



January 18, 2024

To: Benjamin McPherson

From: Peter Zaffram

Re: Byproducts Area Underground Storage Tank (UST)
Riverview Innovation & Technology Campus,
NYSDEC Site #C915353
3875 River Road
Town of Tonawanda, New York

Ben,

On August 11, 2023, Ontario Specialty Contracting (OSC) unearthed a formerly unknown and unregistered Underground Storage Tank (UST). The former UST was located along Broadway in the former By-products area of the site. Upon further investigation of the UST, it was determined that the UST had been closed in place and filled with sand. The sand was removed from the UST and stockpiled on polyethylene sheeting on a former building pad to the west of the UST location. The sand was field screened with a Photo Ionization Detector (PiD) and a sample was collected for characterization. The sample was analyzed for SVOCs, VOCs, TAL Metals, PCBs, Cyanide, Ammonia, and Mercury (Table 1).

Ontario Specialty Contracting (OSC) was able to successfully remove and stockpile approximately 33-35 cubic yards of sand from the newly discovered UST. Riverview Innovation & Technology Campus (RITC) is requesting NYSDEC approval to place the stockpiled UST sand with the surrounding impacted soils in the former Byproducts Area. The UST was discovered in cells G29 and G30 (Figure 1). The 33-35 cubic yards of sand will be mixed with the impacted soils in those cells during the solidification of G29 and G30. A mixture of 5% Breeze and 5% Lime Kiln Dust (by weight) will be used to solidify cells G29 and G30. A verification sample will be collected post solidification. If an unfavorable TCLP result occurs, mixtures will be increased by 50% in cell G29 and G30 with additional verification sampling. Means and methods will be used following the approved Source Area Solidification Interim Remedial Measure Work Plan (Inventum Engineering, October 2023).

Based on the analyte detections, it was determined TCLP analysis was not required for the UST sand. Total SVOCs, VOCs, TAL Metals, PCBs, Cyanide, Ammonia, and Mercury results show the total concentrations of TCLP compounds were below what could render the UST sand to be characteristic, therefore it is considered non-hazardous.

Upon approval by NYSDEC, the material will be solidified, placed and a verification sample will be collected from cell G29 or cell G30 post solidification.

Table





Table 1
UST 01 Sand
Riverview Innovation Technology Campus, Inc.,
Tonawanda, New York

ANALYTE	SAMPLE ID:		UST01-08152023	
	LAB ID:		L2347214-01	
	COLLECTION DATE:		8/15/2023	
	LOCATION:		UST in MW-05A Area	
	DESCRIPTION:		Tan and black sand	
Part 375 Commercial SCOs (mg/kg)	Part 375 Industrial SCOs (mg/kg)			
VOLATILE ORGANICS BY GC/MS				
1,1,1-Trichloroethane	500	1000	<6.2	U
1,1,2,2-Tetrachloroethane			<6.2	U
1,1,2-Trichloroethane			<10	U
1,1-Dichloroethane	240	480	<5.4	U
1,1-Dichloroethene	500	1000	<8.9	U
1,2,3-Trichlorobenzene			<12	U
1,2,4-Trichlorobenzene			<10	U
1,2,4-Trimethylbenzene	190	380	14	J
1,2-Dibromo-3-chloropropane			<37	U
1,2-Dibromoethane			<10	U
1,2-Dichlorobenzene	500	1000	<5.4	U
1,2-Dichloroethane	30	60	<9.6	U
1,2-Dichloroethene, Total			<5.1	U
1,2-Dichloropropane			<4.7	U
1,3,5-Trimethylbenzene	190	380	<7.2	U
1,3-Dichlorobenzene	280	560	<5.5	U
1,3-Dichloropropene, Total			<5.9	U
1,4-Dichlorobenzene	130	250	<6.4	U
1,4-Dioxane	130	250	<1300	U
2-Butanone	500	1000	<83	U
2-Hexanone			<44	U
4-Methyl-2-pentanone			<48	U
Acetone	500	1000	<180	U
Benzene	44	89	8.7	J
Bromochloromethane			<7.7	U
Bromodichloromethane			<4.1	U
Bromoform			<9.2	U
Bromomethane			<22	U
Carbon disulfide			<170	U
Carbon tetrachloride	22	44	<8.6	U
Chlorobenzene	500	1000	<4.8	U
Chloroethane			<17	U
Chloroform	350	700	<5.2	U
Chloromethane			<35	U
cis-1,2-Dichloroethene	500	1000	<6.6	U
cis-1,3-Dichloropropene			<5.9	U
Cyclohexane			<20	U
Dibromochloromethane			<5.2	U
Dichlorodifluoromethane			<34	U
Ethylbenzene	390	780	<5.3	U
Freon-113			<26	U
Isopropylbenzene			<4.1	U
Methyl Acetate			<36	U
Methyl cyclohexane			<22	U
Methyl tert butyl ether	500	1000	<7.5	U
Methylene chloride	500	1000	<86	U
n-Butylbenzene	500	1000	<6.2	U
n-Propylbenzene	500	1000	<6.4	U
Naphthalene	500	1000	17000	
o-Xylene			<11	U
p-Isopropyltoluene			<4.1	U
p/m-Xylene			<21	U
sec-Butylbenzene	500	1000	<5.5	U
Styrene			<7.3	U
tert-Butylbenzene	500	1000	<4.4	U
Tetrachloroethene	150	300	<7.3	U
Toluene	500	1000	<20	U
trans-1,2-Dichloroethene	500	1000	<5.1	U
trans-1,3-Dichloropropene			<10	U
Trichloroethene	200	400	<5.1	U
Trichlorofluoromethane			<26	U
Vinyl chloride	13	27	<12	U
Xylenes, Total	500	1000	<11	U
Total VOCs			17022.7	-



