



INVENTUM ENGINEERING

Tank Management and Closure Construction Completion Report Tank No. RC04

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

3875 River Road
Tonawanda, New York 14150

August 19, 2025

1. Facility Information Summary

Facility Information	
Name of Facility:	Riverview Innovation & Technology Campus, Inc. (RITC)
Address:	3875 River Road, Tonawanda, NY 14150
County:	Erie
Waste Generator Status:	Large Quantity Generator
EPA Identification Number:	NYD088413877
Site Operator:	Ontario Specialty Contracting (OSC)
Operator Address:	140 Lee Street, Buffalo, NY 14210
RITC Project Manager:	Dan Flanigan
RITC Project Manager Email:	dflanigan@oscinc.com
Engineering Consultant:	Inventum Engineering
Consultant Address:	441 Carlisle Drive, Suite C, Herndon, VA 20170
Consultant Contact:	John Black, P.E.
Consultant Email:	John.Black@inventumeng.com

2. Above Ground Storage Tank Information

Tank No.:	RC04
Grid Location:	AP22
Location Notes:	The railcar was located on the southeastern property boundary.
Date of Closure:	6/28/2023
Tank Dimensions:	Horizontal Cylinder 8-foot diameter, 32-foot length
Storage Capacity:	12,100 gallons
Tank Exterior Coating Description:	Double walled, uncoated steel
Tank Piping Description:	None
Secondary Containment Description:	None; the railcar was abandoned on tracks.
Contents Description:	February 2021: Black sludge and frozen layer of liquid, material was slightly exothermic as it was sampled. June 2022: Approximately 1.5-feet of a dual-phase crystalline solid and black oily liquid present.

3. AST Closure Procedure

Contractor:	Clean Harbors Environmental Services, Inc.
Contractor Address:	1 N Gates Ave, Lackawanna, New York 14218
Dates of Cleaning:	6/28/2023
Cleaning Method:	Hot water power washing and mechanical removal of residuals.
Disposition of tank shell and piping:	Recycled Steel
Recycler or Disposal Facility Address:	Niagara Metals 4861 Packard Road, Niagara Falls, NY 14304
Contents Volume Disposed:	32 drums (14,400 pounds)
Disposition of Contents & Hazardous Waste Code(s):	Disposed at Clean Harbors El Dorado as hazardous waste. Cresols D026
Disposal Facility Address:	Clean Harbors El Dorado LLC 309 American Circle, El Dorado, AR 71730
Disposal Facility EPA No.:	ARD069749192
Hazardous Waste Transporter Name:	Clean Harbors Environmental Services, Inc.
Hazardous Waste Transporter EPA No.:	MAD039322250

4. Inspection Summary

Tank closure inspection:	Railcar residuals were completely removed. No standing water from decontamination was present in the railcar interior. Railcar was cleared for shearing and recycling in June 2023.
Evidence of Leaks and/or additional observations:	The exterior metal casing was in relatively poor condition, steel had uniformly oxidized from extended weather exposure. Some discoloration was present on the north side of the tank beneath the top access port due to precipitation. The interior metal containment wall was intact, no holes or cracks observed. No visual or olfactory evidence of staining or historical release present.

5. CAMP Data

Air monitoring was performed in accordance with the Community Air Monitoring Plan (CAMP) for all dates that tank work was completed including sampling, contents removal, cleaning, decommissioning and disposal. Decommissioning includes ancillary pipe removal, shearing, torch cutting, and/or contents stabilization. Daily summary graphs of particulate and volatile organic compound (VOC) monitoring are provided in the AST CCR CAMP Appendix.

Tank Work	Dates
Sampling	2/10/2021, 6/30/2022
Contents Removal	6/28/2023
Cleaning	6/28/2023
Decommissioning	6/28/2023
Disposal	7/12/2023

Additional Notes:

An initial characterization sample was collected in February 2021 and toxicity characterization by TCLP was not performed by ALS laboratory due to matrix interference. Subsequent samples of each phase were collected in June 2022. As the sludge/solid phase was sampled in 2021, the sludge phase was only analyzed for parameters that ALS was unable to analyze including TCLP VOCs, SVOCs, Metals, Herbicides, and Pesticides, total Cyanide, pH, and BTU. The liquid phase was analyzed for TCL VOCs, TCL SVOCs, TAL Metals, Mercury, Ammonia, Cyanide, PCBs, Hazardous Characterization, and BTU. Alpha Laboratories was unable to perform the TCLP extraction for TCLP VOCs [8260] and reported total VOC concentrations for those analytes included in the TLCP list. Results are included in Attachment A, Table 1.

