carbon tetrachloride	94		93		70-130	1		30
1,2-Dichloropropane	101		102		70-130	1		30
Dibromochloromethane	97		98		70-130	1		30
1,1,2-Trichloroethane	98		101		70-130	3		30
Tetrachloroethene	103		102		70-130	1		30
Chlorobenzene	95		95		70-130	0		30
Trichlorofluoromethane	95		94		70-139	1		30
1,2-Dichloroethane	97		99		70-130	2		30
1,1,1-Trichloroethane	100		99		70-130	1		30
Bromodichloromethane	100		102		70-130	2		30
trans-1,3-Dichloropropene	96		98		70-130	2		30
cis-1,3-Dichloropropene	104		104		70-130	0		30
Bromoform	92		96		70-130	4		30
1,1,2,2-Tetrachloroethane	89		92		70-130	3		30
Benzene	100		101		70-130	1		30
Toluene	89		88		70-130	1		30
Ethylbenzene	92		92		70-130	0		30
Chloromethane	94		98		52-130	4		30
Bromomethane	136		130		57-147	5		30
Vinyl chloride	102		106		67-130	4		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

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: WG1809589-3 WG1809589-4								
Chloroethane	105		104		50-151	1		30
1,1-Dichloroethene	100		100		65-135	0		30
trans-1,2-Dichloroethene	103		103		70-130	0		30
Trichloroethene	106		106		70-130	0		30
1,2-Dichlorobenzene	95		96		70-130	1		30
1,3-Dichlorobenzene	94		94		70-130	0		30
1,4-Dichlorobenzene	95		96		70-130	1		30
Methyl tert butyl ether	119		123		66-130	3		30
p/m-Xylene	91		92		70-130	1		30
o-Xylene	94		93		70-130	1		30
cis-1,2-Dichloroethene	105		106		70-130	1		30
Styrene	92		92		70-130	0		30
Dichlorodifluoromethane	106		107		30-146	1		30
Acetone	84		88		54-140	5		30
Carbon disulfide	101		100		59-130	1		30
2-Butanone	88		89		70-130	1		30
4-Methyl-2-pentanone	90		93		70-130	3		30
2-Hexanone	75		77		70-130	3		30
Bromochloromethane	109		109		70-130	0		30
1,2-Dibromoethane	96		99		70-130	3		30
1,2-Dibromo-3-chloropropane	86		92		68-130	7		30
Isopropylbenzene	86		86		70-130	0		30
1,2,3-Trichlorobenzene	99		101		70-130	2		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

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: WG1809589-3 WG1809589-4								
1,2,4-Trichlorobenzene	101		101		70-130	0		30
Methyl Acetate	99		103		51-146	4		30
Cyclohexane	87		86		59-142	1		30
1,4-Dioxane	91		93		65-136	2		30
Freon-113	95		94		50-139	1		30
Methyl cyclohexane	96		96		70-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	94		95		70-130
Toluene-d8	100		100		70-130
4-Bromofluorobenzene	96		97		70-130
Dibromofluoromethane	99		98		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 10-11,16 Batch: WG1810287-3 WG1810287-4								
Methylene chloride	84		83		70-130	1		30
1,1-Dichloroethane	113		112		70-130	1		30
Chloroform	92		91		70-130	1		30
Carbon tetrachloride	94		92		70-130	2		30
1,2-Dichloropropane	106		106		70-130	0		30
Dibromochloromethane	81		81		70-130	0		30
1,1,2-Trichloroethane	79		78		70-130	1		30
Tetrachloroethene	89		88		70-130	1		30
Chlorobenzene	84		83		70-130	1		30
Trichlorofluoromethane	88		87		70-139	1		30
1,2-Dichloroethane	108		107		70-130	1		30
1,1,1-Trichloroethane	101		100		70-130	1		30
Bromodichloromethane	90		89		70-130	1		30
trans-1,3-Dichloropropene	82		82		70-130	0		30
cis-1,3-Dichloropropene	92		92		70-130	0		30
Bromoform	72		72		70-130	0		30
1,1,2,2-Tetrachloroethane	72		**66**	Q	70-130	9		30
Benzene	92		91		70-130	1		30
Toluene	85		84		70-130	1		30
Ethylbenzene	89		88		70-130	1		30
Chloromethane	116		112		52-130	4		30
Bromomethane	99		98		57-147	1		30
Vinyl chloride	108		106		67-130	2		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 10-11,16 Batch: WG1810287-3 WG1810287-4								
Chloroethane	106		105		50-151	1		30
1,1-Dichloroethene	93		92		65-135	1		30
trans-1,2-Dichloroethene	95		93		70-130	2		30
Trichloroethene	97		102		70-130	5		30
1,2-Dichlorobenzene	81		81		70-130	0		30
1,3-Dichlorobenzene	83		82		70-130	1		30
1,4-Dichlorobenzene	80		80		70-130	0		30
Methyl tert butyl ether	102		103		66-130	1		30
p/m-Xylene	87		86		70-130	1		30
o-Xylene	86		86		70-130	0		30
cis-1,2-Dichloroethene	94		89		70-130	5		30
Styrene	88		87		70-130	1		30
Dichlorodifluoromethane	73		73		30-146	0		30
Acetone	88		90		54-140	2		30
Carbon disulfide	87		86		59-130	1		30
2-Butanone	91		78		70-130	15		30
4-Methyl-2-pentanone	100		99		70-130	1		30
2-Hexanone	87		89		70-130	2		30
Bromochloromethane	89		89		70-130	0		30
1,2-Dibromoethane	82		82		70-130	0		30
1,2-Dibromo-3-chloropropane	73		74		68-130	1		30
Isopropylbenzene	85		83		70-130	2		30
1,2,3-Trichlorobenzene	79		79		70-130	0		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 10-11,16 Batch: WG1810287-3 WG1810287-4								
1,2,4-Trichlorobenzene	81		79		70-130	3		30
Methyl Acetate	96		95		51-146	1		30
Cyclohexane	120		117		59-142	3		30
1,4-Dioxane	102		102		65-136	0		30
Freon-113	94		92		50-139	2		30
Methyl cyclohexane	92		90		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	109		111		70-130
Toluene-d8	98		98		70-130
4-Bromofluorobenzene	99		100		70-130
Dibromofluoromethane	104		104		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: PD1WP BENCH SCALES

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Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05,16 Batch: WG1810425-3 WG1810425-4								
Methylene chloride	118		119		70-130	1		30
1,1-Dichloroethane	106		105		70-130	1		30
Chloroform	106		103		70-130	3		30
Carbon tetrachloride	104		104		70-130	0		30
1,2-Dichloropropane	103		105		70-130	2		30
Dibromochloromethane	94		95		70-130	1		30
1,1,2-Trichloroethane	89		93		70-130	4		30
Tetrachloroethene	89		87		70-130	2		30
Chlorobenzene	91		91		70-130	0		30
Trichlorofluoromethane	117		115		70-139	2		30
1,2-Dichloroethane	99		103		70-130	4		30
1,1,1-Trichloroethane	107		105		70-130	2		30
Bromodichloromethane	107		108		70-130	1		30
trans-1,3-Dichloropropene	92		94		70-130	2		30
cis-1,3-Dichloropropene	106		110		70-130	4		30
Bromoform	89		88		70-130	1		30
1,1,2,2-Tetrachloroethane	93		95		70-130	2		30
Benzene	106		107		70-130	1		30
Toluene	87		88		70-130	1		30
Ethylbenzene	89		88		70-130	1		30
Chloromethane	126		123		52-130	2		30
Bromomethane	130		130		57-147	0		30
Vinyl chloride	118		116		67-130	2		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
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Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05,16 Batch: WG1810425-3 WG1810425-4								
Chloroethane	127		126		50-151	1		30
1,1-Dichloroethene	111		108		65-135	3		30
trans-1,2-Dichloroethene	107		102		70-130	5		30
Trichloroethene	108		109		70-130	1		30
1,2-Dichlorobenzene	88		88		70-130	0		30
1,3-Dichlorobenzene	89		88		70-130	1		30
1,4-Dichlorobenzene	88		88		70-130	0		30
Methyl tert butyl ether	107		108		66-130	1		30
p/m-Xylene	93		92		70-130	1		30
o-Xylene	93		93		70-130	0		30
cis-1,2-Dichloroethene	103		106		70-130	3		30
Styrene	92		93		70-130	1		30
Dichlorodifluoromethane	132		129		30-146	2		30
Acetone	107		106		54-140	1		30
Carbon disulfide	116		115		59-130	1		30
2-Butanone	95		94		70-130	1		30
4-Methyl-2-pentanone	83		83		70-130	0		30
2-Hexanone	74		76		70-130	3		30
Bromochloromethane	112		116		70-130	4		30
1,2-Dibromoethane	96		98		70-130	2		30
1,2-Dibromo-3-chloropropane	84		83		68-130	1		30
Isopropylbenzene	87		85		70-130	2		30
1,2,3-Trichlorobenzene	85		85		70-130	0		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05,16 Batch: WG1810425-3 WG1810425-4								
1,2,4-Trichlorobenzene	85		83		70-130	2		30
Methyl Acetate	105		108		51-146	3		30
Cyclohexane	102		99		59-142	3		30
1,4-Dioxane	82		84		65-136	2		30
Freon-113	114		111		50-139	3		30
Methyl cyclohexane	97		96		70-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	109		111		70-130
Toluene-d8	99		99		70-130
4-Bromofluorobenzene	93		91		70-130
Dibromofluoromethane	120		123		70-130

SEMIVOLATILES

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01
Client ID: SS-BCP-21-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/24/23 17:04
Analyst: JG
Percent Solids: 74%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

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	7.0	J	ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	11	J	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	71		21-120
Phenol-d6	64		10-120
Nitrobenzene-d5	66		23-120
2-Fluorobiphenyl	72		15-120
2,4,6-Tribromophenol	93		10-120
4-Terphenyl-d14	68		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01 D2
Client ID: SS-BCP-21-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/01/23 14:09
Analyst: JG
Percent Solids: 74%

Extraction Method: EPA 3546
Extraction Date: 07/27/23 21:26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Naphthalene	390000		ug/kg	44000	5400	200

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01 D
Client ID: SS-BCP-21-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/31/23 13:44
Analyst: SZ
Percent Solids: 74%

Extraction Method: EPA 3546
Extraction Date: 07/27/23 21:26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	33000		ug/kg	3500	460	20
Hexachlorobenzene	ND		ug/kg	2600	490	20
Bis(2-chloroethyl)ether	ND		ug/kg	4000	600	20
2-Chloronaphthalene	ND		ug/kg	4400	440	20
3,3'-Dichlorobenzidine	ND		ug/kg	4400	1200	20
2,4-Dinitrotoluene	ND		ug/kg	4400	880	20
2,6-Dinitrotoluene	ND		ug/kg	4400	760	20
Fluoranthene	46000		ug/kg	2600	500	20
4-Chlorophenyl phenyl ether	ND		ug/kg	4400	470	20
4-Bromophenyl phenyl ether	ND		ug/kg	4400	670	20
Bis(2-chloroisopropyl)ether	ND		ug/kg	5300	750	20
Bis(2-chloroethoxy)methane	ND		ug/kg	4800	440	20
Hexachlorobutadiene	ND		ug/kg	4400	640	20
Hexachlorocyclopentadiene	ND		ug/kg	12000	4000	20
Hexachloroethane	ND		ug/kg	3500	710	20
Isophorone	ND		ug/kg	4000	570	20
Naphthalene	320000	E	ug/kg	4400	540	20
Nitrobenzene	ND		ug/kg	4000	650	20
NDPA/DPA	ND		ug/kg	3500	500	20
n-Nitrosodi-n-propylamine	ND		ug/kg	4400	680	20
Bis(2-ethylhexyl)phthalate	ND		ug/kg	4400	1500	20
Butyl benzyl phthalate	ND		ug/kg	4400	1100	20
Di-n-butylphthalate	ND		ug/kg	4400	840	20
Di-n-octylphthalate	ND		ug/kg	4400	1500	20
Diethyl phthalate	ND		ug/kg	4400	410	20
Dimethyl phthalate	ND		ug/kg	4400	920	20
Benzo(a)anthracene	22000		ug/kg	2600	500	20
Benzo(a)pyrene	12000		ug/kg	3500	1100	20

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01 D
Client ID: SS-BCP-21-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	20000		ug/kg	2600	740	20
Benzo(k)fluoranthene	4900		ug/kg	2600	700	20
Chrysene	20000		ug/kg	2600	460	20
Acenaphthylene	5900		ug/kg	3500	680	20
Anthracene	9900		ug/kg	2600	860	20
Benzo(ghi)perylene	7000		ug/kg	3500	520	20
Fluorene	21000		ug/kg	4400	430	20
Phenanthrene	37000		ug/kg	2600	540	20
Dibenzo(a,h)anthracene	1900	J	ug/kg	2600	510	20
Indeno(1,2,3-cd)pyrene	8000		ug/kg	3500	610	20
Pyrene	38000		ug/kg	2600	440	20
Biphenyl	6500	J	ug/kg	10000	570	20
4-Chloroaniline	ND		ug/kg	4400	800	20
2-Nitroaniline	ND		ug/kg	4400	850	20
3-Nitroaniline	ND		ug/kg	4400	830	20
4-Nitroaniline	ND		ug/kg	4400	1800	20
Dibenzofuran	17000		ug/kg	4400	420	20
2-Methylnaphthalene	50000		ug/kg	5300	530	20
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	4400	460	20
Acetophenone	ND		ug/kg	4400	540	20
2,4,6-Trichlorophenol	ND		ug/kg	2600	840	20
p-Chloro-m-cresol	ND		ug/kg	4400	660	20
2-Chlorophenol	ND		ug/kg	4400	520	20
2,4-Dichlorophenol	ND		ug/kg	4000	710	20
2,4-Dimethylphenol	ND		ug/kg	4400	1400	20
2-Nitrophenol	ND		ug/kg	9500	1600	20
4-Nitrophenol	ND		ug/kg	6200	1800	20
2,4-Dinitrophenol	ND		ug/kg	21000	2000	20
4,6-Dinitro-o-cresol	ND		ug/kg	11000	2100	20
Pentachlorophenol	ND		ug/kg	3500	970	20
Phenol	710	J	ug/kg	4400	660	20
2-Methylphenol	ND		ug/kg	4400	680	20
3-Methylphenol/4-Methylphenol	950	J	ug/kg	6300	690	20
2,4,5-Trichlorophenol	ND		ug/kg	4400	840	20
Carbazole	3500	J	ug/kg	4400	430	20
Atrazine	ND		ug/kg	3500	1500	20
Benzaldehyde	ND		ug/kg	5800	1200	20

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01 D
Client ID: SS-BCP-21-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	4400	1300	20
2,3,4,6-Tetrachlorophenol	ND		ug/kg	4400	890	20

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

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/24/23 17:28
Analyst: JG
Percent Solids: 78%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

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	900		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	2200	E	ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	7.2	J	ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	78		21-120
Phenol-d6	72		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	81		15-120
2,4,6-Tribromophenol	105		10-120
4-Terphenyl-d14	77		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02 D2
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/01/23 15:43
Analyst: JG
Percent Solids: 78%

Extraction Method: EPA 3546
Extraction Date: 07/27/23 21:26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Phenanthrene	4500000		ug/kg	190000	39000	500

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02 D
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/29/23 17:18
Analyst: LJG
Percent Solids: 78%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
3-Methylphenol/4-Methylphenol	2000		ug/l	120	14.	5

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02 D
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/01/23 14:32
Analyst: JG
Percent Solids: 78%

Extraction Method: EPA 3546
Extraction Date: 07/27/23 21:26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	79000		ug/kg	51000	6600	100
Hexachlorobenzene	ND		ug/kg	38000	7200	100
Bis(2-chloroethyl)ether	ND		ug/kg	58000	8700	100
2-Chloronaphthalene	ND		ug/kg	64000	6400	100
3,3'-Dichlorobenzidine	ND		ug/kg	64000	17000	100
2,4-Dinitrotoluene	ND		ug/kg	64000	13000	100
2,6-Dinitrotoluene	ND		ug/kg	64000	11000	100
Fluoranthene	1600000		ug/kg	38000	7400	100
4-Chlorophenyl phenyl ether	ND		ug/kg	64000	6900	100
4-Bromophenyl phenyl ether	ND		ug/kg	64000	9800	100
Bis(2-chloroisopropyl)ether	ND		ug/kg	77000	11000	100
Bis(2-chloroethoxy)methane	ND		ug/kg	69000	6400	100
Hexachlorobutadiene	ND		ug/kg	64000	9400	100
Hexachlorocyclopentadiene	ND		ug/kg	180000	58000	100
Hexachloroethane	ND		ug/kg	51000	10000	100
Isophorone	ND		ug/kg	58000	8300	100
Naphthalene	2000000		ug/kg	64000	7800	100
Nitrobenzene	ND		ug/kg	58000	9500	100
NDPA/DPA	ND		ug/kg	51000	7300	100
n-Nitrosodi-n-propylamine	ND		ug/kg	64000	9900	100
Bis(2-ethylhexyl)phthalate	ND		ug/kg	64000	22000	100
Butyl benzyl phthalate	ND		ug/kg	64000	16000	100
Di-n-butylphthalate	ND		ug/kg	64000	12000	100
Di-n-octylphthalate	ND		ug/kg	64000	22000	100
Diethyl phthalate	ND		ug/kg	64000	5900	100
Dimethyl phthalate	ND		ug/kg	64000	13000	100
Benzo(a)anthracene	810000		ug/kg	38000	7200	100
Benzo(a)pyrene	580000		ug/kg	51000	16000	100

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02 D
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	750000		ug/kg	38000	11000	100
Benzo(k)fluoranthene	250000		ug/kg	38000	10000	100
Chrysene	680000		ug/kg	38000	6700	100
Acenaphthylene	980000		ug/kg	51000	9900	100
Anthracene	490000		ug/kg	38000	12000	100
Benzo(ghi)perylene	280000		ug/kg	51000	7600	100
Fluorene	1200000		ug/kg	64000	6200	100
Phenanthrene	2900000	E	ug/kg	38000	7800	100
Dibenzo(a,h)anthracene	100000		ug/kg	38000	7400	100
Indeno(1,2,3-cd)pyrene	320000		ug/kg	51000	9000	100
Pyrene	1100000		ug/kg	38000	6400	100
Biphenyl	150000		ug/kg	150000	8300	100
4-Chloroaniline	ND		ug/kg	64000	12000	100
2-Nitroaniline	ND		ug/kg	64000	12000	100
3-Nitroaniline	ND		ug/kg	64000	12000	100
4-Nitroaniline	ND		ug/kg	64000	26000	100
Dibenzofuran	700000		ug/kg	64000	6100	100
2-Methylnaphthalene	590000		ug/kg	77000	7800	100
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	64000	6700	100
Acetophenone	ND		ug/kg	64000	8000	100
2,4,6-Trichlorophenol	ND		ug/kg	38000	12000	100
p-Chloro-m-cresol	ND		ug/kg	64000	9600	100
2-Chlorophenol	ND		ug/kg	64000	7600	100
2,4-Dichlorophenol	ND		ug/kg	58000	10000	100
2,4-Dimethylphenol	ND		ug/kg	64000	21000	100
2-Nitrophenol	ND		ug/kg	140000	24000	100
4-Nitrophenol	ND		ug/kg	90000	26000	100
2,4-Dinitrophenol	ND		ug/kg	310000	30000	100
4,6-Dinitro-o-cresol	ND		ug/kg	170000	31000	100
Pentachlorophenol	ND		ug/kg	51000	14000	100
Phenol	16000	J	ug/kg	64000	9700	100
2-Methylphenol	16000	J	ug/kg	64000	10000	100
3-Methylphenol/4-Methylphenol	39000	J	ug/kg	92000	10000	100
2,4,5-Trichlorophenol	ND		ug/kg	64000	12000	100
Carbazole	370000		ug/kg	64000	6200	100
Atrazine	ND		ug/kg	51000	22000	100
Benzaldehyde	ND		ug/kg	85000	17000	100

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02 D
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	64000	20000	100
2,3,4,6-Tetrachlorophenol	ND		ug/kg	64000	13000	100

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

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03
Client ID: SS-BCP-23-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 12:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/24/23 17:51
Analyst: JG
Percent Solids: 76%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

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	1500	E	ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	2200	E	ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	11	J	ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		21-120
Phenol-d6	74		10-120
Nitrobenzene-d5	75		23-120
2-Fluorobiphenyl	85		15-120
2,4,6-Tribromophenol	112		10-120
4-Terphenyl-d14	83		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03 D2
Client ID: SS-BCP-23-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 12:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/01/23 14:56
Analyst: JG
Percent Solids: 76%

Extraction Method: EPA 3546
Extraction Date: 07/27/23 21:26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Naphthalene	10000000		ug/kg	650000	79000	1000

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03 D
Client ID: SS-BCP-23-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 12:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/29/23 17:00
Analyst: LJG
Percent Solids: 76%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
2-Methylphenol	1000		ug/l	120	28.	5
3-Methylphenol/4-Methylphenol	1500		ug/l	120	14.	5

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03 D
Client ID: SS-BCP-23-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 12:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/31/23 14:57
Analyst: SZ
Percent Solids: 76%

Extraction Method: EPA 3546
Extraction Date: 07/27/23 21:26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	100000	13000	200
Hexachlorobenzene	ND		ug/kg	78000	14000	200
Bis(2-chloroethyl)ether	ND		ug/kg	120000	18000	200
2-Chloronaphthalene	ND		ug/kg	130000	13000	200
3,3'-Dichlorobenzidine	ND		ug/kg	130000	34000	200
2,4-Dinitrotoluene	ND		ug/kg	130000	26000	200
2,6-Dinitrotoluene	ND		ug/kg	130000	22000	200
Fluoranthene	2000000		ug/kg	78000	15000	200
4-Chlorophenyl phenyl ether	ND		ug/kg	130000	14000	200
4-Bromophenyl phenyl ether	ND		ug/kg	130000	20000	200
Bis(2-chloroisopropyl)ether	ND		ug/kg	160000	22000	200
Bis(2-chloroethoxy)methane	ND		ug/kg	140000	13000	200
Hexachlorobutadiene	ND		ug/kg	130000	19000	200
Hexachlorocyclopentadiene	ND		ug/kg	370000	120000	200
Hexachloroethane	ND		ug/kg	100000	21000	200
Isophorone	ND		ug/kg	120000	17000	200
Naphthalene	8600000	E	ug/kg	130000	16000	200
Nitrobenzene	ND		ug/kg	120000	19000	200
NDPA/DPA	ND		ug/kg	100000	15000	200
n-Nitrosodi-n-propylamine	ND		ug/kg	130000	20000	200
Bis(2-ethylhexyl)phthalate	ND		ug/kg	130000	45000	200
Butyl benzyl phthalate	ND		ug/kg	130000	33000	200
Di-n-butylphthalate	ND		ug/kg	130000	24000	200
Di-n-octylphthalate	ND		ug/kg	130000	44000	200
Diethyl phthalate	ND		ug/kg	130000	12000	200
Dimethyl phthalate	ND		ug/kg	130000	27000	200
Benzo(a)anthracene	880000		ug/kg	78000	15000	200
Benzo(a)pyrene	570000		ug/kg	100000	32000	200

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03 D
Client ID: SS-BCP-23-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 12:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	750000		ug/kg	78000	22000	200
Benzo(k)fluoranthene	210000		ug/kg	78000	21000	200
Chrysene	860000		ug/kg	78000	13000	200
Acenaphthylene	1400000		ug/kg	100000	20000	200
Anthracene	1000000		ug/kg	78000	25000	200
Benzo(ghi)perylene	220000		ug/kg	100000	15000	200
Fluorene	1200000		ug/kg	130000	13000	200
Phenanthrene	2900000		ug/kg	78000	16000	200
Dibenzo(a,h)anthracene	79000		ug/kg	78000	15000	200
Indeno(1,2,3-cd)pyrene	270000		ug/kg	100000	18000	200
Pyrene	1300000		ug/kg	78000	13000	200
Biphenyl	230000	J	ug/kg	300000	17000	200
4-Chloroaniline	ND		ug/kg	130000	24000	200
2-Nitroaniline	ND		ug/kg	130000	25000	200
3-Nitroaniline	ND		ug/kg	130000	24000	200
4-Nitroaniline	ND		ug/kg	130000	54000	200
Dibenzofuran	790000		ug/kg	130000	12000	200
2-Methylnaphthalene	1600000		ug/kg	160000	16000	200
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	130000	14000	200
Acetophenone	ND		ug/kg	130000	16000	200
2,4,6-Trichlorophenol	ND		ug/kg	78000	24000	200
p-Chloro-m-cresol	ND		ug/kg	130000	19000	200
2-Chlorophenol	ND		ug/kg	130000	15000	200
2,4-Dichlorophenol	ND		ug/kg	120000	21000	200
2,4-Dimethylphenol	120000	J	ug/kg	130000	43000	200
2-Nitrophenol	ND		ug/kg	280000	49000	200
4-Nitrophenol	ND		ug/kg	180000	53000	200
2,4-Dinitrophenol	ND		ug/kg	620000	60000	200
4,6-Dinitro-o-cresol	ND		ug/kg	340000	62000	200
Pentachlorophenol	ND		ug/kg	100000	28000	200
Phenol	200000		ug/kg	130000	20000	200
2-Methylphenol	190000		ug/kg	130000	20000	200
3-Methylphenol/4-Methylphenol	360000		ug/kg	190000	20000	200
2,4,5-Trichlorophenol	ND		ug/kg	130000	25000	200
Carbazole	560000		ug/kg	130000	13000	200
Atrazine	ND		ug/kg	100000	45000	200
Benzaldehyde	ND		ug/kg	170000	35000	200

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03 D
Client ID: SS-BCP-23-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 12:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	130000	39000	200
2,3,4,6-Tetrachlorophenol	ND		ug/kg	130000	26000	200

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

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/22/23 15:03
Analyst: JG
Percent Solids: 76%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 15:22

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	2000	E	ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	4800	E	ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	7.8	J	ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		21-120
Phenol-d6	67		10-120
Nitrobenzene-d5	67		23-120
2-Fluorobiphenyl	79		15-120
2,4,6-Tribromophenol	109		10-120
4-Terphenyl-d14	83		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04 D2
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/01/23 15:20
Analyst: JG
Percent Solids: 76%

Extraction Method: EPA 3546
Extraction Date: 07/27/23 21:26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Naphthalene	2600000		ug/kg	220000	26000	1000
Phenanthrene	2100000		ug/kg	130000	26000	1000

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04 D
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/24/23 06:45
Analyst: JG
Percent Solids: 76%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 15:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
2-Methylphenol	2900		ug/l	250	55.	10
3-Methylphenol/4-Methylphenol	7000		ug/l	250	28.	10

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04 D
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/31/23 15:21
Analyst: SZ
Percent Solids: 76%

Extraction Method: EPA 3546
Extraction Date: 07/27/23 21:26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	54000		ug/kg	34000	4500	200
Hexachlorobenzene	ND		ug/kg	26000	4800	200
Bis(2-chloroethyl)ether	ND		ug/kg	39000	5900	200
2-Chloronaphthalene	ND		ug/kg	43000	4300	200
3,3'-Dichlorobenzidine	ND		ug/kg	43000	11000	200
2,4-Dinitrotoluene	ND		ug/kg	43000	8600	200
2,6-Dinitrotoluene	ND		ug/kg	43000	7400	200
Fluoranthene	1500000		ug/kg	26000	5000	200
4-Chlorophenyl phenyl ether	ND		ug/kg	43000	4600	200
4-Bromophenyl phenyl ether	ND		ug/kg	43000	6600	200
Bis(2-chloroisopropyl)ether	ND		ug/kg	52000	7400	200
Bis(2-chloroethoxy)methane	ND		ug/kg	47000	4300	200
Hexachlorobutadiene	ND		ug/kg	43000	6300	200
Hexachlorocyclopentadiene	ND		ug/kg	120000	39000	200
Hexachloroethane	ND		ug/kg	34000	7000	200
Isophorone	ND		ug/kg	39000	5600	200
Naphthalene	2200000	E	ug/kg	43000	5300	200
Nitrobenzene	ND		ug/kg	39000	6400	200
NDPA/DPA	ND		ug/kg	34000	4900	200
n-Nitrosodi-n-propylamine	ND		ug/kg	43000	6700	200
Bis(2-ethylhexyl)phthalate	ND		ug/kg	43000	15000	200
Butyl benzyl phthalate	ND		ug/kg	43000	11000	200
Di-n-butylphthalate	ND		ug/kg	43000	8200	200
Di-n-octylphthalate	ND		ug/kg	43000	15000	200
Diethyl phthalate	ND		ug/kg	43000	4000	200
Dimethyl phthalate	ND		ug/kg	43000	9100	200
Benzo(a)anthracene	560000		ug/kg	26000	4900	200
Benzo(a)pyrene	490000		ug/kg	34000	10000	200

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04 D
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	640000		ug/kg	26000	7300	200
Benzo(k)fluoranthene	120000		ug/kg	26000	6900	200
Chrysene	540000		ug/kg	26000	4500	200
Acenaphthylene	420000		ug/kg	34000	6700	200
Anthracene	460000		ug/kg	26000	8400	200
Benzo(ghi)perylene	290000		ug/kg	34000	5100	200
Fluorene	600000		ug/kg	43000	4200	200
Phenanthrene	1900000	E	ug/kg	26000	5200	200
Dibenzo(a,h)anthracene	60000		ug/kg	26000	5000	200
Indeno(1,2,3-cd)pyrene	310000		ug/kg	34000	6000	200
Pyrene	1000000		ug/kg	26000	4300	200
Biphenyl	83000	J	ug/kg	98000	5600	200
4-Chloroaniline	ND		ug/kg	43000	7900	200
2-Nitroaniline	ND		ug/kg	43000	8300	200
3-Nitroaniline	ND		ug/kg	43000	8200	200
4-Nitroaniline	ND		ug/kg	43000	18000	200
Dibenzofuran	350000		ug/kg	43000	4100	200
2-Methylnaphthalene	410000		ug/kg	52000	5200	200
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	43000	4500	200
Acetophenone	ND		ug/kg	43000	5400	200
2,4,6-Trichlorophenol	ND		ug/kg	26000	8200	200
p-Chloro-m-cresol	ND		ug/kg	43000	6400	200
2-Chlorophenol	ND		ug/kg	43000	5100	200
2,4-Dichlorophenol	ND		ug/kg	39000	7000	200
2,4-Dimethylphenol	24000	J	ug/kg	43000	14000	200
2-Nitrophenol	ND		ug/kg	93000	16000	200
4-Nitrophenol	ND		ug/kg	60000	18000	200
2,4-Dinitrophenol	ND		ug/kg	210000	20000	200
4,6-Dinitro-o-cresol	ND		ug/kg	110000	21000	200
Pentachlorophenol	ND		ug/kg	34000	9500	200
Phenol	22000	J	ug/kg	43000	6500	200
2-Methylphenol	18000	J	ug/kg	43000	6700	200
3-Methylphenol/4-Methylphenol	42000	J	ug/kg	62000	6800	200
2,4,5-Trichlorophenol	ND		ug/kg	43000	8300	200
Carbazole	320000		ug/kg	43000	4200	200
Atrazine	ND		ug/kg	34000	15000	200
Benzaldehyde	ND		ug/kg	57000	12000	200

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04 D
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	43000	13000	200
2,3,4,6-Tetrachlorophenol	ND		ug/kg	43000	8700	200

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

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05 D2
Client ID: SS-BCP-25-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/01/23 12:34
Analyst: JG
Percent Solids: 72%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
3-Methylphenol/4-Methylphenol	23000		ug/l	2500	280	100

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05 D2
Client ID: SS-BCP-25-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/01/23 17:15
Analyst: MG
Percent Solids: 72%

Extraction Method: EPA 3546
Extraction Date: 07/27/23 22:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Fluoranthene	6400000		ug/kg	790000	150000	1000
Naphthalene	14000000		ug/kg	1300000	160000	1000
Benzo(a)anthracene	2400000		ug/kg	790000	150000	1000
Benzo(a)pyrene	2100000		ug/kg	1000000	320000	1000
Benzo(b)fluoranthene	2600000		ug/kg	790000	220000	1000
Chrysene	2800000		ug/kg	790000	140000	1000
Acenaphthylene	3600000		ug/kg	1000000	200000	1000
Anthracene	2900000		ug/kg	790000	260000	1000
Fluorene	3200000		ug/kg	1300000	130000	1000
Phenanthrene	9100000		ug/kg	790000	160000	1000
Indeno(1,2,3-cd)pyrene	1400000		ug/kg	1000000	180000	1000
Pyrene	4200000		ug/kg	790000	130000	1000
Dibenzofuran	2000000		ug/kg	1300000	120000	1000
2-Methylnaphthalene	2500000		ug/kg	1600000	160000	1000
Carbazole	1600000		ug/kg	1300000	130000	1000

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05 D
Client ID: SS-BCP-25-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/29/23 16:42
Analyst: LJG
Percent Solids: 72%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	200	69.	20
2,4-Dinitrotoluene	ND		ug/l	500	38.	20
Hexachlorobutadiene	ND		ug/l	200	60.	20
Hexachloroethane	ND		ug/l	200	44.	20
Nitrobenzene	ND		ug/l	200	66.	20
2,4,6-Trichlorophenol	ND		ug/l	500	49.	20
Pentachlorophenol	ND		ug/l	1000	200	20
2-Methylphenol	8200		ug/l	500	110	20
3-Methylphenol/4-Methylphenol	22000	E	ug/l	500	55.	20
2,4,5-Trichlorophenol	ND		ug/l	500	38.	20
Pyridine	ND		ug/l	350	90.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	**0**	Q	21-120
Phenol-d6	**0**	Q	10-120
Nitrobenzene-d5	**0**	Q	23-120
2-Fluorobiphenyl	**0**	Q	15-120
2,4,6-Tribromophenol	**0**	Q	10-120
4-Terphenyl-d14	**0**	Q	33-120

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05 D
Client ID: SS-BCP-25-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/31/23 15:45
Analyst: SZ
Percent Solids: 72%

Extraction Method: EPA 3546
Extraction Date: 07/27/23 22:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	470000		ug/kg	21000	2700	20
Hexachlorobenzene	ND		ug/kg	16000	3000	20
Bis(2-chloroethyl)ether	ND		ug/kg	24000	3600	20
2-Chloronaphthalene	ND		ug/kg	26000	2600	20
3,3'-Dichlorobenzidine	ND		ug/kg	26000	7000	20
2,4-Dinitrotoluene	ND		ug/kg	26000	5300	20
2,6-Dinitrotoluene	ND		ug/kg	26000	4500	20
Fluoranthene	3200000	E	ug/kg	16000	3000	20
4-Chlorophenyl phenyl ether	ND		ug/kg	26000	2800	20
4-Bromophenyl phenyl ether	ND		ug/kg	26000	4000	20
Bis(2-chloroisopropyl)ether	ND		ug/kg	32000	4500	20
Bis(2-chloroethoxy)methane	ND		ug/kg	28000	2600	20
Hexachlorobutadiene	ND		ug/kg	26000	3900	20
Hexachlorocyclopentadiene	ND		ug/kg	76000	24000	20
Hexachloroethane	ND		ug/kg	21000	4300	20
Isophorone	ND		ug/kg	24000	3400	20
Naphthalene	5100000	E	ug/kg	26000	3200	20
Nitrobenzene	ND		ug/kg	24000	3900	20
NDPA/DPA	ND		ug/kg	21000	3000	20
n-Nitrosodi-n-propylamine	ND		ug/kg	26000	4100	20
Bis(2-ethylhexyl)phthalate	ND		ug/kg	26000	9100	20
Butyl benzyl phthalate	ND		ug/kg	26000	6700	20
Di-n-butylphthalate	ND		ug/kg	26000	5000	20
Di-n-octylphthalate	ND		ug/kg	26000	9000	20
Diethyl phthalate	ND		ug/kg	26000	2400	20
Dimethyl phthalate	ND		ug/kg	26000	5600	20
Benzo(a)anthracene	2500000	E	ug/kg	16000	3000	20
Benzo(a)pyrene	1700000	E	ug/kg	21000	6400	20

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05 D
Client ID: SS-BCP-25-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	2200000	E	ug/kg	16000	4400	20
Benzo(k)fluoranthene	450000		ug/kg	16000	4200	20
Chrysene	2100000	E	ug/kg	16000	2700	20
Acenaphthylene	2400000	E	ug/kg	21000	4100	20
Anthracene	1800000	E	ug/kg	16000	5200	20
Benzo(ghi)perylene	970000		ug/kg	21000	3100	20
Fluorene	2800000	E	ug/kg	26000	2600	20
Phenanthrene	4100000	E	ug/kg	16000	3200	20
Dibenzo(a,h)anthracene	320000		ug/kg	16000	3000	20
Indeno(1,2,3-cd)pyrene	1200000	E	ug/kg	21000	3700	20
Pyrene	2600000	E	ug/kg	16000	2600	20
Biphenyl	520000		ug/kg	60000	3400	20
4-Chloroaniline	ND		ug/kg	26000	4800	20
2-Nitroaniline	ND		ug/kg	26000	5100	20
3-Nitroaniline	ND		ug/kg	26000	5000	20
4-Nitroaniline	ND		ug/kg	26000	11000	20
Dibenzofuran	1800000	E	ug/kg	26000	2500	20
2-Methylnaphthalene	2300000	E	ug/kg	32000	3200	20
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	26000	2800	20
Acetophenone	ND		ug/kg	26000	3300	20
2,4,6-Trichlorophenol	ND		ug/kg	16000	5000	20
p-Chloro-m-cresol	ND		ug/kg	26000	3900	20
2-Chlorophenol	ND		ug/kg	26000	3100	20
2,4-Dichlorophenol	ND		ug/kg	24000	4200	20
2,4-Dimethylphenol	160000		ug/kg	26000	8700	20
2-Nitrophenol	ND		ug/kg	57000	9900	20
4-Nitrophenol	ND		ug/kg	37000	11000	20
2,4-Dinitrophenol	ND		ug/kg	130000	12000	20
4,6-Dinitro-o-cresol	ND		ug/kg	69000	13000	20
Pentachlorophenol	ND		ug/kg	21000	5800	20
Phenol	610000		ug/kg	26000	4000	20
2-Methylphenol	260000		ug/kg	26000	4100	20
3-Methylphenol/4-Methylphenol	690000		ug/kg	38000	4100	20
2,4,5-Trichlorophenol	ND		ug/kg	26000	5100	20
Carbazole	1500000	E	ug/kg	26000	2600	20
Atrazine	ND		ug/kg	21000	9200	20
Benzaldehyde	ND		ug/kg	35000	7100	20