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	COLLECTION DATE:		8/15/2023	
	LOCATION:		UST in MW-05A Area	
	DESCRIPTION:		Tan and black sand	
	Part 375 Commercial SCOs (mg/kg)	Part 375 Industrial SCOs (mg/kg)		
SEMI-VOLATILE ORGANICS BY GC/MS				
1,2,4,5-Tetrachlorobenzene			<0.43	U
1,2,4-Trichlorobenzene			<0.47	U
1,2-Dichlorobenzene	500	1000	<0.73	U
1,3-Dichlorobenzene	280	560	<0.7	U
1,4-Dichlorobenzene	130	250	<0.71	U
1,4-Dioxane	130	250	<0.19	U
2,4,5-Trichlorophenol			<0.78	U
2,4,6-Trichlorophenol			<0.78	U
2,4-Dichlorophenol			<0.66	U
2,4-Dimethylphenol			<1.3	U
2,4-Dinitrophenol			<1.9	U
2,4-Dinitrotoluene			<0.82	U
2,6-Dinitrotoluene			<0.7	U
2-Chloronaphthalene			<0.4	U
2-Chlorophenol			<0.48	U
2-Methylnaphthalene			75	
2-Methylphenol	500	1000	1.2	J
2-Nitroaniline			<0.79	U
2-Nitrophenol			<1.5	U
3,3'-Dichlorobenzidine			<1.1	U
3-Methylphenol/4-Methylphenol	500	1000	2	J
3-Nitroaniline			<0.77	U
4,6-Dinitro-o-cresol			<2	U
4-Bromophenyl phenyl ether			<0.62	U
4-Chloroaniline			<0.74	U
4-Chlorophenyl phenyl ether			<0.44	U
4-Nitroaniline			<1.7	U
4-Nitrophenol			<1.7	U
Acenaphthene	500	1000	2.8	J
Acenaphthylene	500	1000	16	
Acetophenone			1.6	J
Anthracene	500	1000	18	
Benzo(a)anthracene	5.6	11	15	
Benzo(a)pyrene	1	1.1	12	
Benzo(b)fluoranthene	5.6	11	15	
Benzo(ghi)perylene	500	1000	6.8	
Benzo(k)fluoranthene	56	110	5.6	
Benzoic Acid			<4.1	U
Benzyl Alcohol			<1.2	U
Biphenyl			12	
Bis(2-chloroethoxy)methane			<0.41	U
Bis(2-chloroethyl)ether			<0.55	U
Bis(2-chloroisopropyl)ether			<0.7	U
Bis(2-ethylhexyl)phthalate			<1.4	U
Butyl benzyl phthalate			<1	U
Carbazole			6.8	
Chrysene	56	110	15	
Di-n-butylphthalate			<0.78	U
Di-n-octylphthalate			<1.4	U
Dibenzo(a,h)anthracene	0.56	1.1	1.8	J
Dibenzofuran	350	1000	27	
Diethyl phthalate			<0.38	U
Dimethyl phthalate			<0.86	U
Fluoranthene	500	1000	39	
Fluorene	500	1000	29	
Hexachlorobenzene	6	12	<0.46	U
Hexachlorobutadiene			<0.6	U
Hexachlorocyclopentadiene			<3.7	U
Hexachloroethane			<0.66	U
Indeno(1,2,3-cd)pyrene	5.6	11	7.8	
Isophorone			<0.53	U
n-Nitrosodi-n-propylamine			<0.63	U
Naphthalene	500	1000	5100	
NDPA/DPA			<0.46	U
Nitrobenzene			<0.6	U
p-Chloro-m-cresol			<0.61	U
Pentachlorophenol	6.7	55	<0.9	U
Phenanthrene	500	1000	62	
Phenol	500	1000	2.1	J
Pyrene	500	1000	28	
Total SVOCs			5501.5	-



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	COLLECTION DATE:		8/15/2023	
	LOCATION:		UST in MW-05A Area	
	DESCRIPTION:		Tan and black sand	
	Part 375 Commercial SCOs (mg/kg)	Part 375 Industrial SCOs (mg/kg)		
POLYCHLORINATED BIPHENYLS BY GC				
Aroclor 1016	1	25	<0.00536	U
Aroclor 1221	1	25	<0.00605	U
Aroclor 1232	1	25	<0.0128	U
Aroclor 1242	1	25	<0.00814	U
Aroclor 1248	1	25	<0.00906	U
Aroclor 1254	1	25	<0.00661	U
Aroclor 1260	1	25	<0.0112	U
Aroclor 1262	1	25	<0.00767	U
Aroclor 1268	1	25	<0.00626	U
PCBs, Total	1	25	<0.00536	U
TOTAL METALS				
Aluminum, Total			2000	
Antimony, Total			<0.352	U
Arsenic, Total	16	16	4.27	
Barium, Total	400	10000	11.4	
Beryllium, Total	590	2700	0.116	J
Cadmium, Total	9.3	60	0.212	J
Calcium, Total			60400	
Chromium, Total			6.44	
Cobalt, Total			1.99	
Copper, Total	270	10000	14.3	
Iron, Total			11400	
Lead, Total	1000	3900	16.6	
Magnesium, Total			27100	
Manganese, Total	10000	10000	214	
Mercury, Total	2.8	5.7	0.597	
Nickel, Total	310	10000	4.05	
Potassium, Total			323	
Selenium, Total	1500	6800	<0.239	U
Silver, Total	1500	6800	<0.262	U
Sodium, Total			502	
Thallium, Total			<0.292	U
Vanadium, Total			8.04	
Zinc, Total	10000	10000	51.2	
GENERAL CHEMISTRY				
Cyanide, Total	27	10000	43	
Nitrogen, Ammonia			100	
Solids, Total			80	

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

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

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

Qualifiers:

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 - Analyte concentration exceeds Part 375 Industrial SCOs

Green Highlight - Analyte concentration exceeds Part 375 Commercial SCOs

Figure





Lab Analytical





ANALYTICAL REPORT

Lab Number:	L2347214
Client:	Inventum Engineering 441 Carlisle Drive Suite C Herndon, NY 20170
ATTN:	John Black
Phone:	(571) 752-6562
Project Name:	RITC
Project Number:	UST-01
Report Date:	08/22/23

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: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2347214-01	UST01-08152023	SOIL	3875 RIVER ROAD	08/15/23 15:15	08/15/23

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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

L2347214-01: Any reported concentrations that are below 200 ug/kg may be biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Semivolatile Organics

L2347214-01D: 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.

Total Metals

L2347214-01: 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 WG1817237-3 LCSD recovery for cyanide, total (71%), associated with L2347214-01, 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:

Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative

Date: 08/22/23

ORGANICS

VOLATILES

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

SAMPLE RESULTS

Lab ID: L2347214-01 D2
 Client ID: UST01-08152023
 Sample Location: 3875 RIVER ROAD

Date Collected: 08/15/23 15:15
 Date Received: 08/15/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 08/21/23 12:35
 Analyst: MKS
 Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab

Naphthalene	17000000		ug/kg	600000	97000	2000
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	104		70-130