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05 D
Client ID: SS-BCP-25-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	26000	8000	20
2,3,4,6-Tetrachlorophenol	ND		ug/kg	26000	5300	20

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

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-06
Client ID: SS-BCP-21-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:45
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/22/23 15:27
Analyst: JG
Percent Solids: 90%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 15:22

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	8.7	J	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	52		21-120
Phenol-d6	50		10-120
Nitrobenzene-d5	51		23-120
2-Fluorobiphenyl	63		15-120
2,4,6-Tribromophenol	92		10-120
4-Terphenyl-d14	74		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-07
Client ID: SS-BCP-21-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:50
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/22/23 15:50
Analyst: JG
Percent Solids: 86%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 15:22

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	11	J	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	70		21-120
Phenol-d6	63		10-120
Nitrobenzene-d5	66		23-120
2-Fluorobiphenyl	78		15-120
2,4,6-Tribromophenol	103		10-120
4-Terphenyl-d14	80		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-08
Client ID: SS-BCP-21-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/22/23 16:14
Analyst: JG
Percent Solids: 89%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 15:22

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	11	J	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	70		10-120
Nitrobenzene-d5	73		23-120
2-Fluorobiphenyl	84		15-120
2,4,6-Tribromophenol	107		10-120
4-Terphenyl-d14	83		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-09
Client ID: SS-BCP-22-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/24/23 18:38
Analyst: JG
Percent Solids: 84%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

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	970		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	2600	E	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	62		21-120
Phenol-d6	59		10-120
Nitrobenzene-d5	58		23-120
2-Fluorobiphenyl	66		15-120
2,4,6-Tribromophenol	87		10-120
4-Terphenyl-d14	66		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-09 D
Client ID: SS-BCP-22-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/29/23 16:23
Analyst: LJG
Percent Solids: 84%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
3-Methylphenol/4-Methylphenol	2500		ug/l	120	14.	5

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-10
Client ID: SS-BCP-22-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:02
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/24/23 19:02
Analyst: JG
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

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	1200	E	ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	3200	E	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	91		21-120
Phenol-d6	84		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	92		15-120
2,4,6-Tribromophenol	**121**	Q	10-120
4-Terphenyl-d14	90		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-10 D
Client ID: SS-BCP-22-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:02
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/29/23 16:05
Analyst: LJG
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
2-Methylphenol	1300		ug/l	120	28.	5
3-Methylphenol/4-Methylphenol	3400		ug/l	120	14.	5

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-11
Client ID: SS-BCP-22-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:06
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/24/23 17:08
Analyst: JG
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

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	980		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	2100	E	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	71		21-120
Phenol-d6	73		10-120
Nitrobenzene-d5	77		23-120
2-Fluorobiphenyl	68		15-120
2,4,6-Tribromophenol	66		10-120
4-Terphenyl-d14	69		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-11 D
Client ID: SS-BCP-22-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:06
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/29/23 15:47
Analyst: LJG
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
3-Methylphenol/4-Methylphenol	1900		ug/l	120	14.	5

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-12
Client ID: SS-BCP-23-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:39
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/22/23 16:37
Analyst: JG
Percent Solids: 89%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 15:22

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	1000		ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	1600	E	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	69		21-120
Phenol-d6	63		10-120
Nitrobenzene-d5	63		23-120
2-Fluorobiphenyl	76		15-120
2,4,6-Tribromophenol	107		10-120
4-Terphenyl-d14	80		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-12 D
Client ID: SS-BCP-23-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:39
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/24/23 04:31
Analyst: JG
Percent Solids: 89%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 15:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
3-Methylphenol/4-Methylphenol	2700		ug/l	120	14.	5

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-13
Client ID: SS-BCP-23-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:41
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/22/23 17:01
Analyst: JG
Percent Solids: 91%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 15:22

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	1200	E	ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	2400	E	ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	5.8	J	ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		21-120
Phenol-d6	62		10-120
Nitrobenzene-d5	62		23-120
2-Fluorobiphenyl	73		15-120
2,4,6-Tribromophenol	98		10-120
4-Terphenyl-d14	73		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-13 D
Client ID: SS-BCP-23-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:41
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/24/23 06:29
Analyst: JG
Percent Solids: 91%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 15:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
2-Methylphenol	1300		ug/l	120	28.	5
3-Methylphenol/4-Methylphenol	2100		ug/l	120	14.	5

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-14
Client ID: SS-BCP-23-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:44
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/24/23 17:33
Analyst: JG
Percent Solids: 87%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 15:22

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	1100	E	ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	2500	E	ug/l	25	2.8	1
2,4,5-Trichlorophenol	ND		ug/l	25	1.9	1
Pyridine	8.5	J	ug/l	18	4.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		21-120
Phenol-d6	60		10-120
Nitrobenzene-d5	66		23-120
2-Fluorobiphenyl	63		15-120
2,4,6-Tribromophenol	63		10-120
4-Terphenyl-d14	67		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-14 D
Client ID: SS-BCP-23-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:44
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/01/23 11:23
Analyst: JG
Percent Solids: 87%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 15:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
2-Methylphenol	1400		ug/l	250	55.	10
3-Methylphenol/4-Methylphenol	3000		ug/l	250	28.	10

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-15
Client ID: SS-BCP-24-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/24/23 17:58
Analyst: JG
Percent Solids: 87%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

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	2100	E	ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	5300	E	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	68		21-120
Phenol-d6	68		10-120
Nitrobenzene-d5	68		23-120
2-Fluorobiphenyl	65		15-120
2,4,6-Tribromophenol	65		10-120
4-Terphenyl-d14	66		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-15 D
Client ID: SS-BCP-24-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/01/23 12:58
Analyst: JG
Percent Solids: 87%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
2-Methylphenol	2300		ug/l	500	110	20
3-Methylphenol/4-Methylphenol	5900		ug/l	500	55.	20

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-16
Client ID: SS-BCP-24-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:38
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/24/23 18:22
Analyst: JG
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

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	3000	E	ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	7000	E	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	68		21-120
Phenol-d6	69		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	64		15-120
2,4,6-Tribromophenol	66		10-120
4-Terphenyl-d14	66		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-16 D
Client ID: SS-BCP-24-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:38
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/01/23 13:21
Analyst: JG
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
2-Methylphenol	3500		ug/l	500	110	20
3-Methylphenol/4-Methylphenol	8500		ug/l	500	55.	20

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-17
Client ID: SS-BCP-24-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:40
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/24/23 18:46
Analyst: JG
Percent Solids: 86%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

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	4000	E	ug/l	25	5.5	1
3-Methylphenol/4-Methylphenol	9400	E	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	97		21-120
Phenol-d6	95		10-120
Nitrobenzene-d5	99		23-120
2-Fluorobiphenyl	89		15-120
2,4,6-Tribromophenol	88		10-120
4-Terphenyl-d14	94		33-120

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-17 D
Client ID: SS-BCP-24-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:40
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/01/23 13:45
Analyst: JG
Percent Solids: 86%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
2-Methylphenol	3900		ug/l	500	110	20
3-Methylphenol/4-Methylphenol	9000		ug/l	500	55.	20

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/22/23 07:38
Analyst: CMM
TCLP/SPLP Extraction Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 15:22

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Semivolatiles by EPA 1311 - Westborough Lab for sample(s): 04,06-08,12-14 Batch: WG1806245-1					
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	64		21-120
Phenol-d6	56		10-120
Nitrobenzene-d5	62		23-120
2-Fluorobiphenyl	69		15-120
2,4,6-Tribromophenol	91		10-120
4-Terphenyl-d14	76		33-120

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/22/23 11:40
Analyst: CMM
TCLP/SPLP Extraction Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 20:15

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Semivolatiles by EPA 1311 - Westborough Lab for sample(s): 01-03,05,09-11,15-17 Batch: WG1806314-1					
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	91		21-120
Phenol-d6	81		10-120
Nitrobenzene-d5	90		23-120
2-Fluorobiphenyl	85		15-120
2,4,6-Tribromophenol	86		10-120
4-Terphenyl-d14	90		33-120

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/27/23 22:26
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 07/27/23 12:54

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1808566-1					
Acenaphthene	ND		ug/kg	130	17.
Hexachlorobenzene	ND		ug/kg	97	18.
Bis(2-chloroethyl)ether	ND		ug/kg	140	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
3,3'-Dichlorobenzidine	ND		ug/kg	160	43.
2,4-Dinitrotoluene	ND		ug/kg	160	32.
2,6-Dinitrotoluene	ND		ug/kg	160	28.
Fluoranthene	ND		ug/kg	97	18.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	17.
4-Bromophenyl phenyl ether	ND		ug/kg	160	25.
Bis(2-chloroisopropyl)ether	ND		ug/kg	190	28.
Bis(2-chloroethoxy)methane	ND		ug/kg	170	16.
Hexachlorobutadiene	ND		ug/kg	160	24.
Hexachlorocyclopentadiene	ND		ug/kg	460	150
Hexachloroethane	ND		ug/kg	130	26.
Isophorone	ND		ug/kg	140	21.
Naphthalene	ND		ug/kg	160	20.
Nitrobenzene	ND		ug/kg	140	24.
NDPA/DPA	ND		ug/kg	130	18.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	25.
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	56.
Butyl benzyl phthalate	ND		ug/kg	160	41.
Di-n-butylphthalate	ND		ug/kg	160	31.
Di-n-octylphthalate	ND		ug/kg	160	55.
Diethyl phthalate	ND		ug/kg	160	15.
Dimethyl phthalate	ND		ug/kg	160	34.
Benzo(a)anthracene	ND		ug/kg	97	18.
Benzo(a)pyrene	ND		ug/kg	130	39.
Benzo(b)fluoranthene	ND		ug/kg	97	27.

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/27/23 22:26
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 07/27/23 12:54

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1808566-1					
Benzo(k)fluoranthene	ND		ug/kg	97	26.
Chrysene	ND		ug/kg	97	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	97	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	97	20.
Dibenzo(a,h)anthracene	ND		ug/kg	97	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	22.
Pyrene	ND		ug/kg	97	16.
Biphenyl	ND		ug/kg	370	21.
4-Chloroaniline	ND		ug/kg	160	29.
2-Nitroaniline	ND		ug/kg	160	31.
3-Nitroaniline	ND		ug/kg	160	30.
4-Nitroaniline	ND		ug/kg	160	67.
Dibenzofuran	ND		ug/kg	160	15.
2-Methylnaphthalene	ND		ug/kg	190	20.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	17.
Acetophenone	ND		ug/kg	160	20.
2,4,6-Trichlorophenol	ND		ug/kg	97	31.
p-Chloro-m-cresol	ND		ug/kg	160	24.
2-Chlorophenol	ND		ug/kg	160	19.
2,4-Dichlorophenol	ND		ug/kg	140	26.
2,4-Dimethylphenol	ND		ug/kg	160	53.
2-Nitrophenol	ND		ug/kg	350	61.
4-Nitrophenol	ND		ug/kg	230	66.
2,4-Dinitrophenol	ND		ug/kg	780	75.
4,6-Dinitro-o-cresol	ND		ug/kg	420	78.
Pentachlorophenol	ND		ug/kg	130	36.

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/27/23 22:26
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 07/27/23 12:54

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1808566-1					
Phenol	85	J	ug/kg	160	24.
2-Methylphenol	ND		ug/kg	160	25.
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	25.
2,4,5-Trichlorophenol	ND		ug/kg	160	31.
Carbazole	ND		ug/kg	160	16.
Atrazine	ND		ug/kg	130	57.
Benzaldehyde	ND		ug/kg	210	44.
Caprolactam	ND		ug/kg	160	49.
2,3,4,6-Tetrachlorophenol	ND		ug/kg	160	33.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		25-120
Phenol-d6	61		10-120
Nitrobenzene-d5	57		23-120
2-Fluorobiphenyl	55		30-120
2,4,6-Tribromophenol	52		10-136
4-Terphenyl-d14	57		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Semivolatiles by EPA 1311 - Westborough Lab Associated sample(s): 04,06-08,12-14 Batch: WG1806245-2 WG1806245-3								
Hexachlorobenzene	72		61		40-140	17		30
2,4-Dinitrotoluene	73		64		40-132	13		30
Hexachlorobutadiene	58		49		28-111	17		30
Hexachloroethane	52		44		21-105	17		30
Nitrobenzene	59		50		40-140	17		30
2,4,6-Trichlorophenol	73		64		30-130	13		30
Pentachlorophenol	80		66		9-103	19		30
2-Methylphenol	64		56		30-130	13		30
3-Methylphenol/4-Methylphenol	72		60		30-130	18		30
2,4,5-Trichlorophenol	73		63		30-130	15		30
Pyridine	40		20		10-66	**67**	Q	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	64		56		21-120
Phenol-d6	58		52		10-120
Nitrobenzene-d5	61		55		23-120
2-Fluorobiphenyl	67		62		15-120
2,4,6-Tribromophenol	90		80		10-120
4-Terphenyl-d14	71		63		33-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Semivolatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-03,05,09-11,15-17 Batch: WG1806314-2 WG1806314-3								
Hexachlorobenzene	63		73		40-140	15		30
2,4-Dinitrotoluene	72		81		40-132	12		30
Hexachlorobutadiene	52		58		28-111	11		30
Hexachloroethane	56		61		21-105	9		30
Nitrobenzene	68		76		40-140	11		30
2,4,6-Trichlorophenol	64		74		30-130	14		30
Pentachlorophenol	81		96		9-103	17		30
2-Methylphenol	72		82		30-130	13		30
3-Methylphenol/4-Methylphenol	71		84		30-130	17		30
2,4,5-Trichlorophenol	65		74		30-130	13		30
Pyridine	26		46		10-66	**56**	Q	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	74		83		21-120
Phenol-d6	68		77		10-120
Nitrobenzene-d5	71		82		23-120
2-Fluorobiphenyl	68		78		15-120
2,4,6-Tribromophenol	67		77		10-120
4-Terphenyl-d14	69		80		33-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1808566-2 WG1808566-3								
Acenaphthene	65		62		31-137	5		50
Hexachlorobenzene	64		57		40-140	12		50
Bis(2-chloroethyl)ether	66		62		40-140	6		50
2-Chloronaphthalene	62		58		40-140	7		50
3,3'-Dichlorobenzidine	50		47		40-140	6		50
2,4-Dinitrotoluene	70		64		40-132	9		50
2,6-Dinitrotoluene	62		57		40-140	8		50
Fluoranthene	68		63		40-140	8		50
4-Chlorophenyl phenyl ether	65		60		40-140	8		50
4-Bromophenyl phenyl ether	64		58		40-140	10		50
Bis(2-chloroisopropyl)ether	54		49		40-140	10		50
Bis(2-chloroethoxy)methane	68		62		40-117	9		50
Hexachlorobutadiene	51		50		40-140	2		50
Hexachlorocyclopentadiene	60		55		40-140	9		50
Hexachloroethane	56		53		40-140	6		50
Isophorone	64		58		40-140	10		50
Naphthalene	63		60		40-140	5		50
Nitrobenzene	67		60		40-140	11		50
NDPA/DPA	72		64		36-157	12		50
n-Nitrosodi-n-propylamine	68		62		32-121	9		50
Bis(2-ethylhexyl)phthalate	77		72		40-140	7		50
Butyl benzyl phthalate	75		72		40-140	4		50
Di-n-butylphthalate	76		70		40-140	8		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1808566-2 WG1808566-3								
Di-n-octylphthalate	76		74		40-140	3		50
Diethyl phthalate	72		67		40-140	7		50
Dimethyl phthalate	64		60		40-140	6		50
Benzo(a)anthracene	67		63		40-140	6		50
Benzo(a)pyrene	70		65		40-140	7		50
Benzo(b)fluoranthene	63		60		40-140	5		50
Benzo(k)fluoranthene	64		62		40-140	3		50
Chrysene	68		63		40-140	8		50
Acenaphthylene	70		62		40-140	12		50
Anthracene	72		67		40-140	7		50
Benzo(ghi)perylene	65		61		40-140	6		50
Fluorene	68		63		40-140	8		50
Phenanthrene	69		64		40-140	8		50
Dibenzo(a,h)anthracene	66		62		40-140	6		50
Indeno(1,2,3-cd)pyrene	65		62		40-140	5		50
Pyrene	68		63		35-142	8		50
Biphenyl	64		58		37-127	10		50
4-Chloroaniline	59		57		40-140	3		50
2-Nitroaniline	71		62		47-134	14		50
3-Nitroaniline	67		62		26-129	8		50
4-Nitroaniline	75		68		41-125	10		50
Dibenzofuran	69		62		40-140	11		50
2-Methylnaphthalene	63		59		40-140	7		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1808566-2 WG1808566-3								
1,2,4,5-Tetrachlorobenzene	57		52		40-117	9		50
Acetophenone	73		66		14-144	10		50
2,4,6-Trichlorophenol	64		57		30-130	12		50
p-Chloro-m-cresol	73		67		26-103	9		50
2-Chlorophenol	69		63		25-102	9		50
2,4-Dichlorophenol	69		61		30-130	12		50
2,4-Dimethylphenol	72		64		30-130	12		50
2-Nitrophenol	70		63		30-130	11		50
4-Nitrophenol	83		73		11-114	13		50
2,4-Dinitrophenol	67		55		4-130	20		50
4,6-Dinitro-o-cresol	78		66		10-130	17		50
Pentachlorophenol	76		67		17-109	13		50
Phenol	79		75		26-90	5		50
2-Methylphenol	71		65		30-130.	9		50
3-Methylphenol/4-Methylphenol	74		72		30-130	3		50
2,4,5-Trichlorophenol	65		59		30-130	10		50
Carbazole	73		66		54-128	10		50
Atrazine	62		58		40-140	7		50
Benzaldehyde	72		68		40-140	6		50
Caprolactam	63		56		15-130	12		50
2,3,4,6-Tetrachlorophenol	68		60		40-140	13		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1808566-2 WG1808566-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	69		65		25-120
Phenol-d6	69		62		10-120
Nitrobenzene-d5	64		59		23-120
2-Fluorobiphenyl	61		57		30-120
2,4,6-Tribromophenol	62		56		10-136
4-Terphenyl-d14	62		59		18-120

PESTICIDES

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01
Client ID: SS-BCP-21-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/22/23 15:46
Analyst: AR
Percent Solids: 74%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 21:57

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	70		30-150	A
Decachlorobiphenyl	84		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	84		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01
Client ID: SS-BCP-21-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/22/23 17:21
Analyst: AKM
Percent Solids: 74%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:20

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 13:01

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	35		30-150	A
DCAA	35		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/22/23 15:58
Analyst: AR
Percent Solids: 78%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 21:57

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	108		30-150	A
Decachlorobiphenyl	100		30-150	A
2,4,5,6-Tetrachloro-m-xylene	84		30-150	B
Decachlorobiphenyl	88		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/22/23 17:39
Analyst: AKM
Percent Solids: 78%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:20

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 13:01

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	38		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03
Client ID: SS-BCP-23-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 12:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/22/23 16:09
Analyst: AR
Percent Solids: 76%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 21:57

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	96		30-150	A
Decachlorobiphenyl	58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	75		30-150	B
Decachlorobiphenyl	41		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03
Client ID: SS-BCP-23-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 12:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/22/23 17:57
Analyst: AKM
Percent Solids: 76%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:20

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 13:01

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	39		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/23/23 15:44
Analyst: EJL
Percent Solids: 76%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 19:05

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	92		30-150	A
Decachlorobiphenyl	98		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	86		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/22/23 14:17
Analyst: AKM
Percent Solids: 76%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:45

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 11:57

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	55		30-150	A
DCAA	51		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05
Client ID: SS-BCP-25-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/22/23 16:20
Analyst: AR
Percent Solids: 72%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 21:57

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	78		30-150	A
Decachlorobiphenyl	72		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		30-150	B
Decachlorobiphenyl	69		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05
Client ID: SS-BCP-25-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/22/23 18:16
Analyst: AKM
Percent Solids: 72%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:20

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 13:01

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	50		30-150	A
DCAA	50		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-06
Client ID: SS-BCP-21-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:45
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/23/23 15:55
Analyst: EJL
Percent Solids: 90%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 19:05

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	108		30-150	A
2,4,5,6-Tetrachloro-m-xylene	82		30-150	B
Decachlorobiphenyl	107		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-06
Client ID: SS-BCP-21-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:45
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/25/23 11:31
Analyst: AKM
Percent Solids: 90%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/24/23 22:43

Extraction Method: EPA 8151A
Extraction Date: 07/24/23 10:34

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	40		30-150	A
DCAA	43		30-150	B

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-07
Client ID: SS-BCP-21-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:50
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/23/23 16:07
Analyst: EJL
Percent Solids: 86%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 19:05

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	79		30-150	A
Decachlorobiphenyl	97		30-150	A
2,4,5,6-Tetrachloro-m-xylene	73		30-150	B
Decachlorobiphenyl	96		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-07
Client ID: SS-BCP-21-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:50
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/25/23 11:49
Analyst: AKM
Percent Solids: 86%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/24/23 22:43

Extraction Method: EPA 8151A
Extraction Date: 07/24/23 10:34

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	39		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-08
Client ID: SS-BCP-21-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/23/23 16:18
Analyst: EJL
Percent Solids: 89%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 19:05

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	72		30-150	A
Decachlorobiphenyl	90		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	90		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-08
Client ID: SS-BCP-21-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/25/23 12:08
Analyst: AKM
Percent Solids: 89%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/24/23 22:43

Extraction Method: EPA 8151A
Extraction Date: 07/24/23 10:34

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	50		30-150	A
DCAA	57		30-150	B

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-09
Client ID: SS-BCP-22-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/22/23 16:31
Analyst: AR
Percent Solids: 84%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 21:57

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	105		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	99		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-09
Client ID: SS-BCP-22-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/22/23 18:53
Analyst: AKM
Percent Solids: 84%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:20

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 13:01

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	49		30-150	A
DCAA	42		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-10
Client ID: SS-BCP-22-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:02
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/22/23 16:42
Analyst: AR
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 21:57

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	97		30-150	A
Decachlorobiphenyl	96		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	89		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-10
Client ID: SS-BCP-22-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:02
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/22/23 19:11
Analyst: AKM
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:20

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 13:01

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	40		30-150	B

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-11
Client ID: SS-BCP-22-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:06
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/22/23 16:54
Analyst: AR
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 21:57

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	95		30-150	A
Decachlorobiphenyl	105		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	95		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-11
Client ID: SS-BCP-22-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:06
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/22/23 19:29
Analyst: AKM
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:20

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 13:01

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	42		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-12
Client ID: SS-BCP-23-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:39
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/23/23 16:30
Analyst: EJL
Percent Solids: 89%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 19:05

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	78		30-150	A
Decachlorobiphenyl	91		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	88		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-12
Client ID: SS-BCP-23-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:39
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/24/23 03:31
Analyst: EJL
Percent Solids: 89%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:45

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 11:57

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	**23**	Q	30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-13
Client ID: SS-BCP-23-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:41
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/23/23 16:41
Analyst: EJL
Percent Solids: 91%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 19:05

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	76		30-150	A
Decachlorobiphenyl	89		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	89		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-13
Client ID: SS-BCP-23-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:41
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/22/23 16:07
Analyst: AKM
Percent Solids: 91%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:45

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 11:57

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	53		30-150	A
DCAA	34		30-150	B

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-14
Client ID: SS-BCP-23-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:44
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/23/23 16:52
Analyst: EJL
Percent Solids: 87%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 19:05

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	81		30-150	A
Decachlorobiphenyl	86		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	93		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-14
Client ID: SS-BCP-23-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:44
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/25/23 12:26
Analyst: AKM
Percent Solids: 87%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/24/23 22:43

Extraction Method: EPA 8151A
Extraction Date: 07/24/23 10:34

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	46		30-150	B

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-15
Client ID: SS-BCP-24-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/22/23 17:05
Analyst: AR
Percent Solids: 87%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 21:57

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	76		30-150	A
Decachlorobiphenyl	105		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	94		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-15
Client ID: SS-BCP-24-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/22/23 19:47
Analyst: AKM
Percent Solids: 87%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:20

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 13:01

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	63		30-150	B

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-16
Client ID: SS-BCP-24-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:38
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/22/23 17:16
Analyst: AR
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 21:57

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	88		30-150	A
Decachlorobiphenyl	102		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	82		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-16
Client ID: SS-BCP-24-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:38
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/22/23 20:06
Analyst: AKM
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:20

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 13:01

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	44		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-17
Client ID: SS-BCP-24-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:40
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/22/23 17:27
Analyst: AR
Percent Solids: 86%
TCLP/SPLP Ext. Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 22:16

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	111		30-150	A
2,4,5,6-Tetrachloro-m-xylene	98		30-150	B
Decachlorobiphenyl	112		30-150	B

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-17
Client ID: SS-BCP-24-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:40
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/22/23 20:24
Analyst: AKM
Percent Solids: 86%
TCLP/SPLP Ext. Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:20

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 13:01

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	66		30-150	A
DCAA	53		30-150	B

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 07/22/23 10:19
Analyst: AKM
TCLP/SPLP Extraction Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:20

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 10:40

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Herbicides by EPA 1311 - Westborough Lab for sample(s): 01-03,05,09-11,15-17 Batch: WG1806060-1						
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	50		30-150	A
DCAA	52		30-150	B

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 07/22/23 11:14
Analyst: AKM
TCLP/SPLP Extraction Date: 07/20/23 04:40
Methylation Date: 07/22/23 06:45

Extraction Method: EPA 8151A
Extraction Date: 07/21/23 10:40

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Herbicides by EPA 1311 - Westborough Lab for sample(s): 04,12-13 Batch: WG1806074-1						
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	47		30-150	A
DCAA	47		30-150	B

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 07/23/23 14:35
Analyst: EJL
TCLP/SPLP Extraction Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 19:05

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Pesticides by EPA 1311 - Westborough Lab for sample(s): 04,06-08,12-14 Batch: WG1806303-1						
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	60		30-150	A
Decachlorobiphenyl	73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	56		30-150	B
Decachlorobiphenyl	70		30-150	B

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 07/22/23 14:05
Analyst: AR
TCLP/SPLP Extraction Date: 07/20/23 04:40

Extraction Method: EPA 3510C
Extraction Date: 07/21/23 21:57

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Pesticides by EPA 1311 - Westborough Lab for sample(s): 01-03,05,09-11,15-17 Batch: WG1806327-1						
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	72		30-150	A
Decachlorobiphenyl	97		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	88		30-150	B

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 07/25/23 10:35
Analyst: AKM
TCLP/SPLP Extraction Date: 07/20/23 04:40
Methylation Date: 07/24/23 22:43

Extraction Method: EPA 8151A
Extraction Date: 07/24/23 10:34

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Herbicides by EPA 1311 - Westborough Lab for sample(s): 06-08,14 Batch: WG1806915-1						
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	35		30-150	A
DCAA	40		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Herbicides by EPA 1311 - Westborough Lab Associated sample(s): 01-03,05,09-11,15-17 Batch: WG1806060-2 WG1806060-3									
2,4-D	82		102		30-150	22		25	A
2,4,5-TP (Silvex)	35		36		30-150	3		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	33		35		30-150	A
DCAA	42		45		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Herbicides by EPA 1311 - Westborough Lab Associated sample(s): 04,12-13 Batch: WG1806074-2 WG1806074-3									
2,4-D	114		82		30-150	**33**	Q	25	A
2,4,5-TP (Silvex)	42		43		30-150	2		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	47		49		30-150	A
DCAA	45		47		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Pesticides by EPA 1311 - Westborough Lab Associated sample(s): 04,06-08,12-14 Batch: WG1806303-2 WG1806303-3									
Lindane	86		92		30-150	7		20	A
Heptachlor	87		94		30-150	8		20	A
Heptachlor epoxide	87		94		30-150	8		20	A
Endrin	91		99		30-150	8		20	A
Methoxychlor	90		98		30-150	8		20	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		77		30-150	A
Decachlorobiphenyl	92		99		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		73		30-150	B
Decachlorobiphenyl	89		96		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Pesticides by EPA 1311 - Westborough Lab Associated sample(s): 01-03,05,09-11,15-17 Batch: WG1806327-2 WG1806327-3									
Lindane	95		102		30-150	7		20	A
Heptachlor	102		108		30-150	6		20	A
Heptachlor epoxide	95		100		30-150	5		20	A
Endrin	95		99		30-150	4		20	A
Methoxychlor	123		128		30-150	4		20	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		86		30-150	A
Decachlorobiphenyl	107		112		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		86		30-150	B
Decachlorobiphenyl	94		98		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Herbicides by EPA 1311 - Westborough Lab Associated sample(s): 06-08,14 Batch: WG1806915-2 WG1806915-3									
2,4-D	102		81		30-150	23		25	A
2,4,5-TP (Silvex)	56		47		30-150	17		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	54		46		30-150	A
DCAA	58		49		30-150	B

METALS

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01 Date Collected: 07/18/23 11:55

Client ID: SS-BCP-21-07182023 Date Received: 07/18/23

Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 07/20/23 04:40

Matrix: Soil

Percent Solids: 74%

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	07/21/23 20:32	08/04/23 13:27	EPA 3015	1,6010D	JTS
Barium, TCLP	0.394	J	mg/l	0.500	0.0210	1	07/21/23 20:32	08/04/23 13:27	EPA 3015	1,6010D	JTS
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/21/23 20:32	08/04/23 13:27	EPA 3015	1,6010D	JTS
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/21/23 20:32	08/04/23 13:27	EPA 3015	1,6010D	JTS
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/21/23 20:32	08/04/23 13:27	EPA 3015	1,6010D	JTS
Mercury, TCLP	0.0005	J	mg/l	0.0010	0.0005	1	07/21/23 16:40	08/10/23 11:14	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/21/23 20:32	08/04/23 13:27	EPA 3015	1,6010D	JTS
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/21/23 20:32	08/04/23 13:27	EPA 3015	1,6010D	JTS

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01
Client ID: SS-BCP-21-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 11:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 74%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	5970		mg/kg	10.6	2.85	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Antimony, Total	ND		mg/kg	5.28	0.402	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Arsenic, Total	5.65		mg/kg	1.06	0.220	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Barium, Total	60.0		mg/kg	1.06	0.184	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Beryllium, Total	0.484	J	mg/kg	0.528	0.035	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Cadmium, Total	0.195	J	mg/kg	1.06	0.104	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Calcium, Total	41500		mg/kg	10.6	3.70	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Chromium, Total	6.34		mg/kg	1.06	0.101	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Cobalt, Total	3.17		mg/kg	2.11	0.175	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Copper, Total	19.9		mg/kg	1.06	0.273	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Iron, Total	16500		mg/kg	5.28	0.955	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Lead, Total	159		mg/kg	5.28	0.283	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Magnesium, Total	3010		mg/kg	10.6	1.63	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Manganese, Total	559		mg/kg	1.06	0.168	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Mercury, Total	11.5		mg/kg	1.03	0.672	10	07/20/23 23:35	08/09/23 20:23	EPA 7471B	1,7471B	MJR
Nickel, Total	7.22		mg/kg	2.64	0.256	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Potassium, Total	619		mg/kg	264	15.2	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Selenium, Total	0.908	J	mg/kg	2.11	0.273	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Silver, Total	ND		mg/kg	0.528	0.299	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Sodium, Total	226		mg/kg	211	3.33	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Thallium, Total	0.922	J	mg/kg	2.11	0.333	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Vanadium, Total	11.5		mg/kg	1.06	0.215	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW
Zinc, Total	40.7		mg/kg	5.28	0.310	2	07/20/23 22:47	08/06/23 14:54	EPA 3050B	1,6010D	AMW

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 78%
TCLP/SPLP Ext. Date: 07/20/23 04:40

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	07/21/23 20:32	08/04/23 13:45	EPA 3015	1,6010D	JTS
Barium, TCLP	0.365	J	mg/l	0.500	0.0210	1	07/21/23 20:32	08/04/23 13:45	EPA 3015	1,6010D	JTS
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/21/23 20:32	08/04/23 13:45	EPA 3015	1,6010D	JTS
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/21/23 20:32	08/04/23 13:45	EPA 3015	1,6010D	JTS
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/21/23 20:32	08/04/23 13:45	EPA 3015	1,6010D	JTS
Mercury, TCLP	0.0008	J	mg/l	0.0010	0.0005	1	07/21/23 16:40	08/10/23 11:17	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/21/23 20:32	08/04/23 13:45	EPA 3015	1,6010D	JTS
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/21/23 20:32	08/04/23 13:45	EPA 3015	1,6010D	JTS

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 78%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	3160		mg/kg	9.94	2.68	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Antimony, Total	0.474	J	mg/kg	4.97	0.378	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Arsenic, Total	7.32		mg/kg	0.994	0.207	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Barium, Total	78.8		mg/kg	0.994	0.173	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Beryllium, Total	0.281	J	mg/kg	0.497	0.033	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Cadmium, Total	1.02		mg/kg	0.994	0.097	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Calcium, Total	35000		mg/kg	9.94	3.48	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Chromium, Total	42.3		mg/kg	0.994	0.095	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Cobalt, Total	3.47		mg/kg	1.99	0.165	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Copper, Total	53.4		mg/kg	0.994	0.256	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Iron, Total	23700		mg/kg	4.97	0.897	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Lead, Total	152		mg/kg	4.97	0.266	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Magnesium, Total	9410		mg/kg	9.94	1.53	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Manganese, Total	315		mg/kg	0.994	0.158	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Mercury, Total	1.14		mg/kg	0.102	0.067	1	07/20/23 23:35	08/09/23 00:22	EPA 7471B	1,7471B	MJR
Nickel, Total	14.9		mg/kg	2.48	0.240	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Potassium, Total	405		mg/kg	248	14.3	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Selenium, Total	0.829	J	mg/kg	1.99	0.256	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Silver, Total	ND		mg/kg	0.497	0.281	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Sodium, Total	453		mg/kg	199	3.13	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Thallium, Total	0.751	J	mg/kg	1.99	0.313	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Vanadium, Total	6.23		mg/kg	0.994	0.202	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW
Zinc, Total	164		mg/kg	4.97	0.291	2	07/20/23 22:47	08/06/23 14:57	EPA 3050B	1,6010D	AMW

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03 Date Collected: 07/18/23 12:00

Client ID: SS-BCP-23-07182023 Date Received: 07/18/23

Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 07/20/23 04:40

Matrix: Soil

Percent Solids: 76%

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	07/21/23 20:32	08/04/23 14:11	EPA 3015	1,6010D	JTS
Barium, TCLP	0.566		mg/l	0.500	0.0210	1	07/21/23 20:32	08/04/23 14:11	EPA 3015	1,6010D	JTS
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/21/23 20:32	08/04/23 14:11	EPA 3015	1,6010D	JTS
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/21/23 20:32	08/04/23 14:11	EPA 3015	1,6010D	JTS
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/21/23 20:32	08/04/23 14:11	EPA 3015	1,6010D	JTS
Mercury, TCLP	0.0007	J	mg/l	0.0010	0.0005	1	07/21/23 16:40	08/10/23 11:20	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/21/23 20:32	08/04/23 14:11	EPA 3015	1,6010D	JTS
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/21/23 20:32	08/04/23 14:11	EPA 3015	1,6010D	JTS

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03 Date Collected: 07/18/23 12:00

Client ID: SS-BCP-23-07182023 Date Received: 07/18/23

Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 76%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	1970		mg/kg	10.4	2.82	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Antimony, Total	ND		mg/kg	5.22	0.397	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Arsenic, Total	4.84		mg/kg	1.04	0.217	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Barium, Total	49.4		mg/kg	1.04	0.182	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Beryllium, Total	0.335	J	mg/kg	0.522	0.035	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Cadmium, Total	0.314	J	mg/kg	1.04	0.102	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Calcium, Total	11500		mg/kg	10.4	3.66	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Chromium, Total	16.4		mg/kg	1.04	0.100	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Cobalt, Total	2.75		mg/kg	2.09	0.173	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Copper, Total	17.9		mg/kg	1.04	0.269	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Iron, Total	5140		mg/kg	5.22	0.943	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Lead, Total	25.8		mg/kg	5.22	0.280	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Magnesium, Total	821		mg/kg	10.4	1.61	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Manganese, Total	93.4		mg/kg	1.04	0.166	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Mercury, Total	3.00		mg/kg	0.104	0.068	1	07/20/23 23:35	08/09/23 00:25	EPA 7471B	1,7471B	MJR
Nickel, Total	6.35		mg/kg	2.61	0.253	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Potassium, Total	257	J	mg/kg	261	15.0	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Selenium, Total	1.18	J	mg/kg	2.09	0.269	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Silver, Total	ND		mg/kg	0.522	0.296	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Sodium, Total	77.1	J	mg/kg	209	3.29	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Thallium, Total	0.785	J	mg/kg	2.09	0.329	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Vanadium, Total	5.06		mg/kg	1.04	0.212	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW
Zinc, Total	36.3		mg/kg	5.22	0.306	2	07/20/23 22:47	08/06/23 15:01	EPA 3050B	1,6010D	AMW

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04 Date Collected: 07/18/23 11:35

Client ID: SS-BCP-24-07182023 Date Received: 07/18/23

Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 07/20/23 04:40

Matrix: Soil

Percent Solids: 76%

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	0.0290	J	mg/l	1.00	0.0190	1	07/24/23 19:45	08/08/23 07:55	EPA 3015	1,6010D	DHL
Barium, TCLP	0.479	J	mg/l	0.500	0.0210	1	07/24/23 19:45	08/08/23 07:55	EPA 3015	1,6010D	DHL
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/24/23 19:45	08/08/23 07:55	EPA 3015	1,6010D	DHL
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/24/23 19:45	08/08/23 07:55	EPA 3015	1,6010D	DHL
Lead, TCLP	0.0632	J	mg/l	0.500	0.0270	1	07/24/23 19:45	08/08/23 07:55	EPA 3015	1,6010D	DHL
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/24/23 17:07	08/10/23 11:02	EPA 7470A	1,7470A	GMG
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/24/23 19:45	08/08/23 07:55	EPA 3015	1,6010D	DHL
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/24/23 19:45	08/08/23 07:55	EPA 3015	1,6010D	DHL