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

SAMPLE RESULTS

Lab ID: L2347214-01 D
Client ID: UST01-08152023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/15/23 15:15
Date Received: 08/15/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/19/23 17:46
Analyst: AJK
Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	190000	86000	500
1,1-Dichloroethane	ND		ug/kg	37000	5400	500
Chloroform	ND		ug/kg	56000	5200	500
Carbon tetrachloride	ND		ug/kg	37000	8600	500
1,2-Dichloropropane	ND		ug/kg	37000	4700	500
Dibromochloromethane	ND		ug/kg	37000	5200	500
1,1,2-Trichloroethane	ND		ug/kg	37000	10000	500
Tetrachloroethene	ND		ug/kg	19000	7300	500
Chlorobenzene	ND		ug/kg	19000	4800	500
Trichlorofluoromethane	ND		ug/kg	150000	26000	500
1,2-Dichloroethane	ND		ug/kg	37000	9600	500
1,1,1-Trichloroethane	ND		ug/kg	19000	6200	500
Bromodichloromethane	ND		ug/kg	19000	4100	500
trans-1,3-Dichloropropene	ND		ug/kg	37000	10000	500
cis-1,3-Dichloropropene	ND		ug/kg	19000	5900	500
1,3-Dichloropropene, Total	ND		ug/kg	19000	5900	500
Bromoform	ND		ug/kg	150000	9200	500
1,1,2,2-Tetrachloroethane	ND		ug/kg	19000	6200	500
Benzene	8700	J	ug/kg	19000	6200	500
Toluene	ND		ug/kg	37000	20000	500
Ethylbenzene	ND		ug/kg	37000	5300	500
Chloromethane	ND		ug/kg	150000	35000	500
Bromomethane	ND		ug/kg	75000	22000	500
Vinyl chloride	ND		ug/kg	37000	12000	500
Chloroethane	ND		ug/kg	75000	17000	500
1,1-Dichloroethene	ND		ug/kg	37000	8900	500
trans-1,2-Dichloroethene	ND		ug/kg	56000	5100	500
Trichloroethene	ND		ug/kg	19000	5100	500

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

SAMPLE RESULTS

Lab ID: L2347214-01 D
Client ID: UST01-08152023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/15/23 15:15
Date Received: 08/15/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/kg	75000	5400	500
1,3-Dichlorobenzene	ND		ug/kg	75000	5500	500
1,4-Dichlorobenzene	ND		ug/kg	75000	6400	500
Methyl tert butyl ether	ND		ug/kg	75000	7500	500
p/m-Xylene	ND		ug/kg	75000	21000	500
o-Xylene	ND		ug/kg	37000	11000	500
Xylenes, Total	ND		ug/kg	37000	11000	500
cis-1,2-Dichloroethene	ND		ug/kg	37000	6600	500
1,2-Dichloroethene, Total	ND		ug/kg	37000	5100	500
Styrene	ND		ug/kg	37000	7300	500
Dichlorodifluoromethane	ND		ug/kg	370000	34000	500
Acetone	ND		ug/kg	370000	180000	500
Carbon disulfide	ND		ug/kg	370000	170000	500
2-Butanone	ND		ug/kg	370000	83000	500
4-Methyl-2-pentanone	ND		ug/kg	370000	48000	500
2-Hexanone	ND		ug/kg	370000	44000	500
Bromochloromethane	ND		ug/kg	75000	7700	500
1,2-Dibromoethane	ND		ug/kg	37000	10000	500
n-Butylbenzene	ND		ug/kg	37000	6200	500
sec-Butylbenzene	ND		ug/kg	37000	5500	500
tert-Butylbenzene	ND		ug/kg	75000	4400	500
1,2-Dibromo-3-chloropropane	ND		ug/kg	110000	37000	500
Isopropylbenzene	ND		ug/kg	37000	4100	500
p-Isopropyltoluene	ND		ug/kg	37000	4100	500
Naphthalene	22000000	E	ug/kg	150000	24000	500
n-Propylbenzene	ND		ug/kg	37000	6400	500
1,2,3-Trichlorobenzene	ND		ug/kg	75000	12000	500
1,2,4-Trichlorobenzene	ND		ug/kg	75000	10000	500
1,3,5-Trimethylbenzene	ND		ug/kg	75000	7200	500
1,2,4-Trimethylbenzene	14000	J	ug/kg	75000	12000	500
Methyl Acetate	ND		ug/kg	150000	36000	500
Cyclohexane	ND		ug/kg	370000	20000	500
1,4-Dioxane	ND		ug/kg	3000000	1300000	500
Freon-113	ND		ug/kg	150000	26000	500
Methyl cyclohexane	ND		ug/kg	150000	22000	500

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

SAMPLE RESULTS

Lab ID: L2347214-01 D
 Client ID: UST01-08152023
 Sample Location: 3875 RIVER ROAD

Date Collected: 08/15/23 15:15
 Date Received: 08/15/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	120		70-130

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/19/23 11:13
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1818038-5					
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
1,3-Dichloropropene, Total	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

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 08/19/23 11:13
 Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1818038-5					
1,3-Dichlorobenzene	ND		ug/kg	100	7.4
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
Xylenes, Total	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8
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.
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
tert-Butylbenzene	ND		ug/kg	100	5.9
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
Naphthalene	ND		ug/kg	200	32.
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 08/19/23 11:13
 Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1818038-5					
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.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	102		70-130

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 08/21/23 09:35
 Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01 Batch: WG1818275-5					
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
1,3-Dichloropropene, Total	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	33	J	ug/kg	100	29.
Vinyl chloride	ND		ug/kg	50	17.
Chloroethane	ND		ug/kg	100	23.
1,1-Dichloroethene	ND		ug/kg	50	12.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8
1,2-Dichlorobenzene	ND		ug/kg	100	7.2

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/21/23 09:35
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01 Batch: WG1818275-5					
1,3-Dichlorobenzene	ND		ug/kg	100	7.4
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
Xylenes, Total	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8
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.
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
tert-Butylbenzene	ND		ug/kg	100	5.9
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
Naphthalene	ND		ug/kg	200	32.
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/21/23 09:35
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01 Batch: WG1818275-5					
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.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	102		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1818038-3 WG1818038-4								
Methylene chloride	91		90		70-130	1		30
1,1-Dichloroethane	94		95		70-130	1		30
Chloroform	96		94		70-130	2		30
Carbon tetrachloride	97		96		70-130	1		30
1,2-Dichloropropane	92		93		70-130	1		30
Dibromochloromethane	96		97		70-130	1		30
1,1,2-Trichloroethane	102		105		70-130	3		30
Tetrachloroethene	102		103		70-130	1		30
Chlorobenzene	98		100		70-130	2		30
Trichlorofluoromethane	102		98		70-139	4		30
1,2-Dichloroethane	97		95		70-130	2		30
1,1,1-Trichloroethane	104		103		70-130	1		30
Bromodichloromethane	92		92		70-130	0		30
trans-1,3-Dichloropropene	100		104		70-130	4		30
cis-1,3-Dichloropropene	100		97		70-130	3		30
Bromoform	91		94		70-130	3		30
1,1,2,2-Tetrachloroethane	95		93		70-130	2		30
Benzene	112		96		70-130	15		30
Toluene	98		99		70-130	1		30
Ethylbenzene	100		103		70-130	3		30
Chloromethane	104		101		52-130	3		30
Bromomethane	90		84		57-147	7		30
Vinyl chloride	104		102		67-130	2		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1818038-3 WG1818038-4								
Chloroethane	98		94		50-151	4		30
1,1-Dichloroethene	97		94		65-135	3		30
trans-1,2-Dichloroethene	98		91		70-130	7		30
Trichloroethene	100		100		70-130	0		30
1,2-Dichlorobenzene	96		98		70-130	2		30
1,3-Dichlorobenzene	99		101		70-130	2		30
1,4-Dichlorobenzene	100		100		70-130	0		30
Methyl tert butyl ether	97		96		66-130	1		30
p/m-Xylene	105		107		70-130	2		30
o-Xylene	104		104		70-130	0		30
cis-1,2-Dichloroethene	95		94		70-130	1		30
Styrene	105		107		70-130	2		30
Dichlorodifluoromethane	109		103		30-146	6		30
Acetone	97		103		54-140	6		30
Carbon disulfide	96		94		59-130	2		30
2-Butanone	103		84		70-130	20		30
4-Methyl-2-pentanone	101		100		70-130	1		30
2-Hexanone	96		100		70-130	4		30
Bromochloromethane	98		94		70-130	4		30
1,2-Dibromoethane	105		107		70-130	2		30
n-Butylbenzene	107		108		70-130	1		30
sec-Butylbenzene	105		106		70-130	1		30
tert-Butylbenzene	103		103		70-130	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1818038-3 WG1818038-4								
1,2-Dibromo-3-chloropropane	104		100		68-130	4		30
Isopropylbenzene	102		102		70-130	0		30
p-Isopropyltoluene	106		106		70-130	0		30
Naphthalene	92		96		70-130	4		30
n-Propylbenzene	101		103		70-130	2		30
1,2,3-Trichlorobenzene	96		98		70-130	2		30
1,2,4-Trichlorobenzene	98		100		70-130	2		30
1,3,5-Trimethylbenzene	103		105		70-130	2		30
1,2,4-Trimethylbenzene	104		106		70-130	2		30
Methyl Acetate	100		99		51-146	1		30
Cyclohexane	98		96		59-142	2		30
1,4-Dioxane	97		101		65-136	4		30
Freon-113	101		99		50-139	2		30
Methyl cyclohexane	98		95		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	116		95		70-130
Toluene-d8	101		101		70-130
4-Bromofluorobenzene	94		96		70-130
Dibromofluoromethane	105		101		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG1818275-3 WG1818275-4								
Methylene chloride	93		95		70-130	2		30
1,1-Dichloroethane	110		111		70-130	1		30
Chloroform	108		109		70-130	1		30
Carbon tetrachloride	107		106		70-130	1		30
1,2-Dichloropropane	107		107		70-130	0		30
Dibromochloromethane	99		102		70-130	3		30
1,1,2-Trichloroethane	101		102		70-130	1		30
Tetrachloroethene	106		106		70-130	0		30
Chlorobenzene	103		104		70-130	1		30
Trichlorofluoromethane	110		124		70-139	12		30
1,2-Dichloroethane	107		109		70-130	2		30
1,1,1-Trichloroethane	113		113		70-130	0		30
Bromodichloromethane	106		106		70-130	0		30
trans-1,3-Dichloropropene	104		107		70-130	3		30
cis-1,3-Dichloropropene	107		107		70-130	0		30
Bromoform	97		92		70-130	5		30
1,1,2,2-Tetrachloroethane	126		107		70-130	16		30
Benzene	104		105		70-130	1		30
Toluene	102		102		70-130	0		30
Ethylbenzene	102		102		70-130	0		30
Chloromethane	113		115		52-130	2		30
Bromomethane	143		146		57-147	2		30
Vinyl chloride	113		113		67-130	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG1818275-3 WG1818275-4								
Chloroethane	105		128		50-151	20		30
1,1-Dichloroethene	105		105		65-135	0		30
trans-1,2-Dichloroethene	105		105		70-130	0		30
Trichloroethene	106		108		70-130	2		30
1,2-Dichlorobenzene	100		100		70-130	0		30
1,3-Dichlorobenzene	117		102		70-130	14		30
1,4-Dichlorobenzene	100		100		70-130	0		30
Methyl tert butyl ether	99		99		66-130	0		30
p/m-Xylene	102		103		70-130	1		30
o-Xylene	102		102		70-130	0		30
cis-1,2-Dichloroethene	105		104		70-130	1		30
Styrene	98		98		70-130	0		30
Dichlorodifluoromethane	103		105		30-146	2		30
Acetone	99		98		54-140	1		30
Carbon disulfide	97		98		59-130	1		30
2-Butanone	95		98		70-130	3		30
4-Methyl-2-pentanone	95		99		70-130	4		30
2-Hexanone	87		91		70-130	4		30
Bromochloromethane	102		104		70-130	2		30
1,2-Dibromoethane	104		106		70-130	2		30
n-Butylbenzene	113		112		70-130	1		30
sec-Butylbenzene	125		108		70-130	15		30
tert-Butylbenzene	120		103		70-130	15		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG1818275-3 WG1818275-4								
1,2-Dibromo-3-chloropropane	86		89		68-130	3		30
Isopropylbenzene	124		104		70-130	18		30
p-Isopropyltoluene	122		106		70-130	14		30
Naphthalene	95		96		70-130	1		30
n-Propylbenzene	130		108		70-130	18		30
1,2,3-Trichlorobenzene	98		97		70-130	1		30
1,2,4-Trichlorobenzene	98		96		70-130	2		30
1,3,5-Trimethylbenzene	123		105		70-130	16		30
1,2,4-Trimethylbenzene	122		104		70-130	16		30
Methyl Acetate	100		103		51-146	3		30
Cyclohexane	110		111		59-142	1		30
1,4-Dioxane	98		104		65-136	6		30
Freon-113	110		110		50-139	0		30
Methyl cyclohexane	98		98		70-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	111		113		70-130
Toluene-d8	102		101		70-130
4-Bromofluorobenzene	116		97		70-130
Dibromofluoromethane	102		104		70-130

SEMIVOLATILES

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

SAMPLE RESULTS

Lab ID: L2347214-01 D2
 Client ID: UST01-08152023
 Sample Location: 3875 RIVER ROAD

Date Collected: 08/15/23 15:15
 Date Received: 08/15/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8270E
 Analytical Date: 08/18/23 16:31
 Analyst: JG
 Percent Solids: 80%

Extraction Method: EPA 3546
 Extraction Date: 08/17/23 18:31

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Naphthalene	5100000		ug/kg	200000	25000	1000
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Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

SAMPLE RESULTS

Lab ID: L2347214-01 D
Client ID: UST01-08152023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/15/23 15:15
Date Received: 08/15/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/18/23 16:55
Analyst: JG
Percent Solids: 80%