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 76%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	3190		mg/kg	10.3	2.78	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Antimony, Total	ND		mg/kg	5.16	0.392	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Arsenic, Total	10.6		mg/kg	1.03	0.214	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Barium, Total	27.8		mg/kg	1.03	0.179	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Beryllium, Total	0.246	J	mg/kg	0.516	0.034	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Cadmium, Total	2.19		mg/kg	1.03	0.101	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Calcium, Total	8440		mg/kg	10.3	3.61	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Chromium, Total	26.6		mg/kg	1.03	0.099	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Cobalt, Total	3.16		mg/kg	2.06	0.171	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Copper, Total	44.1		mg/kg	1.03	0.266	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Iron, Total	20600		mg/kg	5.16	0.931	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Lead, Total	264		mg/kg	5.16	0.276	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Magnesium, Total	3330		mg/kg	10.3	1.59	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Manganese, Total	232		mg/kg	1.03	0.164	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Mercury, Total	0.399		mg/kg	0.106	0.069	1	07/20/23 23:35	08/09/23 00:29	EPA 7471B	1,7471B	MJR
Nickel, Total	13.5		mg/kg	2.58	0.250	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Potassium, Total	422		mg/kg	258	14.8	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Selenium, Total	1.74	J	mg/kg	2.06	0.266	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Silver, Total	ND		mg/kg	0.516	0.292	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Sodium, Total	154	J	mg/kg	206	3.25	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Thallium, Total	1.16	J	mg/kg	2.06	0.325	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Vanadium, Total	7.08		mg/kg	1.03	0.209	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW
Zinc, Total	215		mg/kg	5.16	0.302	2	07/20/23 22:47	08/06/23 15:04	EPA 3050B	1,6010D	AMW

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05 Date Collected: 07/18/23 14:00

Client ID: SS-BCP-25-07182023 Date Received: 07/18/23

Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 07/20/23 04:40

Matrix: Soil

Percent Solids: 72%

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	07/21/23 20:32	08/04/23 14:15	EPA 3015	1,6010D	JTS
Barium, TCLP	0.627		mg/l	0.500	0.0210	1	07/21/23 20:32	08/04/23 14:15	EPA 3015	1,6010D	JTS
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/21/23 20:32	08/04/23 14:15	EPA 3015	1,6010D	JTS
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/21/23 20:32	08/04/23 14:15	EPA 3015	1,6010D	JTS
Lead, TCLP	0.0291	J	mg/l	0.500	0.0270	1	07/21/23 20:32	08/04/23 14:15	EPA 3015	1,6010D	JTS
Mercury, TCLP	0.0007	J	mg/l	0.0010	0.0005	1	07/21/23 16:40	08/10/23 11:24	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/21/23 20:32	08/04/23 14:15	EPA 3015	1,6010D	JTS
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/21/23 20:32	08/04/23 14:15	EPA 3015	1,6010D	JTS

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05
Client ID: SS-BCP-25-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 14:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 72%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	5580		mg/kg	11.0	2.96	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Antimony, Total	ND		mg/kg	5.48	0.417	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Arsenic, Total	9.49		mg/kg	1.10	0.228	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Barium, Total	65.4		mg/kg	1.10	0.191	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Beryllium, Total	0.296	J	mg/kg	0.548	0.036	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Cadmium, Total	3.29		mg/kg	1.10	0.107	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Calcium, Total	30500		mg/kg	11.0	3.84	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Chromium, Total	17.6		mg/kg	1.10	0.105	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Cobalt, Total	4.31		mg/kg	2.19	0.182	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Copper, Total	34.6		mg/kg	1.10	0.283	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Iron, Total	18100		mg/kg	5.48	0.990	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Lead, Total	969		mg/kg	5.48	0.294	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Magnesium, Total	5690		mg/kg	11.0	1.69	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Manganese, Total	503		mg/kg	1.10	0.174	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Mercury, Total	2.12		mg/kg	0.105	0.068	1	07/20/23 23:35	08/09/23 00:32	EPA 7471B	1,7471B	MJR
Nickel, Total	18.0		mg/kg	2.74	0.265	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Potassium, Total	402		mg/kg	274	15.8	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Selenium, Total	4.09		mg/kg	2.19	0.283	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Silver, Total	ND		mg/kg	0.548	0.310	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Sodium, Total	96.8	J	mg/kg	219	3.45	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Thallium, Total	1.05	J	mg/kg	2.19	0.345	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Vanadium, Total	11.9		mg/kg	1.10	0.223	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW
Zinc, Total	201		mg/kg	5.48	0.321	2	07/20/23 22:47	08/06/23 15:07	EPA 3050B	1,6010D	AMW

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-06 Date Collected: 07/18/23 14:45

Client ID: SS-BCP-21-02-07182023 Date Received: 07/18/23

Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 07/20/23 04:40

Matrix: Soil

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	0.0294	J	mg/l	1.00	0.0190	1	07/24/23 19:45	08/08/23 08:17	EPA 3015	1,6010D	DHL
Barium, TCLP	0.531		mg/l	0.500	0.0210	1	07/24/23 19:45	08/08/23 08:17	EPA 3015	1,6010D	DHL
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/24/23 19:45	08/08/23 08:17	EPA 3015	1,6010D	DHL
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/24/23 19:45	08/08/23 08:17	EPA 3015	1,6010D	DHL
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/24/23 19:45	08/08/23 08:17	EPA 3015	1,6010D	DHL
Mercury, TCLP	0.0007	J	mg/l	0.0010	0.0005	1	07/24/23 17:07	08/10/23 11:12	EPA 7470A	1,7470A	GMG
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/24/23 19:45	08/08/23 08:17	EPA 3015	1,6010D	DHL
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/24/23 19:45	08/08/23 08:17	EPA 3015	1,6010D	DHL

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-07
Client ID: SS-BCP-21-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 14:50
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 86%
TCLP/SPLP Ext. Date: 07/20/23 04:40

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	07/24/23 19:45	08/08/23 08:22	EPA 3015	1,6010D	DHL
Barium, TCLP	0.490	J	mg/l	0.500	0.0210	1	07/24/23 19:45	08/08/23 08:22	EPA 3015	1,6010D	DHL
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/24/23 19:45	08/08/23 08:22	EPA 3015	1,6010D	DHL
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/24/23 19:45	08/08/23 08:22	EPA 3015	1,6010D	DHL
Lead, TCLP	0.0330	J	mg/l	0.500	0.0270	1	07/24/23 19:45	08/08/23 08:22	EPA 3015	1,6010D	DHL
Mercury, TCLP	0.0009	J	mg/l	0.0010	0.0005	1	07/24/23 17:07	08/10/23 11:16	EPA 7470A	1,7470A	GMG
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/24/23 19:45	08/08/23 08:22	EPA 3015	1,6010D	DHL
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/24/23 19:45	08/08/23 08:22	EPA 3015	1,6010D	DHL

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-08 Date Collected: 07/18/23 14:55

Client ID: SS-BCP-21-06-07182023 Date Received: 07/18/23

Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 07/20/23 04:40

Matrix: Soil

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	0.0282	J	mg/l	1.00	0.0190	1	07/24/23 19:45	08/08/23 08:26	EPA 3015	1,6010D	DHL
Barium, TCLP	0.333	J	mg/l	0.500	0.0210	1	07/24/23 19:45	08/08/23 08:26	EPA 3015	1,6010D	DHL
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/24/23 19:45	08/08/23 08:26	EPA 3015	1,6010D	DHL
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/24/23 19:45	08/08/23 08:26	EPA 3015	1,6010D	DHL
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/24/23 19:45	08/08/23 08:26	EPA 3015	1,6010D	DHL
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/24/23 17:07	08/10/23 11:19	EPA 7470A	1,7470A	GMG
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/24/23 19:45	08/08/23 08:26	EPA 3015	1,6010D	DHL
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/24/23 19:45	08/08/23 08:26	EPA 3015	1,6010D	DHL

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-09
Client ID: SS-BCP-22-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 15:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 84%
TCLP/SPLP Ext. Date: 07/20/23 04:40

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	07/21/23 20:32	08/04/23 14:20	EPA 3015	1,6010D	JTS
Barium, TCLP	0.308	J	mg/l	0.500	0.0210	1	07/21/23 20:32	08/04/23 14:20	EPA 3015	1,6010D	JTS
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/21/23 20:32	08/04/23 14:20	EPA 3015	1,6010D	JTS
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/21/23 20:32	08/04/23 14:20	EPA 3015	1,6010D	JTS
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/21/23 20:32	08/04/23 14:20	EPA 3015	1,6010D	JTS
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/21/23 16:40	08/10/23 11:27	EPA 7470A	1,7470A	MJR
Selenium, TCLP	0.0368	J	mg/l	0.500	0.0350	1	07/21/23 20:32	08/04/23 14:20	EPA 3015	1,6010D	JTS
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/21/23 20:32	08/04/23 14:20	EPA 3015	1,6010D	JTS

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-10
Client ID: SS-BCP-22-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 15:02
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40

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	07/21/23 20:32	08/04/23 14:24	EPA 3015	1,6010D	JTS
Barium, TCLP	0.300	J	mg/l	0.500	0.0210	1	07/21/23 20:32	08/04/23 14:24	EPA 3015	1,6010D	JTS
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/21/23 20:32	08/04/23 14:24	EPA 3015	1,6010D	JTS
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/21/23 20:32	08/04/23 14:24	EPA 3015	1,6010D	JTS
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/21/23 20:32	08/04/23 14:24	EPA 3015	1,6010D	JTS
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/21/23 16:40	08/10/23 11:30	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/21/23 20:32	08/04/23 14:24	EPA 3015	1,6010D	JTS
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/21/23 20:32	08/04/23 14:24	EPA 3015	1,6010D	JTS

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-11
Client ID: SS-BCP-22-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 15:06
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40

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	07/21/23 20:32	08/04/23 14:29	EPA 3015	1,6010D	JTS
Barium, TCLP	0.178	J	mg/l	0.500	0.0210	1	07/21/23 20:32	08/04/23 14:29	EPA 3015	1,6010D	JTS
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/21/23 20:32	08/04/23 14:29	EPA 3015	1,6010D	JTS
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/21/23 20:32	08/04/23 14:29	EPA 3015	1,6010D	JTS
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/21/23 20:32	08/04/23 14:29	EPA 3015	1,6010D	JTS
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/21/23 16:40	08/10/23 11:34	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/21/23 20:32	08/04/23 14:29	EPA 3015	1,6010D	JTS
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/21/23 20:32	08/04/23 14:29	EPA 3015	1,6010D	JTS

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-12
Client ID: SS-BCP-23-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 15:39
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 89%
TCLP/SPLP Ext. Date: 07/20/23 04:40

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	0.0279	J	mg/l	1.00	0.0190	1	07/24/23 19:45	08/08/23 10:24	EPA 3015	1,6010D	JTS
Barium, TCLP	0.444	J	mg/l	0.500	0.0210	1	07/24/23 19:45	08/08/23 10:24	EPA 3015	1,6010D	JTS
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/24/23 19:45	08/08/23 10:24	EPA 3015	1,6010D	JTS
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/24/23 19:45	08/08/23 10:24	EPA 3015	1,6010D	JTS
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/24/23 19:45	08/08/23 10:24	EPA 3015	1,6010D	JTS
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/24/23 17:07	08/10/23 11:22	EPA 7470A	1,7470A	GMG
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/24/23 19:45	08/08/23 10:24	EPA 3015	1,6010D	JTS
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/24/23 19:45	08/08/23 10:24	EPA 3015	1,6010D	JTS

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-13
Client ID: SS-BCP-23-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 15:41
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 91%
TCLP/SPLP Ext. Date: 07/20/23 04:40

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	0.0325	J	mg/l	1.00	0.0190	1	07/24/23 19:45	08/08/23 10:28	EPA 3015	1,6010D	JTS
Barium, TCLP	0.354	J	mg/l	0.500	0.0210	1	07/24/23 19:45	08/08/23 10:28	EPA 3015	1,6010D	JTS
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/24/23 19:45	08/08/23 10:28	EPA 3015	1,6010D	JTS
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/24/23 19:45	08/08/23 10:28	EPA 3015	1,6010D	JTS
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/24/23 19:45	08/08/23 10:28	EPA 3015	1,6010D	JTS
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/24/23 17:07	08/10/23 11:33	EPA 7470A	1,7470A	GMG
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/24/23 19:45	08/08/23 10:28	EPA 3015	1,6010D	JTS
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/24/23 19:45	08/08/23 10:28	EPA 3015	1,6010D	JTS

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-14 Date Collected: 07/18/23 15:44

Client ID: SS-BCP-23-06-07182023 Date Received: 07/18/23

Sample Location: 3875 RIVER ROAD, TONAWANDA Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 07/20/23 04:40

Matrix: Soil

Percent Solids: 87%

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	0.0352	J	mg/l	1.00	0.0190	1	07/24/23 19:45	08/08/23 10:34	EPA 3015	1,6010D	JTS
Barium, TCLP	0.261	J	mg/l	0.500	0.0210	1	07/24/23 19:45	08/08/23 10:34	EPA 3015	1,6010D	JTS
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/24/23 19:45	08/08/23 10:34	EPA 3015	1,6010D	JTS
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/24/23 19:45	08/08/23 10:34	EPA 3015	1,6010D	JTS
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/24/23 19:45	08/08/23 10:34	EPA 3015	1,6010D	JTS
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/24/23 17:07	08/10/23 11:36	EPA 7470A	1,7470A	GMG
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/24/23 19:45	08/08/23 10:34	EPA 3015	1,6010D	JTS
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/24/23 19:45	08/08/23 10:34	EPA 3015	1,6010D	JTS

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-15
Client ID: SS-BCP-24-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 15:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 87%
TCLP/SPLP Ext. Date: 07/20/23 04:40

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	07/21/23 20:32	08/04/23 14:33	EPA 3015	1,6010D	JTS
Barium, TCLP	0.267	J	mg/l	0.500	0.0210	1	07/21/23 20:32	08/04/23 14:33	EPA 3015	1,6010D	JTS
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/21/23 20:32	08/04/23 14:33	EPA 3015	1,6010D	JTS
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/21/23 20:32	08/04/23 14:33	EPA 3015	1,6010D	JTS
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/21/23 20:32	08/04/23 14:33	EPA 3015	1,6010D	JTS
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/21/23 16:40	08/10/23 11:37	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/21/23 20:32	08/04/23 14:33	EPA 3015	1,6010D	JTS
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/21/23 20:32	08/04/23 14:33	EPA 3015	1,6010D	JTS

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-16
Client ID: SS-BCP-24-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 15:38
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 85%
TCLP/SPLP Ext. Date: 07/20/23 04:40

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	0.0350	J	mg/l	1.00	0.0190	1	07/21/23 20:32	08/04/23 14:38	EPA 3015	1,6010D	JTS
Barium, TCLP	0.182	J	mg/l	0.500	0.0210	1	07/21/23 20:32	08/04/23 14:38	EPA 3015	1,6010D	JTS
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/21/23 20:32	08/04/23 14:38	EPA 3015	1,6010D	JTS
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/21/23 20:32	08/04/23 14:38	EPA 3015	1,6010D	JTS
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/21/23 20:32	08/04/23 14:38	EPA 3015	1,6010D	JTS
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/21/23 16:40	08/10/23 11:48	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/21/23 20:32	08/04/23 14:38	EPA 3015	1,6010D	JTS
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/21/23 20:32	08/04/23 14:38	EPA 3015	1,6010D	JTS

Project Name: RITC
Lab Number: L2341132
Project Number: PD1WP BENCH SCALES
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-17
Client ID: SS-BCP-24-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA
Date Collected: 07/18/23 15:40
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 86%
TCLP/SPLP Ext. Date: 07/20/23 04:40

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	07/21/23 20:32	08/04/23 14:42	EPA 3015	1,6010D	JTS
Barium, TCLP	0.146	J	mg/l	0.500	0.0210	1	07/21/23 20:32	08/04/23 14:42	EPA 3015	1,6010D	JTS
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/21/23 20:32	08/04/23 14:42	EPA 3015	1,6010D	JTS
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/21/23 20:32	08/04/23 14:42	EPA 3015	1,6010D	JTS
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/21/23 20:32	08/04/23 14:42	EPA 3015	1,6010D	JTS
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/21/23 16:40	08/10/23 11:51	EPA 7470A	1,7470A	MJR
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	07/21/23 20:32	08/04/23 14:42	EPA 3015	1,6010D	JTS
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/21/23 20:32	08/04/23 14:42	EPA 3015	1,6010D	JTS

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-05 Batch: WG1805526-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Antimony, Total	ND		mg/kg	2.00	0.152	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Arsenic, Total	0.095	J	mg/kg	0.400	0.083	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Barium, Total	ND		mg/kg	0.400	0.070	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Beryllium, Total	ND		mg/kg	0.200	0.013	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Cadmium, Total	ND		mg/kg	0.400	0.039	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Calcium, Total	ND		mg/kg	4.00	1.40	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Chromium, Total	ND		mg/kg	0.400	0.038	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Cobalt, Total	ND		mg/kg	0.800	0.066	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Copper, Total	ND		mg/kg	0.400	0.103	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Iron, Total	ND		mg/kg	2.00	0.361	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Lead, Total	ND		mg/kg	2.00	0.107	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Magnesium, Total	ND		mg/kg	4.00	0.616	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Manganese, Total	ND		mg/kg	0.400	0.064	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Nickel, Total	ND		mg/kg	1.00	0.097	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Potassium, Total	ND		mg/kg	100	5.76	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Selenium, Total	ND		mg/kg	0.800	0.103	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Silver, Total	ND		mg/kg	0.200	0.113	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Sodium, Total	2.39	J	mg/kg	80.0	1.26	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Thallium, Total	ND		mg/kg	0.800	0.126	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Vanadium, Total	ND		mg/kg	0.400	0.081	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY
Zinc, Total	ND		mg/kg	2.00	0.117	1	07/20/23 22:47	07/25/23 21:25	1,6010D	CEY

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-05 Batch: WG1805528-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	07/20/23 23:35	07/26/23 15:37	1,7471B	DMB

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

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): 01-03,05,09-11,15-17 Batch: WG1806098-1										
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	07/21/23 20:30	07/25/23 07:34	1,6010D	DHL
Barium, TCLP	ND		mg/l	0.500	0.0210	1	07/21/23 20:30	07/25/23 07:34	1,6010D	DHL
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/21/23 20:30	07/25/23 07:34	1,6010D	DHL
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/21/23 20:30	07/25/23 07:34	1,6010D	DHL
Lead, TCLP	ND		mg/l	0.500	0.0270	1	07/21/23 20:30	07/25/23 07:34	1,6010D	DHL
Selenium, TCLP	0.0464	J	mg/l	0.500	0.0350	1	07/21/23 20:30	07/25/23 07:34	1,6010D	DHL
Silver, TCLP	ND		mg/l	0.100	0.0280	1	07/21/23 20:30	07/25/23 07:34	1,6010D	DHL

Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 07/18/23 21:06

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): 01-03,05,09-11,15-17 Batch: WG1806102-1										
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/21/23 16:40	07/25/23 13:06	1,7470A	DMB

Prep Information

Digestion Method: EPA 7470A

TCLP/SPLP Extraction Date: 07/18/23 21:06

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): 04,06-08,12-14 Batch: WG1806240-1										
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	07/24/23 19:45	08/08/23 07:46	1,6010D	DHL
Barium, TCLP	ND		mg/l	0.500	0.0210	1	07/24/23 19:45	08/08/23 07:46	1,6010D	DHL
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	07/24/23 19:45	08/08/23 07:46	1,6010D	DHL
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	07/24/23 19:45	08/08/23 07:46	1,6010D	DHL

Project Name: RITC **Lab Number:** L2341132

Project Number: PD1WP BENCH SCALES **Report Date:** 08/10/23

Method Blank Analysis
Batch Quality Control

Lead, TCLP	ND	mg/l	0.500	0.0270	1	07/24/23 19:45	08/08/23 07:46	1,6010D	DHL
Selenium, TCLP	ND	mg/l	0.500	0.0350	1	07/24/23 19:45	08/08/23 07:46	1,6010D	DHL
Silver, TCLP	ND	mg/l	0.100	0.0280	1	07/24/23 19:45	08/08/23 07:46	1,6010D	DHL

Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 07/20/23 04:40

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): 04,06-08,12-14 Batch: WG1806241-1										
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/24/23 17:07	08/10/23 10:56	1,7470A	GMG

Prep Information

Digestion Method: EPA 7470A

TCLP/SPLP Extraction Date: 07/20/23 04:40

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: PD1WP BENCH SCALES

Lab Number: L2341132

Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-05 Batch: WG1805526-2 SRM Lot Number: D119-540								
Aluminum, Total	74		-		48-152	-		
Antimony, Total	108		-		10-190	-		
Arsenic, Total	104		-		83-117	-		
Barium, Total	98		-		82-118	-		
Beryllium, Total	102		-		83-117	-		
Cadmium, Total	108		-		82-117	-		
Calcium, Total	101		-		81-118	-		
Chromium, Total	104		-		82-119	-		
Cobalt, Total	107		-		83-117	-		
Copper, Total	106		-		84-116	-		
Iron, Total	91		-		60-140	-		
Lead, Total	105		-		82-118	-		
Magnesium, Total	92		-		76-124	-		
Manganese, Total	99		-		82-118	-		
Nickel, Total	105		-		82-117	-		
Potassium, Total	87		-		70-130	-		
Selenium, Total	107		-		79-121	-		
Silver, Total	103		-		80-120	-		
Sodium, Total	97		-		74-126	-		
Thallium, Total	105		-		81-119	-		
Vanadium, Total	101		-		79-121	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: PD1WP BENCH SCALES

Lab Number: L2341132

Report Date: 08/10/23

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-05 Batch: WG1805526-2 SRM Lot Number: D119-540					
Zinc, Total	102	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 01-05 Batch: WG1805528-2 SRM Lot Number: D119-540					
Mercury, Total	100	-	73-127	-	
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-03,05,09-11,15-17 Batch: WG1806098-2					
Arsenic, TCLP	93	-	75-125	-	20
Barium, TCLP	86	-	75-125	-	20
Cadmium, TCLP	91	-	75-125	-	20
Chromium, TCLP	87	-	75-125	-	20
Lead, TCLP	87	-	75-125	-	20
Selenium, TCLP	91	-	75-125	-	20
Silver, TCLP	88	-	75-125	-	20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-03,05,09-11,15-17 Batch: WG1806102-2					
Mercury, TCLP	95	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: PD1WP BENCH SCALES

Lab Number: L2341132

Report Date: 08/10/23

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 04,06-08,12-14 Batch: WG1806240-2					
Arsenic, TCLP	98	-	75-125	-	20
Barium, TCLP	92	-	75-125	-	20
Cadmium, TCLP	91	-	75-125	-	20
Chromium, TCLP	98	-	75-125	-	20
Lead, TCLP	99	-	75-125	-	20
Selenium, TCLP	94	-	75-125	-	20
Silver, TCLP	94	-	75-125	-	20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 04,06-08,12-14 Batch: WG1806241-2					
Mercury, TCLP	95	-	80-120	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1805526-3 WG1805526-4 QC Sample: L2341450-01 Client ID: MS Sample												
Aluminum, Total	9710	186	10300	**317**	Q	10100	**210**	Q	75-125	2		20
Antimony, Total	0.652J	46.5	36.2	78		36.4	78		75-125	1		20
Arsenic, Total	5.70	11.2	17.0	101		17.1	102		75-125	1		20
Barium, Total	32.7	186	208	94		204	92		75-125	2		20
Beryllium, Total	0.239J	4.65	4.65	100		4.57	98		75-125	2		20
Cadmium, Total	0.144J	4.93	5.28	107		5.16	105		75-125	2		20
Calcium, Total	882	929	1660	84		1590	76		75-125	4		20
Chromium, Total	9.88	18.6	27.5	95		26.7	90		75-125	3		20
Cobalt, Total	2.20	46.5	50.3	103		48.9	100		75-125	3		20
Copper, Total	9.37	23.2	33.0	102		33.5	104		75-125	2		20
Iron, Total	13400	92.9	12900	**0**	Q	12500	**0**	Q	75-125	3		20
Lead, Total	18.8	49.3	69.5	103		69.0	102		75-125	1		20
Magnesium, Total	995	929	1880	95		1900	97		75-125	1		20
Manganese, Total	283	46.5	356	**157**	Q	341	125		75-125	4		20
Nickel, Total	3.69	46.5	49.9	99		48.7	97		75-125	2		20
Potassium, Total	246	929	1160	98		1150	97		75-125	1		20
Selenium, Total	ND	11.2	11.3	101		10.8	97		75-125	5		20
Silver, Total	ND	4.65	4.52	97		4.48	96		75-125	1		20
Sodium, Total	264	929	1120	92		1100	90		75-125	2		20
Thallium, Total	ND	11.2	10.9	98		10.7	96		75-125	2		20
Vanadium, Total	17.0	46.5	62.4	98		61.6	96		75-125	1		20

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1805526-3 WG1805526-4 QC Sample: L2341450-01 Client ID: MS Sample									
Zinc, Total	18.9	46.5	66.4	102	65.8	101	75-125	1	20
Total Metals - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1805528-3 WG1805528-4 QC Sample: L2341450-01 Client ID: MS Sample									
Mercury, Total	0.125	1.73	2.07	112	2.00	109	80-120	3	20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-03,05,09-11,15-17 QC Batch ID: WG1806098-3 QC Sample: L2341090-01 Client ID: MS Sample									
Arsenic, TCLP	ND	1.2	1.12	93	-	-	75-125	-	20
Barium, TCLP	0.691	20	17.1	82	-	-	75-125	-	20
Cadmium, TCLP	ND	0.53	0.468	88	-	-	75-125	-	20
Chromium, TCLP	ND	2	1.70	85	-	-	75-125	-	20
Lead, TCLP	ND	5.3	4.58	86	-	-	75-125	-	20
Selenium, TCLP	ND	1.2	1.13	94	-	-	75-125	-	20
Silver, TCLP	ND	0.5	0.436	87	-	-	75-125	-	20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-03,05,09-11,15-17 QC Batch ID: WG1806102-3 QC Sample: L2341090-01 Client ID: MS Sample									
Mercury, TCLP	ND	0.025	0.0242	97	-	-	75-125	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

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): 04,06-08,12-14 QC Batch ID: WG1806240-3 QC Sample: L2341132-04 Client ID: SS-BCP-24-07182023									
Arsenic, TCLP	0.0290J	1.2	1.25	104	-	-	75-125	-	20
Barium, TCLP	0.479J	20	20.1	100	-	-	75-125	-	20
Cadmium, TCLP	ND	0.53	0.499	94	-	-	75-125	-	20
Chromium, TCLP	ND	2	2.12	106	-	-	75-125	-	20
Lead, TCLP	0.0632J	5.3	5.50	104	-	-	75-125	-	20
Selenium, TCLP	ND	1.2	1.18	98	-	-	75-125	-	20
Silver, TCLP	ND	0.5	0.493	99	-	-	75-125	-	20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 04,06-08,12-14 QC Batch ID: WG1806241-3 QC Sample: L2341132-04 Client ID: SS-BCP-24-07182023									
Mercury, TCLP	ND	0.025	0.0228	91	-	-	75-125	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-03,05,09-11,15-17 QC Batch ID: WG1806098-4 QC Sample: L2341090-01 Client ID: DUP Sample						
Arsenic, TCLP	ND	ND	mg/l	NC		20
Barium, TCLP	0.691	0.731	mg/l	6		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): 01-03,05,09-11,15-17 QC Batch ID: WG1806102-4 QC Sample: L2341090-01 Client ID: DUP Sample						
Mercury, TCLP	ND	0.0005J	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 04,06-08,12-14 QC Batch ID: WG1806240-4 QC Sample: L2341132-04 Client ID: SS-BCP-24-07182023						
Arsenic, TCLP	0.0290J	0.0477J	mg/l	NC		20
Barium, TCLP	0.479J	0.512	mg/l	NC		20
Cadmium, TCLP	ND	ND	mg/l	NC		20
Chromium, TCLP	ND	ND	mg/l	NC		20
Lead, TCLP	0.0632J	0.0734J	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: PD1WP BENCH SCALES

Lab Number: L2341132

Report Date: 08/10/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 04,06-08,12-14 QC Batch ID: WG1806241-4 QC Sample: L2341132-04 Client ID: SS-BCP-24-07182023					
Mercury, TCLP	ND	ND	mg/l	NC	20

INORGANICS
&
MISCELLANEOUS

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01
Client ID: SS-BCP-21-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/27/23 12:21	1,1030	MMJ

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Clay
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	07/27/23 12:21	1,1030	MMJ

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03
Client ID: SS-BCP-23-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 12:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Clay
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	07/27/23 12:21	1,1030	MMJ

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Wet Clay
Particle Size:	Fine
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	07/27/23 12:21	1,1030	MMJ

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05
Client ID: SS-BCP-25-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Wet Clay
Particle Size:	Fine
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	07/27/23 12:21	1,1030	MMJ

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-06
Client ID: SS-BCP-21-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:45
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Fine
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	07/27/23 12:21	1,1030	MMJ

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-07
Client ID: SS-BCP-21-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:50
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/28/23 15:27	1,1030	GEF

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-08
Client ID: SS-BCP-21-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/28/23 15:27	1,1030	GEF

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-09
Client ID: SS-BCP-22-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/28/23 15:27	1,1030	GEF

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-10
Client ID: SS-BCP-22-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:02
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/28/23 15:27	1,1030	GEF

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-11
Client ID: SS-BCP-22-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:06
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/28/23 15:27	1,1030	GEF

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-12
Client ID: SS-BCP-23-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:39
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/28/23 15:27	1,1030	GEF

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-13
Client ID: SS-BCP-23-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:41
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/28/23 15:27	1,1030	GEF

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-14
Client ID: SS-BCP-23-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:44
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/28/23 15:27	1,1030	GEF

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-15
Client ID: SS-BCP-24-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/28/23 15:27	1,1030	GEF

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-16
Client ID: SS-BCP-24-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:38
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/28/23 15:27	1,1030	GEF

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-17
Client ID: SS-BCP-24-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:40
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

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	07/28/23 15:27	1,1030	GEF

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-01
Client ID: SS-BCP-21-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.5		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
Cyanide, Total	4.3		mg/kg	1.3	0.27	1	07/31/23 03:10	07/31/23 15:51	1,9010C/9012B	JER
pH (H)	8.06		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Nitrogen, Ammonia	250		mg/kg	10	3.7	1	07/23/23 19:24	07/24/23 13:39	121,4500NH3-BH	KEP
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:11	125,7.3	QJM
Sulfide, Reactive	340		mg/kg	50	50.	5	07/28/23 23:20	07/29/23 02:40	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-02
Client ID: SS-BCP-22-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:15
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.7		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
Cyanide, Total	1.4		mg/kg	1.2	0.25	1	07/31/23 03:10	07/31/23 15:52	1,9010C/9012B	JER
pH (H)	8.39		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Nitrogen, Ammonia	76		mg/kg	9.5	3.5	1	07/23/23 19:24	07/24/23 13:40	121,4500NH3-BH	KEP
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:11	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:41	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-03
Client ID: SS-BCP-23-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 12:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	75.5		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
Cyanide, Total	0.87	J	mg/kg	1.2	0.26	1	07/31/23 03:10	07/31/23 15:53	1,9010C/9012B	JER
pH (H)	8.55		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Nitrogen, Ammonia	440		mg/kg	91	34.	10	07/23/23 19:24	07/24/23 13:24	121,4500NH3-BH	KEP
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:11	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:42	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-04
Client ID: SS-BCP-24-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 11:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	76.4		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
Cyanide, Total	2.7		mg/kg	1.2	0.26	1	07/31/23 03:10	07/31/23 15:54	1,9010C/9012B	JER
pH (H)	8.42		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Nitrogen, Ammonia	920		mg/kg	97	36.	10	07/23/23 19:24	07/24/23 13:25	121,4500NH3-BH	KEP
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:11	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:42	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-05
Client ID: SS-BCP-25-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	72.2		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
Cyanide, Total	2.5		mg/kg	1.4	0.29	1	07/31/23 03:10	07/31/23 15:55	1,9010C/9012B	JER
pH (H)	8.77		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Nitrogen, Ammonia	350		mg/kg	10	3.8	1	07/23/23 19:24	07/24/23 13:41	121,4500NH3-BH	KEP
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:12	125,7.3	QJM
Sulfide, Reactive	31		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:42	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-06
Client ID: SS-BCP-21-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:45
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.7		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
pH (H)	11.3		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:13	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:44	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-07
Client ID: SS-BCP-21-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:50
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.2		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
pH (H)	11.7		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:13	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:44	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-08
Client ID: SS-BCP-21-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 14:55
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.0		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
pH (H)	12.0		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:14	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:44	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-09
Client ID: SS-BCP-22-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:00
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.9		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
pH (H)	11.6		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:14	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:45	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-10
Client ID: SS-BCP-22-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:02
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.3		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
pH (H)	11.8		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:14	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:45	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-11
Client ID: SS-BCP-22-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:06
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.5		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
pH (H)	12.0		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:15	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:45	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-12
Client ID: SS-BCP-23-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:39
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.3		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
pH (H)	11.6		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:15	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:46	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-13
Client ID: SS-BCP-23-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:41
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.3		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
pH (H)	11.9		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:15	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:46	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-14
Client ID: SS-BCP-23-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:44
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.3		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
pH (H)	12.2		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:16	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:46	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-15
Client ID: SS-BCP-24-02-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:35
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.6		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
pH (H)	11.5		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:16	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:47	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-16
Client ID: SS-BCP-24-04-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:38
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.8		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
pH (H)	11.5		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:17	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:48	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

SAMPLE RESULTS

Lab ID: L2341132-17
Client ID: SS-BCP-24-06-07182023
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 07/18/23 15:40
Date Received: 07/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.7		%	0.100	NA	1	-	07/20/23 12:08	121,2540G	ROI
pH (H)	11.8		SU	-	NA	1	-	07/31/23 22:34	1,9045D	AAS
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:18	125,7.3	QJM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:48	125,7.3	QJM

Project Name: RITC
Project Number: PD1WP BENCH SCALES
Lab Number: L2341132
Report Date: 08/10/23

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): 01-05 Batch: WG1806477-1										
Nitrogen, Ammonia	ND		mg/kg	7.5	0.02	1	07/23/23 19:24	07/24/23 13:02	121,4500NH3-BH	KEP
General Chemistry - Westborough Lab for sample(s): 01-17 Batch: WG1809173-1										
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 02:38	125,7.3	QJM
General Chemistry - Westborough Lab for sample(s): 01-17 Batch: WG1809176-1										
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/28/23 23:20	07/29/23 01:08	125,7.3	QJM
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG1809606-1										
Cyanide, Total	ND		mg/kg	0.86	0.18	1	07/31/23 03:10	07/31/23 15:16	1,9010C/9012B	JER

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: PD1WP BENCH SCALES

Lab Number: L2341132

Report Date: 08/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG1806477-2								
Nitrogen, Ammonia	90		-		83-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-17 Batch: WG1809173-2								
Sulfide, Reactive	70		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-17 Batch: WG1809176-2								
Cyanide, Reactive	79		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG1809606-2 WG1809606-3								
Cyanide, Total	**72**	Q	82		80-120	9		35
General Chemistry - Westborough Lab Associated sample(s): 01-17 Batch: WG1810042-1								
pH	100		-		99-101	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

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): 01-05 QC Batch ID: WG1806477-4 QC Sample: L2340893-01 Client ID: MS Sample												
Nitrogen, Ammonia	8900	550	7900	**0**	Q	-	-		55-144	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1809606-4 WG1809606-5 QC Sample: L2341092-04 Client ID: MS Sample												
Cyanide, Total	0.66J	12	10	77		4.3	**29**	Q	75-125	**90**	Q	35

Lab Duplicate Analysis
Batch Quality Control

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-17 QC Batch ID: WG1805490-1 QC Sample: L2341132-01 Client ID: SS-BCP-21-07182023						
Solids, Total	73.5	71.8	%	2		20
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1806477-3 QC Sample: L2340893-01 Client ID: DUP Sample						
Nitrogen, Ammonia	8900	7700	mg/kg	14		20
General Chemistry - Westborough Lab Associated sample(s): 01-17 QC Batch ID: WG1809173-3 QC Sample: L2340991-02 Client ID: DUP Sample						
Sulfide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01-17 QC Batch ID: WG1809176-3 QC Sample: L2340991-02 Client ID: DUP Sample						
Cyanide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01-17 QC Batch ID: WG1810042-2 QC Sample: L2341132-01 Client ID: SS-BCP-21-07182023						
pH (H)	8.06	7.86	SU	3		5

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2341132-01A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2341132-01B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),TL-TI(180),NI-TI(180),CR-TI(180),SE-TI(180),CU-TI(180),SB-TI(180),PB-TI(180),ZN-TI(180),V-TI(180),CO-TI(180),MG-TI(180),HG-T(28),MN-TI(180),FE-TI(180),CA-TI(180),CD-TI(180),NA-TI(180),K-TI(180)
L2341132-01C	Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		TCN-9010(14),IGNIT-1030(14),NYTCL-8270(14),REACTS(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-01D	Glass 120ml/4oz unpreserved	A	NA		3.3	Y	Absent		TCN-9010(14),IGNIT-1030(14),NYTCL-8270(14),REACTS(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-01E	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14),TCLP-EXT-ZHE(14)
L2341132-01F	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14),TCLP-EXT-ZHE(14)
L2341132-01G	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		TCN-9010(14),IGNIT-1030(14),NYTCL-8270(14),REACTS(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-01T	Vial MeOH preserved split	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14)
L2341132-01U	Vial Water preserved split	A	NA		3.3	Y	Absent	**26-JUL-23 07:20**	NYTCL-8260-R2(14)
L2341132-01V	Vial Water preserved split	A	NA		3.3	Y	Absent	**26-JUL-23 07:20**	NYTCL-8260-R2(14)
L2341132-01W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2341132-01X	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),SE-CI(180),CR-CI(180),AG-CI(180)
L2341132-01X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2341132-01Y	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-01Z	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-02A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2341132-02B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),SB-TI(180),V-TI(180),CO-TI(180),MN-TI(180),HG-T(28),FE-TI(180),MG-TI(180),CA-TI(180),K-TI(180),NA-TI(180),CD-TI(180)
L2341132-02C	Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		IGNIT-1030(14),NYTCL-8270(14),REACTS(14),TCN-9010(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-02D	Glass 120ml/4oz unpreserved	A	NA		3.3	Y	Absent		IGNIT-1030(14),NYTCL-8270(14),REACTS(14),TCN-9010(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-02E	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14),TCLP-EXT-ZHE(14)
L2341132-02F	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14),TCLP-EXT-ZHE(14)
L2341132-02G	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		IGNIT-1030(14),NYTCL-8270(14),REACTS(14),TCN-9010(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-02T	Vial MeOH preserved split	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14)
L2341132-02U	Vial Water preserved split	A	NA		3.3	Y	Absent	**26-JUL-23 07:20**	NYTCL-8260-R2(14)
L2341132-02V	Vial Water preserved split	A	NA		3.3	Y	Absent	**26-JUL-23 07:20**	NYTCL-8260-R2(14)
L2341132-02W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2341132-02X	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)
L2341132-02X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2341132-02Y	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-02Z	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-03A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2341132-03B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),TL-TI(180),CR-TI(180),NI-TI(180),AL-TI(180),ZN-TI(180),SE-TI(180),SB-TI(180),PB-TI(180),CU-TI(180),V-TI(180),CO-TI(180),MN-TI(180),MG-TI(180),FE-TI(180),HG-T(28),NA-TI(180),CA-TI(180),CD-TI(180),K-TI(180)
L2341132-03C	Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),TCN-9010(14),IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-03D	Glass 120ml/4oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),TCN-9010(14),IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NH3-4500(28)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2341132-03E	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14),NYTCL-8260-R2(14)
L2341132-03F	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14),NYTCL-8260-R2(14)
L2341132-03G	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),TCN-9010(14),IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-03T	Vial MeOH preserved split	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14)
L2341132-03U	Vial Water preserved split	A	NA		3.3	Y	Absent	**26-JUL-23 07:20**	NYTCL-8260-R2(14)
L2341132-03V	Vial Water preserved split	A	NA		3.3	Y	Absent	**26-JUL-23 07:20**	NYTCL-8260-R2(14)
L2341132-03W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2341132-03X	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),CR-CI(180),SE-CI(180),AG-CI(180)
L2341132-03X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2341132-03Y	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-03Z	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-04A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2341132-04B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),NI-TI(180),AL-TI(180),CR-TI(180),TL-TI(180),PB-TI(180),SE-TI(180),CU-TI(180),SB-TI(180),ZN-TI(180),V-TI(180),CO-TI(180),HG-T(28),MG-TI(180),FE-TI(180),MN-TI(180),CD-TI(180),K-TI(180),CA-TI(180),NA-TI(180)
L2341132-04C	Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),REACTS(14),IGNIT-1030(14),TCN-9010(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-04D	Glass 120ml/4oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),REACTS(14),IGNIT-1030(14),TCN-9010(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-04E	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14),TCLP-EXT-ZHE(14)
L2341132-04F	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14),TCLP-EXT-ZHE(14)
L2341132-04G	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),REACTS(14),IGNIT-1030(14),TCN-9010(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-04T	Vial MeOH preserved split	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14)
L2341132-04U	Vial Water preserved split	A	NA		3.3	Y	Absent	**26-JUL-23 07:20**	NYTCL-8260-R2(14)
L2341132-04V	Vial Water preserved split	A	NA		3.3	Y	Absent	**26-JUL-23 07:20**	NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2341132-04W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2341132-04X	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)
L2341132-04X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2341132-04Y	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-04Z	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-05A	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2341132-05B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),AL-TI(180),TL-TI(180),NI-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),PB-TI(180),CU-TI(180),V-TI(180),CO-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CD-TI(180),K-TI(180),NA-TI(180),CA-TI(180)
L2341132-05C	Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		REACTS(14),IGNIT-1030(14),NYTCL-8270(14),TCN-9010(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-05D	Glass 120ml/4oz unpreserved	A	NA		3.3	Y	Absent		REACTS(14),IGNIT-1030(14),NYTCL-8270(14),TCN-9010(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-05E	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14)
L2341132-05F	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14)
L2341132-05G	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		REACTS(14),IGNIT-1030(14),NYTCL-8270(14),TCN-9010(14),PH-9045(1),REACTCN(14),NH3-4500(28)
L2341132-05T	Vial MeOH preserved split	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14)
L2341132-05U	Vial Water preserved split	A	NA		3.3	Y	Absent	**26-JUL-23 07:20**	NYTCL-8260-R2(14)
L2341132-05V	Vial Water preserved split	A	NA		3.3	Y	Absent	**26-JUL-23 07:20**	NYTCL-8260-R2(14)
L2341132-05W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2341132-05X	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)
L2341132-05X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2341132-06A	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2341132-06B	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		IGNIT-1030(14),REACTS(14),TS(7),PH-9045(1),REACTCN(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2341132-06W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2341132-06X	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)
L2341132-06X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2341132-06Y	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-06Z	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-07A	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2341132-07B	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		IGNIT-1030(14),REACTS(14),TS(7),PH-9045(1),REACTCN(14)
L2341132-07W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2341132-07X	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)
L2341132-07X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2341132-07Y	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-07Z	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-08A	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		TCLP-EXT-ZHE(14)
L2341132-08B	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		IGNIT-1030(14),REACTS(14),TS(7),PH-9045(1),REACTCN(14)
L2341132-08W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2341132-08X	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)
L2341132-08X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2341132-08Y	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-08Z	Vial unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-VOA(14)
L2341132-09A	Vial Large Septa unpreserved (4oz)	B	NA		2.5	Y	Absent		TCLP-EXT-ZHE(14)
L2341132-09B	Glass 500ml/16oz unpreserved	B	NA		2.5	Y	Absent		REACTS(14),IGNIT-1030(14),TS(7),PH-9045(1),REACTCN(14)
L2341132-09W	Amber 1000ml unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2341132-09X	Plastic 120ml HNO3 preserved Extracts	B	NA		2.5	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)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2341132-09X9	Tumble Vessel	B	NA		2.5	Y	Absent		-
L2341132-09Y	Vial unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-VOA(14)
L2341132-09Z	Vial unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-VOA(14)
L2341132-10A	Vial Large Septa unpreserved (4oz)	B	NA		2.5	Y	Absent		NYTCL-8260-R2(14)
L2341132-10B	Glass 500ml/16oz unpreserved	B	NA		2.5	Y	Absent		IGNIT-1030(14),REACTS(14),TS(7),PH-9045(1),REACTCN(14)
L2341132-10S	Vial MeOH preserved split	NA	NA			Y	Absent		NYTCL-8260-R2(14)
L2341132-10T	Vial Water preserved split	NA	NA			Y	Absent	**31-JUL-23 12:52**	NYTCL-8260-R2(14)
L2341132-10U	Vial Water preserved split	NA	NA			Y	Absent	**31-JUL-23 12:52**	NYTCL-8260-R2(14)
L2341132-10W	Amber 1000ml unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2341132-10X	Plastic 120ml HNO3 preserved Extracts	B	NA		2.5	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)
L2341132-10X9	Tumble Vessel	B	NA		2.5	Y	Absent		-
L2341132-11A	Vial Large Septa unpreserved (4oz)	A	NA		3.3	Y	Absent		NYTCL-8260-R2(14)
L2341132-11B	Glass 500ml/16oz unpreserved	A	NA		3.3	Y	Absent		IGNIT-1030(14),REACTS(14),TS(7),PH-9045(1),REACTCN(14)
L2341132-11S	Vial MeOH preserved split	NA	NA			Y	Absent		NYTCL-8260-R2(14)
L2341132-11T	Vial Water preserved split	NA	NA			Y	Absent	**31-JUL-23 12:52**	NYTCL-8260-R2(14)
L2341132-11U	Vial Water preserved split	NA	NA			Y	Absent	**31-JUL-23 12:52**	NYTCL-8260-R2(14)
L2341132-11W	Amber 1000ml unpreserved Extracts	A	NA		3.3	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2341132-11X	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)
L2341132-11X9	Tumble Vessel	A	NA		3.3	Y	Absent		-
L2341132-12A	Vial Large Septa unpreserved (4oz)	B	NA		2.5	Y	Absent		TCLP-EXT-ZHE(14)
L2341132-12B	Glass 500ml/16oz unpreserved	B	NA		2.5	Y	Absent		IGNIT-1030(14),REACTS(14),TS(7),PH-9045(1),REACTCN(14)
L2341132-12W	Amber 1000ml unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2341132-12X	Plastic 120ml HNO3 preserved Extracts	B	NA		2.5	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)
L2341132-12X9	Tumble Vessel	B	NA		2.5	Y	Absent		-

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2341132-12Y	Vial unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-VOA(14)
L2341132-12Z	Vial unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-VOA(14)
L2341132-13A	Vial Large Septa unpreserved (4oz)	B	NA		2.5	Y	Absent		TCLP-EXT-ZHE(14)
L2341132-13B	Glass 500ml/16oz unpreserved	B	NA		2.5	Y	Absent		REACTS(14),IGNIT-1030(14),TS(7),PH-9045(1),REACTCN(14)
L2341132-13W	Amber 1000ml unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2341132-13X	Plastic 120ml HNO3 preserved Extracts	B	NA		2.5	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)
L2341132-13X9	Tumble Vessel	B	NA		2.5	Y	Absent		-
L2341132-13Y	Vial unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-VOA(14)
L2341132-13Z	Vial unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-VOA(14)
L2341132-14A	Vial Large Septa unpreserved (4oz)	B	NA		2.5	Y	Absent		TCLP-EXT-ZHE(14)
L2341132-14B	Glass 500ml/16oz unpreserved	B	NA		2.5	Y	Absent		REACTS(14),IGNIT-1030(14),TS(7),PH-9045(1),REACTCN(14)
L2341132-14W	Amber 1000ml unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2341132-14X	Plastic 120ml HNO3 preserved Extracts	B	NA		2.5	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)
L2341132-14X9	Tumble Vessel	B	NA		2.5	Y	Absent		-
L2341132-14Y	Vial unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-VOA(14)
L2341132-14Z	Vial unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-VOA(14)
L2341132-15A	Vial Large Septa unpreserved (4oz)	B	NA		2.5	Y	Absent		TCLP-EXT-ZHE(14)
L2341132-15B	Glass 500ml/16oz unpreserved	B	NA		2.5	Y	Absent		IGNIT-1030(14),REACTS(14),TS(7),PH-9045(1),REACTCN(14)
L2341132-15W	Amber 1000ml unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2341132-15X	Plastic 120ml HNO3 preserved Extracts	B	NA		2.5	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)
L2341132-15X9	Tumble Vessel	B	NA		2.5	Y	Absent		-
L2341132-15Y	Vial unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-VOA(14)
L2341132-15Z	Vial unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-VOA(14)
L2341132-16A	Vial Large Septa unpreserved (4oz)	B	NA		2.5	Y	Absent		NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

Project Name: RITC
Project Number: PD1WP BENCH SCALES

Lab Number: L2341132
Report Date: 08/10/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2341132-16B	Glass 500ml/16oz unpreserved	B	NA		2.5	Y	Absent		REACTS(14),IGNIT-1030(14),TS(7),PH-9045(1),REACTCN(14)
L2341132-16S	Vial MeOH preserved split	NA	NA			Y	Absent		NYTCL-8260-R2(14)
L2341132-16T	Vial Water preserved split	NA	NA			Y	Absent	**31-JUL-23 12:52**	NYTCL-8260-R2(14)
L2341132-16U	Vial Water preserved split	NA	NA			Y	Absent	**31-JUL-23 12:52**	NYTCL-8260-R2(14)
L2341132-16W	Amber 1000ml unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L2341132-16X	Plastic 120ml HNO3 preserved Extracts	B	NA		2.5	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)
L2341132-16X9	Tumble Vessel	B	NA		2.5	Y	Absent		-
L2341132-17A	Vial Large Septa unpreserved (4oz)	B	NA		2.5	Y	Absent		TCLP-EXT-ZHE(14)
L2341132-17B	Glass 500ml/16oz unpreserved	B	NA		2.5	Y	Absent		REACTS(14),IGNIT-1030(14),TS(7),PH-9045(1),REACTCN(14)
L2341132-17W	Amber 1000ml unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2341132-17X	Plastic 120ml HNO3 preserved Extracts	B	NA		2.5	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)
L2341132-17X9	Tumble Vessel	B	NA		2.5	Y	Absent		-
L2341132-17Y	Vial unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-VOA(14)
L2341132-17Z	Vial unpreserved Extracts	B	NA		2.5	Y	Absent		TCLP-VOA(14)

*Values in parentheses indicate holding time in days

Project Name:	RITC	**Lab Number:**	L2341132
Project Number:	PD1WP BENCH SCALES	**Report Date:**	08/10/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	RITC	**Lab Number:**	L2341132
Project Number:	PD1WP BENCH SCALES	**Report Date:**	08/10/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	RITC	**Lab Number:**	L2341132
Project Number:	PD1WP BENCH SCALES	**Report Date:**	08/10/23

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	**Lab Number:**	L2341132
Project Number:	PD1WP BENCH SCALES	**Report Date:**	08/10/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

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, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-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, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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

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 1 of 2

Date Rec'd in Lab: 7/19/23

ALPHA Job #: L2341132

Client Information
Client: INVENTUM ENG
Address: 441 CARLISLE DR HERNDON VA, 20170
Phone: 585-734-5255
Fax: john.black@inventumeng.com
Email: roxanne.birx@"

Project Information
Project Name: RITC
Project Location: 3875 RIVER ROAD, TONAWANDA
Project #: PDI WP BENCH SCALES
(Use Project name as Project #) ☐
Project Manager: JOHN BLACK
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☒ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☒ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☒ Same as Client Info
PO #

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:
HAZCAT-REACTIVITY, CORROSIVITY, IGNITEABILITY

Please specify Metals or TAL.

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL VOCs 8260	TCL SVOCs 8270	TOTAL CYANIDE	TAL METALS, Hg	AMMONIA	FULL TCL P	HAZ CAT	Total Bottle	Sample Specific Comments
41132-01	SS-BCP-21-07182023	7/18/23	11:55	SD	RB	X	X	X	X	X	X	X		
02	SS-BCP-22-07182023		11:15			X	X	X	X	X	X	X		
03	SS-BCP-23-07182023		12:00			X	X	X	X	X	X	X		
04	SS-BCP-24-07182023		11:35			X	X	X	X	X	X	X		
05	SS-BCP-25-07182023		14:00			X	X	X	X	X	X	X		
06	SS-BCP-21-02-07182023		14:45								X	X		
07	SS-BCP-21-04-07182023		14:50								X	X		
08	SS-BCP-21-06-07182023		14:55								X	X		
09	SS-BCP-22-02-07182023		15:00								X	X		
10	SS-BCP-22-04-07182023	↓	15:02	↓	↓						X	X		

Container Type
Preservative

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
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

Relinquished By:	Date/Time	Received By:	Date/Time
Corey Boyston	4:32/07/18/2023	[illegible]	7/18/23 1632
[illegible] AMC	7/18/23 1632	[illegible]	7/19/23 0830

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.)

Form No: 01-25 HC (rev. 30-Sept-2013)

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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 2 of 2

Date Rec'd in Lab: 7/19/23

ALPHA Job #: L2341132

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

Client Information
Client: INVENTUM ENG
Address: 441 CARLISLE DR
HERNDON, VA 20170
Phone: 585-734-5255
Fax: john.black@inventumeng.com
Email: roxanne.birx@[illegible]

Project Information
Project Name: RITC
Project Location: 3875 RIVER ROAD, TONAWANDA
Project # PDIWP BENCH SCALES
(Use Project name as Project #) ☐
Project Manager: JOHN BLACK
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☒ EQuIS (1 File) ☐ EQuIS (4 Files)
☐ Other

Regulatory Requirement
☐ NY TOGS ☒ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☒ Same as Client Info
PO #

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:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	HAZ CAT	FULL TCLP	Total Bottle	Sample Specific Comments
41132-11	SS-BCP-22-06-07182023	7/18/23	15:06	SD	RB	X	X		
12	SS-BCP-23-02-07182023	7/18/23	15:39	↓	↓	X	X		
13	SS-BCP-23-04-07182023	7/18/23	15:41			X	X		
14	SS-BCP-23-06-07182023	7/18/23	15:44			X	X		
15	SS-BCP-24-02-07182023	7/18/23	15:35			X	X		
16	SS-BCP-24-04-07182023	7/18/23	15:38			X	X		
17	SS-BCP-24-06-07182023	7/18/23	15:40	↓	↓	X	X		

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
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								

Relinquished By:	Date/Time	Received By:	Date/Time
Corey Bryerton	4:32 07/18/23	[signature] AMZ	7/19/23 1632
[signature] AMZ	7/18/23 1632	[signature]	7/19/23 0030

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.)

Form No: 01-25 HC (rev. 30-Sept-2013)

PARADIGM

PARADIGM
ENVIRONMENTAL SERVICES, INC

Analytical Report For

Inventum Engineering, P.C.

For Lab Project ID

233748

Referencing

Pump House Bench Scale (10% Mixes)

Prepared

Wednesday, August 30, 2023

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below:

Portions of the enclosed report reflects analysis that has been subcontracted and are presented in their original form.

Emily Farmer

Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 233748

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Sample Identifier:	SS-BCP-25-02-08172023		
Lab Sample ID:	233748-01	**Date Sampled:**	8/17/2023 12:00
Matrix:	Solid	**Date Received**	8/17/2023

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	<10.0	mg/Kg		8/29/2023

Method Reference(s): SM 4500 NH3 G - 2011
Subcontractor ELAP ID: 10709

Corrosivity as pH

Analyte	Result	Units	Qualifier	Date Analyzed
Corrosivity (as pH)	10.26 @ 22.4 C	S.U.		8/18/2023 15:27

Method Reference(s): EPA 9045D

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**24.9**	mg/Kg		8/29/2023

Method Reference(s): EPA 9012B
Subcontractor ELAP ID: 10709

Ignitability

Analyte	Result	Units	Qualifier	Date Analyzed
Ignitability	No Burn	mm / sec		8/18/2023

Method Reference(s): EPA 1030

Reactive Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Reactivity, Cyanide	<1.0	mg/Kg		8/23/2023

Method Reference(s): EPA 7.3.3.2
Subcontractor ELAP ID: 10709
ELAP does not offer this test for approval as part of their laboratory certification program.
This sample has been reported as received.

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 233748

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Sample Identifier:	SS-BCP-25-02-08172023		
Lab Sample ID:	233748-01	**Date Sampled:**	8/17/2023 12:00
Matrix:	Solid	**Date Received**	8/17/2023

Reactive Sulfide

Analyte	Result	Units	Qualifier	Date Analyzed
Reactivity, Sulfide	<10	mg/Kg		8/23/2023

Method Reference(s): EPA 7.3.4.2
Subcontractor ELAP ID: 10709
ELAP does not offer this test for approval as part of their laboratory certification program.
This sample has been reported as received.

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 233748

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Sample Identifier:	SS-BCP-25-02-08172023		
Lab Sample ID:	233748-01A	**Date Sampled:**	8/17/2023 12:00
Matrix:	TCLP Extract	**Date Received**	8/17/2023

TCLP Mercury

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
Mercury	< 0.00200	mg/L	0.2		8/22/2023 09:17

Method Reference(s): EPA 7470A
EPA 1311
Preparation Date: 8/21/2023
Data File: Hg230822A

TCLP RCRA Metals (ICP)

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
Arsenic	< 0.500	mg/L	5		8/21/2023 08:34
Barium	< 0.500	mg/L	100		8/21/2023 08:34
Cadmium	< 0.0250	mg/L	1		8/21/2023 08:34
Chromium	< 0.500	mg/L	5		8/21/2023 08:34
Lead	< 0.500	mg/L	5		8/21/2023 08:34
Selenium	< 0.200	mg/L	1		8/21/2023 08:34
Silver	< 0.500	mg/L	5		8/21/2023 08:34

Method Reference(s): EPA 6010C
EPA 1311 / 3005A
Preparation Date: 8/18/2023
Data File: 230821A

TCLP Volatile Organics

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
1,1-Dichloroethene	< 20.0	ug/L	700		8/21/2023 14:45
1,2-Dichloroethane	< 20.0	ug/L	500		8/21/2023 14:45
2-Butanone	< 100	ug/L	200000		8/21/2023 14:45
Benzene	< 20.0	ug/L	500		8/21/2023 14:45
Carbon Tetrachloride	< 20.0	ug/L	500		8/21/2023 14:45
Chlorobenzene	< 20.0	ug/L	100000		8/21/2023 14:45
Chloroform	< 20.0	ug/L	6000		8/21/2023 14:45
Tetrachloroethene	**33.4**	ug/L	700		8/21/2023 14:45

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 233748

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Sample Identifier: SS-BCP-25-02-08172023
Lab Sample ID: 233748-01A **Date Sampled:** 8/17/2023 12:00
Matrix: TCLP Extract **Date Received** 8/17/2023

Trichloroethene	< 20.0	ug/L	500		8/21/2023 14:45
Vinyl chloride	< 20.0	ug/L	200		8/21/2023 14:45

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**96.4**	79.7 - 118		8/21/2023 14:45
4-Bromofluorobenzene	**83.4**	80.1 - 112		8/21/2023 14:45
Pentafluorobenzene	**96.3**	88 - 115		8/21/2023 14:45
Toluene-D8	**95.5**	88.2 - 113		8/21/2023 14:45

Method Reference(s): EPA 8260C
EPA 1311 / 5030C
Data File: z18933.D

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 233748

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Sample Identifier:	SS-BCP-25-05-08172023		
Lab Sample ID:	233748-02	**Date Sampled:**	8/17/2023 12:05
Matrix:	Solid	**Date Received**	8/17/2023

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	<10.0	mg/Kg		8/29/2023

Method Reference(s): SM 4500 NH3 G - 2011
Subcontractor ELAP ID: 10709

Corrosivity as pH

Analyte	Result	Units	Qualifier	Date Analyzed
Corrosivity (as pH)	11.69 @ 22.5 C	S.U.		8/18/2023 15:32

Method Reference(s): EPA 9045D

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**10.7**	mg/Kg		8/29/2023

Method Reference(s): EPA 9012B
Subcontractor ELAP ID: 10709

Ignitability

Analyte	Result	Units	Qualifier	Date Analyzed
Ignitability	No Burn	mm / sec		8/18/2023

Method Reference(s): EPA 1030

Reactive Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Reactivity, Cyanide	<1.0	mg/Kg		8/23/2023

Method Reference(s): EPA 7.3.3.2
Subcontractor ELAP ID: 10709
ELAP does not offer this test for approval as part of their laboratory certification program.
This sample has been reported as received.

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 233748

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Sample Identifier:	SS-BCP-25-05-08172023		
Lab Sample ID:	233748-02	**Date Sampled:**	8/17/2023 12:05
Matrix:	Solid	**Date Received**	8/17/2023

Reactive Sulfide

Analyte	Result	Units	Qualifier	Date Analyzed
Reactivity, Sulfide	<10	mg/Kg		8/23/2023

Method Reference(s): EPA 7.3.4.2
Subcontractor ELAP ID: 10709
ELAP does not offer this test for approval as part of their laboratory certification program.
This sample has been reported as received.

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 233748

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Sample Identifier:	SS-BCP-25-05-08172023		
Lab Sample ID:	233748-02A	**Date Sampled:**	8/17/2023 12:05
Matrix:	TCLP Extract	**Date Received**	8/17/2023

TCLP Mercury

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
Mercury	< 0.00200	mg/L	0.2		8/22/2023 09:24

Method Reference(s): EPA 7470A
EPA 1311
Preparation Date: 8/21/2023
Data File: Hg230822A

TCLP RCRA Metals (ICP)

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
Arsenic	< 0.500	mg/L	5		8/21/2023 08:43
Barium	< 0.500	mg/L	100		8/21/2023 08:43
Cadmium	< 0.0250	mg/L	1		8/21/2023 08:43
Chromium	< 0.500	mg/L	5		8/21/2023 08:43
Lead	< 0.500	mg/L	5		8/21/2023 08:43
Selenium	< 0.200	mg/L	1		8/21/2023 08:43
Silver	< 0.500	mg/L	5		8/21/2023 08:43

Method Reference(s): EPA 6010C
EPA 1311 / 3005A
Preparation Date: 8/18/2023
Data File: 230821A

TCLP Volatile Organics

Analyte	Result	Units	Regulatory Limit	Qualifier	Date Analyzed
1,1-Dichloroethene	< 20.0	ug/L	700		8/21/2023 15:04
1,2-Dichloroethane	< 20.0	ug/L	500		8/21/2023 15:04
2-Butanone	< 100	ug/L	200000		8/21/2023 15:04
Benzene	< 20.0	ug/L	500		8/21/2023 15:04
Carbon Tetrachloride	< 20.0	ug/L	500		8/21/2023 15:04
Chlorobenzene	< 20.0	ug/L	100000		8/21/2023 15:04
Chloroform	< 20.0	ug/L	6000		8/21/2023 15:04
Tetrachloroethene	< 20.0	ug/L	700		8/21/2023 15:04

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 233748

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Sample Identifier: SS-BCP-25-05-08172023
Lab Sample ID: 233748-02A **Date Sampled:** 8/17/2023 12:05
Matrix: TCLP Extract **Date Received** 8/17/2023

Trichloroethene	< 20.0	ug/L	500		8/21/2023 15:04
Vinyl chloride	< 20.0	ug/L	200		8/21/2023 15:04

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**105**	79.7 - 118		8/21/2023 15:04
4-Bromofluorobenzene	**96.5**	80.1 - 112		8/21/2023 15:04
Pentafluorobenzene	**101**	88 - 115		8/21/2023 15:04
Toluene-D8	**102**	88.2 - 113		8/21/2023 15:04

Method Reference(s): EPA 8260C
EPA 1311 / 5030C
Data File: z18934.D

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Lab Project ID: 233748

Matrix: TCLP Fluid

TCLP Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	<0.00200	mg/L		8/22/2023 09:07

Method Reference(s): EPA 7470A
Preparation Date: 8/21/2023
Data File: Hg230822A
QC Batch ID: QC230821Hgtclp
QC Number: Blk 1

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample and Control Sample Duplicate

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Lab Project ID: 233748

Matrix: TCLP Fluid

TCLP Mercury

Analyte	LCS Added	LCSD Added	Spike Units	LCS Result	LCSD Result	LCS % Recovery	LCSD % Recovery	% Rec Limits	LCS Outliers	LCSD Outliers	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Mercury	0.0200	0.0200	mg/L	0.0209	0.0197	104	98.3	80 - 120			6.00	20		8/22/2023

Method Reference(s): EPA 7470A
Preparation Date: 8/21/2023
Data File: Hg230822A
QC Number: 1
QC Batch ID: QC230821Hgtclp

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Wednesday, August 23, 2023

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Lab Project ID: 233748

Matrix: TCLP Fluid

TCLP RCRA Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed	
Arsenic	<0.500	mg/L		8/21/2023	08:05
Barium	<0.500	mg/L		8/21/2023	08:05
Cadmium	<0.0250	mg/L		8/21/2023	08:05
Chromium	<0.500	mg/L		8/21/2023	08:05
Lead	<0.500	mg/L		8/21/2023	08:05
Selenium	<0.200	mg/L		8/21/2023	08:05
Silver	<0.500	mg/L		8/21/2023	08:05

Method Reference(s): EPA 6010C
EPA 3005
Preparation Date: 8/18/2023
Data File: 230821A
QC Batch ID: QC230818tclp
QC Number: Blk 1

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample and Control Sample Duplicate

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Lab Project ID: 233748

Matrix: TCLP Fluid

TCLP Metals (ICP)

Analyte	LCS Added	LCSD Added	Spike Units	LCS Result	LCSD Result	LCS % Recovery	LCSD % Recovery	% Rec Limits	LCS Outliers	LCSD Outliers	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Arsenic	12.5	12.5	mg/L	12.3	12.4	98.7	99.0	80 - 120			0.324	20		8/21/2023
Barium	12.5	12.5	mg/L	12.4	12.5	99.5	99.9	80 - 120			0.401	20		8/21/2023
Cadmium	5.00	5.00	mg/L	5.15	5.18	103	104	80 - 120			0.484	20		8/21/2023
Chromium	12.5	12.5	mg/L	11.8	11.9	94.6	95.1	80 - 120			0.506	20		8/21/2023
Lead	12.5	12.5	mg/L	12.4	12.4	98.9	99.4	80 - 120			0.484	20		8/21/2023
Selenium	12.5	12.5	mg/L	12.5	12.6	99.8	101	80 - 120			0.957	20		8/21/2023
Silver	1.25	1.25	mg/L	1.28	1.28	102	103	80 - 120			0.156	20		8/21/2023

Method Reference(s): EPA 6010C
EPA 3005
Preparation Date: 8/18/2023
Data File: 230821A
QC Number: 1
QC Batch ID: QC230818tclp

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Wednesday, August 23, 2023

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Lab Project ID: 233748

Matrix: TCLP Fluid

TCLP Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed	
1,1-Dichloroethene	<20.0	ug/L		8/21/2023	11:43
1,2-Dichloroethane	<20.0	ug/L		8/21/2023	11:43
2-Butanone	<100	ug/L		8/21/2023	11:43
Benzene	<20.0	ug/L		8/21/2023	11:43
Carbon Tetrachloride	<20.0	ug/L		8/21/2023	11:43
Chlorobenzene	<20.0	ug/L		8/21/2023	11:43
Chloroform	<20.0	ug/L		8/21/2023	11:43
Tetrachloroethene	<20.0	ug/L		8/21/2023	11:43
Trichloroethene	<20.0	ug/L		8/21/2023	11:43
Vinyl chloride	<20.0	ug/L		8/21/2023	11:43

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**101**	79.7 - 118		8/21/2023	11:43
4-Bromofluorobenzene	**91.3**	80.1 - 112		8/21/2023	11:43
Pentafluorobenzene	**98.4**	88 - 115		8/21/2023	11:43
Toluene-D8	**97.9**	88.2 - 113		8/21/2023	11:43

Method Reference(s): EPA 8260C
EPA 5030

Data File: z18924.D

QC Batch ID: voax230821

QC Number: Blk 1

PARADIGM ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Pump House Bench Scale (10% Mixes)

Lab Project ID: 233748

Matrix: TCLP Fluid

TCLP Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
1,1-Dichloroethene	20.0	ug/L	18.9	94.6	70.1 - 114		8/21/2023
1,2-Dichloroethane	20.0	ug/L	19.5	97.4	76.2 - 113		8/21/2023
Benzene	20.0	ug/L	19.3	96.4	82.6 - 111		8/21/2023
Carbon Tetrachloride	20.0	ug/L	18.9	94.5	69.7 - 115		8/21/2023
Chlorobenzene	20.0	ug/L	19.4	97.0	88.3 - 111		8/21/2023
Chloroform	20.0	ug/L	19.4	97.2	77.1 - 112		8/21/2023
Tetrachloroethene	20.0	ug/L	19.1	95.6	74.7 - 113		8/21/2023
Trichloroethene	20.0	ug/L	19.5	97.3	82.4 - 113		8/21/2023
Vinyl chloride	20.0	ug/L	20.6	103	63 - 120		8/21/2023

Method Reference(s): EPA 8260C
EPA 5030

Data File: z18923.D

QC Number: LCS 1

QC Batch ID: voax230821

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared *Wednesday, August 23, 2023*

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

Each page of this document is part of a multipage report. This document may not be reproduced except in its entirety, without the prior consent of Paradigm Environmental Services, Inc.

All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.
"E" = Result has been estimated, calibration limit exceeded.
"H" = Denotes a parameter analyzed outside of holding time.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*
"(1)" = Indicates data from primary column used for QC calculation.
"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.
"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.

GENERAL TERMS AND CONDITIONS
LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty. Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB wi use LAB default method for all tests unless specified otherwise on the Work Order.
Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices. Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability. In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.
LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.
All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.
Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure. Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling. Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.
Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on th final report.
Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.
LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment. LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure. LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law. This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES

REPORT TO:	INVOICE TO:	
COMPANY: INVENTUM ENG	COMPANY: SAME	LAB PROJECT ID: 233748
address: 441 Carlisle Drive	ADDRESS:	
CITY: HERNDON STATE: VA ZIP:	CITY: STATE: ZIP:	Quotation #:
PHONE: 716-553-5129 FAX:	PHONE: FAX:	Email:
ATTN: Roxanne.Birx@inventumeng.com	ATTN: JOHN BLACK	

PROJECT REFERENCE: Pump House BENCH SCALE (10% MIXES)

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	FULL TCLP	HAZCAT	AMMONIA	CYANIDE	REMARKS	PARADIGM LAB SAMPLE NUMBER
8/17/23	1200		X	SS-BCP-25-02-08172023	SD	3	X	X	X	X	FULL TCLP - 8260, 8270,	01 A
8/17/23	1205		X	SS-BCP-25-05-08172023	SD	3	X	X	X	X	6010, 8151, 8081 (PEST/HERB)	02 A
											HAZCAT - IGNITABILITY,	
											CORROSIVITY, REACTIVITY	
											A for TCLP extract.	
											CP 8/17/23	

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	X	None Required		None Required	X
10 day		Batch QC	X	Basic EDD	
Rush 3 day		Category A		NYSDEC EDD	
Rush 2 day		Category B			
Rush 1 day					
Other (please indicate date needed:)		Other (please indicate package needed:)		Other EDD (please indicate EDD needed :)	

Peter Zaffram 8/17/23
Sampled By — Date/Time

Relinquished By — Date/Time 8/17/23 1240

Received By — Date/Time 8/17/23 1320

Received @ Lab By — Date/Time 8/17/23 16:04

Total Cost:

P.I.F.

By signing this form, client agrees to Paradigm Terms and Conditions (reverse).

4°C ice 1 8/17/23 16:02

See additional page for sample conditions.

PARADIGM

Chain of Custody Supplement

Client: Inventum

Lab Project ID: 233748

Completed by: [signature]

Date: 8/17/2023

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)	X TCLP VOA		X
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature	X		X metals
Comments	4°C Iced		
Compliant Sample Quantity/Type	X		
Comments			

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

PARADIGM ENVIRONMENTAL SERVICES, INC.

CHAIN OF CUSTODY 230818016

ELAP ID: 10

REPORT TO:		INVOICE TO:			
COMPANY:	Paradigm Environmental	COMPANY:	Same	LAB PROJECT #:	CLIENT PROJECT #:
ADDRESS:		ADDRESS:			
CITY: STATE: ZIP:		CITY: STATE: ZIP:		TURNAROUND TIME: (WORKING DAYS)	
PHONE: FAX:		PHONE: FAX:			
PROJECT NAME/SITE NAME:		ATTN:	Reporting	ATTN:	Accounts Payable
		COMMENTS:	Please email results to reporting@paradigmenv.com		

STD: 1 ☐ 2 ☐ 3 ☐ 5 ☒ O ☐

Date Due: 8/25/23

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER OF CONTAINERS	Reactivity	Ammonia	T. Cyanide							REMARKS	PARADIGM LAB SAMPLE NUMBER					
1	8/17/23	1200		X	SS-BCP-25-02-08172023	SD	1	X	X	X							233748-01						
2	↓	1205		X	SS-BCP-25-05-08172023	SD	1	X	X	X							↓ -02						
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							

****LAB USE ONLY BELOW THIS LINE****

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type:	Y ☐	N ☐
Comments:		
Preservation:	Y ☐	N ☐
Comments:		
Holding Time:	Y ☐	N ☐
Comments:		
Temperature: 4°	Y ☐	N ☐
Comments:		

Client

Sampled By	Date/Time	
[signature]	8/19/23	0830
Relinquished By	Date/Time	
[signature]	8/18/23	1230
Received By	Date/Time	
[signature]	8/18/23	16:00
Received @ Lab By	Date/Time	

Total Cost: ☐

P.I.F. ☐

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 25, 2023

Emily Farmen
Paradigm Environmental
179 Lake Avenue
Rochester, NY 14608

TEL: (800) 724-1997

Work Order No: 230821028

RE: Analysis of Samples
Projects #233748, 57 & 58

Adirondack Environmental Services, Inc received 6 samples on 8/21/2023 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

Adirondack Environmental Services, Inc — CASE NARRATIVE

Paradigm Environmental

Analysis of Samples

Projects #233748, 57 & 58

Date: *25-Aug-23*

Lab WorkOrder: **230821028**

Sample containers were not supplied by Adirondack Environmental Services.