Extraction Method: EPA 3546
Extraction Date: 08/17/23 18:31

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	2800	J	ug/kg	3300	420	20
1,2,4-Trichlorobenzene	ND		ug/kg	4100	470	20
Hexachlorobenzene	ND		ug/kg	2400	460	20
Bis(2-chloroethyl)ether	ND		ug/kg	3700	550	20
2-Chloronaphthalene	ND		ug/kg	4100	400	20
1,2-Dichlorobenzene	ND		ug/kg	4100	730	20
1,3-Dichlorobenzene	ND		ug/kg	4100	700	20
1,4-Dichlorobenzene	ND		ug/kg	4100	710	20
3,3'-Dichlorobenzidine	ND		ug/kg	4100	1100	20
2,4-Dinitrotoluene	ND		ug/kg	4100	820	20
2,6-Dinitrotoluene	ND		ug/kg	4100	700	20
Fluoranthene	39000		ug/kg	2400	470	20
4-Chlorophenyl phenyl ether	ND		ug/kg	4100	440	20
4-Bromophenyl phenyl ether	ND		ug/kg	4100	620	20
Bis(2-chloroisopropyl)ether	ND		ug/kg	4900	700	20
Bis(2-chloroethoxy)methane	ND		ug/kg	4400	410	20
Hexachlorobutadiene	ND		ug/kg	4100	600	20
Hexachlorocyclopentadiene	ND		ug/kg	12000	3700	20
Hexachloroethane	ND		ug/kg	3300	660	20
Isophorone	ND		ug/kg	3700	530	20
Naphthalene	1100000	E	ug/kg	4100	500	20
Nitrobenzene	ND		ug/kg	3700	600	20
NDPA/DPA	ND		ug/kg	3300	460	20
n-Nitrosodi-n-propylamine	ND		ug/kg	4100	630	20
Bis(2-ethylhexyl)phthalate	ND		ug/kg	4100	1400	20
Butyl benzyl phthalate	ND		ug/kg	4100	1000	20
Di-n-butylphthalate	ND		ug/kg	4100	780	20
Di-n-octylphthalate	ND		ug/kg	4100	1400	20

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

SAMPLE RESULTS

Lab ID: L2347214-01 D
 Client ID: UST01-08152023
 Sample Location: 3875 RIVER ROAD

Date Collected: 08/15/23 15:15
 Date Received: 08/15/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	4100	380	20
Dimethyl phthalate	ND		ug/kg	4100	860	20
Benzo(a)anthracene	15000		ug/kg	2400	460	20
Benzo(a)pyrene	12000		ug/kg	3300	1000	20
Benzo(b)fluoranthene	15000		ug/kg	2400	690	20
Benzo(k)fluoranthene	5600		ug/kg	2400	650	20
Chrysene	15000		ug/kg	2400	420	20
Acenaphthylene	16000		ug/kg	3300	630	20
Anthracene	18000		ug/kg	2400	800	20
Benzo(ghi)perylene	6800		ug/kg	3300	480	20
Fluorene	29000		ug/kg	4100	400	20
Phenanthrene	62000		ug/kg	2400	500	20
Dibenzo(a,h)anthracene	1800	J	ug/kg	2400	470	20
Indeno(1,2,3-cd)pyrene	7800		ug/kg	3300	570	20
Pyrene	28000		ug/kg	2400	410	20
Biphenyl	12000		ug/kg	9300	530	20
4-Chloroaniline	ND		ug/kg	4100	740	20
2-Nitroaniline	ND		ug/kg	4100	790	20
3-Nitroaniline	ND		ug/kg	4100	770	20
4-Nitroaniline	ND		ug/kg	4100	1700	20
Dibenzofuran	27000		ug/kg	4100	390	20
2-Methylnaphthalene	75000		ug/kg	4900	490	20
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	4100	430	20
Acetophenone	1600	J	ug/kg	4100	510	20
2,4,6-Trichlorophenol	ND		ug/kg	2400	780	20
p-Chloro-m-cresol	ND		ug/kg	4100	610	20
2-Chlorophenol	ND		ug/kg	4100	480	20
2,4-Dichlorophenol	ND		ug/kg	3700	660	20
2,4-Dimethylphenol	ND		ug/kg	4100	1300	20
2-Nitrophenol	ND		ug/kg	8800	1500	20
4-Nitrophenol	ND		ug/kg	5700	1700	20
2,4-Dinitrophenol	ND		ug/kg	20000	1900	20
4,6-Dinitro-o-cresol	ND		ug/kg	11000	2000	20
Pentachlorophenol	ND		ug/kg	3300	900	20
Phenol	2100	J	ug/kg	4100	620	20
2-Methylphenol	1200	J	ug/kg	4100	630	20
3-Methylphenol/4-Methylphenol	2000	J	ug/kg	5900	640	20

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

SAMPLE RESULTS

Lab ID: L2347214-01 D
Client ID: UST01-08152023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/15/23 15:15
Date Received: 08/15/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	4100	780	20
Benzoic Acid	ND		ug/kg	13000	4100	20
Benzyl Alcohol	ND		ug/kg	4100	1200	20
Carbazole	6800		ug/kg	4100	400	20
1,4-Dioxane	ND		ug/kg	610	190	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
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 08/18/23 08:26
Analyst: SZ

Extraction Method: EPA 3546
Extraction Date: 08/17/23 18:31

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1817214-1					
Acenaphthene	ND		ug/kg	130	17.
1,2,4-Trichlorobenzene	ND		ug/kg	160	19.
Hexachlorobenzene	ND		ug/kg	98	18.
Bis(2-chloroethyl)ether	ND		ug/kg	150	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
1,2-Dichlorobenzene	ND		ug/kg	160	29.
1,3-Dichlorobenzene	ND		ug/kg	160	28.
1,4-Dichlorobenzene	ND		ug/kg	160	28.
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.

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 08/18/23 08:26
Analyst: SZ

Extraction Method: EPA 3546
Extraction Date: 08/17/23 18:31

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1817214-1					
Dimethyl phthalate	ND		ug/kg	160	34.
Benzo(a)anthracene	ND		ug/kg	98	18.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	98	27.
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.

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 08/18/23 08:26
Analyst: SZ

Extraction Method: EPA 3546
Extraction Date: 08/17/23 18:31

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1817214-1					
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.
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.
Benzoic Acid	ND		ug/kg	530	160
Benzyl Alcohol	ND		ug/kg	160	50.
Carbazole	ND		ug/kg	160	16.
1,4-Dioxane	ND		ug/kg	24	7.5