The client provided percent moisture data for dry weight calculations.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *25-Aug-23*

CLIENT:	Paradigm Environmental	**Client Sample ID:**	233748-01A (SS-BCP-25-02-08
Work Order:	**230821028**	**Collection Date:**	8/17/2023 12:00:00 PM
Reference:	Analysis of Samples / Projects #233748, 57	**Lab Sample ID:**	230821028-001
PO#:		**Matrix:**	TCLP-EXTRACT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCLP HERBICIDES - EPA 8321B						Analyst: **KF**
(Prep: SW3535A - 8/21/2023)						
2,4,5-TP (Silvex)-TCLP	**ND**	0.10		mg/L	1	8/21/2023 6:26:22 PM
2,4-D-TCLP	**ND**	0.10		mg/L	1	8/21/2023 6:26:22 PM
Surr: Acifluorfen	**73.2**	52.5-128		%REC	1	8/21/2023 6:26:22 PM
Surr: DCAA	**76.2**	56.2-139		%REC	1	8/21/2023 6:26:22 PM
TCLP PESTICIDES - EPA 8081B						Analyst: **KF**
(Prep: SW3535A - 8/22/2023)						
Chlordane-TCLP	**ND**	0.010		mg/L	1	8/22/2023 3:33:19 PM
Endrin-TCLP	**ND**	0.0020		mg/L	1	8/22/2023 3:33:19 PM
gamma-BHC(Lindane)-TCLP	**ND**	0.0020		mg/L	1	8/22/2023 3:33:19 PM
Heptachlor epoxide-TCLP	**ND**	0.0020		mg/L	1	8/22/2023 3:33:19 PM
Heptachlor-TCLP	**ND**	0.0020		mg/L	1	8/22/2023 3:33:19 PM
Methoxychlor-TCLP	**ND**	0.010		mg/L	1	8/22/2023 3:33:19 PM
Toxaphene-TCLP	**ND**	0.020		mg/L	1	8/22/2023 3:33:19 PM
Surr: Decachlorobiphenyl-TCLP	**136**	51.5-141		%REC	1	8/22/2023 3:33:19 PM
TCLP SEMI-VOLATILES - EPA 8270D						Analyst: **MT**
(Prep: SW3535A - 8/23/2023)						
1,4-Dichlorobenzene -TCLP	**ND**	500		µg/L	10	8/24/2023 3:03:00 PM
2,4,5-Trichlorophenol-TCLP	**ND**	500		µg/L	10	8/24/2023 3:03:00 PM
2,4,6-Trichlorophenol-TCLP	**ND**	500		µg/L	10	8/24/2023 3:03:00 PM
2,4-Dinitrotoluene-TCLP	**ND**	500		µg/L	10	8/24/2023 3:03:00 PM
Cresols, Total-TCLP	**4200**	2000		µg/L	10	8/24/2023 3:03:00 PM
Hexachlorobenzene-TCLP	**ND**	500		µg/L	10	8/24/2023 3:03:00 PM
Hexachlorobutadiene-TCLP	**ND**	500		µg/L	10	8/24/2023 3:03:00 PM
Hexachloroethane-TCLP	**ND**	500		µg/L	10	8/24/2023 3:03:00 PM
Nitrobenzene-TCLP	**ND**	500		µg/L	10	8/24/2023 3:03:00 PM
Pentachlorophenol-TCLP	**ND**	2500	C	µg/L	10	8/24/2023 3:03:00 PM
Pyridine-TCLP	**ND**	1000		µg/L	10	8/24/2023 3:03:00 PM
Surr: 2,4,6-Tribromophenol	**61.9**	43.7-123		%REC	10	8/24/2023 3:03:00 PM
Surr: 2-Fluorobiphenyl	**63.6**	48.7-108		%REC	10	8/24/2023 3:03:00 PM
Surr: 2-Fluorophenol	**60.5**	23.5-101		%REC	10	8/24/2023 3:03:00 PM
Surr: 4-Terphenyl-d14	**76.4**	50.6-121		%REC	10	8/24/2023 3:03:00 PM
Surr: Nitrobenzene-d5	**69.6**	43.7-109		%REC	10	8/24/2023 3:03:00 PM
Surr: Phenol-d6	**64.7**	12.6-93.5		%REC	10	8/24/2023 3:03:00 PM

CLIENT:	Paradigm Environmental	**Client Sample ID:**	233748-02A (SS-BCP-25-05-08
Work Order:	**230821028**	**Collection Date:**	8/17/2023 12:05:00 PM
Reference:	Analysis of Samples / Projects #233748, 57	**Lab Sample ID:**	230821028-002
PO#:		**Matrix:**	TCLP-EXTRACT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCLP HERBICIDES - EPA 8321B						Analyst: **KF**
(Prep: SW3535A - 8/21/2023)						
2,4,5-TP (Silvex)-TCLP	**ND**	0.050		mg/L	1	8/21/2023 6:48:55 PM
2,4-D-TCLP	**ND**	0.050		mg/L	1	8/21/2023 6:48:55 PM
Surr: Acifluorfen	**84.3**	52.5-128		%REC	1	8/21/2023 6:48:55 PM
Surr: DCAA	**69.0**	56.2-139		%REC	1	8/21/2023 6:48:55 PM
TCLP PESTICIDES - EPA 8081B						Analyst: **KF**
(Prep: SW3535A - 8/22/2023)						
Chlordane-TCLP	**ND**	0.010		mg/L	1	8/22/2023 3:47:26 PM
Endrin-TCLP	**ND**	0.0020		mg/L	1	8/22/2023 3:47:26 PM
gamma-BHC(Lindane)-TCLP	**ND**	0.0020		mg/L	1	8/22/2023 3:47:26 PM
Heptachlor epoxide-TCLP	**ND**	0.0020		mg/L	1	8/22/2023 3:47:26 PM
Heptachlor-TCLP	**ND**	0.0020		mg/L	1	8/22/2023 3:47:26 PM
Methoxychlor-TCLP	**ND**	0.010		mg/L	1	8/22/2023 3:47:26 PM
Toxaphene-TCLP	**ND**	0.020		mg/L	1	8/22/2023 3:47:26 PM
Surr: Decachlorobiphenyl-TCLP	**125**	51.5-141		%REC	1	8/22/2023 3:47:26 PM
TCLP SEMI-VOLATILES - EPA 8270D						Analyst: **MT**
(Prep: SW3535A - 8/23/2023)						
1,4-Dichlorobenzene -TCLP	**ND**	1000		µg/L	20	8/24/2023 3:28:00 PM
2,4,5-Trichlorophenol-TCLP	**ND**	1000		µg/L	20	8/24/2023 3:28:00 PM
2,4,6-Trichlorophenol-TCLP	**ND**	1000		µg/L	20	8/24/2023 3:28:00 PM
2,4-Dinitrotoluene-TCLP	**ND**	1000		µg/L	20	8/24/2023 3:28:00 PM
Cresols, Total-TCLP	**8000**	4000		µg/L	20	8/24/2023 3:28:00 PM
Hexachlorobenzene-TCLP	**ND**	1000		µg/L	20	8/24/2023 3:28:00 PM
Hexachlorobutadiene-TCLP	**ND**	1000		µg/L	20	8/24/2023 3:28:00 PM
Hexachloroethane-TCLP	**ND**	1000		µg/L	20	8/24/2023 3:28:00 PM
Nitrobenzene-TCLP	**ND**	1000		µg/L	20	8/24/2023 3:28:00 PM
Pentachlorophenol-TCLP	**ND**	5000	C	µg/L	20	8/24/2023 3:28:00 PM
Pyridine-TCLP	**ND**	2000		µg/L	20	8/24/2023 3:28:00 PM
Surr: 2,4,6-Tribromophenol	**64.0**	43.7-123		%REC	20	8/24/2023 3:28:00 PM
Surr: 2-Fluorobiphenyl	**75.6**	48.7-108		%REC	20	8/24/2023 3:28:00 PM
Surr: 2-Fluorophenol	**61.8**	23.5-101		%REC	20	8/24/2023 3:28:00 PM
Surr: 4-Terphenyl-d14	**85.2**	50.6-121		%REC	20	8/24/2023 3:28:00 PM
Surr: Nitrobenzene-d5	**68.4**	43.7-109		%REC	20	8/24/2023 3:28:00 PM
Surr: Phenol-d6	**69.8**	12.6-93.5		%REC	20	8/24/2023 3:28:00 PM

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

1071

CHAIN OF CUSTODY

230821028

ELAP ID: 107[illegible]

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:		INVOICE TO:			
COMPANY:	Paradigm Environmental	COMPANY:	Same	LAB PROJECT #:	CLIENT PROJECT #:
ADDRESS:		ADDRESS:			
CITY: STATE: ZIP:		CITY: STATE: ZIP:		TURNAROUND TIME: (WORKING DAYS)	
PHONE: FAX:		PHONE: FAX:			STD OT
PROJECT NAME/SITE NAME:		ATTN:	Reporting	ATTN: Accounts Payable	☐ 1 ☐ 2 ☐ 3 ☒ 5 ☐
		COMMENTS:	Please email results to reporting@paradigmenv.com	Date Due:	

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER OF CONTAINERS	TCLP 8270	TCLP Pest	TCLP Herb	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	8/17/23	1100		X	SS-BCP-25-02-08172023	TCLP extract	1	X	X	X	233748-01A	
2	↓	1105		X	SS-BCP-25-05-08172023	↓	1	X	X	X	↓ -02A	
3												
4												
5											Spun @ Paradigm on	
6												
7												
8												
9												
10												

LAB USE ONLY BELOW THIS LINE

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type:	Y ☐	N ☐
Comments:		
Preservation:	Y ☐	N ☐
Comments:		
Holding Time:	Y ☐	N ☐
Comments:		
Temperature: 4a	Y ☐	N ☐
Comments:		

Client

	Date/Time	
Sampled By	8/21/2023	0830
Relinquished By	8/21/23	1345
Received By	8/21/23	15:23
Received @ Lab By		

Total Cost:

P.I.F.

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

ANALYTICAL REPORT

Lab Number:	L2347700
Client:	Inventum Engineering 441 Carlisle Drive Suite C Herndon, NY 20170
ATTN:	John Black
Phone:	(571) 752-6562
Project Name:	RITC
Project Number:	BENCH SCALE-TOC
Report Date:	08/31/23

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

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

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

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2347700-01	BREEZE-08172023	SEDIMENT	3875 RIVER ROAD	08/17/23 11:35	08/17/23
L2347700-02	SS-BCP-24-02-08172023	SEDIMENT	3875 RIVER ROAD	08/17/23 11:45	08/17/23
L2347700-03	SS-BCP-24-04-08172023	SEDIMENT	3875 RIVER ROAD	08/17/23 11:45	08/17/23
L2347700-04	SS-BCP-24-06-08172023	SEDIMENT	3875 RIVER ROAD	08/17/23 11:48	08/17/23

Project Name:	RITC	**Lab Number:**	L2347700
Project Number:	BENCH SCALE-TOC	**Report Date:**	08/31/23

Case Narrative

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

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

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

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

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

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

Project Name:	RITC	**Lab Number:**	L2347700
Project Number:	BENCH SCALE-TOC	**Report Date:**	08/31/23

Case Narrative (continued)

Report Submission

August 31, 2023: This final report includes the results of all requested analyses.

August 28, 2023: This is a preliminary report.

August 24, 2023: This is a preliminary report.

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

Volatile Organics

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.

Total Metals

L2347700-01: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by the sample matrix.

Cyanide, Total

The WG1817873-3 LCSD recovery for cyanide, total (77%), associated with L2347700-01 and -02, is outside our in-house acceptance criteria, but within the vendor-certified acceptance limits. The results of the original analyses are reported.

The WG1817875-3 LCSD recovery for cyanide, total (76%), associated with L2347700-03 and -04, is outside our in-house acceptance criteria, but within the vendor-certified acceptance limits. The results of the original analyses are reported.

Nitrogen, Ammonia

The WG1817932-3 Laboratory Duplicate RPD for nitrogen, ammonia (150%), performed on L2347700-01, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the

Project Name:	RITC	**Lab Number:**	L2347700
Project Number:	BENCH SCALE-TOC	**Report Date:**	08/31/23

Case Narrative (continued)

native sample.

Total Organic Carbon

WG1820886: The required batch QC was prepared; however, the native sample required a different reporting method; therefore, the associated QC results could not be 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: Cristin Walker

Title: Technical Director/Representative Date: 08/31/23

ORGANICS

VOLATILES

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01
Client ID: BREEZE-08172023
Sample Location: 3875 RIVER ROAD
Date Collected: 08/17/23 11:35
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8260D
Analytical Date: 08/23/23 14:03
Analyst: AJK
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	5.8	2.6	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.17	1
Chloroform	ND		ug/kg	1.7	0.16	1
Carbon tetrachloride	ND		ug/kg	1.2	0.27	1
1,2-Dichloropropane	ND		ug/kg	1.2	0.14	1
Dibromochloromethane	ND		ug/kg	1.2	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.31	1
Tetrachloroethene	ND		ug/kg	0.58	0.23	1
Chlorobenzene	ND		ug/kg	0.58	0.15	1
Trichlorofluoromethane	ND		ug/kg	4.6	0.80	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.30	1
1,1,1-Trichloroethane	ND		ug/kg	0.58	0.19	1
Bromodichloromethane	ND		ug/kg	0.58	0.13	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.32	1
cis-1,3-Dichloropropene	ND		ug/kg	0.58	0.18	1
Bromoform	ND		ug/kg	4.6	0.28	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.58	0.19	1
Benzene	ND		ug/kg	0.58	0.19	1
Toluene	1.2		ug/kg	1.2	0.63	1
Ethylbenzene	0.28	J	ug/kg	1.2	0.16	1
Chloromethane	ND		ug/kg	4.6	1.1	1
Bromomethane	ND		ug/kg	2.3	0.67	1
Vinyl chloride	ND		ug/kg	1.2	0.39	1
Chloroethane	ND		ug/kg	2.3	0.52	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.28	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.16	1
Trichloroethene	ND		ug/kg	0.58	0.16	1
1,2-Dichlorobenzene	ND		ug/kg	2.3	0.17	1

Project Name: RITC **Lab Number:** L2347700

Project Number: BENCH SCALE-TOC **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01 Date Collected: 08/17/23 11:35

Client ID: BREEZE-08172023 Date Received: 08/17/23

Sample Location: 3875 RIVER ROAD Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.3	0.17	1
1,4-Dichlorobenzene	ND		ug/kg	2.3	0.20	1
Methyl tert butyl ether	ND		ug/kg	2.3	0.23	1
p/m-Xylene	0.84	J	ug/kg	2.3	0.65	1
o-Xylene	0.36	J	ug/kg	1.2	0.34	1
cis-1,2-Dichloroethene	3.2		ug/kg	1.2	0.20	1
Styrene	ND		ug/kg	1.2	0.23	1
Dichlorodifluoromethane	ND		ug/kg	12	1.0	1
Acetone	ND		ug/kg	12	5.6	1
Carbon disulfide	ND		ug/kg	12	5.3	1
2-Butanone	ND		ug/kg	12	2.6	1
4-Methyl-2-pentanone	ND		ug/kg	12	1.5	1
2-Hexanone	ND		ug/kg	12	1.4	1
Bromochloromethane	ND		ug/kg	2.3	0.24	1
1,2-Dibromoethane	ND		ug/kg	1.2	0.32	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.5	1.2	1
Isopropylbenzene	ND		ug/kg	1.2	0.13	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.3	0.37	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.3	0.32	1
Methyl Acetate	ND		ug/kg	4.6	1.1	1
Cyclohexane	ND		ug/kg	12	0.63	1
1,4-Dioxane	ND		ug/kg	93	41.	1
Freon-113	ND		ug/kg	4.6	0.80	1
Methyl cyclohexane	ND		ug/kg	4.6	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	101		70-130

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/23/23 08:25
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1819331-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/23/23 08:25
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1819331-5					
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Isopropylbenzene	ND		ug/kg	1.0	0.11
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
Methyl Acetate	ND		ug/kg	4.0	0.95
Cyclohexane	ND		ug/kg	10	0.54
1,4-Dioxane	ND		ug/kg	80	35.
Freon-113	ND		ug/kg	4.0	0.69
Methyl cyclohexane	ND		ug/kg	4.0	0.60

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/23/23 08:25
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1819331-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	107		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

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: WG1819331-3 WG1819331-4								
Methylene chloride	97		91		70-130	6		30
1,1-Dichloroethane	102		93		70-130	9		30
Chloroform	88		81		70-130	8		30
Carbon tetrachloride	95		83		70-130	13		30
1,2-Dichloropropane	97		92		70-130	5		30
Dibromochloromethane	102		98		70-130	4		30
1,1,2-Trichloroethane	106		102		70-130	4		30
Tetrachloroethene	115		101		70-130	13		30
Chlorobenzene	102		97		70-130	5		30
Trichlorofluoromethane	112		96		70-139	15		30
1,2-Dichloroethane	96		93		70-130	3		30
1,1,1-Trichloroethane	98		87		70-130	12		30
Bromodichloromethane	94		89		70-130	5		30
trans-1,3-Dichloropropene	99		98		70-130	1		30
cis-1,3-Dichloropropene	98		98		70-130	0		30
Bromoform	93		92		70-130	1		30
1,1,2,2-Tetrachloroethane	97		92		70-130	5		30
Benzene	99		93		70-130	6		30
Toluene	103		94		70-130	9		30
Ethylbenzene	106		97		70-130	9		30
Chloromethane	108		95		52-130	13		30
Bromomethane	95		86		57-147	10		30
Vinyl chloride	114		94		67-130	19		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

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: WG1819331-3 WG1819331-4								
Chloroethane	101		91		50-151	10		30
1,1-Dichloroethene	106		92		65-135	14		30
trans-1,2-Dichloroethene	102		94		70-130	8		30
Trichloroethene	108		99		70-130	9		30
1,2-Dichlorobenzene	101		94		70-130	7		30
1,3-Dichlorobenzene	105		98		70-130	7		30
1,4-Dichlorobenzene	103		98		70-130	5		30
Methyl tert butyl ether	96		94		66-130	2		30
p/m-Xylene	110		101		70-130	9		30
o-Xylene	106		99		70-130	7		30
cis-1,2-Dichloroethene	97		79		70-130	20		30
Styrene	110		105		70-130	5		30
Dichlorodifluoromethane	115		96		30-146	18		30
Acetone	95		97		54-140	2		30
Carbon disulfide	104		90		59-130	14		30
2-Butanone	86		90		70-130	5		30
4-Methyl-2-pentanone	95		90		70-130	5		30
2-Hexanone	94		91		70-130	3		30
Bromochloromethane	98		84		70-130	15		30
1,2-Dibromoethane	104		102		70-130	2		30
1,2-Dibromo-3-chloropropane	108		100		68-130	8		30
Isopropylbenzene	107		95		70-130	12		30
1,2,3-Trichlorobenzene	98		97		70-130	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

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: WG1819331-3 WG1819331-4								
1,2,4-Trichlorobenzene	99		98		70-130	1		30
Methyl Acetate	102		94		51-146	8		30
Cyclohexane	110		72		59-142	**42**	Q	30
1,4-Dioxane	99		88		65-136	12		30
Freon-113	112		96		50-139	15		30
Methyl cyclohexane	107		92		70-130	15		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	96		96		70-130
Toluene-d8	102		102		70-130
4-Bromofluorobenzene	96		94		70-130
Dibromofluoromethane	90		90		70-130

SEMIVOLATILES

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01 D
Client ID: BREEZE-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:35
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E
Analytical Date: 08/21/23 16:03
Analyst: JG
Percent Solids: 85%

Extraction Method: EPA 3546
Extraction Date: 08/20/23 04:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	640	J	ug/kg	770	99.	5
Hexachlorobenzene	ND		ug/kg	580	110	5
Bis(2-chloroethyl)ether	ND		ug/kg	860	130	5
2-Chloronaphthalene	ND		ug/kg	960	95.	5
3,3'-Dichlorobenzidine	ND		ug/kg	960	260	5
2,4-Dinitrotoluene	ND		ug/kg	960	190	5
2,6-Dinitrotoluene	ND		ug/kg	960	160	5
Fluoranthene	24000		ug/kg	580	110	5
4-Chlorophenyl phenyl ether	ND		ug/kg	960	100	5
4-Bromophenyl phenyl ether	ND		ug/kg	960	150	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	1200	160	5
Bis(2-chloroethoxy)methane	ND		ug/kg	1000	96.	5
Hexachlorobutadiene	ND		ug/kg	960	140	5
Hexachlorocyclopentadiene	ND		ug/kg	2700	870	5
Hexachloroethane	ND		ug/kg	770	160	5
Isophorone	ND		ug/kg	860	120	5
Naphthalene	5000		ug/kg	960	120	5
Nitrobenzene	ND		ug/kg	860	140	5
NDPA/DPA	ND		ug/kg	770	110	5
n-Nitrosodi-n-propylamine	ND		ug/kg	960	150	5
Bis(2-ethylhexyl)phthalate	ND		ug/kg	960	330	5
Butyl benzyl phthalate	ND		ug/kg	960	240	5
Di-n-butylphthalate	ND		ug/kg	960	180	5
Di-n-octylphthalate	ND		ug/kg	960	330	5
Diethyl phthalate	ND		ug/kg	960	89.	5
Dimethyl phthalate	ND		ug/kg	960	200	5
Benzo(a)anthracene	9100		ug/kg	580	110	5
Benzo(a)pyrene	9500		ug/kg	770	230	5

Project Name: RITC **Lab Number:** L2347700

Project Number: BENCH SCALE-TOC **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01 D
Client ID: BREEZE-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:35
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	12000		ug/kg	580	160	5
Benzo(k)fluoranthene	2900		ug/kg	580	150	5
Chrysene	9800		ug/kg	580	100	5
Acenaphthylene	2700		ug/kg	770	150	5
Anthracene	4000		ug/kg	580	190	5
Benzo(ghi)perylene	6000		ug/kg	770	110	5
Fluorene	2900		ug/kg	960	93.	5
Phenanthrene	18000		ug/kg	580	120	5
Dibenzo(a,h)anthracene	1500		ug/kg	580	110	5
Indeno(1,2,3-cd)pyrene	5600		ug/kg	770	130	5
Pyrene	18000		ug/kg	580	95.	5
Biphenyl	340	J	ug/kg	2200	120	5
4-Chloroaniline	ND		ug/kg	960	170	5
2-Nitroaniline	ND		ug/kg	960	180	5
3-Nitroaniline	ND		ug/kg	960	180	5
4-Nitroaniline	ND		ug/kg	960	400	5
Dibenzofuran	1700		ug/kg	960	91.	5
2-Methylnaphthalene	1300		ug/kg	1200	120	5
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	960	100	5
Acetophenone	ND		ug/kg	960	120	5
2,4,6-Trichlorophenol	ND		ug/kg	580	180	5
p-Chloro-m-cresol	ND		ug/kg	960	140	5
2-Chlorophenol	ND		ug/kg	960	110	5
2,4-Dichlorophenol	ND		ug/kg	860	150	5
2,4-Dimethylphenol	ND		ug/kg	960	320	5
2-Nitrophenol	ND		ug/kg	2100	360	5
4-Nitrophenol	ND		ug/kg	1300	390	5
2,4-Dinitrophenol	ND		ug/kg	4600	450	5
4,6-Dinitro-o-cresol	ND		ug/kg	2500	460	5
Pentachlorophenol	ND		ug/kg	770	210	5
Phenol	150	J	ug/kg	960	140	5
2-Methylphenol	ND		ug/kg	960	150	5
3-Methylphenol/4-Methylphenol	150	J	ug/kg	1400	150	5
2,4,5-Trichlorophenol	ND		ug/kg	960	180	5
Carbazole	1300		ug/kg	960	93.	5
Atrazine	ND		ug/kg	770	340	5
Benzaldehyde	ND		ug/kg	1300	260	5

Project Name: RITC **Lab Number:** L2347700

Project Number: BENCH SCALE-TOC **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01 D
Client ID: BREEZE-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:35
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	960	290	5
2,3,4,6-Tetrachlorophenol	ND		ug/kg	960	190	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	28		25-120
Phenol-d6	36		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	86		30-120
2,4,6-Tribromophenol	51		10-136
4-Terphenyl-d14	77		18-120

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 08/21/23 14:06
Analyst: MG

Extraction Method: EPA 3546
Extraction Date: 08/20/23 04:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1817942-1					
Acenaphthene	ND		ug/kg	130	17.
Hexachlorobenzene	ND		ug/kg	99	18.
Bis(2-chloroethyl)ether	ND		ug/kg	150	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
3,3'-Dichlorobenzidine	ND		ug/kg	160	44.
2,4-Dinitrotoluene	ND		ug/kg	160	33.
2,6-Dinitrotoluene	ND		ug/kg	160	28.
Fluoranthene	ND		ug/kg	99	19.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	18.
4-Bromophenyl phenyl ether	ND		ug/kg	160	25.
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	28.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	17.
Hexachlorobutadiene	ND		ug/kg	160	24.
Hexachlorocyclopentadiene	ND		ug/kg	470	150
Hexachloroethane	ND		ug/kg	130	27.
Isophorone	ND		ug/kg	150	22.
Naphthalene	ND		ug/kg	160	20.
Nitrobenzene	ND		ug/kg	150	24.
NDPA/DPA	ND		ug/kg	130	19.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	26.
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	57.
Butyl benzyl phthalate	ND		ug/kg	160	42.
Di-n-butylphthalate	ND		ug/kg	160	31.
Di-n-octylphthalate	ND		ug/kg	160	56.
Diethyl phthalate	ND		ug/kg	160	15.
Dimethyl phthalate	ND		ug/kg	160	35.
Benzo(a)anthracene	ND		ug/kg	99	19.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	99	28.

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 08/21/23 14:06
Analyst: MG

Extraction Method: EPA 3546
Extraction Date: 08/20/23 04:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1817942-1					
Benzo(k)fluoranthene	ND		ug/kg	99	26.
Chrysene	ND		ug/kg	99	17.
Acenaphthylene	ND		ug/kg	130	26.
Anthracene	ND		ug/kg	99	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	99	20.
Dibenzo(a,h)anthracene	ND		ug/kg	99	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	99	16.
Biphenyl	ND		ug/kg	380	22.
4-Chloroaniline	ND		ug/kg	160	30.
2-Nitroaniline	ND		ug/kg	160	32.
3-Nitroaniline	ND		ug/kg	160	31.
4-Nitroaniline	ND		ug/kg	160	68.
Dibenzofuran	ND		ug/kg	160	16.
2-Methylnaphthalene	ND		ug/kg	200	20.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	17.
Acetophenone	ND		ug/kg	160	20.
2,4,6-Trichlorophenol	ND		ug/kg	99	31.
p-Chloro-m-cresol	ND		ug/kg	160	25.
2-Chlorophenol	ND		ug/kg	160	20.
2,4-Dichlorophenol	ND		ug/kg	150	27.
2,4-Dimethylphenol	ND		ug/kg	160	55.
2-Nitrophenol	ND		ug/kg	360	62.
4-Nitrophenol	ND		ug/kg	230	68.
2,4-Dinitrophenol	ND		ug/kg	800	77.
4,6-Dinitro-o-cresol	ND		ug/kg	430	80.
Pentachlorophenol	ND		ug/kg	130	36.

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 08/21/23 14:06
Analyst: MG

Extraction Method: EPA 3546
Extraction Date: 08/20/23 04:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1817942-1					
Phenol	ND		ug/kg	160	25.
2-Methylphenol	ND		ug/kg	160	26.
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	26.
2,4,5-Trichlorophenol	ND		ug/kg	160	32.
Carbazole	ND		ug/kg	160	16.
Atrazine	ND		ug/kg	130	58.
Benzaldehyde	ND		ug/kg	220	45.
Caprolactam	ND		ug/kg	160	50.
2,3,4,6-Tetrachlorophenol	ND		ug/kg	160	33.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	94		25-120
Phenol-d6	97		10-120
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	113		30-120
2,4,6-Tribromophenol	119		10-136
4-Terphenyl-d14	119		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

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: WG1817942-2 WG1817942-3								
Acenaphthene	72		87		31-137	19		50
Hexachlorobenzene	88		101		40-140	14		50
Bis(2-chloroethyl)ether	64		76		40-140	17		50
2-Chloronaphthalene	83		95		40-140	13		50
3,3'-Dichlorobenzidine	90		102		40-140	13		50
2,4-Dinitrotoluene	89		103		40-132	15		50
2,6-Dinitrotoluene	91		100		40-140	9		50
Fluoranthene	80		90		40-140	12		50
4-Chlorophenyl phenyl ether	82		96		40-140	16		50
4-Bromophenyl phenyl ether	85		98		40-140	14		50
Bis(2-chloroisopropyl)ether	62		76		40-140	20		50
Bis(2-chloroethoxy)methane	66		77		40-117	15		50
Hexachlorobutadiene	83		104		40-140	22		50
Hexachlorocyclopentadiene	92		110		40-140	18		50
Hexachloroethane	60		72		40-140	18		50
Isophorone	67		76		40-140	13		50
Naphthalene	72		88		40-140	20		50
Nitrobenzene	66		76		40-140	14		50
NDPA/DPA	80		92		36-157	14		50
n-Nitrosodi-n-propylamine	67		78		32-121	15		50
Bis(2-ethylhexyl)phthalate	81		96		40-140	17		50
Butyl benzyl phthalate	76		87		40-140	13		50
Di-n-butylphthalate	77		91		40-140	17		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

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: WG1817942-2 WG1817942-3								
Di-n-octylphthalate	82		97		40-140	17		50
Diethyl phthalate	77		89		40-140	14		50
Dimethyl phthalate	84		93		40-140	10		50
Benzo(a)anthracene	81		95		40-140	16		50
Benzo(a)pyrene	83		107		40-140	25		50
Benzo(b)fluoranthene	75		93		40-140	21		50
Benzo(k)fluoranthene	76		100		40-140	27		50
Chrysene	79		95		40-140	18		50
Acenaphthylene	83		93		40-140	11		50
Anthracene	79		92		40-140	15		50
Benzo(ghi)perylene	82		103		40-140	23		50
Fluorene	78		92		40-140	16		50
Phenanthrene	77		91		40-140	17		50
Dibenzo(a,h)anthracene	84		105		40-140	22		50
Indeno(1,2,3-cd)pyrene	85		106		40-140	22		50
Pyrene	79		90		35-142	13		50
Biphenyl	86		97		37-127	12		50
4-Chloroaniline	63		73		40-140	15		50
2-Nitroaniline	95		106		47-134	11		50
3-Nitroaniline	81		91		26-129	12		50
4-Nitroaniline	83		94		41-125	12		50
Dibenzofuran	80		95		40-140	17		50
2-Methylnaphthalene	79		92		40-140	15		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

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: WG1817942-2 WG1817942-3								
1,2,4,5-Tetrachlorobenzene	89		106		40-117	17		50
Acetophenone	72		85		14-144	17		50
2,4,6-Trichlorophenol	94		108		30-130	14		50
p-Chloro-m-cresol	74		82		26-103	10		50
2-Chlorophenol	75		87		25-102	15		50
2,4-Dichlorophenol	90		100		30-130	11		50
2,4-Dimethylphenol	73		81		30-130	10		50
2-Nitrophenol	87		103		30-130	17		50
4-Nitrophenol	70		80		11-114	13		50
2,4-Dinitrophenol	66		75		4-130	13		50
4,6-Dinitro-o-cresol	107		120		10-130	11		50
Pentachlorophenol	99		108		17-109	9		50
Phenol	74		82		26-90	10		50
2-Methylphenol	76		86		30-130.	12		50
3-Methylphenol/4-Methylphenol	75		86		30-130	14		50
2,4,5-Trichlorophenol	101		108		30-130	7		50
Carbazole	78		90		54-128	14		50
Atrazine	80		86		40-140	7		50
Benzaldehyde	103		126		40-140	20		50
Caprolactam	71		79		15-130	11		50
2,3,4,6-Tetrachlorophenol	91		103		40-140	12		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

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: WG1817942-2 WG1817942-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	76		84		25-120
Phenol-d6	79		86		10-120
Nitrobenzene-d5	69		79		23-120
2-Fluorobiphenyl	90		98		30-120
2,4,6-Tribromophenol	108		119		10-136
4-Terphenyl-d14	83		91		18-120

METALS

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01
Client ID: BREEZE-08172023
Sample Location: 3875 RIVER ROAD
Date Collected: 08/17/23 11:35
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	1760		mg/kg	9.15	2.47	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Antimony, Total	ND		mg/kg	4.58	0.348	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Arsenic, Total	5.38		mg/kg	0.915	0.190	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Barium, Total	35.5		mg/kg	0.915	0.159	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Beryllium, Total	0.268	J	mg/kg	0.458	0.030	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Cadmium, Total	ND		mg/kg	0.915	0.090	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Calcium, Total	4740		mg/kg	9.15	3.20	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Chromium, Total	5.44		mg/kg	0.915	0.088	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Cobalt, Total	2.36		mg/kg	1.83	0.152	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Copper, Total	17.1		mg/kg	0.915	0.236	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Iron, Total	6210		mg/kg	4.58	0.826	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Lead, Total	8.57		mg/kg	4.58	0.245	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Magnesium, Total	991		mg/kg	9.15	1.41	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Manganese, Total	76.2		mg/kg	0.915	0.146	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Mercury, Total	0.075	J	mg/kg	0.086	0.056	1	08/22/23 17:18	08/28/23 17:42	EPA 7471B	1,7471B	DMB
Nickel, Total	5.17		mg/kg	2.29	0.221	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Potassium, Total	233		mg/kg	229	13.2	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Selenium, Total	1.12	J	mg/kg	1.83	0.236	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Silver, Total	ND		mg/kg	0.458	0.259	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Sodium, Total	116	J	mg/kg	183	2.88	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Thallium, Total	ND		mg/kg	1.83	0.288	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Vanadium, Total	4.08		mg/kg	0.915	0.186	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Zinc, Total	23.6		mg/kg	4.58	0.268	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS

Project Name: RITC **Lab Number:** L2347700

Project Number: BENCH SCALE-TOC **Report Date:** 08/31/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1818746-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Antimony, Total	0.922	J	mg/kg	2.00	0.152	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Arsenic, Total	ND		mg/kg	0.400	0.083	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Barium, Total	ND		mg/kg	0.400	0.070	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Beryllium, Total	ND		mg/kg	0.200	0.013	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Cadmium, Total	ND		mg/kg	0.400	0.039	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Calcium, Total	ND		mg/kg	4.00	1.40	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Chromium, Total	ND		mg/kg	0.400	0.038	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Cobalt, Total	0.091	J	mg/kg	0.800	0.066	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Copper, Total	ND		mg/kg	0.400	0.103	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Iron, Total	0.751	J	mg/kg	2.00	0.361	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Lead, Total	ND		mg/kg	2.00	0.107	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Magnesium, Total	ND		mg/kg	4.00	0.616	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Manganese, Total	ND		mg/kg	0.400	0.064	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Nickel, Total	ND		mg/kg	1.00	0.097	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Potassium, Total	ND		mg/kg	100	5.76	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Selenium, Total	ND		mg/kg	0.800	0.103	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Silver, Total	ND		mg/kg	0.200	0.113	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Sodium, Total	1.46	J	mg/kg	80.0	1.26	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Thallium, Total	0.198	J	mg/kg	0.800	0.126	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Vanadium, Total	ND		mg/kg	0.400	0.081	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Zinc, Total	ND		mg/kg	2.00	0.117	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1818748-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	08/22/23 17:18	08/28/23 17:22	1,7471B	DMB

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: BENCH SCALE-TOC

Lab Number: L2347700

Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1818746-2 SRM Lot Number: D119-540								
Aluminum, Total	79		-		48-152	-		
Antimony, Total	174		-		10-190	-		
Arsenic, Total	104		-		83-117	-		
Barium, Total	102		-		82-118	-		
Beryllium, Total	102		-		83-117	-		
Cadmium, Total	94		-		82-117	-		
Calcium, Total	101		-		81-118	-		
Chromium, Total	104		-		82-119	-		
Cobalt, Total	100		-		83-117	-		
Copper, Total	96		-		84-116	-		
Iron, Total	110		-		60-140	-		
Lead, Total	102		-		82-118	-		
Magnesium, Total	92		-		76-124	-		
Manganese, Total	115		-		82-118	-		
Nickel, Total	98		-		82-117	-		
Potassium, Total	92		-		70-130	-		
Selenium, Total	106		-		79-121	-		
Silver, Total	102		-		80-120	-		
Sodium, Total	99		-		74-126	-		
Thallium, Total	100		-		81-119	-		
Vanadium, Total	98		-		79-121	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: BENCH SCALE-TOC

Lab Number: L2347700

Report Date: 08/31/23

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1818746-2 SRM Lot Number: D119-540					
Zinc, Total	104	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1818748-2 SRM Lot Number: D119-540					
Mercury, Total	100	-	73-127	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1818746-3 QC Sample: L2347595-01 Client ID: MS Sample												
Aluminum, Total	6260	183	8150	**1030**	Q	-	-		75-125	-		20
Antimony, Total	ND	45.8	47.6	104		-	-		75-125	-		20
Arsenic, Total	5.05	11	16.6	105		-	-		75-125	-		20
Barium, Total	66.5	183	246	98		-	-		75-125	-		20
Beryllium, Total	0.507	4.58	5.11	100		-	-		75-125	-		20
Cadmium, Total	ND	4.85	4.39	90		-	-		75-125	-		20
Calcium, Total	2310	915	3350	114		-	-		75-125	-		20
Chromium, Total	28.2	18.3	41.1	**70**	Q	-	-		75-125	-		20
Cobalt, Total	6.15	45.8	49.1	94		-	-		75-125	-		20
Copper, Total	11.5	22.9	34.7	101		-	-		75-125	-		20
Iron, Total	12400	91.5	12700	**328**	Q	-	-		75-125	-		20
Lead, Total	60.5	48.5	116	114		-	-		75-125	-		20
Magnesium, Total	3790	915	2410	**0**	Q	-	-		75-125	-		20
Manganese, Total	240	45.8	252	**26**	Q	-	-		75-125	-		20
Nickel, Total	42.2	45.8	54.4	**27**	Q	-	-		75-125	-		20
Potassium, Total	580	915	1550	106		-	-		75-125	-		20
Selenium, Total	0.219J	11	10.9	99		-	-		75-125	-		20
Silver, Total	ND	4.58	4.69	102		-	-		75-125	-		20
Sodium, Total	55.7J	915	941	103		-	-		75-125	-		20
Thallium, Total	ND	11	10.9	99		-	-		75-125	-		20
Vanadium, Total	25.6	45.8	69.9	97		-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1818746-3 QC Sample: L2347595-01 Client ID: MS Sample									
Zinc, Total	51.2	45.8	94.3	94	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1818748-3 QC Sample: L2347595-01 Client ID: MS Sample									
Mercury, Total	ND	1.7	1.77	104	-	-	80-120	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1818746-4 QC Sample: L2347595-01 Client ID: DUP Sample						
Aluminum, Total	6260	6160	mg/kg	2		20
Antimony, Total	ND	ND	mg/kg	NC		20
Arsenic, Total	5.05	4.99	mg/kg	1		20
Barium, Total	66.5	63.9	mg/kg	4		20
Beryllium, Total	0.507	0.486	mg/kg	4		20
Cadmium, Total	ND	ND	mg/kg	NC		20
Chromium, Total	28.2	20.1	mg/kg	**34**	Q	20
Cobalt, Total	6.15	4.40	mg/kg	**33**	Q	20
Copper, Total	11.5	15.8	mg/kg	**32**	Q	20
Iron, Total	12400	11700	mg/kg	6		20
Lead, Total	60.5	56.7	mg/kg	6		20
Manganese, Total	240	219	mg/kg	9		20
Nickel, Total	42.2	9.12	mg/kg	**129**	Q	20
Selenium, Total	0.219J	0.261J	mg/kg	NC		20
Silver, Total	ND	0.160J	mg/kg	NC		20
Thallium, Total	ND	ND	mg/kg	NC		20
Vanadium, Total	25.6	25.9	mg/kg	1		20
Zinc, Total	51.2	45.1	mg/kg	13		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: RITC