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	55		25-120
Phenol-d6	57		10-120
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	60		30-120
2,4,6-Tribromophenol	86		10-136
4-Terphenyl-d14	91		18-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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: WG1817214-2 WG1817214-3								
Acenaphthene	53		59		31-137	11		50
1,2,4-Trichlorobenzene	56		60		38-107	7		50
Hexachlorobenzene	59		66		40-140	11		50
Bis(2-chloroethyl)ether	52		56		40-140	7		50
2-Chloronaphthalene	57		62		40-140	8		50
1,2-Dichlorobenzene	53		57		40-140	7		50
1,3-Dichlorobenzene	52		55		40-140	6		50
1,4-Dichlorobenzene	53		56		28-104	6		50
3,3'-Dichlorobenzidine	51		55		40-140	8		50
2,4-Dinitrotoluene	63		72		40-132	13		50
2,6-Dinitrotoluene	64		71		40-140	10		50
Fluoranthene	56		64		40-140	13		50
4-Chlorophenyl phenyl ether	57		63		40-140	10		50
4-Bromophenyl phenyl ether	59		68		40-140	14		50
Bis(2-chloroisopropyl)ether	53		57		40-140	7		50
Bis(2-chloroethoxy)methane	55		60		40-117	9		50
Hexachlorobutadiene	57		62		40-140	8		50
Hexachlorocyclopentadiene	60		65		40-140	8		50
Hexachloroethane	50		54		40-140	8		50
Isophorone	55		57		40-140	4		50
Naphthalene	56		61		40-140	9		50
Nitrobenzene	56		59		40-140	5		50
NDPA/DPA	57		63		36-157	10		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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: WG1817214-2 WG1817214-3								
n-Nitrosodi-n-propylamine	53		58		32-121	9		50
Bis(2-ethylhexyl)phthalate	61		69		40-140	12		50
Butyl benzyl phthalate	61		69		40-140	12		50
Di-n-butylphthalate	59		67		40-140	13		50
Di-n-octylphthalate	59		66		40-140	11		50
Diethyl phthalate	58		63		40-140	8		50
Dimethyl phthalate	62		68		40-140	9		50
Benzo(a)anthracene	54		60		40-140	11		50
Benzo(a)pyrene	58		63		40-140	8		50
Benzo(b)fluoranthene	52		59		40-140	13		50
Benzo(k)fluoranthene	57		64		40-140	12		50
Chrysene	57		63		40-140	10		50
Acenaphthylene	60		64		40-140	6		50
Anthracene	58		65		40-140	11		50
Benzo(ghi)perylene	53		60		40-140	12		50
Fluorene	57		63		40-140	10		50
Phenanthrene	56		64		40-140	13		50
Dibenzo(a,h)anthracene	53		61		40-140	14		50
Indeno(1,2,3-cd)pyrene	54		61		40-140	12		50
Pyrene	57		64		35-142	12		50
Biphenyl	64		69		37-127	8		50
4-Chloroaniline	50		56		40-140	11		50
2-Nitroaniline	64		70		47-134	9		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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: WG1817214-2 WG1817214-3								
3-Nitroaniline	52		59		26-129	13		50
4-Nitroaniline	57		64		41-125	12		50
Dibenzofuran	58		64		40-140	10		50
2-Methylnaphthalene	59		62		40-140	5		50
1,2,4,5-Tetrachlorobenzene	64		69		40-117	8		50
Acetophenone	57		61		14-144	7		50
2,4,6-Trichlorophenol	65		72		30-130	10		50
p-Chloro-m-cresol	62		68		26-103	9		50
2-Chlorophenol	57		60		25-102	5		50
2,4-Dichlorophenol	62		66		30-130	6		50
2,4-Dimethylphenol	60		65		30-130	8		50
2-Nitrophenol	69		73		30-130	6		50
4-Nitrophenol	60		69		11-114	14		50
2,4-Dinitrophenol	64		72		4-130	12		50
4,6-Dinitro-o-cresol	70		78		10-130	11		50
Pentachlorophenol	63		71		17-109	12		50
Phenol	58		60		26-90	3		50
2-Methylphenol	57		61		30-130.	7		50
3-Methylphenol/4-Methylphenol	63		68		30-130	8		50
2,4,5-Trichlorophenol	65		70		30-130	7		50
Benzoic Acid	38		50		10-110	27		50
Benzyl Alcohol	60		64		40-140	6		50
Carbazole	55		63		54-128	14		50

Lab Control Sample Analysis Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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: WG1817214-2 WG1817214-3								
1,4-Dioxane	41		43		40-140	5		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	55		58		25-120
Phenol-d6	54		57		10-120
Nitrobenzene-d5	53		57		23-120
2-Fluorobiphenyl	56		62		30-120
2,4,6-Tribromophenol	65		74		10-136
4-Terphenyl-d14	56		63		18-120

PCBS

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

SAMPLE RESULTS

Lab ID: L2347214-01
Client ID: UST01-08152023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/15/23 15:15
Date Received: 08/15/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 08/18/23 10:37
Analyst: MEO
Percent Solids: 80%

Extraction Method: EPA 3546
Extraction Date: 08/17/23 19:12
Cleanup Method: EPA 3665A
Cleanup Date: 08/18/23
Cleanup Method: EPA 3660B
Cleanup Date: 08/18/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	60.4	5.36	1	A
Aroclor 1221	ND		ug/kg	60.4	6.05	1	A
Aroclor 1232	ND		ug/kg	60.4	12.8	1	A
Aroclor 1242	ND		ug/kg	60.4	8.14	1	A
Aroclor 1248	ND		ug/kg	60.4	9.06	1	A
Aroclor 1254	ND		ug/kg	60.4	6.61	1	A
Aroclor 1260	ND		ug/kg	60.4	11.2	1	A
Aroclor 1262	ND		ug/kg	60.4	7.67	1	A
Aroclor 1268	ND		ug/kg	60.4	6.26	1	A
PCBs, Total	ND		ug/kg	60.4	5.36	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	97		30-150	B

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 08/18/23 10:13
Analyst: MEO

Extraction Method: EPA 3546
Extraction Date: 08/17/23 19:12
Cleanup Method: EPA 3665A
Cleanup Date: 08/18/23
Cleanup Method: EPA 3660B
Cleanup Date: 08/18/23

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1817216-1						
Aroclor 1016	ND		ug/kg	47.4	4.21	A
Aroclor 1221	ND		ug/kg	47.4	4.75	A
Aroclor 1232	ND		ug/kg	47.4	10.0	A
Aroclor 1242	ND		ug/kg	47.4	6.39	A
Aroclor 1248	ND		ug/kg	47.4	7.12	A
Aroclor 1254	ND		ug/kg	47.4	5.19	A
Aroclor 1260	ND		ug/kg	47.4	8.77	A
Aroclor 1262	ND		ug/kg	47.4	6.02	A
Aroclor 1268	ND		ug/kg	47.4	4.91	A
PCBs, Total	ND		ug/kg	47.4	4.21	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	86		30-150	A
2,4,5,6-Tetrachloro-m-xylene	75		30-150	B
Decachlorobiphenyl	82		30-150	B

Lab Control Sample Analysis Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1817216-2 WG1817216-3									
Aroclor 1016	81		82		40-140	1		50	A
Aroclor 1260	77		80		40-140	4		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		76		30-150	A
Decachlorobiphenyl	82		87		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		78		30-150	B
Decachlorobiphenyl	80		84		30-150	B