Project Number: BENCH SCALE-TOC

Lab Number: L2347700

Report Date: 08/31/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1818748-4 QC Sample: L2347595-01 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/kg	NC	20

INORGANICS
&
MISCELLANEOUS

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01
Client ID: BREEZE-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:35
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon	78.0		%	0.010	0.010	1	-	08/28/23 08:43	1,9060A	SPP
General Chemistry - Westborough Lab										
Solids, Total	85.3		%	0.100	NA	1	-	08/18/23 13:45	121,2540G	ROI
Cyanide, Total	0.75	J	mg/kg	1.1	0.24	1	08/19/23 16:00	08/21/23 15:14	1,9010C/9012B	KEP
Nitrogen, Ammonia	9.1		mg/kg	8.3	3.1	1	08/20/23 10:40	08/20/23 17:22	121,4500NH3-BH	AVT

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-02
Client ID: SS-BCP-24-02-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:45
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	93.0		%	0.100	NA	1	-	08/18/23 13:45	121,2540G	ROI
Cyanide, Total	29		mg/kg	2.0	0.43	2	08/19/23 16:00	08/21/23 16:11	1,9010C/9012B	KEP
Nitrogen, Ammonia	9.9		mg/kg	8.0	3.0	1	08/20/23 10:40	08/20/23 17:25	121,4500NH3-BH	AVT

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-03
Client ID: SS-BCP-24-04-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:45
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.0		%	0.100	NA	1	-	08/18/23 13:45	121,2540G	ROI
Cyanide, Total	53		mg/kg	5.3	1.1	5	08/19/23 16:00	08/21/23 16:13	1,9010C/9012B	KEP
Nitrogen, Ammonia	150		mg/kg	7.3	2.7	1	08/20/23 10:40	08/20/23 17:26	121,4500NH3-BH	AVT

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-04
Client ID: SS-BCP-24-06-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:48
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.9		%	0.100	NA	1	-	08/18/23 13:45	121,2540G	ROI
Cyanide, Total	25		mg/kg	2.0	0.43	2	08/19/23 16:00	08/21/23 16:14	1,9010C/9012B	KEP
Nitrogen, Ammonia	20		mg/kg	6.4	2.4	1	08/20/23 10:40	08/20/23 17:27	121,4500NH3-BH	AVT

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

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): 01-02 Batch: WG1817873-1										
Cyanide, Total	ND		mg/kg	0.86	0.18	1	08/19/23 16:00	08/21/23 15:10	1,9010C/9012B	KEP
General Chemistry - Westborough Lab for sample(s): 03-04 Batch: WG1817875-1										
Cyanide, Total	ND		mg/kg	0.86	0.18	1	08/19/23 16:00	08/21/23 15:10	1,9010C/9012B	KEP
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1817932-1										
Nitrogen, Ammonia	ND		mg/kg	7.5	0.02	1	08/20/23 10:40	08/20/23 17:19	121,4500NH3-BH	AVT
Total Organic Carbon - Mansfield Lab for sample(s): 01 Batch: WG1820886-1										
Total Organic Carbon	ND		%	0.010	0.010	1	-	08/28/23 08:43	1,9060A	SPP

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: BENCH SCALE-TOC

Lab Number: L2347700

Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1817873-2 WG1817873-3								
Cyanide, Total	87		**77**	Q	80-120	15		35
General Chemistry - Westborough Lab Associated sample(s): 03-04 Batch: WG1817875-2 WG1817875-3								
Cyanide, Total	87		**76**	Q	80-120	15		35
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1817932-2								
Nitrogen, Ammonia	93		-		83-115	-		20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01 Batch: WG1820886-2								
Total Organic Carbon	96		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

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): 01-02 QC Batch ID: WG1817873-4 WG1817873-5 QC Sample: L2347700-01 Client ID: BREEZE-08172023												
Cyanide, Total	0.75J	12	12	97		12	98		75-125	0		35
General Chemistry - Westborough Lab Associated sample(s): 03-04 QC Batch ID: WG1817875-4 WG1817875-5 QC Sample: L2347803-04 Client ID: MS Sample												
Cyanide, Total	ND	10	9.8	96		10	95		75-125	2		35
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1817932-4 QC Sample: L2347700-01 Client ID: BREEZE-08172023												
Nitrogen, Ammonia	9.1	390	350	88		-	-		55-144	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: RITC

Project Number: BENCH SCALE-TOC

Lab Number: L2347700

Report Date: 08/31/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1817424-1 QC Sample: L2347609-01 Client ID: DUP Sample						
Solids, Total	88.3	88.6	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1817932-3 QC Sample: L2347700-01 Client ID: BREEZE-08172023						
Nitrogen, Ammonia	9.1	63	mg/kg	**150**	Q	20

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

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(*)
L2347700-01A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),AL-TI(180),SB-TI(180),ZN-TI(180),PB-TI(180),SE-TI(180),CU-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MN-TI(180),MG-TI(180),CA-TI(180),NA-TI(180),K-TI(180),CD-TI(180)
L2347700-01B	Vial Large Septa unpreserved (4oz)	A	NA		2.3	Y	Absent		NYTCL-8260-R2(14)
L2347700-01C	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		A2-TOC-9060(28)
L2347700-01D	Glass 250ml/8oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),NYTCL-8270(14),TS(7),NH3-4500(28)
L2347700-01E	Glass 250ml/8oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),NYTCL-8270(14),TS(7),NH3-4500(28)
L2347700-01X	Vial MeOH preserved split	A	NA		2.3	Y	Absent		NYTCL-8260-R2(14)
L2347700-01Y	Vial Water preserved split	A	NA		2.3	Y	Absent	18-AUG-23 13:49	NYTCL-8260-R2(14)
L2347700-01Z	Vial Water preserved split	A	NA		2.3	Y	Absent	18-AUG-23 13:49	NYTCL-8260-R2(14)
L2347700-02A	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),TS(7),NH3-4500(28)
L2347700-02B	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),TS(7),NH3-4500(28)
L2347700-03A	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),TS(7),NH3-4500(28)
L2347700-03B	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),TS(7),NH3-4500(28)
L2347700-04A	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),TS(7),NH3-4500(28)
L2347700-04B	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),TS(7),NH3-4500(28)

*Values in parentheses indicate holding time in days

Project Name:	RITC	**Lab Number:**	L2347700
Project Number:	BENCH SCALE-TOC	**Report Date:**	08/31/23

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	RITC	**Lab Number:**	L2347700
Project Number:	BENCH SCALE-TOC	**Report Date:**	08/31/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	RITC	**Lab Number:**	L2347700
Project Number:	BENCH SCALE-TOC	**Report Date:**	08/31/23

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.)

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

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, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-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, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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

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 1 of 1

Date Rec'd in Lab: 8/18/23

ALPHA Job #: L2347100

Client Information
Client: INVENTUM ENG.
Address: 441 Carlisle Drive C.
HERNDON VA
Phone: 716-553-5129
Fax:
Email: Roxanne.Bisk@inventumeng.com

Project Information
Project Name: RITC
Project Location: 3875 River Road
Project #: BENCH SCALE - TOC
(Use Project name as Project #) ☐
Project Manager: JOHN BLACK
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☒ # of Days: 5

Deliverables
☐ ASP-A ☐ ASP-B
☒ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☒ Same as Client Info
PO #

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:
*NEED REPORT BY MONDAY 8/28
TAL METALS DO not Require Rush

Please specify Metals or TAL.

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	Collection Time	Sample Matrix	Sampler's Initials	TOTAL ORGANIC CARBON	TCL VOCS 8260	TCL SVOCS 8270	TAL METALS, Hg 6010	AMMONIA - 350.1	T. CYANIDE 9012			Total Bottle
47708-01	BREEZE-08172023	8/17/23	1135	RB	SD	X	X	X	X	X	X			
-02	SS-BCP-24-02-08172023	8/17/23	1145	SD	RB					X	X			
-03	SS-BCP-24-04-08172023	8/17/23	1145	SD	RB					X	X			
-04	SS-BCP-24-06-08172023	8/17/23	1148	SD	RB					X	X			

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
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	A	A												
Preservative	A	A												

Relinquished By:	Date/Time	Received By:	Date/Time
	8/17/23 1755		8/17/23 1253
	8/17/23 1255		8/18/23 0100

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.)

Form No: 01-25 HC (rev. 30-Sept-2013)

PARADIGM

PARADIGM
ENVIRONMENTAL SERVICES, INC

Analytical Report For

Inventum Engineering, P.C.

For Lab Project ID

234271

Referencing

Breeze Water Testing

Prepared

Monday, September 25, 2023

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below.

Emily Laumen

Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Sample Identifier:	BreezeTest-01-09132023		
Lab Sample ID:	234271-01	**Date Sampled:** 9/13/2023	16:15
Matrix:	Groundwater	**Date Received** 9/15/2023	

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	**7.7**	mg/L		9/19/2023

Method Reference(s): EPA 350.1 Rev 2.0
Subcontractor ELAP ID: 10709

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.200**	mg/L		9/19/2023

Method Reference(s): EPA 335.4 Rev 1.0
Subcontractor ELAP ID: 10709

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/20/2023 17:23
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/20/2023 17:23
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/20/2023 17:23
1,2-Dichlorobenzene	< 10.0	ug/L		9/20/2023 17:23
1,3-Dichlorobenzene	< 10.0	ug/L		9/20/2023 17:23
1,4-Dichlorobenzene	< 10.0	ug/L		9/20/2023 17:23
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/20/2023 17:23
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/20/2023 17:23
2,4,5-Trichlorophenol	< 10.0	ug/L		9/20/2023 17:23
2,4,6-Trichlorophenol	< 20.0	ug/L		9/20/2023 17:23
2,4-Dichlorophenol	< 10.0	ug/L		9/20/2023 17:23
2,4-Dimethylphenol	< 10.0	ug/L		9/20/2023 17:23
2,4-Dinitrophenol	< 20.0	ug/L		9/20/2023 17:23
2,4-Dinitrotoluene	< 10.0	ug/L		9/20/2023 17:23
2,6-Dinitrotoluene	< 10.0	ug/L		9/20/2023 17:23
2-Chloronaphthalene	< 10.0	ug/L		9/20/2023 17:23
2-Chlorophenol	< 10.0	ug/L		9/20/2023 17:23

Sample Identifier:	BreezeTest-01-09132023		
Lab Sample ID:	234271-01	**Date Sampled:** 9/13/2023	16:15
Matrix:	Groundwater	**Date Received** 9/15/2023	

2-Methylnapthalene	< 10.0	ug/L	9/20/2023	17:23
2-Methylphenol	< 10.0	ug/L	9/20/2023	17:23
2-Nitroaniline	< 20.0	ug/L	9/20/2023	17:23
2-Nitrophenol	< 10.0	ug/L	9/20/2023	17:23
3&4-Methylphenol	< 10.0	ug/L	9/20/2023	17:23
3,3'-Dichlorobenzidine	< 10.0	ug/L	9/20/2023	17:23
3-Nitroaniline	< 20.0	ug/L	9/20/2023	17:23
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/20/2023	17:23
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/20/2023	17:23
4-Chloro-3-methylphenol	< 10.0	ug/L	9/20/2023	17:23
4-Chloroaniline	< 10.0	ug/L	9/20/2023	17:23
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/20/2023	17:23
4-Nitroaniline	< 20.0	ug/L	9/20/2023	17:23
4-Nitrophenol	< 20.0	ug/L	9/20/2023	17:23
Acenaphthene	< 10.0	ug/L	9/20/2023	17:23
Acenaphthylene	< 10.0	ug/L	9/20/2023	17:23
Acetophenone	< 10.0	ug/L	9/20/2023	17:23
Anthracene	< 10.0	ug/L	9/20/2023	17:23
Atrazine	< 25.0	ug/L	9/20/2023	17:23
Benzaldehyde	< 10.0	ug/L	9/20/2023	17:23
Benzo (a) anthracene	< 10.0	ug/L	9/20/2023	17:23
Benzo (a) pyrene	< 10.0	ug/L	9/20/2023	17:23
Benzo (b) fluoranthene	< 10.0	ug/L	9/20/2023	17:23
Benzo (g,h,i) perylene	< 10.0	ug/L	9/20/2023	17:23
Benzo (k) fluoranthene	< 10.0	ug/L	9/20/2023	17:23
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/20/2023	17:23
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/20/2023	17:23
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/20/2023	17:23
Butylbenzylphthalate	< 10.0	ug/L	9/20/2023	17:23
Caprolactam	< 10.0	ug/L	9/20/2023	17:23

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-01-09132023		
Lab Sample ID:	234271-01	**Date Sampled:** 9/13/2023	16:15
Matrix:	Groundwater	**Date Received** 9/15/2023	

Carbazole	< 10.0	ug/L	9/20/2023	17:23
Chrysene	< 10.0	ug/L	9/20/2023	17:23
Dibenz (a,h) anthracene	< 10.0	ug/L	9/20/2023	17:23
Dibenzofuran	< 10.0	ug/L	9/20/2023	17:23
Diethyl phthalate	< 10.0	ug/L	9/20/2023	17:23
Dimethyl phthalate	< 20.0	ug/L	9/20/2023	17:23
Di-n-butyl phthalate	< 10.0	ug/L	9/20/2023	17:23
Di-n-octylphthalate	< 10.0	ug/L	9/20/2023	17:23
Fluoranthene	< 10.0	ug/L	9/20/2023	17:23
Fluorene	< 10.0	ug/L	9/20/2023	17:23
Hexachlorobenzene	< 10.0	ug/L	9/20/2023	17:23
Hexachlorobutadiene	< 10.0	ug/L	9/20/2023	17:23
Hexachlorocyclopentadiene	< 10.0	ug/L	9/20/2023	17:23
Hexachloroethane	< 10.0	ug/L	9/20/2023	17:23
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/20/2023	17:23
Isophorone	< 10.0	ug/L	9/20/2023	17:23
Naphthalene	< 10.0	ug/L	9/20/2023	17:23
Nitrobenzene	< 10.0	ug/L	9/20/2023	17:23
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/20/2023	17:23
N-Nitrosodiphenylamine	< 10.0	ug/L	9/20/2023	17:23
Pentachlorophenol	< 20.0	ug/L	9/20/2023	17:23
Phenanthrene	< 10.0	ug/L	9/20/2023	17:23
Phenol	< 10.0	ug/L	9/20/2023	17:23
Pyrene	< 10.0	ug/L	9/20/2023	17:23

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-01-09132023
Lab Sample ID: 234271-01 **Date Sampled:** 9/13/2023 16:15
Matrix: Groundwater **Date Received** 9/15/2023

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**70.0**	49 - 127		9/20/2023 17:23
2-Fluorobiphenyl	**36.7**	10 - 107		9/20/2023 17:23
2-Fluorophenol	**28.1**	10.6 - 109		9/20/2023 17:23
Nitrobenzene-d5	**57.5**	41 - 106		9/20/2023 17:23
Phenol-d5	**21.4**	10 - 109		9/20/2023 17:23
Terphenyl-d14	**67.1**	49.6 - 120		9/20/2023 17:23

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66927.D

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 40.0	ug/L		9/20/2023 19:04
1,1,2,2-Tetrachloroethane	< 40.0	ug/L		9/20/2023 19:04
1,1,2-Trichloroethane	< 40.0	ug/L		9/20/2023 19:04
1,1-Dichloroethane	< 40.0	ug/L		9/20/2023 19:04
1,1-Dichloroethene	< 40.0	ug/L		9/20/2023 19:04
1,2,3-Trichlorobenzene	< 100	ug/L		9/20/2023 19:04
1,2,4-Trichlorobenzene	< 100	ug/L		9/20/2023 19:04
1,2-Dibromo-3-Chloropropane	< 200	ug/L		9/20/2023 19:04
1,2-Dibromoethane	< 40.0	ug/L		9/20/2023 19:04
1,2-Dichlorobenzene	< 40.0	ug/L		9/20/2023 19:04
1,2-Dichloroethane	< 40.0	ug/L		9/20/2023 19:04
1,2-Dichloropropane	< 40.0	ug/L		9/20/2023 19:04
1,3-Dichlorobenzene	< 40.0	ug/L		9/20/2023 19:04
1,4-Dichlorobenzene	< 40.0	ug/L		9/20/2023 19:04
1,4-Dioxane	< 200	ug/L		9/20/2023 19:04
2-Butanone	< 200	ug/L		9/20/2023 19:04
2-Hexanone	< 100	ug/L		9/20/2023 19:04
4-Methyl-2-pentanone	< 100	ug/L		9/20/2023 19:04

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-01-09132023		
Lab Sample ID:	234271-01	**Date Sampled:** 9/13/2023	16:15
Matrix:	Groundwater	**Date Received** 9/15/2023	

Acetone	**236**	ug/L	9/20/2023	19:04
Benzene	**519**	ug/L	9/20/2023	19:04
Bromochloromethane	< 100	ug/L	9/20/2023	19:04
Bromodichloromethane	< 40.0	ug/L	9/20/2023	19:04
Bromoform	< 100	ug/L	9/20/2023	19:04
Bromomethane	< 40.0	ug/L	9/20/2023	19:04
Carbon disulfide	< 40.0	ug/L	9/20/2023	19:04
Carbon Tetrachloride	< 40.0	ug/L	9/20/2023	19:04
Chlorobenzene	< 40.0	ug/L	9/20/2023	19:04
Chloroethane	< 40.0	ug/L	9/20/2023	19:04
Chloroform	< 40.0	ug/L	9/20/2023	19:04
Chloromethane	< 40.0	ug/L	9/20/2023	19:04
cis-1,2-Dichloroethene	< 40.0	ug/L	9/20/2023	19:04
cis-1,3-Dichloropropene	< 40.0	ug/L	9/20/2023	19:04
Cyclohexane	< 200	ug/L	9/20/2023	19:04
Dibromochloromethane	< 40.0	ug/L	9/20/2023	19:04
Dichlorodifluoromethane	< 40.0	ug/L	9/20/2023	19:04
Ethylbenzene	< 40.0	ug/L	9/20/2023	19:04
Freon 113	< 40.0	ug/L	9/20/2023	19:04
Isopropylbenzene	< 40.0	ug/L	9/20/2023	19:04
m,p-Xylene	**44.8**	ug/L	9/20/2023	19:04
Methyl acetate	< 40.0	ug/L	9/20/2023	19:04
Methyl tert-butyl Ether	< 40.0	ug/L	9/20/2023	19:04
Methylcyclohexane	< 40.0	ug/L	9/20/2023	19:04
Methylene chloride	< 100	ug/L	9/20/2023	19:04
o-Xylene	< 40.0	ug/L	9/20/2023	19:04
Styrene	< 100	ug/L	9/20/2023	19:04
Tetrachloroethene	< 40.0	ug/L	9/20/2023	19:04
Toluene	**67.2**	ug/L	9/20/2023	19:04
trans-1,2-Dichloroethene	< 40.0	ug/L	9/20/2023	19:04

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-01-09132023		
Lab Sample ID:	234271-01	**Date Sampled:** 9/13/2023	16:15
Matrix:	Groundwater	**Date Received** 9/15/2023	

trans-1,3-Dichloropropene	< 40.0	ug/L	9/20/2023	19:04
Trichloroethene	< 40.0	ug/L	9/20/2023	19:04
Trichlorofluoromethane	< 40.0	ug/L	9/20/2023	19:04
Vinyl chloride	< 40.0	ug/L	9/20/2023	19:04

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**106**	79.7 - 118		9/20/2023	19:04
4-Bromofluorobenzene	**98.9**	80.1 - 112		9/20/2023	19:04
Pentafluorobenzene	**97.0**	88 - 115		9/20/2023	19:04
Toluene-D8	**109**	88.2 - 113		9/20/2023	19:04

Method Reference(s): EPA 8260C
EPA 5030C

Data File: z19680.D

Sample Identifier:	BreezeTest-02-09152023		
Lab Sample ID:	234271-02	**Date Sampled:**	9/15/2023 9:00
Matrix:	Groundwater	**Date Received**	9/15/2023

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	**1.2**	mg/L		9/19/2023

Method Reference(s): EPA 350.1 Rev 2.0
Subcontractor ELAP ID: 10709

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.0560**	mg/L		9/19/2023

Method Reference(s): EPA 335.4 Rev 1.0
Subcontractor ELAP ID: 10709

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/20/2023 17:52
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/20/2023 17:52
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/20/2023 17:52
1,2-Dichlorobenzene	< 10.0	ug/L		9/20/2023 17:52
1,3-Dichlorobenzene	< 10.0	ug/L		9/20/2023 17:52
1,4-Dichlorobenzene	< 10.0	ug/L		9/20/2023 17:52
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/20/2023 17:52
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/20/2023 17:52
2,4,5-Trichlorophenol	< 10.0	ug/L		9/20/2023 17:52
2,4,6-Trichlorophenol	< 20.0	ug/L		9/20/2023 17:52
2,4-Dichlorophenol	< 10.0	ug/L		9/20/2023 17:52
2,4-Dimethylphenol	< 10.0	ug/L		9/20/2023 17:52
2,4-Dinitrophenol	< 20.0	ug/L		9/20/2023 17:52
2,4-Dinitrotoluene	< 10.0	ug/L		9/20/2023 17:52
2,6-Dinitrotoluene	< 10.0	ug/L		9/20/2023 17:52
2-Chloronaphthalene	< 10.0	ug/L		9/20/2023 17:52
2-Chlorophenol	< 10.0	ug/L		9/20/2023 17:52

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-02-09152023
Lab Sample ID: 234271-02 **Date Sampled:** 9/15/2023 9:00
Matrix: Groundwater **Date Received** 9/15/2023

2-Methylnapthalene	< 10.0	ug/L	9/20/2023 17:52
2-Methylphenol	< 10.0	ug/L	9/20/2023 17:52
2-Nitroaniline	< 20.0	ug/L	9/20/2023 17:52
2-Nitrophenol	< 10.0	ug/L	9/20/2023 17:52
3&4-Methylphenol	< 10.0	ug/L	9/20/2023 17:52
3,3'-Dichlorobenzidine	< 10.0	ug/L	9/20/2023 17:52
3-Nitroaniline	< 20.0	ug/L	9/20/2023 17:52
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/20/2023 17:52
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/20/2023 17:52
4-Chloro-3-methylphenol	< 10.0	ug/L	9/20/2023 17:52
4-Chloroaniline	< 10.0	ug/L	9/20/2023 17:52
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/20/2023 17:52
4-Nitroaniline	< 20.0	ug/L	9/20/2023 17:52
4-Nitrophenol	< 20.0	ug/L	9/20/2023 17:52
Acenaphthene	< 10.0	ug/L	9/20/2023 17:52
Acenaphthylene	< 10.0	ug/L	9/20/2023 17:52
Acetophenone	< 10.0	ug/L	9/20/2023 17:52
Anthracene	< 10.0	ug/L	9/20/2023 17:52
Atrazine	< 25.0	ug/L	9/20/2023 17:52
Benzaldehyde	< 10.0	ug/L	9/20/2023 17:52
Benzo (a) anthracene	< 10.0	ug/L	9/20/2023 17:52
Benzo (a) pyrene	< 10.0	ug/L	9/20/2023 17:52
Benzo (b) fluoranthene	< 10.0	ug/L	9/20/2023 17:52
Benzo (g,h,i) perylene	< 10.0	ug/L	9/20/2023 17:52
Benzo (k) fluoranthene	< 10.0	ug/L	9/20/2023 17:52
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/20/2023 17:52
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/20/2023 17:52
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/20/2023 17:52
Butylbenzylphthalate	< 10.0	ug/L	9/20/2023 17:52
Caprolactam	< 10.0	ug/L	9/20/2023 17:52

Sample Identifier:	BreezeTest-02-09152023		
Lab Sample ID:	234271-02	**Date Sampled:**	9/15/2023 9:00
Matrix:	Groundwater	**Date Received**	9/15/2023

Carbazole	< 10.0	ug/L	9/20/2023 17:52
Chrysene	< 10.0	ug/L	9/20/2023 17:52
Dibenz (a,h) anthracene	< 10.0	ug/L	9/20/2023 17:52
Dibenzofuran	< 10.0	ug/L	9/20/2023 17:52
Diethyl phthalate	< 10.0	ug/L	9/20/2023 17:52
Dimethyl phthalate	< 20.0	ug/L	9/20/2023 17:52
Di-n-butyl phthalate	< 10.0	ug/L	9/20/2023 17:52
Di-n-octylphthalate	< 10.0	ug/L	9/20/2023 17:52
Fluoranthene	< 10.0	ug/L	9/20/2023 17:52
Fluorene	< 10.0	ug/L	9/20/2023 17:52
Hexachlorobenzene	< 10.0	ug/L	9/20/2023 17:52
Hexachlorobutadiene	< 10.0	ug/L	9/20/2023 17:52
Hexachlorocyclopentadiene	< 10.0	ug/L	9/20/2023 17:52
Hexachloroethane	< 10.0	ug/L	9/20/2023 17:52
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/20/2023 17:52
Isophorone	< 10.0	ug/L	9/20/2023 17:52
Naphthalene	< 10.0	ug/L	9/20/2023 17:52
Nitrobenzene	< 10.0	ug/L	9/20/2023 17:52
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/20/2023 17:52
N-Nitrosodiphenylamine	< 10.0	ug/L	9/20/2023 17:52
Pentachlorophenol	< 20.0	ug/L	9/20/2023 17:52
Phenanthrene	< 10.0	ug/L	9/20/2023 17:52
Phenol	< 10.0	ug/L	9/20/2023 17:52
Pyrene	< 10.0	ug/L	9/20/2023 17:52

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-02-09152023
Lab Sample ID: 234271-02 **Date Sampled:** 9/15/2023 9:00
Matrix: Groundwater **Date Received** 9/15/2023

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**87.8**	49 - 127		9/20/2023 17:52
2-Fluorobiphenyl	**35.3**	10 - 107		9/20/2023 17:52
2-Fluorophenol	**48.5**	10.6 - 109		9/20/2023 17:52
Nitrobenzene-d5	**53.1**	41 - 106		9/20/2023 17:52
Phenol-d5	**39.9**	10 - 109		9/20/2023 17:52
Terphenyl-d14	**72.6**	49.6 - 120		9/20/2023 17:52

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66928.D

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/20/2023 19:24
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/20/2023 19:24
1,1,2-Trichloroethane	< 2.00	ug/L		9/20/2023 19:24
1,1-Dichloroethane	< 2.00	ug/L		9/20/2023 19:24
1,1-Dichloroethene	< 2.00	ug/L		9/20/2023 19:24
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/20/2023 19:24
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/20/2023 19:24
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/20/2023 19:24
1,2-Dibromoethane	< 2.00	ug/L		9/20/2023 19:24
1,2-Dichlorobenzene	< 2.00	ug/L		9/20/2023 19:24
1,2-Dichloroethane	< 2.00	ug/L		9/20/2023 19:24
1,2-Dichloropropane	< 2.00	ug/L		9/20/2023 19:24
1,3-Dichlorobenzene	< 2.00	ug/L		9/20/2023 19:24
1,4-Dichlorobenzene	< 2.00	ug/L		9/20/2023 19:24
1,4-Dioxane	< 10.0	ug/L		9/20/2023 19:24
2-Butanone	< 10.0	ug/L		9/20/2023 19:24
2-Hexanone	< 5.00	ug/L		9/20/2023 19:24
4-Methyl-2-pentanone	< 5.00	ug/L		9/20/2023 19:24

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-02-09152023		
Lab Sample ID:	234271-02	**Date Sampled:** 9/15/2023	9:00
Matrix:	Groundwater	**Date Received** 9/15/2023	

Acetone	**19.4**	ug/L	9/20/2023	19:24
Benzene	< 1.00	ug/L	9/20/2023	19:24
Bromochloromethane	< 5.00	ug/L	9/20/2023	19:24
Bromodichloromethane	< 2.00	ug/L	9/20/2023	19:24
Bromoform	< 5.00	ug/L	9/20/2023	19:24
Bromomethane	< 2.00	ug/L	9/20/2023	19:24
Carbon disulfide	< 2.00	ug/L	9/20/2023	19:24
Carbon Tetrachloride	< 2.00	ug/L	9/20/2023	19:24
Chlorobenzene	< 2.00	ug/L	9/20/2023	19:24
Chloroethane	< 2.00	ug/L	9/20/2023	19:24
Chloroform	< 2.00	ug/L	9/20/2023	19:24
Chloromethane	< 2.00	ug/L	9/20/2023	19:24
cis-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023	19:24
cis-1,3-Dichloropropene	< 2.00	ug/L	9/20/2023	19:24
Cyclohexane	< 10.0	ug/L	9/20/2023	19:24
Dibromochloromethane	< 2.00	ug/L	9/20/2023	19:24
Dichlorodifluoromethane	< 2.00	ug/L	9/20/2023	19:24
Ethylbenzene	< 2.00	ug/L	9/20/2023	19:24
Freon 113	< 2.00	ug/L	9/20/2023	19:24
Isopropylbenzene	< 2.00	ug/L	9/20/2023	19:24
m,p-Xylene	< 2.00	ug/L	9/20/2023	19:24
Methyl acetate	< 2.00	ug/L	9/20/2023	19:24
Methyl tert-butyl Ether	< 2.00	ug/L	9/20/2023	19:24
Methylcyclohexane	< 2.00	ug/L	9/20/2023	19:24
Methylene chloride	< 5.00	ug/L	9/20/2023	19:24
o-Xylene	< 2.00	ug/L	9/20/2023	19:24
Styrene	< 5.00	ug/L	9/20/2023	19:24
Tetrachloroethene	< 2.00	ug/L	9/20/2023	19:24
Toluene	< 2.00	ug/L	9/20/2023	19:24
trans-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023	19:24

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-02-09152023
Lab Sample ID: 234271-02 **Date Sampled:** 9/15/2023 9:00
Matrix: Groundwater **Date Received** 9/15/2023

trans-1,3-Dichloropropene	< 2.00	ug/L			9/20/2023 19:24
Trichloroethene	< 2.00	ug/L			9/20/2023 19:24
Trichlorofluoromethane	< 2.00	ug/L			9/20/2023 19:24
Vinyl chloride	< 2.00	ug/L			9/20/2023 19:24

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**112**	79.7 - 118		9/20/2023 19:24
4-Bromofluorobenzene	**97.4**	80.1 - 112		9/20/2023 19:24
Pentafluorobenzene	**95.1**	88 - 115		9/20/2023 19:24
Toluene-D8	**109**	88.2 - 113		9/20/2023 19:24

Method Reference(s): EPA 8260C
EPA 5030C
Data File: z19681.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-03-09152023		
Lab Sample ID:	234271-03	**Date Sampled:** 9/15/2023	9:10
Matrix:	Groundwater	**Date Received** 9/15/2023	

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	**1.5**	mg/L		9/19/2023

Method Reference(s): EPA 350.1 Rev 2.0
Subcontractor ELAP ID: 10709

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.0930**	mg/L		9/19/2023

Method Reference(s): EPA 335.4 Rev 1.0
Subcontractor ELAP ID: 10709

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/20/2023 18:20
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/20/2023 18:20
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/20/2023 18:20
1,2-Dichlorobenzene	< 10.0	ug/L		9/20/2023 18:20
1,3-Dichlorobenzene	< 10.0	ug/L		9/20/2023 18:20
1,4-Dichlorobenzene	< 10.0	ug/L		9/20/2023 18:20
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/20/2023 18:20
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/20/2023 18:20
2,4,5-Trichlorophenol	< 10.0	ug/L		9/20/2023 18:20
2,4,6-Trichlorophenol	< 20.0	ug/L		9/20/2023 18:20
2,4-Dichlorophenol	< 10.0	ug/L		9/20/2023 18:20
2,4-Dimethylphenol	< 10.0	ug/L		9/20/2023 18:20
2,4-Dinitrophenol	< 20.0	ug/L		9/20/2023 18:20
2,4-Dinitrotoluene	< 10.0	ug/L		9/20/2023 18:20
2,6-Dinitrotoluene	< 10.0	ug/L		9/20/2023 18:20
2-Chloronaphthalene	< 10.0	ug/L		9/20/2023 18:20
2-Chlorophenol	< 10.0	ug/L		9/20/2023 18:20

Sample Identifier:	BreezeTest-03-09152023		
Lab Sample ID:	234271-03	**Date Sampled:** 9/15/2023	9:10
Matrix:	Groundwater	**Date Received** 9/15/2023	

2-Methylnapthalene	< 10.0	ug/L	9/20/2023	18:20
2-Methylphenol	< 10.0	ug/L	9/20/2023	18:20
2-Nitroaniline	< 20.0	ug/L	9/20/2023	18:20
2-Nitrophenol	< 10.0	ug/L	9/20/2023	18:20
3&4-Methylphenol	< 10.0	ug/L	9/20/2023	18:20
3,3'-Dichlorobenzidine	< 10.0	ug/L	9/20/2023	18:20
3-Nitroaniline	< 20.0	ug/L	9/20/2023	18:20
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/20/2023	18:20
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/20/2023	18:20
4-Chloro-3-methylphenol	< 10.0	ug/L	9/20/2023	18:20
4-Chloroaniline	< 10.0	ug/L	9/20/2023	18:20
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/20/2023	18:20
4-Nitroaniline	< 20.0	ug/L	9/20/2023	18:20
4-Nitrophenol	< 20.0	ug/L	9/20/2023	18:20
Acenaphthene	< 10.0	ug/L	9/20/2023	18:20
Acenaphthylene	< 10.0	ug/L	9/20/2023	18:20
Acetophenone	< 10.0	ug/L	9/20/2023	18:20
Anthracene	< 10.0	ug/L	9/20/2023	18:20
Atrazine	< 25.0	ug/L	9/20/2023	18:20
Benzaldehyde	< 10.0	ug/L	9/20/2023	18:20
Benzo (a) anthracene	< 10.0	ug/L	9/20/2023	18:20
Benzo (a) pyrene	< 10.0	ug/L	9/20/2023	18:20
Benzo (b) fluoranthene	< 10.0	ug/L	9/20/2023	18:20
Benzo (g,h,i) perylene	< 10.0	ug/L	9/20/2023	18:20
Benzo (k) fluoranthene	< 10.0	ug/L	9/20/2023	18:20
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/20/2023	18:20
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/20/2023	18:20
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/20/2023	18:20
Butylbenzylphthalate	< 10.0	ug/L	9/20/2023	18:20
Caprolactam	< 10.0	ug/L	9/20/2023	18:20

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-03-09152023		
Lab Sample ID:	234271-03	**Date Sampled:**	9/15/2023 9:10
Matrix:	Groundwater	**Date Received**	9/15/2023

Carbazole	< 10.0	ug/L	9/20/2023	18:20
Chrysene	< 10.0	ug/L	9/20/2023	18:20
Dibenz (a,h) anthracene	< 10.0	ug/L	9/20/2023	18:20
Dibenzofuran	< 10.0	ug/L	9/20/2023	18:20
Diethyl phthalate	< 10.0	ug/L	9/20/2023	18:20
Dimethyl phthalate	< 20.0	ug/L	9/20/2023	18:20
Di-n-butyl phthalate	< 10.0	ug/L	9/20/2023	18:20
Di-n-octylphthalate	< 10.0	ug/L	9/20/2023	18:20
Fluoranthene	< 10.0	ug/L	9/20/2023	18:20
Fluorene	< 10.0	ug/L	9/20/2023	18:20
Hexachlorobenzene	< 10.0	ug/L	9/20/2023	18:20
Hexachlorobutadiene	< 10.0	ug/L	9/20/2023	18:20
Hexachlorocyclopentadiene	< 10.0	ug/L	9/20/2023	18:20
Hexachloroethane	< 10.0	ug/L	9/20/2023	18:20
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/20/2023	18:20
Isophorone	< 10.0	ug/L	9/20/2023	18:20
Naphthalene	< 10.0	ug/L	9/20/2023	18:20
Nitrobenzene	< 10.0	ug/L	9/20/2023	18:20
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/20/2023	18:20
N-Nitrosodiphenylamine	< 10.0	ug/L	9/20/2023	18:20
Pentachlorophenol	< 20.0	ug/L	9/20/2023	18:20
Phenanthrene	< 10.0	ug/L	9/20/2023	18:20
Phenol	< 10.0	ug/L	9/20/2023	18:20
Pyrene	< 10.0	ug/L	9/20/2023	18:20

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-03-09152023
Lab Sample ID: 234271-03 **Date Sampled:** 9/15/2023 9:10
Matrix: Groundwater **Date Received** 9/15/2023

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**90.3**	49 - 127		9/20/2023 18:20
2-Fluorobiphenyl	**36.5**	10 - 107		9/20/2023 18:20
2-Fluorophenol	**32.5**	10.6 - 109		9/20/2023 18:20
Nitrobenzene-d5	**52.8**	41 - 106		9/20/2023 18:20
Phenol-d5	**33.4**	10 - 109		9/20/2023 18:20
Terphenyl-d14	**78.3**	49.6 - 120		9/20/2023 18:20

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66929.D

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/20/2023 19:43
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/20/2023 19:43
1,1,2-Trichloroethane	< 2.00	ug/L		9/20/2023 19:43
1,1-Dichloroethane	< 2.00	ug/L		9/20/2023 19:43
1,1-Dichloroethene	< 2.00	ug/L		9/20/2023 19:43
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/20/2023 19:43
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/20/2023 19:43
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/20/2023 19:43
1,2-Dibromoethane	< 2.00	ug/L		9/20/2023 19:43
1,2-Dichlorobenzene	< 2.00	ug/L		9/20/2023 19:43
1,2-Dichloroethane	< 2.00	ug/L		9/20/2023 19:43
1,2-Dichloropropane	< 2.00	ug/L		9/20/2023 19:43
1,3-Dichlorobenzene	< 2.00	ug/L		9/20/2023 19:43
1,4-Dichlorobenzene	< 2.00	ug/L		9/20/2023 19:43
1,4-Dioxane	< 10.0	ug/L		9/20/2023 19:43
2-Butanone	< 10.0	ug/L		9/20/2023 19:43
2-Hexanone	< 5.00	ug/L		9/20/2023 19:43
4-Methyl-2-pentanone	< 5.00	ug/L		9/20/2023 19:43