METALS

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

SAMPLE RESULTS

Lab ID: L2347214-01
 Client ID: UST01-08152023
 Sample Location: 3875 RIVER ROAD

Date Collected: 08/15/23 15:15
 Date Received: 08/15/23
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	2000		mg/kg	9.27	2.50	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Antimony, Total	ND		mg/kg	4.63	0.352	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Arsenic, Total	4.27		mg/kg	0.927	0.193	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Barium, Total	11.4		mg/kg	0.927	0.161	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Beryllium, Total	0.116	J	mg/kg	0.463	0.031	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Cadmium, Total	0.212	J	mg/kg	0.927	0.091	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Calcium, Total	60400		mg/kg	9.27	3.24	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Chromium, Total	6.44		mg/kg	0.927	0.089	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Cobalt, Total	1.99		mg/kg	1.85	0.154	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Copper, Total	14.3		mg/kg	0.927	0.239	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Iron, Total	11400		mg/kg	4.63	0.837	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Lead, Total	16.6		mg/kg	4.63	0.248	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Magnesium, Total	27100		mg/kg	9.27	1.43	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Manganese, Total	214		mg/kg	0.927	0.147	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Mercury, Total	0.597		mg/kg	0.093	0.060	1	08/17/23 00:00	08/17/23 16:44	EPA 7471B	1,7471B	MJR
Nickel, Total	4.05		mg/kg	2.32	0.224	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Potassium, Total	323		mg/kg	232	13.3	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Selenium, Total	ND		mg/kg	1.85	0.239	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Silver, Total	ND		mg/kg	0.463	0.262	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Sodium, Total	502		mg/kg	185	2.92	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Thallium, Total	ND		mg/kg	1.85	0.292	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Vanadium, Total	8.04		mg/kg	0.927	0.188	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW
Zinc, Total	51.2		mg/kg	4.63	0.271	2	08/16/23 21:00	08/21/23 14:41	EPA 3050B	1,6010D	AMW



Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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: WG1816560-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Antimony, Total	ND		mg/kg	2.00	0.152	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Arsenic, Total	ND		mg/kg	0.400	0.083	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Barium, Total	ND		mg/kg	0.400	0.070	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Beryllium, Total	ND		mg/kg	0.200	0.013	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Cadmium, Total	ND		mg/kg	0.400	0.039	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Calcium, Total	ND		mg/kg	4.00	1.40	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Chromium, Total	ND		mg/kg	0.400	0.038	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Cobalt, Total	ND		mg/kg	0.800	0.066	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Copper, Total	ND		mg/kg	0.400	0.103	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Iron, Total	ND		mg/kg	2.00	0.361	1	08/16/23 21:00	08/21/23 14:16	1,6010D	AMW
Lead, Total	ND		mg/kg	2.00	0.107	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Magnesium, Total	ND		mg/kg	4.00	0.616	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Manganese, Total	ND		mg/kg	0.400	0.064	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Nickel, Total	ND		mg/kg	1.00	0.097	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Potassium, Total	ND		mg/kg	100	5.76	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Selenium, Total	0.131	J	mg/kg	0.800	0.103	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Silver, Total	ND		mg/kg	0.200	0.113	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Sodium, Total	2.33	J	mg/kg	80.0	1.26	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Thallium, Total	ND		mg/kg	0.800	0.126	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Vanadium, Total	ND		mg/kg	0.400	0.081	1	08/16/23 21:00	08/21/23 08:36	1,6010D	DHL
Zinc, Total	ND		mg/kg	2.00	0.117	1	08/16/23 21:00	08/21/23 08:36	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 Batch: WG1816562-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	08/17/23 00:00	08/17/23 15:34	1,7471B	MJR



Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1816560-2 SRM Lot Number: D119-540								
Aluminum, Total	76		-		48-152	-		
Antimony, Total	140		-		10-190	-		
Arsenic, Total	103		-		83-117	-		
Barium, Total	97		-		82-118	-		
Beryllium, Total	104		-		83-117	-		
Cadmium, Total	98		-		82-117	-		
Calcium, Total	102		-		81-118	-		
Chromium, Total	105		-		82-119	-		
Cobalt, Total	105		-		83-117	-		
Copper, Total	98		-		84-116	-		
Iron, Total	98		-		60-140	-		
Lead, Total	101		-		82-118	-		
Magnesium, Total	87		-		76-124	-		
Manganese, Total	100		-		82-118	-		
Nickel, Total	104		-		82-117	-		
Potassium, Total	87		-		70-130	-		
Selenium, Total	106		-		79-121	-		
Silver, Total	97		-		80-120	-		
Sodium, Total	101		-		74-126	-		
Thallium, Total	107		-		81-119	-		
Vanadium, Total	100		-		79-121	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1816560-2 SRM Lot Number: D119-540					
Zinc, Total	102	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1816562-2 SRM Lot Number: D119-540					
Mercury, Total	94	-	73-127	-	

Matrix Spike Analysis

Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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: WG1816560-3 QC Sample: L2347053-01 Client ID: MS Sample												
Aluminum, Total	1130	163	1480	214	Q	-	-		75-125	-		20
Antimony, Total	0.388J	40.8	40.0	98		-	-		75-125	-		20
Arsenic, Total	0.858	9.79	10.4	97		-	-		75-125	-		20
Barium, Total	9.53	163	166	96		-	-		75-125	-		20
Beryllium, Total	0.149J	4.08	4.29	105		-	-		75-125	-		20
Cadmium, Total	ND	4.32	4.15	96		-	-		75-125	-		20
Calcium, Total	140	816	1300	142	Q	-	-		75-125	-		20
Chromium, Total	5.31	16.3	19.0	84		-	-		75-125	-		20
Cobalt, Total	1.88	40.8	41.8	98		-	-		75-125	-		20
Copper, Total	3.34	20.4	22.8	95		-	-		75-125	-		20
Iron, Total	10500	81.6	4440	0	Q	-	-		75-125	-		20
Lead, Total	2.63J	43.2	45.9	106		-	-		75-125	-		20
Magnesium, Total	383	816	1100	88		-	-		75-125	-		20
Manganese, Total	281	40.8	126	0	Q	-	-		75-125	-		20
Nickel, Total	6.31	40.8	42.9	90		-	-		75-125	-		20
Potassium, Total	153J	816	1020	125		-	-		75-125	-		20
Selenium, Total	ND	9.79	9.92	101		-	-		75-125	-		20
Silver, Total	ND	4.08	3.96	97		-	-		75-125	-		20
Sodium, Total	11.8J	816	853	104		-	-		75-125	-		20
Thallium, Total	ND	9.79	10.1	103		-	-		75-125	-		20
Vanadium, Total	2.97	40.8	43.2	98		-	-		75-125	-		20

Matrix Spike Analysis Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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: WG1816560-3 QC Sample: L2347053-01 Client ID: MS Sample									
Zinc, Total	10.3	40.8	50.4	98	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1816562-3 QC Sample: L2347053-01 Client ID: MS Sample									
Mercury, Total	ND	1.74	1.83	105	-	-	80-120	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1816560-4 QC Sample: L2347053-01 Client ID: DUP Sample						
Aluminum, Total	1130	1300	mg/kg	14		20
Antimony, Total	0.388J	ND	mg/kg	NC		20
Arsenic, Total	0.858	0.732J	mg/kg	NC		20
Barium, Total	9.53	4.36	mg/kg	74	Q	20
Beryllium, Total	0.149J	0.105J	mg/kg	NC		20
Cadmium, Total	ND	ND	mg/kg	NC		20
Calcium, Total	140	483	mg/kg	110	Q	20
Chromium, Total	5.31	2.97	mg/kg	57	Q	20
Cobalt, Total	1.88	1.13J	mg/kg	NC		20
Copper, Total	3.34	2.20	mg/kg	41	Q	20
Lead, Total	2.63J	1.91J	mg/kg	NC		20
Magnesium, Total	383	394	mg/kg	3		20
Manganese, Total	281	78.8	mg/kg	112	Q	20
Nickel, Total	6.31	2.68	mg/kg	81	Q	20
Potassium, Total	153J	268	mg/kg	NC		20
Selenium, Total	ND	ND	mg/kg	NC		20
Silver, Total	ND	ND	mg/kg	NC		20
Sodium, Total	11.8J	11.9J	mg/kg	NC		20
Thallium, Total	ND	ND	mg/kg	NC		20

Lab Duplicate Analysis *Batch Quality Control*

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1816560-4 QC Sample: L2347053-01 Client ID: DUP Sample					
Vanadium, Total	2.97	3.47	mg/kg	16	20
Zinc, Total	10.3	9.42	mg/kg	9	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1816560-4 QC Sample: L2347053-01 Client ID: DUP Sample					
Iron, Total	10500	3160	mg/kg	107	Q 20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1816562-4 QC Sample: L2347053-01 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/kg	NC	20

Project Name: RITC
Project Number: UST-01

**Lab Serial Dilution
 Analysis
 Batch Quality Control**

Lab Number: L2347214
Report Date: 08/22/23

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1816560-6 QC Sample: L2347053-01 Client ID: DUP Sample						
Aluminum, Total	1130	1160	mg/kg	3		20
Magnesium, Total	383	394	mg/kg	3		20
Manganese, Total	281	289	mg/kg	3		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1816560-6 QC Sample: L2347053-01 Client ID: DUP Sample						
Iron, Total	10500	11100	mg/kg	6		20

INORGANICS & MISCELLANEOUS

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

SAMPLE RESULTS

Lab ID: L2347214-01
Client ID: UST01-08152023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/15/23 15:15
Date Received: 08/15/23
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	80.0		%	0.100	NA	1	-	08/16/23 09:46	121,2540G	ROI
Cyanide, Total	43		mg/kg	5.7	1.2	5	08/18/23 03:20	08/18/23 14:29	1,9010C/9012B	KEP
Nitrogen, Ammonia	100		mg/kg	36	14.	1	08/18/23 14:19	08/18/23 18:49	121,4500NH3-BH	AVT



Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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 Batch: WG1816992-1										
Nitrogen, Ammonia	ND		mg/kg	7.5	0.02	1	08/18/23 14:19	08/18/23 18:46	121,4500NH3-BH	
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1817237-1										
Cyanide, Total	ND		mg/kg	0.84	0.18	1	08/18/23 03:20	08/18/23 13:46	1,9010C/9012B	KEP

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1816992-2								
Nitrogen, Ammonia	96		-		83-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1817237-2 WG1817237-3								
Cyanide, Total	82		71	Q	80-120	16		35

Matrix Spike Analysis

Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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 QC Batch ID: WG1816992-4 QC Sample: L2347251-01 Client ID: MS Sample												
Nitrogen, Ammonia	9000	560	8300	0	Q	-	-		55-144	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1817237-4 WG1817237-5 QC Sample: L2345406-01 Client ID: MS Sample												
Cyanide, Total	ND	9.8	8.8	90		9.8	100		75-125	11		35

Lab Duplicate Analysis

Batch Quality Control

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1816391-1 QC Sample: L2347084-04 Client ID: DUP Sample						
Solids, Total	89.6	89.4	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1816992-3 QC Sample: L2347251-01 Client ID: DUP Sample						
Nitrogen, Ammonia	9000	8200	mg/kg	9		20

Project Name: RITC**Lab Number:** L2347214**Project Number:** UST-01**Report Date:** 08/22/23**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler Custody Seal**

A	Absent
B	Absent
C	Absent
D	Absent
E	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2347214-01A	Metals Only-Glass 60mL/2oz unpreserved	D	NA		3.2	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),SE-Ti(180),SB-Ti(180),PB-Ti(180),ZN-Ti(180),CO-Ti(180),V-Ti(180),HG-T(28),FE-Ti(180),MN-Ti(180),MG-Ti(180),NA-Ti(180),CD-Ti(180),CA-Ti(180),K-Ti(180)
L2347214-01B	Glass 60mL/2oz unpreserved	D	NA		3.2	Y	Absent		TS(7)
L2347214-01C	Vial Large Septa unpreserved (4oz)	D	NA		3.2	Y	Absent		NYTCL-8260-R2(14)
L2347214-01D	Vial Large Septa unpreserved (4oz)	D	NA		3.2	Y	Absent		HOLD-CONTINGENCY(14),NYTCL-8270(14),TCN-9010(14),NYTCL-8082(365),NH3-4500(28)
L2347214-01E	Glass 250ml/8oz unpreserved	D	NA		3.2	Y	Absent		HOLD-CONTINGENCY(14),NYTCL-8270(14),TCN-9010(14),NYTCL-8082(365),NH3-4500(28)
L2347214-01F	Glass 250ml/8oz unpreserved	D	NA		3.2	Y	Absent		HOLD-CONTINGENCY(14),NYTCL-8270(14),TCN-9010(14),NYTCL-8082(365),NH3-4500(28)
L2347214-01G	Glass 500ml/16oz unpreserved	D	NA		3.2	Y	Absent		HOLD-CONTINGENCY(14),NYTCL-8270(14),TCN-9010(14),NYTCL-8082(365),NH3-4500(28)
L2347214-01X	Vial MeOH preserved split	D	NA		3.2	Y	Absent		NYTCL-8260-R2(14)
L2347214-01Y	Vial Water preserved split	D	NA		3.2	Y	Absent	18-AUG-23 08:09	NYTCL-8260-R2(14)
L2347214-01Z	Vial Water preserved split	D	NA		3.2	Y	Absent	18-AUG-23 08:09	NYTCL-8260-R2(14)

Project Name: RITC
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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
Project Number: UST-01

Lab Number: L2347214
Report Date: 08/22/23

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.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 20

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Page 1 of 1

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.

Page
of

ALPHA Job #
L2347214

Page 62 of 62