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-03-09152023		
Lab Sample ID:	234271-03	**Date Sampled:** 9/15/2023	9:10
Matrix:	Groundwater	**Date Received** 9/15/2023	

Acetone	**17.1**	ug/L	9/20/2023	19:43
Benzene	< 1.00	ug/L	9/20/2023	19:43
Bromochloromethane	< 5.00	ug/L	9/20/2023	19:43
Bromodichloromethane	< 2.00	ug/L	9/20/2023	19:43
Bromoform	< 5.00	ug/L	9/20/2023	19:43
Bromomethane	< 2.00	ug/L	9/20/2023	19:43
Carbon disulfide	< 2.00	ug/L	9/20/2023	19:43
Carbon Tetrachloride	< 2.00	ug/L	9/20/2023	19:43
Chlorobenzene	< 2.00	ug/L	9/20/2023	19:43
Chloroethane	< 2.00	ug/L	9/20/2023	19:43
Chloroform	< 2.00	ug/L	9/20/2023	19:43
Chloromethane	< 2.00	ug/L	9/20/2023	19:43
cis-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023	19:43
cis-1,3-Dichloropropene	< 2.00	ug/L	9/20/2023	19:43
Cyclohexane	< 10.0	ug/L	9/20/2023	19:43
Dibromochloromethane	< 2.00	ug/L	9/20/2023	19:43
Dichlorodifluoromethane	< 2.00	ug/L	9/20/2023	19:43
Ethylbenzene	< 2.00	ug/L	9/20/2023	19:43
Freon 113	< 2.00	ug/L	9/20/2023	19:43
Isopropylbenzene	< 2.00	ug/L	9/20/2023	19:43
m,p-Xylene	< 2.00	ug/L	9/20/2023	19:43
Methyl acetate	< 2.00	ug/L	9/20/2023	19:43
Methyl tert-butyl Ether	< 2.00	ug/L	9/20/2023	19:43
Methylcyclohexane	< 2.00	ug/L	9/20/2023	19:43
Methylene chloride	< 5.00	ug/L	9/20/2023	19:43
o-Xylene	< 2.00	ug/L	9/20/2023	19:43
Styrene	< 5.00	ug/L	9/20/2023	19:43
Tetrachloroethene	< 2.00	ug/L	9/20/2023	19:43
Toluene	< 2.00	ug/L	9/20/2023	19:43
trans-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023	19:43

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-03-09152023
Lab Sample ID: 234271-03 **Date Sampled:** 9/15/2023 9:10
Matrix: Groundwater **Date Received** 9/15/2023

trans-1,3-Dichloropropene	< 2.00	ug/L			9/20/2023 19:43
Trichloroethene	< 2.00	ug/L			9/20/2023 19:43
Trichlorofluoromethane	< 2.00	ug/L			9/20/2023 19:43
Vinyl chloride	< 2.00	ug/L			9/20/2023 19:43

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**107**	79.7 - 118		9/20/2023 19:43
4-Bromofluorobenzene	**93.9**	80.1 - 112		9/20/2023 19:43
Pentafluorobenzene	**97.9**	88 - 115		9/20/2023 19:43
Toluene-D8	**110**	88.2 - 113		9/20/2023 19:43

Method Reference(s): EPA 8260C
EPA 5030C
Data File: z19682.D

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PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-04-09152023		
Lab Sample ID:	234271-04	**Date Sampled:**	9/15/2023 9:20
Matrix:	Groundwater	**Date Received**	9/15/2023

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	**4.0**	mg/L		9/19/2023

Method Reference(s): EPA 350.1 Rev 2.0
Subcontractor ELAP ID: 10709

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.140**	mg/L		9/19/2023

Method Reference(s): EPA 335.4 Rev 1.0
Subcontractor ELAP ID: 10709

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/20/2023 18:49
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/20/2023 18:49
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/20/2023 18:49
1,2-Dichlorobenzene	< 10.0	ug/L		9/20/2023 18:49
1,3-Dichlorobenzene	< 10.0	ug/L		9/20/2023 18:49
1,4-Dichlorobenzene	< 10.0	ug/L		9/20/2023 18:49
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/20/2023 18:49
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/20/2023 18:49
2,4,5-Trichlorophenol	< 10.0	ug/L		9/20/2023 18:49
2,4,6-Trichlorophenol	< 20.0	ug/L		9/20/2023 18:49
2,4-Dichlorophenol	< 10.0	ug/L		9/20/2023 18:49
2,4-Dimethylphenol	< 10.0	ug/L		9/20/2023 18:49
2,4-Dinitrophenol	< 20.0	ug/L		9/20/2023 18:49
2,4-Dinitrotoluene	< 10.0	ug/L		9/20/2023 18:49
2,6-Dinitrotoluene	< 10.0	ug/L		9/20/2023 18:49
2-Chloronaphthalene	< 10.0	ug/L		9/20/2023 18:49
2-Chlorophenol	< 10.0	ug/L		9/20/2023 18:49

Sample Identifier:	BreezeTest-04-09152023		
Lab Sample ID:	234271-04	**Date Sampled:**	9/15/2023 9:20
Matrix:	Groundwater	**Date Received**	9/15/2023

2-Methylnapthalene	< 10.0	ug/L	9/20/2023 18:49
2-Methylphenol	< 10.0	ug/L	9/20/2023 18:49
2-Nitroaniline	< 20.0	ug/L	9/20/2023 18:49
2-Nitrophenol	< 10.0	ug/L	9/20/2023 18:49
3&4-Methylphenol	< 10.0	ug/L	9/20/2023 18:49
3,3'-Dichlorobenzidine	< 10.0	ug/L	9/20/2023 18:49
3-Nitroaniline	< 20.0	ug/L	9/20/2023 18:49
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/20/2023 18:49
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/20/2023 18:49
4-Chloro-3-methylphenol	< 10.0	ug/L	9/20/2023 18:49
4-Chloroaniline	< 10.0	ug/L	9/20/2023 18:49
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/20/2023 18:49
4-Nitroaniline	< 20.0	ug/L	9/20/2023 18:49
4-Nitrophenol	< 20.0	ug/L	9/20/2023 18:49
Acenaphthene	< 10.0	ug/L	9/20/2023 18:49
Acenaphthylene	< 10.0	ug/L	9/20/2023 18:49
Acetophenone	< 10.0	ug/L	9/20/2023 18:49
Anthracene	< 10.0	ug/L	9/20/2023 18:49
Atrazine	< 25.0	ug/L	9/20/2023 18:49
Benzaldehyde	< 10.0	ug/L	9/20/2023 18:49
Benzo (a) anthracene	< 10.0	ug/L	9/20/2023 18:49
Benzo (a) pyrene	< 10.0	ug/L	9/20/2023 18:49
Benzo (b) fluoranthene	< 10.0	ug/L	9/20/2023 18:49
Benzo (g,h,i) perylene	< 10.0	ug/L	9/20/2023 18:49
Benzo (k) fluoranthene	< 10.0	ug/L	9/20/2023 18:49
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/20/2023 18:49
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/20/2023 18:49
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/20/2023 18:49
Butylbenzylphthalate	< 10.0	ug/L	9/20/2023 18:49
Caprolactam	< 10.0	ug/L	9/20/2023 18:49

Sample Identifier:	BreezeTest-04-09152023		
Lab Sample ID:	234271-04	**Date Sampled:**	9/15/2023 9:20
Matrix:	Groundwater	**Date Received**	9/15/2023

Carbazole	< 10.0	ug/L	9/20/2023 18:49
Chrysene	< 10.0	ug/L	9/20/2023 18:49
Dibenz (a,h) anthracene	< 10.0	ug/L	9/20/2023 18:49
Dibenzofuran	< 10.0	ug/L	9/20/2023 18:49
Diethyl phthalate	< 10.0	ug/L	9/20/2023 18:49
Dimethyl phthalate	< 20.0	ug/L	9/20/2023 18:49
Di-n-butyl phthalate	< 10.0	ug/L	9/20/2023 18:49
Di-n-octylphthalate	< 10.0	ug/L	9/20/2023 18:49
Fluoranthene	< 10.0	ug/L	9/20/2023 18:49
Fluorene	< 10.0	ug/L	9/20/2023 18:49
Hexachlorobenzene	< 10.0	ug/L	9/20/2023 18:49
Hexachlorobutadiene	< 10.0	ug/L	9/20/2023 18:49
Hexachlorocyclopentadiene	< 10.0	ug/L	9/20/2023 18:49
Hexachloroethane	< 10.0	ug/L	9/20/2023 18:49
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/20/2023 18:49
Isophorone	< 10.0	ug/L	9/20/2023 18:49
Naphthalene	< 10.0	ug/L	9/20/2023 18:49
Nitrobenzene	< 10.0	ug/L	9/20/2023 18:49
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/20/2023 18:49
N-Nitrosodiphenylamine	< 10.0	ug/L	9/20/2023 18:49
Pentachlorophenol	< 20.0	ug/L	9/20/2023 18:49
Phenanthrene	< 10.0	ug/L	9/20/2023 18:49
Phenol	< 10.0	ug/L	9/20/2023 18:49
Pyrene	< 10.0	ug/L	9/20/2023 18:49

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-04-09152023
Lab Sample ID: 234271-04 **Date Sampled:** 9/15/2023 9:20
Matrix: Groundwater **Date Received** 9/15/2023

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**92.7**	49 - 127		9/20/2023 18:49
2-Fluorobiphenyl	**36.4**	10 - 107		9/20/2023 18:49
2-Fluorophenol	**49.2**	10.6 - 109		9/20/2023 18:49
Nitrobenzene-d5	**54.8**	41 - 106		9/20/2023 18:49
Phenol-d5	**41.3**	10 - 109		9/20/2023 18:49
Terphenyl-d14	**78.6**	49.6 - 120		9/20/2023 18:49

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66930.D

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/20/2023 20:02
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/20/2023 20:02
1,1,2-Trichloroethane	< 2.00	ug/L		9/20/2023 20:02
1,1-Dichloroethane	< 2.00	ug/L		9/20/2023 20:02
1,1-Dichloroethene	< 2.00	ug/L		9/20/2023 20:02
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/20/2023 20:02
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/20/2023 20:02
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/20/2023 20:02
1,2-Dibromoethane	< 2.00	ug/L		9/20/2023 20:02
1,2-Dichlorobenzene	< 2.00	ug/L		9/20/2023 20:02
1,2-Dichloroethane	< 2.00	ug/L		9/20/2023 20:02
1,2-Dichloropropane	< 2.00	ug/L		9/20/2023 20:02
1,3-Dichlorobenzene	< 2.00	ug/L		9/20/2023 20:02
1,4-Dichlorobenzene	< 2.00	ug/L		9/20/2023 20:02
1,4-Dioxane	< 10.0	ug/L		9/20/2023 20:02
2-Butanone	< 10.0	ug/L		9/20/2023 20:02
2-Hexanone	< 5.00	ug/L		9/20/2023 20:02
4-Methyl-2-pentanone	< 5.00	ug/L		9/20/2023 20:02

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-04-09152023		
Lab Sample ID:	234271-04	**Date Sampled:** 9/15/2023	9:20
Matrix:	Groundwater	**Date Received** 9/15/2023	

Acetone	**24.4**	ug/L	9/20/2023	20:02
Benzene	< 1.00	ug/L	9/20/2023	20:02
Bromochloromethane	< 5.00	ug/L	9/20/2023	20:02
Bromodichloromethane	< 2.00	ug/L	9/20/2023	20:02
Bromoform	< 5.00	ug/L	9/20/2023	20:02
Bromomethane	< 2.00	ug/L	9/20/2023	20:02
Carbon disulfide	< 2.00	ug/L	9/20/2023	20:02
Carbon Tetrachloride	< 2.00	ug/L	9/20/2023	20:02
Chlorobenzene	< 2.00	ug/L	9/20/2023	20:02
Chloroethane	< 2.00	ug/L	9/20/2023	20:02
Chloroform	< 2.00	ug/L	9/20/2023	20:02
Chloromethane	< 2.00	ug/L	9/20/2023	20:02
cis-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023	20:02
cis-1,3-Dichloropropene	< 2.00	ug/L	9/20/2023	20:02
Cyclohexane	< 10.0	ug/L	9/20/2023	20:02
Dibromochloromethane	< 2.00	ug/L	9/20/2023	20:02
Dichlorodifluoromethane	< 2.00	ug/L	9/20/2023	20:02
Ethylbenzene	< 2.00	ug/L	9/20/2023	20:02
Freon 113	< 2.00	ug/L	9/20/2023	20:02
Isopropylbenzene	< 2.00	ug/L	9/20/2023	20:02
m,p-Xylene	< 2.00	ug/L	9/20/2023	20:02
Methyl acetate	< 2.00	ug/L	9/20/2023	20:02
Methyl tert-butyl Ether	< 2.00	ug/L	9/20/2023	20:02
Methylcyclohexane	< 2.00	ug/L	9/20/2023	20:02
Methylene chloride	< 5.00	ug/L	9/20/2023	20:02
o-Xylene	< 2.00	ug/L	9/20/2023	20:02
Styrene	< 5.00	ug/L	9/20/2023	20:02
Tetrachloroethene	< 2.00	ug/L	9/20/2023	20:02
Toluene	< 2.00	ug/L	9/20/2023	20:02
trans-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023	20:02

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-04-09152023
Lab Sample ID: 234271-04 **Date Sampled:** 9/15/2023 9:20
Matrix: Groundwater **Date Received** 9/15/2023

trans-1,3-Dichloropropene	< 2.00	ug/L	9/20/2023	20:02
Trichloroethene	< 2.00	ug/L	9/20/2023	20:02
Trichlorofluoromethane	< 2.00	ug/L	9/20/2023	20:02
Vinyl chloride	< 2.00	ug/L	9/20/2023	20:02

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**110**	79.7 - 118		9/20/2023	20:02
4-Bromofluorobenzene	**95.9**	80.1 - 112		9/20/2023	20:02
Pentafluorobenzene	**96.1**	88 - 115		9/20/2023	20:02
Toluene-D8	**108**	88.2 - 113		9/20/2023	20:02

Method Reference(s): EPA 8260C
EPA 5030C
Data File: z19683.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Sample Identifier:	BreezeTest-05-09152023		
Lab Sample ID:	234271-05	**Date Sampled:**	9/15/2023 9:25
Matrix:	Groundwater	**Date Received**	9/15/2023

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	<0.1	mg/L		9/19/2023

Method Reference(s): EPA 350.1 Rev 2.0
Subcontractor ELAP ID: 10709

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	<0.010	mg/L		9/21/2023

Method Reference(s): EPA 335.4 Rev 1.0
Subcontractor ELAP ID: 10709

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/20/2023 19:17
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/20/2023 19:17
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/20/2023 19:17
1,2-Dichlorobenzene	< 10.0	ug/L		9/20/2023 19:17
1,3-Dichlorobenzene	< 10.0	ug/L		9/20/2023 19:17
1,4-Dichlorobenzene	< 10.0	ug/L		9/20/2023 19:17
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/20/2023 19:17
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/20/2023 19:17
2,4,5-Trichlorophenol	< 10.0	ug/L		9/20/2023 19:17
2,4,6-Trichlorophenol	< 20.0	ug/L		9/20/2023 19:17
2,4-Dichlorophenol	< 10.0	ug/L		9/20/2023 19:17
2,4-Dimethylphenol	< 10.0	ug/L		9/20/2023 19:17
2,4-Dinitrophenol	< 20.0	ug/L		9/20/2023 19:17
2,4-Dinitrotoluene	< 10.0	ug/L		9/20/2023 19:17
2,6-Dinitrotoluene	< 10.0	ug/L		9/20/2023 19:17
2-Chloronaphthalene	< 10.0	ug/L		9/20/2023 19:17
2-Chlorophenol	< 10.0	ug/L		9/20/2023 19:17

Sample Identifier:	BreezeTest-05-09152023		
Lab Sample ID:	234271-05	**Date Sampled:**	9/15/2023 9:25
Matrix:	Groundwater	**Date Received**	9/15/2023

2-Methylnapthalene	< 10.0	ug/L	9/20/2023 19:17
2-Methylphenol	< 10.0	ug/L	9/20/2023 19:17
2-Nitroaniline	< 20.0	ug/L	9/20/2023 19:17
2-Nitrophenol	< 10.0	ug/L	9/20/2023 19:17
3&4-Methylphenol	< 10.0	ug/L	9/20/2023 19:17
3,3'-Dichlorobenzidine	< 10.0	ug/L	9/20/2023 19:17
3-Nitroaniline	< 20.0	ug/L	9/20/2023 19:17
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/20/2023 19:17
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/20/2023 19:17
4-Chloro-3-methylphenol	< 10.0	ug/L	9/20/2023 19:17
4-Chloroaniline	< 10.0	ug/L	9/20/2023 19:17
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/20/2023 19:17
4-Nitroaniline	< 20.0	ug/L	9/20/2023 19:17
4-Nitrophenol	< 20.0	ug/L	9/20/2023 19:17
Acenaphthene	< 10.0	ug/L	9/20/2023 19:17
Acenaphthylene	< 10.0	ug/L	9/20/2023 19:17
Acetophenone	< 10.0	ug/L	9/20/2023 19:17
Anthracene	< 10.0	ug/L	9/20/2023 19:17
Atrazine	< 25.0	ug/L	9/20/2023 19:17
Benzaldehyde	< 10.0	ug/L	9/20/2023 19:17
Benzo (a) anthracene	< 10.0	ug/L	9/20/2023 19:17
Benzo (a) pyrene	< 10.0	ug/L	9/20/2023 19:17
Benzo (b) fluoranthene	< 10.0	ug/L	9/20/2023 19:17
Benzo (g,h,i) perylene	< 10.0	ug/L	9/20/2023 19:17
Benzo (k) fluoranthene	< 10.0	ug/L	9/20/2023 19:17
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/20/2023 19:17
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/20/2023 19:17
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/20/2023 19:17
Butylbenzylphthalate	< 10.0	ug/L	9/20/2023 19:17
Caprolactam	< 10.0	ug/L	9/20/2023 19:17

Sample Identifier:	BreezeTest-05-09152023		
Lab Sample ID:	234271-05	**Date Sampled:**	9/15/2023 9:25
Matrix:	Groundwater	**Date Received**	9/15/2023

Carbazole	< 10.0	ug/L	9/20/2023 19:17
Chrysene	< 10.0	ug/L	9/20/2023 19:17
Dibenz (a,h) anthracene	< 10.0	ug/L	9/20/2023 19:17
Dibenzofuran	< 10.0	ug/L	9/20/2023 19:17
Diethyl phthalate	< 10.0	ug/L	9/20/2023 19:17
Dimethyl phthalate	< 20.0	ug/L	9/20/2023 19:17
Di-n-butyl phthalate	< 10.0	ug/L	9/20/2023 19:17
Di-n-octylphthalate	< 10.0	ug/L	9/20/2023 19:17
Fluoranthene	< 10.0	ug/L	9/20/2023 19:17
Fluorene	< 10.0	ug/L	9/20/2023 19:17
Hexachlorobenzene	< 10.0	ug/L	9/20/2023 19:17
Hexachlorobutadiene	< 10.0	ug/L	9/20/2023 19:17
Hexachlorocyclopentadiene	< 10.0	ug/L	9/20/2023 19:17
Hexachloroethane	< 10.0	ug/L	9/20/2023 19:17
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/20/2023 19:17
Isophorone	< 10.0	ug/L	9/20/2023 19:17
Naphthalene	< 10.0	ug/L	9/20/2023 19:17
Nitrobenzene	< 10.0	ug/L	9/20/2023 19:17
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/20/2023 19:17
N-Nitrosodiphenylamine	< 10.0	ug/L	9/20/2023 19:17
Pentachlorophenol	< 20.0	ug/L	9/20/2023 19:17
Phenanthrene	**17.5**	ug/L	9/20/2023 19:17
Phenol	< 10.0	ug/L	9/20/2023 19:17
Pyrene	< 10.0	ug/L	9/20/2023 19:17

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-05-09152023
Lab Sample ID: 234271-05 **Date Sampled:** 9/15/2023 9:25
Matrix: Groundwater **Date Received** 9/15/2023

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**92.9**	49 - 127		9/20/2023 19:17
2-Fluorobiphenyl	**39.2**	10 - 107		9/20/2023 19:17
2-Fluorophenol	**34.6**	10.6 - 109		9/20/2023 19:17
Nitrobenzene-d5	**58.2**	41 - 106		9/20/2023 19:17
Phenol-d5	**24.1**	10 - 109		9/20/2023 19:17
Terphenyl-d14	**77.2**	49.6 - 120		9/20/2023 19:17

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66931.D

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/20/2023 20:21
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/20/2023 20:21
1,1,2-Trichloroethane	< 2.00	ug/L		9/20/2023 20:21
1,1-Dichloroethane	< 2.00	ug/L		9/20/2023 20:21
1,1-Dichloroethene	< 2.00	ug/L		9/20/2023 20:21
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/20/2023 20:21
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/20/2023 20:21
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/20/2023 20:21
1,2-Dibromoethane	< 2.00	ug/L		9/20/2023 20:21
1,2-Dichlorobenzene	< 2.00	ug/L		9/20/2023 20:21
1,2-Dichloroethane	< 2.00	ug/L		9/20/2023 20:21
1,2-Dichloropropane	< 2.00	ug/L		9/20/2023 20:21
1,3-Dichlorobenzene	< 2.00	ug/L		9/20/2023 20:21
1,4-Dichlorobenzene	< 2.00	ug/L		9/20/2023 20:21
1,4-Dioxane	< 10.0	ug/L		9/20/2023 20:21
2-Butanone	< 10.0	ug/L		9/20/2023 20:21
2-Hexanone	< 5.00	ug/L		9/20/2023 20:21
4-Methyl-2-pentanone	< 5.00	ug/L		9/20/2023 20:21

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-05-09152023		
Lab Sample ID:	234271-05	**Date Sampled:**	9/15/2023 9:25
Matrix:	Groundwater	**Date Received**	9/15/2023

Acetone	**14.1**	ug/L	9/20/2023 20:21
Benzene	< 1.00	ug/L	9/20/2023 20:21
Bromochloromethane	< 5.00	ug/L	9/20/2023 20:21
Bromodichloromethane	< 2.00	ug/L	9/20/2023 20:21
Bromoform	< 5.00	ug/L	9/20/2023 20:21
Bromomethane	< 2.00	ug/L	9/20/2023 20:21
Carbon disulfide	< 2.00	ug/L	9/20/2023 20:21
Carbon Tetrachloride	< 2.00	ug/L	9/20/2023 20:21
Chlorobenzene	< 2.00	ug/L	9/20/2023 20:21
Chloroethane	< 2.00	ug/L	9/20/2023 20:21
Chloroform	< 2.00	ug/L	9/20/2023 20:21
Chloromethane	< 2.00	ug/L	9/20/2023 20:21
cis-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023 20:21
cis-1,3-Dichloropropene	< 2.00	ug/L	9/20/2023 20:21
Cyclohexane	< 10.0	ug/L	9/20/2023 20:21
Dibromochloromethane	< 2.00	ug/L	9/20/2023 20:21
Dichlorodifluoromethane	< 2.00	ug/L	9/20/2023 20:21
Ethylbenzene	< 2.00	ug/L	9/20/2023 20:21
Freon 113	< 2.00	ug/L	9/20/2023 20:21
Isopropylbenzene	< 2.00	ug/L	9/20/2023 20:21
m,p-Xylene	< 2.00	ug/L	9/20/2023 20:21
Methyl acetate	< 2.00	ug/L	9/20/2023 20:21
Methyl tert-butyl Ether	< 2.00	ug/L	9/20/2023 20:21
Methylcyclohexane	< 2.00	ug/L	9/20/2023 20:21
Methylene chloride	< 5.00	ug/L	9/20/2023 20:21
o-Xylene	< 2.00	ug/L	9/20/2023 20:21
Styrene	< 5.00	ug/L	9/20/2023 20:21
Tetrachloroethene	< 2.00	ug/L	9/20/2023 20:21
Toluene	< 2.00	ug/L	9/20/2023 20:21
trans-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023 20:21

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-05-09152023
Lab Sample ID: 234271-05 **Date Sampled:** 9/15/2023 9:25
Matrix: Groundwater **Date Received** 9/15/2023

trans-1,3-Dichloropropene	< 2.00	ug/L		9/20/2023 20:21
Trichloroethene	< 2.00	ug/L		9/20/2023 20:21
Trichlorofluoromethane	< 2.00	ug/L		9/20/2023 20:21
Vinyl chloride	< 2.00	ug/L		9/20/2023 20:21

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**109**	79.7 - 118		9/20/2023 20:21
4-Bromofluorobenzene	**95.5**	80.1 - 112		9/20/2023 20:21
Pentafluorobenzene	**98.2**	88 - 115		9/20/2023 20:21
Toluene-D8	**109**	88.2 - 113		9/20/2023 20:21

Method Reference(s): EPA 8260C
EPA 5030C
Data File: z19684.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Sample Identifier:	BreezeTest-06-09152023		
Lab Sample ID:	234271-06	**Date Sampled:**	9/15/2023 9:30
Matrix:	Solid	**Date Received**	9/15/2023

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	<10.0	mg/Kg		9/19/2023

Method Reference(s): SM 4500 NH3 G - 2011
Subcontractor ELAP ID: 10709

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	<0.50	mg/Kg		9/19/2023

Method Reference(s): EPA 9012B
Subcontractor ELAP ID: 10709

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 272	ug/Kg		9/20/2023 21:10
1,2,4,5-Tetrachlorobenzene	< 272	ug/Kg		9/20/2023 21:10
1,2,4-Trichlorobenzene	< 272	ug/Kg		9/20/2023 21:10
1,2-Dichlorobenzene	< 272	ug/Kg		9/20/2023 21:10
1,3-Dichlorobenzene	< 272	ug/Kg		9/20/2023 21:10
1,4-Dichlorobenzene	< 272	ug/Kg		9/20/2023 21:10
2,2-Oxybis (1-chloropropane)	< 272	ug/Kg		9/20/2023 21:10
2,3,4,6-Tetrachlorophenol	< 272	ug/Kg		9/20/2023 21:10
2,4,5-Trichlorophenol	< 272	ug/Kg		9/20/2023 21:10
2,4,6-Trichlorophenol	< 272	ug/Kg		9/20/2023 21:10
2,4-Dichlorophenol	< 272	ug/Kg		9/20/2023 21:10
2,4-Dimethylphenol	< 272	ug/Kg		9/20/2023 21:10
2,4-Dinitrophenol	< 1090	ug/Kg		9/20/2023 21:10
2,4-Dinitrotoluene	< 272	ug/Kg		9/20/2023 21:10
2,6-Dinitrotoluene	< 272	ug/Kg		9/20/2023 21:10
2-Chloronaphthalene	< 272	ug/Kg		9/20/2023 21:10
2-Chlorophenol	< 272	ug/Kg		9/20/2023 21:10

Sample Identifier:	BreezeTest-06-09152023		
Lab Sample ID:	234271-06	**Date Sampled:**	9/15/2023 9:30
Matrix:	Solid	**Date Received**	9/15/2023

2-Methylnapthalene	**765**	ug/Kg	9/20/2023 21:10
2-Methylphenol	< 272	ug/Kg	9/20/2023 21:10
2-Nitroaniline	< 272	ug/Kg	9/20/2023 21:10
2-Nitrophenol	< 272	ug/Kg	9/20/2023 21:10
3&4-Methylphenol	< 272	ug/Kg	9/20/2023 21:10
3,3'-Dichlorobenzidine	< 272	ug/Kg	9/20/2023 21:10
3-Nitroaniline	< 272	ug/Kg	9/20/2023 21:10
4,6-Dinitro-2-methylphenol	< 364	ug/Kg	9/20/2023 21:10
4-Bromophenyl phenyl ether	< 272	ug/Kg	9/20/2023 21:10
4-Chloro-3-methylphenol	< 272	ug/Kg	9/20/2023 21:10
4-Chloroaniline	< 272	ug/Kg	9/20/2023 21:10
4-Chlorophenyl phenyl ether	< 272	ug/Kg	9/20/2023 21:10
4-Nitroaniline	< 272	ug/Kg	9/20/2023 21:10
4-Nitrophenol	< 272	ug/Kg	9/20/2023 21:10
Acenaphthene	**1130**	ug/Kg	9/20/2023 21:10
Acenaphthylene	< 272	ug/Kg	9/20/2023 21:10
Acetophenone	< 272	ug/Kg	9/20/2023 21:10
Anthracene	**985**	ug/Kg	9/20/2023 21:10
Atrazine	< 272	ug/Kg	9/20/2023 21:10
Benzaldehyde	< 272	ug/Kg	9/20/2023 21:10
Benzo (a) anthracene	**3430**	ug/Kg	9/20/2023 21:10
Benzo (a) pyrene	**6430**	ug/Kg	9/20/2023 21:10
Benzo (b) fluoranthene	**6320**	ug/Kg	9/20/2023 21:10
Benzo (g,h,i) perylene	**5010**	ug/Kg	9/20/2023 21:10
Benzo (k) fluoranthene	**3050**	ug/Kg	9/20/2023 21:10
Bis (2-chloroethoxy) methane	< 272	ug/Kg	9/20/2023 21:10
Bis (2-chloroethyl) ether	< 272	ug/Kg	9/20/2023 21:10
Bis (2-ethylhexyl) phthalate	< 272	ug/Kg	9/20/2023 21:10
Butylbenzylphthalate	< 272	ug/Kg	9/20/2023 21:10
Caprolactam	< 272	ug/Kg	9/20/2023 21:10

Sample Identifier:	BreezeTest-06-09152023		
Lab Sample ID:	234271-06	**Date Sampled:**	9/15/2023 9:30
Matrix:	Solid	**Date Received**	9/15/2023

Carbazole	**320**	ug/Kg	9/20/2023	21:10
Chrysene	**4210**	ug/Kg	9/20/2023	21:10
Dibenz (a,h) anthracene	**1500**	ug/Kg	9/20/2023	21:10
Dibenzofuran	**326**	ug/Kg	9/20/2023	21:10
Diethyl phthalate	< 272	ug/Kg	9/20/2023	21:10
Dimethyl phthalate	< 272	ug/Kg	9/20/2023	21:10
Di-n-butyl phthalate	< 272	ug/Kg	9/20/2023	21:10
Di-n-octylphthalate	< 272	ug/Kg	9/20/2023	21:10
Fluoranthene	< 272	ug/Kg	9/20/2023	21:10
Fluorene	< 272	ug/Kg	9/20/2023	21:10
Hexachlorobenzene	< 272	ug/Kg	9/20/2023	21:10
Hexachlorobutadiene	< 272	ug/Kg	9/20/2023	21:10
Hexachlorocyclopentadiene	< 1090	ug/Kg	9/20/2023	21:10
Hexachloroethane	< 272	ug/Kg	9/20/2023	21:10
Indeno (1,2,3-cd) pyrene	**3780**	ug/Kg	9/20/2023	21:10
Isophorone	< 272	ug/Kg	9/20/2023	21:10
Naphthalene	**1190**	ug/Kg	9/20/2023	21:10
Nitrobenzene	< 272	ug/Kg	9/20/2023	21:10
N-Nitroso-di-n-propylamine	< 272	ug/Kg	9/20/2023	21:10
N-Nitrosodiphenylamine	< 272	ug/Kg	9/20/2023	21:10
Pentachlorophenol	< 543	ug/Kg	9/20/2023	21:10
Phenanthrene	**2800**	ug/Kg	9/20/2023	21:10
Phenol	< 272	ug/Kg	9/20/2023	21:10
Pyrene	**4520**	ug/Kg	9/20/2023	21:10

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-06-09152023
Lab Sample ID: 234271-06 **Date Sampled:** 9/15/2023 9:30
Matrix: Solid **Date Received** 9/15/2023

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**28.8**	35.1 - 95.9	*	9/20/2023 21:10
2-Fluorobiphenyl	**31.0**	10 - 156		9/20/2023 21:10
2-Fluorophenol	**31.2**	36 - 81.3	*	9/20/2023 21:10
Nitrobenzene-d5	**27.6**	31.5 - 83.8	*	9/20/2023 21:10
Phenol-d5	**28.2**	37.7 - 84	*	9/20/2023 21:10
Terphenyl-d14	**29.3**	40.5 - 99.5	*	9/20/2023 21:10

Method Reference(s): EPA 8270D
EPA 3546
Preparation Date: 9/20/2023
Data File: B66935.D

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 8.00	ug/Kg		9/21/2023 14:17
1,1,2,2-Tetrachloroethane	< 8.00	ug/Kg		9/21/2023 14:17
1,1,2-Trichloroethane	< 8.00	ug/Kg		9/21/2023 14:17
1,1-Dichloroethane	< 8.00	ug/Kg		9/21/2023 14:17
1,1-Dichloroethene	< 8.00	ug/Kg		9/21/2023 14:17
1,2,3-Trichlorobenzene	< 20.0	ug/Kg		9/21/2023 14:17
1,2,4-Trichlorobenzene	< 20.0	ug/Kg		9/21/2023 14:17
1,2-Dibromo-3-Chloropropane	< 40.0	ug/Kg		9/21/2023 14:17
1,2-Dibromoethane	< 8.00	ug/Kg		9/21/2023 14:17
1,2-Dichlorobenzene	< 8.00	ug/Kg		9/21/2023 14:17
1,2-Dichloroethane	< 8.00	ug/Kg		9/21/2023 14:17
1,2-Dichloropropane	< 8.00	ug/Kg		9/21/2023 14:17
1,3-Dichlorobenzene	< 8.00	ug/Kg		9/21/2023 14:17
1,4-Dichlorobenzene	< 8.00	ug/Kg		9/21/2023 14:17
1,4-Dioxane	< 40.0	ug/Kg		9/21/2023 14:17
2-Butanone	< 40.0	ug/Kg		9/21/2023 14:17
2-Hexanone	< 20.0	ug/Kg		9/21/2023 14:17
4-Methyl-2-pentanone	< 20.0	ug/Kg		9/21/2023 14:17

Sample Identifier: BreezeTest-06-09152023
Lab Sample ID: 234271-06 **Date Sampled:** 9/15/2023 9:30
Matrix: Solid **Date Received** 9/15/2023

Acetone	< 40.0	ug/Kg	9/21/2023 14:17
Benzene	< 8.00	ug/Kg	9/21/2023 14:17
Bromochloromethane	< 20.0	ug/Kg	9/21/2023 14:17
Bromodichloromethane	< 8.00	ug/Kg	9/21/2023 14:17
Bromoform	< 20.0	ug/Kg	9/21/2023 14:17
Bromomethane	< 8.00	ug/Kg	9/21/2023 14:17
Carbon disulfide	< 8.00	ug/Kg	9/21/2023 14:17
Carbon Tetrachloride	< 8.00	ug/Kg	9/21/2023 14:17
Chlorobenzene	< 8.00	ug/Kg	9/21/2023 14:17
Chloroethane	< 8.00	ug/Kg	9/21/2023 14:17
Chloroform	< 8.00	ug/Kg	9/21/2023 14:17
Chloromethane	< 8.00	ug/Kg	9/21/2023 14:17
cis-1,2-Dichloroethene	< 8.00	ug/Kg	9/21/2023 14:17
cis-1,3-Dichloropropene	< 8.00	ug/Kg	9/21/2023 14:17
Cyclohexane	< 40.0	ug/Kg	9/21/2023 14:17
Dibromochloromethane	< 8.00	ug/Kg	9/21/2023 14:17
Dichlorodifluoromethane	< 8.00	ug/Kg	9/21/2023 14:17
Ethylbenzene	< 8.00	ug/Kg	9/21/2023 14:17
Freon 113	< 8.00	ug/Kg	9/21/2023 14:17
Isopropylbenzene	< 8.00	ug/Kg	9/21/2023 14:17
m,p-Xylene	< 8.00	ug/Kg	9/21/2023 14:17
Methyl acetate	< 8.00	ug/Kg	9/21/2023 14:17
Methyl tert-butyl Ether	< 8.00	ug/Kg	9/21/2023 14:17
Methylcyclohexane	< 8.00	ug/Kg	9/21/2023 14:17
Methylene chloride	< 20.0	ug/Kg	9/21/2023 14:17
o-Xylene	< 8.00	ug/Kg	9/21/2023 14:17
Styrene	< 20.0	ug/Kg	9/21/2023 14:17
Tetrachloroethene	< 8.00	ug/Kg	9/21/2023 14:17
Toluene	< 8.00	ug/Kg	9/21/2023 14:17
trans-1,2-Dichloroethene	< 8.00	ug/Kg	9/21/2023 14:17

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-06-09152023		
Lab Sample ID:	234271-06	**Date Sampled:** 9/15/2023	9:30
Matrix:	Solid	**Date Received** 9/15/2023	

trans-1,3-Dichloropropene	< 8.00	ug/Kg		9/21/2023	14:17
Trichloroethene	< 8.00	ug/Kg		9/21/2023	14:17
Trichlorofluoromethane	< 8.00	ug/Kg		9/21/2023	14:17
Vinyl chloride	< 8.00	ug/Kg		9/21/2023	14:17

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**101**	72.3 - 128		9/21/2023	14:17
4-Bromofluorobenzene	**71.9**	70 - 123		9/21/2023	14:17
Pentafluorobenzene	**97.5**	80.7 - 124		9/21/2023	14:17
Toluene-D8	**102**	82.1 - 121		9/21/2023	14:17

Internal standard outliers indicate probable matrix interference

Method Reference(s): EPA 8260C
EPA 5035A - L

Data File: z19701.D

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed	
1,1-Biphenyl	<262	ug/Kg		9/20/2023	19:45
1,2,4,5-Tetrachlorobenzene	<262	ug/Kg		9/20/2023	19:45
1,2,4-Trichlorobenzene	<262	ug/Kg		9/20/2023	19:45
1,2-Dichlorobenzene	<262	ug/Kg		9/20/2023	19:45
1,3-Dichlorobenzene	<262	ug/Kg		9/20/2023	19:45
1,4-Dichlorobenzene	<262	ug/Kg		9/20/2023	19:45
2,2-Oxybis (1-chloropropane)	<262	ug/Kg		9/20/2023	19:45
2,3,4,6-Tetrachlorophenol	<262	ug/Kg		9/20/2023	19:45
2,4,5-Trichlorophenol	<262	ug/Kg		9/20/2023	19:45
2,4,6-Trichlorophenol	<262	ug/Kg		9/20/2023	19:45
2,4-Dichlorophenol	<262	ug/Kg		9/20/2023	19:45
2,4-Dimethylphenol	<262	ug/Kg		9/20/2023	19:45
2,4-Dinitrophenol	<1050	ug/Kg		9/20/2023	19:45
2,4-Dinitrotoluene	<262	ug/Kg		9/20/2023	19:45
2,6-Dinitrotoluene	<262	ug/Kg		9/20/2023	19:45
2-Chloronaphthalene	<262	ug/Kg		9/20/2023	19:45
2-Chlorophenol	<262	ug/Kg		9/20/2023	19:45
2-Methylnapthalene	<262	ug/Kg		9/20/2023	19:45
2-Methylphenol	<262	ug/Kg		9/20/2023	19:45
2-Nitroaniline	<262	ug/Kg		9/20/2023	19:45
2-Nitrophenol	<262	ug/Kg		9/20/2023	19:45
3&4-Methylphenol	<262	ug/Kg		9/20/2023	19:45
3,3'-Dichlorobenzidine	<262	ug/Kg		9/20/2023	19:45
3-Nitroaniline	<262	ug/Kg		9/20/2023	19:45
4,6-Dinitro-2-methylphenol	<524	ug/Kg		9/20/2023	19:45
4-Bromophenyl phenyl ether	<262	ug/Kg		9/20/2023	19:45
4-Chloro-3-methylphenol	<262	ug/Kg		9/20/2023	19:45

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PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed	
4-Chloroaniline	<262	ug/Kg		9/20/2023	19:45
4-Chlorophenyl phenyl ether	<262	ug/Kg		9/20/2023	19:45
4-Nitroaniline	<262	ug/Kg		9/20/2023	19:45
4-Nitrophenol	<262	ug/Kg		9/20/2023	19:45
Acenaphthene	<262	ug/Kg		9/20/2023	19:45
Acenaphthylene	<262	ug/Kg		9/20/2023	19:45
Acetophenone	<262	ug/Kg		9/20/2023	19:45
Anthracene	<262	ug/Kg		9/20/2023	19:45
Atrazine	<262	ug/Kg		9/20/2023	19:45
Benzaldehyde	<262	ug/Kg		9/20/2023	19:45
Benzo (a) anthracene	<262	ug/Kg		9/20/2023	19:45
Benzo (a) pyrene	<262	ug/Kg		9/20/2023	19:45
Benzo (b) fluoranthene	<262	ug/Kg		9/20/2023	19:45
Benzo (g,h,i) perylene	<262	ug/Kg		9/20/2023	19:45
Benzo (k) fluoranthene	<262	ug/Kg		9/20/2023	19:45
Bis (2-chloroethoxy) methane	<262	ug/Kg		9/20/2023	19:45
Bis (2-chloroethyl) ether	<262	ug/Kg		9/20/2023	19:45
Bis (2-ethylhexyl) phthalate	<262	ug/Kg		9/20/2023	19:45
Butylbenzylphthalate	<262	ug/Kg		9/20/2023	19:45
Caprolactam	<262	ug/Kg		9/20/2023	19:45
Carbazole	<262	ug/Kg		9/20/2023	19:45
Chrysene	<262	ug/Kg		9/20/2023	19:45
Dibenz (a,h) anthracene	<262	ug/Kg		9/20/2023	19:45
Dibenzofuran	<262	ug/Kg		9/20/2023	19:45
Diethyl phthalate	<262	ug/Kg		9/20/2023	19:45
Dimethyl phthalate	<262	ug/Kg		9/20/2023	19:45
Di-n-butyl phthalate	<262	ug/Kg		9/20/2023	19:45
Di-n-octylphthalate	<262	ug/Kg		9/20/2023	19:45

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed	
Fluoranthene	<262	ug/Kg		9/20/2023	19:45
Fluorene	<262	ug/Kg		9/20/2023	19:45
Hexachlorobenzene	<262	ug/Kg		9/20/2023	19:45
Hexachlorobutadiene	<262	ug/Kg		9/20/2023	19:45
Hexachlorocyclopentadiene	<1050	ug/Kg		9/20/2023	19:45
Hexachloroethane	<262	ug/Kg		9/20/2023	19:45
Indeno (1,2,3-cd) pyrene	<262	ug/Kg		9/20/2023	19:45
Isophorone	<262	ug/Kg		9/20/2023	19:45
Naphthalene	<262	ug/Kg		9/20/2023	19:45
Nitrobenzene	<262	ug/Kg		9/20/2023	19:45
N-Nitroso-di-n-propylamine	<262	ug/Kg		9/20/2023	19:45
N-Nitrosodiphenylamine	<262	ug/Kg		9/20/2023	19:45
Pentachlorophenol	<524	ug/Kg		9/20/2023	19:45
Phenanthrene	<262	ug/Kg		9/20/2023	19:45
Phenol	<262	ug/Kg		9/20/2023	19:45
Pyrene	<262	ug/Kg		9/20/2023	19:45

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
2,4,6-Tribromophenol	**69.6**	35.1 - 95.9		9/20/2023	19:45
2-Fluorobiphenyl	**58.1**	10 - 156		9/20/2023	19:45
2-Fluorophenol	**54.4**	36 - 81.3		9/20/2023	19:45
Nitrobenzene-d5	**50.3**	31.5 - 83.8		9/20/2023	19:45
Phenol-d5	**54.5**	37.7 - 84		9/20/2023	19:45
Terphenyl-d14	**68.0**	40.5 - 99.5		9/20/2023	19:45

Method Reference(s): EPA 8270D
EPA 3546
Preparation Date: 9/20/2023
Data File: B66932.D
QC Batch ID: QC2309020ABNS
QC Number: Blk 1

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**
Project Reference: Breeze Water Testing
Lab Project ID: 234271
Matrix: Solid

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
1,2,4-Trichlorobenzene	2530	ug/Kg	1640	64.8	41.2 - 84.4		9/20/2023
1,4-Dichlorobenzene	2530	ug/Kg	1540	60.9	39.2 - 74.5		9/20/2023
2,3,4,6-Tetrachlorophenol	3790	ug/Kg	2700	71.4	46.8 - 91.6		9/20/2023
2,4,6-Trichlorophenol	3790	ug/Kg	2800	73.8	49.4 - 96.7		9/20/2023
2,4-Dichlorophenol	3790	ug/Kg	2650	70.0	49.9 - 90		9/20/2023
2,4-Dimethylphenol	3790	ug/Kg	2480	65.5	40.5 - 92.9		9/20/2023
2,4-Dinitrophenol	3790	ug/Kg	2020	53.5	10 - 76.8		9/20/2023
2,4-Dinitrotoluene	2530	ug/Kg	1850	73.4	37.8 - 99.2		9/20/2023
2-Chlorophenol	3790	ug/Kg	2510	66.2	48.2 - 82.9		9/20/2023
2-Nitrophenol	3790	ug/Kg	2440	64.5	45.2 - 85.7		9/20/2023
4,6-Dinitro-2-methylphenol	3790	ug/Kg	2740	72.3	22.6 - 92.8		9/20/2023
4-Chloro-3-methylphenol	3790	ug/Kg	2710	71.6	48.3 - 93.6		9/20/2023
4-Nitrophenol	3790	ug/Kg	2430	64.2	19.3 - 106		9/20/2023
Acenaphthene	2530	ug/Kg	1760	69.5	44.2 - 90.1		9/20/2023
N-Nitroso-di-n-propylamine	2530	ug/Kg	1560	61.7	36.5 - 87.1		9/20/2023
Pentachlorophenol	3790	ug/Kg	2970	78.3	33 - 110		9/20/2023

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PARADIGM ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
Phenol	3790	ug/Kg	2490	65.6	45.5 - 83.9		9/20/2023
Pyrene	2530	ug/Kg	1960	77.7	47.9 - 101		9/20/2023

Method Reference(s): EPA 8270D
EPA 3546
Preparation Date: 9/20/2023
Data File: B66933.D
QC Number: LCS 1
QC Batch ID: QC2309020ABNS

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PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed	
1,1-Biphenyl	<10.0	ug/L		9/20/2023	16:55
1,2,4,5-Tetrachlorobenzene	<10.0	ug/L		9/20/2023	16:55
1,2,4-Trichlorobenzene	<10.0	ug/L		9/20/2023	16:55
1,2-Dichlorobenzene	<10.0	ug/L		9/20/2023	16:55
1,3-Dichlorobenzene	<10.0	ug/L		9/20/2023	16:55
1,4-Dichlorobenzene	<10.0	ug/L		9/20/2023	16:55
2,2-Oxybis (1-chloropropane)	<10.0	ug/L		9/20/2023	16:55
2,3,4,6-Tetrachlorophenol	<10.0	ug/L		9/20/2023	16:55
2,4,5-Trichlorophenol	<10.0	ug/L		9/20/2023	16:55
2,4,6-Trichlorophenol	<20.0	ug/L		9/20/2023	16:55
2,4-Dichlorophenol	<10.0	ug/L		9/20/2023	16:55
2,4-Dimethylphenol	<10.0	ug/L		9/20/2023	16:55
2,4-Dinitrophenol	<20.0	ug/L		9/20/2023	16:55
2,4-Dinitrotoluene	<10.0	ug/L		9/20/2023	16:55
2,6-Dinitrotoluene	<10.0	ug/L		9/20/2023	16:55
2-Chloronaphthalene	<10.0	ug/L		9/20/2023	16:55
2-Chlorophenol	<10.0	ug/L		9/20/2023	16:55
2-Methylnapthalene	<10.0	ug/L		9/20/2023	16:55
2-Methylphenol	<10.0	ug/L		9/20/2023	16:55
2-Nitroaniline	<20.0	ug/L		9/20/2023	16:55
2-Nitrophenol	<10.0	ug/L		9/20/2023	16:55
3&4-Methylphenol	<10.0	ug/L		9/20/2023	16:55
3,3'-Dichlorobenzidine	<10.0	ug/L		9/20/2023	16:55
3-Nitroaniline	<20.0	ug/L		9/20/2023	16:55
4,6-Dinitro-2-methylphenol	<20.0	ug/L		9/20/2023	16:55
4-Bromophenyl phenyl ether	<10.0	ug/L		9/20/2023	16:55
4-Chloro-3-methylphenol	<10.0	ug/L		9/20/2023	16:55

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed	
4-Chloroaniline	<10.0	ug/L		9/20/2023	16:55
4-Chlorophenyl phenyl ether	<10.0	ug/L		9/20/2023	16:55
4-Nitroaniline	<20.0	ug/L		9/20/2023	16:55
4-Nitrophenol	<20.0	ug/L		9/20/2023	16:55
Acenaphthene	<10.0	ug/L		9/20/2023	16:55
Acenaphthylene	<10.0	ug/L		9/20/2023	16:55
Acetophenone	<10.0	ug/L		9/20/2023	16:55
Anthracene	<10.0	ug/L		9/20/2023	16:55
Atrazine	<25.0	ug/L		9/20/2023	16:55
Benzaldehyde	<10.0	ug/L		9/20/2023	16:55
Benzo (a) anthracene	<10.0	ug/L		9/20/2023	16:55
Benzo (a) pyrene	<10.0	ug/L		9/20/2023	16:55
Benzo (b) fluoranthene	<10.0	ug/L		9/20/2023	16:55
Benzo (g,h,i) perylene	<10.0	ug/L		9/20/2023	16:55
Benzo (k) fluoranthene	<10.0	ug/L		9/20/2023	16:55
Bis (2-chloroethoxy) methane	<10.0	ug/L		9/20/2023	16:55
Bis (2-chloroethyl) ether	<10.0	ug/L		9/20/2023	16:55
Bis (2-ethylhexyl) phthalate	<10.0	ug/L		9/20/2023	16:55
Butylbenzylphthalate	<10.0	ug/L		9/20/2023	16:55
Caprolactam	<10.0	ug/L		9/20/2023	16:55
Carbazole	<10.0	ug/L		9/20/2023	16:55
Chrysene	<10.0	ug/L		9/20/2023	16:55
Dibenz (a,h) anthracene	<10.0	ug/L		9/20/2023	16:55
Dibenzofuran	<10.0	ug/L		9/20/2023	16:55
Diethyl phthalate	<10.0	ug/L		9/20/2023	16:55
Dimethyl phthalate	<20.0	ug/L		9/20/2023	16:55
Di-n-butyl phthalate	<10.0	ug/L		9/20/2023	16:55
Di-n-octylphthalate	<10.0	ug/L		9/20/2023	16:55

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed	
Fluoranthene	<10.0	ug/L		9/20/2023	16:55
Fluorene	<10.0	ug/L		9/20/2023	16:55
Hexachlorobenzene	<10.0	ug/L		9/20/2023	16:55
Hexachlorobutadiene	<10.0	ug/L		9/20/2023	16:55
Hexachlorocyclopentadiene	<10.0	ug/L		9/20/2023	16:55
Hexachloroethane	<10.0	ug/L		9/20/2023	16:55
Indeno (1,2,3-cd) pyrene	<10.0	ug/L		9/20/2023	16:55
Isophorone	<10.0	ug/L		9/20/2023	16:55
Naphthalene	<10.0	ug/L		9/20/2023	16:55
Nitrobenzene	<10.0	ug/L		9/20/2023	16:55
N-Nitroso-di-n-propylamine	<10.0	ug/L		9/20/2023	16:55
N-Nitrosodiphenylamine	<10.0	ug/L		9/20/2023	16:55
Pentachlorophenol	<20.0	ug/L		9/20/2023	16:55
Phenanthrene	<10.0	ug/L		9/20/2023	16:55
Phenol	<10.0	ug/L		9/20/2023	16:55
Pyrene	<10.0	ug/L		9/20/2023	16:55

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
2,4,6-Tribromophenol	**93.1**	49 - 127		9/20/2023	16:55
2-Fluorobiphenyl	**36.8**	10 - 107		9/20/2023	16:55
2-Fluorophenol	**34.6**	10.6 - 109		9/20/2023	16:55
Nitrobenzene-d5	**58.7**	41 - 106		9/20/2023	16:55
Phenol-d5	**24.5**	10 - 109		9/20/2023	16:55
Terphenyl-d14	**85.8**	49.6 - 120		9/20/2023	16:55

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66926.D
QC Batch ID: QC2309020ABNW
QC Number: Blk 1

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PARADIGM ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
1,2,4-Trichlorobenzene	50.0	ug/L	31.9	63.8	16.6 - 116		9/21/2023
1,4-Dichlorobenzene	50.0	ug/L	29.8	59.5	10 - 107		9/21/2023
2,3,4,6-Tetrachlorophenol	75.0	ug/L	63.0	84.0	44.4 - 130		9/21/2023
2,4,6-Trichlorophenol	75.0	ug/L	64.8	86.3	49.3 - 129		9/21/2023
2,4-Dichlorophenol	75.0	ug/L	61.7	82.3	57.3 - 116		9/21/2023
2,4-Dimethylphenol	75.0	ug/L	59.6	79.4	42.4 - 123		9/21/2023
2,4-Dinitrophenol	75.0	ug/L	60.3	80.4	14.4 - 130		9/21/2023
2,4-Dinitrotoluene	50.0	ug/L	40.9	81.7	50.8 - 124		9/21/2023
2-Chlorophenol	75.0	ug/L	56.9	75.8	48.8 - 110		9/21/2023
2-Nitrophenol	75.0	ug/L	62.8	83.7	54.2 - 117		9/21/2023
4,6-Dinitro-2-methylphenol	75.0	ug/L	68.3	91.0	16.7 - 137		9/21/2023
4-Chloro-3-methylphenol	75.0	ug/L	61.7	82.3	59.1 - 117		9/21/2023
4-Nitrophenol	75.0	ug/L	26.8	35.8	10 - 124		9/21/2023
Acenaphthene	50.0	ug/L	38.8	77.6	43.3 - 115		9/21/2023
N-Nitroso-di-n-propylamine	50.0	ug/L	38.2	76.5	46.1 - 118		9/21/2023
Pentachlorophenol	75.0	ug/L	72.7	97.0	36.1 - 158		9/21/2023

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
Phenol	75.0	ug/L	25.1	33.5	10 - 116		9/21/2023
Pyrene	50.0	ug/L	41.9	83.9	55.4 - 122		9/21/2023

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66976.D
QC Number: LCS 1
QC Batch ID: QC2309020ABNW

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PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed	
1,1,1-Trichloroethane	<2.00	ug/Kg		9/21/2023	13:39
1,1,2,2-Tetrachloroethane	<2.00	ug/Kg		9/21/2023	13:39
1,1,2-Trichloroethane	<2.00	ug/Kg		9/21/2023	13:39
1,1-Dichloroethane	<2.00	ug/Kg		9/21/2023	13:39
1,1-Dichloroethene	<2.00	ug/Kg		9/21/2023	13:39
1,2,3-Trichlorobenzene	<5.00	ug/Kg		9/21/2023	13:39
1,2,4-Trichlorobenzene	<5.00	ug/Kg		9/21/2023	13:39
1,2-Dibromo-3-Chloropropane	<10.0	ug/Kg		9/21/2023	13:39
1,2-Dibromoethane	<2.00	ug/Kg		9/21/2023	13:39
1,2-Dichlorobenzene	<2.00	ug/Kg		9/21/2023	13:39
1,2-Dichloroethane	<2.00	ug/Kg		9/21/2023	13:39
1,2-Dichloropropane	<2.00	ug/Kg		9/21/2023	13:39
1,3-Dichlorobenzene	<2.00	ug/Kg		9/21/2023	13:39
1,4-Dichlorobenzene	<2.00	ug/Kg		9/21/2023	13:39
1,4-Dioxane	<10.0	ug/Kg		9/21/2023	13:39
2-Butanone	<10.0	ug/Kg		9/21/2023	13:39
2-Hexanone	<5.00	ug/Kg		9/21/2023	13:39
4-Methyl-2-pentanone	<5.00	ug/Kg		9/21/2023	13:39
Acetone	<10.0	ug/Kg		9/21/2023	13:39
Benzene	<2.00	ug/Kg		9/21/2023	13:39
Bromochloromethane	<5.00	ug/Kg		9/21/2023	13:39
Bromodichloromethane	<2.00	ug/Kg		9/21/2023	13:39
Bromoform	<5.00	ug/Kg		9/21/2023	13:39
Bromomethane	<2.00	ug/Kg		9/21/2023	13:39
Carbon disulfide	<2.00	ug/Kg		9/21/2023	13:39
Carbon Tetrachloride	<2.00	ug/Kg		9/21/2023	13:39
Chlorobenzene	<2.00	ug/Kg		9/21/2023	13:39

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed	
Chloroethane	<2.00	ug/Kg		9/21/2023	13:39
Chloroform	<2.00	ug/Kg		9/21/2023	13:39
Chloromethane	<2.00	ug/Kg		9/21/2023	13:39
cis-1,2-Dichloroethene	<2.00	ug/Kg		9/21/2023	13:39
cis-1,3-Dichloropropene	<2.00	ug/Kg		9/21/2023	13:39
Cyclohexane	<10.0	ug/Kg		9/21/2023	13:39
Dibromochloromethane	<2.00	ug/Kg		9/21/2023	13:39
Dichlorodifluoromethane	<2.00	ug/Kg		9/21/2023	13:39
Ethylbenzene	<2.00	ug/Kg		9/21/2023	13:39
Freon 113	<2.00	ug/Kg		9/21/2023	13:39
Isopropylbenzene	<2.00	ug/Kg		9/21/2023	13:39
m,p-Xylene	<2.00	ug/Kg		9/21/2023	13:39
Methyl acetate	<2.00	ug/Kg		9/21/2023	13:39
Methyl tert-butyl Ether	<2.00	ug/Kg		9/21/2023	13:39
Methylcyclohexane	<2.00	ug/Kg		9/21/2023	13:39
Methylene chloride	<5.00	ug/Kg		9/21/2023	13:39
o-Xylene	<2.00	ug/Kg		9/21/2023	13:39
Styrene	<5.00	ug/Kg		9/21/2023	13:39
Tetrachloroethene	<2.00	ug/Kg		9/21/2023	13:39
Toluene	<2.00	ug/Kg		9/21/2023	13:39
trans-1,2-Dichloroethene	<2.00	ug/Kg		9/21/2023	13:39
trans-1,3-Dichloropropene	<2.00	ug/Kg		9/21/2023	13:39
Trichloroethene	<2.00	ug/Kg		9/21/2023	13:39
Trichlorofluoromethane	<2.00	ug/Kg		9/21/2023	13:39
Vinyl chloride	<2.00	ug/Kg		9/21/2023	13:39

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**106**	72.3 - 128		9/21/2023 13:39
4-Bromofluorobenzene	**95.8**	70 - 123		9/21/2023 13:39
Pentafluorobenzene	**98.2**	80.7 - 124		9/21/2023 13:39
Toluene-D8	**110**	82.1 - 121		9/21/2023 13:39

Method Reference(s): EPA 8260C
EPA 5035A - L

Data File: z19699.D

QC Batch ID: voas230921

QC Number: Blk 1

PARADIGM ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
1,1,1-Trichloroethane	20.0	ug/Kg	20.0	99.9	69.1 - 120		9/21/2023
1,1,2,2-Tetrachloroethane	20.0	ug/Kg	19.7	98.7	21 - 179		9/21/2023
1,1,2-Trichloroethane	20.0	ug/Kg	20.5	102	64.1 - 126		9/21/2023
1,1-Dichloroethane	20.0	ug/Kg	19.9	99.5	75.4 - 113		9/21/2023
1,1-Dichloroethene	20.0	ug/Kg	19.2	95.8	71.2 - 116		9/21/2023
1,2-Dichlorobenzene	20.0	ug/Kg	18.8	94.1	76.4 - 116		9/21/2023
1,2-Dichloroethane	20.0	ug/Kg	20.4	102	69.4 - 121		9/21/2023
1,2-Dichloropropane	20.0	ug/Kg	19.9	99.5	74.7 - 115		9/21/2023
1,3-Dichlorobenzene	20.0	ug/Kg	18.6	93.1	77.3 - 114		9/21/2023
1,4-Dichlorobenzene	20.0	ug/Kg	18.3	91.6	77.5 - 112		9/21/2023
Benzene	20.0	ug/Kg	20.4	102	78.4 - 116		9/21/2023
Bromodichloromethane	20.0	ug/Kg	20.1	101	71.2 - 117		9/21/2023
Bromoform	20.0	ug/Kg	19.0	95.0	63.5 - 121		9/21/2023
Bromomethane	20.0	ug/Kg	21.1	106	61.6 - 128		9/21/2023
Carbon Tetrachloride	20.0	ug/Kg	19.6	98.2	67.2 - 121		9/21/2023
Chlorobenzene	20.0	ug/Kg	19.3	96.4	81.1 - 119		9/21/2023

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PARADIGM ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
Chloroethane	20.0	ug/Kg	18.8	93.9	70.2 - 123		9/21/2023
Chloroform	20.0	ug/Kg	18.9	94.5	76.5 - 113		9/21/2023
Chloromethane	20.0	ug/Kg	15.4	77.1	53.8 - 125		9/21/2023
cis-1,3-Dichloropropene	20.0	ug/Kg	20.5	103	69.7 - 115		9/21/2023
Dibromochloromethane	20.0	ug/Kg	20.4	102	61.4 - 125		9/21/2023
Ethylbenzene	20.0	ug/Kg	19.1	95.3	75.5 - 117		9/21/2023
Methylene chloride	20.0	ug/Kg	22.4	112	65.8 - 125		9/21/2023
Tetrachloroethene	20.0	ug/Kg	18.7	93.7	61.1 - 125		9/21/2023
Toluene	20.0	ug/Kg	20.3	102	77.1 - 116		9/21/2023
trans-1,2-Dichloroethene	20.0	ug/Kg	19.5	97.6	75.4 - 116		9/21/2023
trans-1,3-Dichloropropene	20.0	ug/Kg	20.7	104	65.9 - 116		9/21/2023
Trichloroethene	20.0	ug/Kg	20.9	104	75.8 - 120		9/21/2023
Trichlorofluoromethane	20.0	ug/Kg	19.7	98.5	69 - 123		9/21/2023
Vinyl chloride	20.0	ug/Kg	19.1	95.4	64 - 127		9/21/2023

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Report Prepared Monday, September 25, 2023

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed

Method Reference(s): EPA 8260C
EPA 5035A - L

Data File: z19698.D

QC Number: LCS 1

QC Batch ID: voas230921

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Report Prepared Monday, September 25, 2023

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed	
1,1,1-Trichloroethane	<2.00	ug/L		9/20/2023	13:17
1,1,2,2-Tetrachloroethane	<2.00	ug/L		9/20/2023	13:17
1,1,2-Trichloroethane	<2.00	ug/L		9/20/2023	13:17
1,1-Dichloroethane	<2.00	ug/L		9/20/2023	13:17
1,1-Dichloroethene	<2.00	ug/L		9/20/2023	13:17
1,2,3-Trichlorobenzene	<5.00	ug/L		9/20/2023	13:17
1,2,4-Trichlorobenzene	<5.00	ug/L		9/20/2023	13:17
1,2-Dibromo-3-Chloropropane	<10.0	ug/L		9/20/2023	13:17
1,2-Dibromoethane	<2.00	ug/L		9/20/2023	13:17
1,2-Dichlorobenzene	<2.00	ug/L		9/20/2023	13:17
1,2-Dichloroethane	<2.00	ug/L		9/20/2023	13:17
1,2-Dichloropropane	<2.00	ug/L		9/20/2023	13:17
1,3-Dichlorobenzene	<2.00	ug/L		9/20/2023	13:17
1,4-Dichlorobenzene	<2.00	ug/L		9/20/2023	13:17
1,4-Dioxane	<10.0	ug/L		9/20/2023	13:17
2-Butanone	<10.0	ug/L		9/20/2023	13:17
2-Hexanone	<5.00	ug/L		9/20/2023	13:17
4-Methyl-2-pentanone	<5.00	ug/L		9/20/2023	13:17
Acetone	<10.0	ug/L		9/20/2023	13:17
Benzene	<1.00	ug/L		9/20/2023	13:17
Bromochloromethane	<5.00	ug/L		9/20/2023	13:17
Bromodichloromethane	<2.00	ug/L		9/20/2023	13:17
Bromoform	<5.00	ug/L		9/20/2023	13:17
Bromomethane	<2.00	ug/L		9/20/2023	13:17
Carbon disulfide	<2.00	ug/L		9/20/2023	13:17
Carbon Tetrachloride	<2.00	ug/L		9/20/2023	13:17
Chlorobenzene	<2.00	ug/L		9/20/2023	13:17

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed	
Chloroethane	<2.00	ug/L		9/20/2023	13:17
Chloroform	<2.00	ug/L		9/20/2023	13:17
Chloromethane	<2.00	ug/L		9/20/2023	13:17
cis-1,2-Dichloroethene	<2.00	ug/L		9/20/2023	13:17
cis-1,3-Dichloropropene	<2.00	ug/L		9/20/2023	13:17
Cyclohexane	<10.0	ug/L		9/20/2023	13:17
Dibromochloromethane	<2.00	ug/L		9/20/2023	13:17
Dichlorodifluoromethane	<2.00	ug/L		9/20/2023	13:17
Ethylbenzene	<2.00	ug/L		9/20/2023	13:17
Freon 113	<2.00	ug/L		9/20/2023	13:17
Isopropylbenzene	<2.00	ug/L		9/20/2023	13:17
m,p-Xylene	<2.00	ug/L		9/20/2023	13:17
Methyl acetate	<2.00	ug/L		9/20/2023	13:17
Methyl tert-butyl Ether	<2.00	ug/L		9/20/2023	13:17
Methylcyclohexane	<2.00	ug/L		9/20/2023	13:17
Methylene chloride	<5.00	ug/L		9/20/2023	13:17
o-Xylene	<2.00	ug/L		9/20/2023	13:17
Styrene	<5.00	ug/L		9/20/2023	13:17
Tetrachloroethene	<2.00	ug/L		9/20/2023	13:17
Toluene	<2.00	ug/L		9/20/2023	13:17
trans-1,2-Dichloroethene	<2.00	ug/L		9/20/2023	13:17
trans-1,3-Dichloropropene	<2.00	ug/L		9/20/2023	13:17
Trichloroethene	<2.00	ug/L		9/20/2023	13:17
Trichlorofluoromethane	<2.00	ug/L		9/20/2023	13:17
Vinyl chloride	<2.00	ug/L		9/20/2023	13:17

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**113**	79.7 - 118		9/20/2023 13:17
4-Bromofluorobenzene	**98.0**	80.1 - 112		9/20/2023 13:17
Pentafluorobenzene	**94.4**	88 - 115		9/20/2023 13:17
Toluene-D8	**109**	88.2 - 113		9/20/2023 13:17

Method Reference(s): EPA 8260C
EPA 5030C

Data File: z19662.D

QC Batch ID: voaw230920

QC Number: Blk 1

PARADIGM ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
1,1,1-Trichloroethane	20.0	ug/L	19.3	96.3	72.2 - 115		9/20/2023
1,1,2,2-Tetrachloroethane	20.0	ug/L	19.0	95.0	79.1 - 121		9/20/2023
1,1,2-Trichloroethane	20.0	ug/L	20.2	101	80.9 - 111		9/20/2023
1,1-Dichloroethane	20.0	ug/L	18.9	94.4	74.9 - 111		9/20/2023
1,1-Dichloroethene	20.0	ug/L	18.4	91.8	70.1 - 114		9/20/2023
1,2-Dichlorobenzene	20.0	ug/L	18.4	92.2	83.9 - 108		9/20/2023
1,2-Dichloroethane	20.0	ug/L	19.8	99.0	76.2 - 113		9/20/2023
1,2-Dichloropropane	20.0	ug/L	19.3	96.3	82 - 107		9/20/2023
1,3-Dichlorobenzene	20.0	ug/L	18.2	91.2	84.7 - 106		9/20/2023
1,4-Dichlorobenzene	20.0	ug/L	17.8	89.2	84.8 - 105		9/20/2023
Benzene	20.0	ug/L	19.5	97.4	82.6 - 111		9/20/2023
Bromodichloromethane	20.0	ug/L	19.2	95.9	79.8 - 106		9/20/2023
Bromoform	20.0	ug/L	18.0	90.2	76.1 - 112		9/20/2023
Bromomethane	20.0	ug/L	20.2	101	64.7 - 125		9/20/2023
Carbon Tetrachloride	20.0	ug/L	18.7	93.5	69.7 - 115		9/20/2023
Chlorobenzene	20.0	ug/L	18.7	93.5	88.3 - 111		9/20/2023

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PARADIGM ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
Chloroethane	20.0	ug/L	18.6	93.0	70.6 - 119		9/20/2023
Chloroform	20.0	ug/L	18.7	93.3	77.1 - 112		9/20/2023
Chloromethane	20.0	ug/L	15.2	76.2	57.6 - 111		9/20/2023
cis-1,3-Dichloropropene	20.0	ug/L	19.9	99.7	79.2 - 106		9/20/2023
Dibromochloromethane	20.0	ug/L	19.6	98.1	75.6 - 111		9/20/2023
Ethylbenzene	20.0	ug/L	18.9	94.5	82.7 - 108		9/20/2023
Methylene chloride	20.0	ug/L	19.4	96.9	64.4 - 128		9/20/2023
Tetrachloroethene	20.0	ug/L	18.4	92.2	74.7 - 113		9/20/2023
Toluene	20.0	ug/L	19.9	99.5	81.3 - 111		9/20/2023
trans-1,2-Dichloroethene	20.0	ug/L	18.9	94.7	75.9 - 112		9/20/2023
trans-1,3-Dichloropropene	20.0	ug/L	19.5	97.3	75.7 - 108		9/20/2023
Trichloroethene	20.0	ug/L	19.9	99.6	82.4 - 113		9/20/2023
Trichlorofluoromethane	20.0	ug/L	18.8	93.8	69.8 - 118		9/20/2023
Vinyl chloride	20.0	ug/L	17.8	89.0	63 - 120		9/20/2023

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Monday, September 25, 2023

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed

Method Reference(s): EPA 8260C
EPA 5030C

Data File: z19661.D

QC Number: LCS 1

QC Batch ID: voaw230920

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Monday, September 25, 2023

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

Each page of this document is part of a multipage report. This document may not be reproduced except in its entirety, without the prior consent of Paradigm Environmental Services, Inc.

All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.
"E" = Result has been estimated, calibration limit exceeded.
"H" = Denotes a parameter analyzed outside of holding time.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*
"(1)" = Indicates data from primary column used for QC calculation.
"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.
"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.

GENERAL TERMS AND CONDITIONS
LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty. Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB wi use LAB default method for all tests unless specified otherwise on the Work Order.
Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices. Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability. In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.
LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.
All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.
Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure. Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling. Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.
Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on th final report.
Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.
LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment. LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure. LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law. This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PARADIGM
ENVIRONMENTAL SERVICES

REPORT TO:	INVOICE TO:	
COMPANY: INVENTUM ENGINEERING	COMPANY: SAME	LAB PROJECT ID: 234271
address: 441 CARLISLE DR	ADDRESS:	
CITY: HERNDON STATE: VA ZIP: 20170	CITY: STATE: ZIP:	Quotation #:
PHONE: 585-734-5255 FAX:	PHONE: FAX:	Email: john.black@inventumeng.com roxanne.birx @ " "
ATTN: ROXANNE BIRX	ATTN: JOHN BLACK	

PROJECT REFERENCE: BREEZE WATER TESTING

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	TCL VOCs 8260	TCL SVOCs 8270	AMMONIA	CYANIDE	REMARKS	PARADIGM LAB SAMPLE NUMBER
9/13/23	1615		X	BREEZETEST-01-09132023	WAG	4	X	X	X	X	NO FILTRATION	-01
9/15/23	900		X	BREEZETEST-02-09152023	WAG	4					LAB FILTRATION	-02
9/15/23	910		X	BREEZETEST-03-09152023	WAG	4					LAB FILTRATION	-03
9/15/23	920		X	BREEZETEST-04-09152023	WAG	4					LAB FILTRATION	-04
9/15/23	925		X	BREEZETEST-05-09152023	WAG	4					LAB FILTRATION	-05
9/15/23	930		X	BREEZETEST-06-09152023	SD	3					COKE BREEZE	-06

WAG = GROUNDWATER per SD EM 9/19/23

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	X	None Required		None Required	
10 day		Batch QC	X	Basic EDD	
Rush 3 day		Category A		NYSDEC EDD	X
Rush 2 day		Category B			
Rush 1 day					
Other		Other		Other EDD	
please indicate date needed:		please indicate package needed:		please indicate EDD needed :	

ROXANNE BIRX — Sampled By — 9/15/23 — Date/Time

Relinquished By — Date/Time

Received By — 9/15/23 11:10 — Date/Time

Received @ Lab By — @ 1600 9/15/23 — Date/Time

Total Cost:

P.I.F.

By signing this form, client agrees to Paradigm Terms and Conditions (reverse).

10°C iced @ 1553 9/15/23

See additional page for sample conditions.

PARADIGM

Chain of Custody Supplement

Client: Inventum

Completed by: ZF

Lab Project ID: 234271

Date: 9/18/23

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container	X		X -01 -06
Headspace (<1 mL)	X VOA		X
Comments	pressure filtered all containers through a 0.7um acid washed glass fiber filter (-02, -03, -04, -05)		
Preservation	X -01 VOA TCN NH3 -02, -03, -04, -05	X VOA Ammonia TCN	X SVOCs
Comments	transfered VOAs to a preserved vial after filtration		
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature		X	
Comments	10°C		
Compliant Sample Quantity/Type	X		
Comments			

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

2309180 7 8 4 of 9/18

CHAIN OF CUSTODY

ELAP ID: 1

PARADIGM ENVIRONMENTAL SERVICES, INC

REPORT TO:		INVOICE TO:			
COMPANY:	Paradigm Environmental	COMPANY:	Same	LAB PROJECT #:	CLIENT PROJECT
ADDRESS:		ADDRESS:			
CITY: STATE: ZIP:		CITY: STATE: ZIP:		TURNAROUND TIME: (WORKING DAYS)	
PHONE: FAX:		PHONE: FAX:		STD ☐1 ☐2 ☐3 ☐5	
PROJECT NAME/SITE NAME:		ATTN:	Reporting	ATTN:	Accounts Payable
		COMMENTS:	Please email results to reporting@paradigmenv.com	Date Due:	9/25

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER OF CONTAINERS	Ammonia	Cyanide	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	9/13/23	1615		X	BreezeTest-01-09132023	WG	4/2	X	X	234271.01	
2	9/15/23	0900		X	BreezeTest-02-09152023		2	X	X	.02	
3		0910		X	BreezeTest-03-09152023		2	X	X	.03	
4		0920		X	BreezeTest-04-09152023		2	X	X	.04	
5		0925		X	BreezeTest-05-09152023		2	X	X	.05	
6		0930		X	BreezeTest-06-09152023	SD	1	X	X	.06	
7											
8											
9											
10											

LAB USE ONLY BELOW THIS LINE

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type:	Y ☐	N ☐
Comments:		
Preservation:	Y ☐	N ☐
Comments:		
Holding Time:	Y ☐	N ☐
Comments:		
Temperature:	Y ☐	N ☐
Comments:		

Client

Sampled By	Date/Time	Total Cost:
[signature]	@ 0830 9/18/23	
Relinquished By	Date/Time	
[signature]	9/18/23 1200	
Received By	Date/Time	P.I.F.
[signature]	9/18/23 15:36	
Received @ Lab By	Date/Time	

2309180824