6. Attachments

1. Attachment A – Analytical Tables of tank contents for disposal profiling.
2. Attachment B – Photographic Log includes original, color photographs of the closure process.
3. Attachment C – Waste Manifests.
4. Attachment D – Laboratory Reports.



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 Tank Management and Closure Construction Completion Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and DER Green Remediation (DER-31) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

Respectfully Submitted,

Inventum Engineering, P.C.

John P. Black, P.E.



Date:

8.18.2025

License No:

062818-1

It is a violation of the laws of New York for any person, unless acting under the direction of a Licensed Professional Engineer, to alter any item or any portion of this document in any way. If an item bearing the seal of a Licensed Professional Engineer is altered, the altering Engineer shall affix to the item his/her seal and notation "altered by" followed by his/her signature and the date of such alternation, and a specific description of the alteration.



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Attachment A – Analytical Tables



Table 1
Tank Management & Closure CCR
RC04 Analytical Results
Riverview Innovation & Technology Campus, Inc.
Town of Tonawanda, New York

Analytes	Sample ID:		TK-SD-RC04-0210		TK-SD-RC04-06302022		TK-LQ-RC04-06302022	
	Sample Date:		2/10/2021		6/30/2022			
	Contents:		Black Sludgy Liquid		Crystalline solid		Black Oil	
	Hazardous Waste Code(s):		NA		D026			
	Lab Report Number(s):		R2101263, L2235331					
	TCLP Standards (ug/L)	Units	RC04 - Rail Car No. 4					
VOCs SW8260C								
1,1,1-Trichloroethane (TCA)		ug/kg	<1000	U	NS		<77.0	U
1,1,2,2-Tetrachloroethane		ug/kg	<1000	U	NS		<77.0	U
1,1,2-Trichloroethane		ug/kg	<1000	U	NS		<120	U
1,1,2-Trichloro-1,2,2-Trifluoroethane		ug/kg	<1000	U	NS		<320	U
1,1-Dichloroethane		ug/kg	<1000	U	NS		<67.0	U
1,1-Dichloroethene		ug/kg	<1000	U	<110		<110	U
1,2,3-Trichlorobenzene		ug/kg	<1300	U	NS		<150	U
1,2,4-Trichlorobenzene		ug/kg	<1700	U	NS		<120	U
1,2-Dibromo-3-Chloropropane		ug/kg	<2300	U	NS		<460	U
1,2-Dibromoethane (Ethylene Dibromide)		ug/kg	<1000	U	NS		<460	U
1,2-Dichlorobenzene		ug/kg	<1000	U	NS		<67.0	U
1,2-Dichloroethane		ug/kg	<1000	U	<120		<120	U
1,2-Dichloropropane		ug/kg	<1000	U	NS		<58.0	U
1,3-Dichlorobenzene		ug/kg	<1000	U	NS		<68.0	U
1,4-Dichlorobenzene		ug/kg	<1000	U	<81.0		<79.0	U
1,4-Dioxane (P-Dioxane)		ug/kg	<65000	U	NS		<16000	U
Methyl Ethyl Ketone (2-Butanone)		ug/kg	4000	J	<1000		<1000	U
2-Hexanone		ug/kg	<1000	U	NS		<550	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		ug/kg	<1000	U	NS		<590	U
Acetone		ug/kg	<11000	U	NS		<2200	U
Benzene		ug/kg	1200	J	870		700	
Bromochloromethane		ug/kg	<1000	U	NS		<95.0	U
Bromodichloromethane		ug/kg	<1000	U	NS		<50.0	U
Bromoform		ug/kg	<1300	U	NS		<110	U
Bromomethane		ug/kg	<3500	U	NS		<270	U
Carbon Disulfide		ug/kg	<2100	U	NS		<2100	U
Carbon Tetrachloride		ug/kg	<1700	U	<110		<110	U
Chlorobenzene		ug/kg	<1000	U	<60.0		<59.0	U
Chloroethane		ug/kg	<1200	U	NS		<210	U
Chloroform		ug/kg	<1200	U	<67.0		<65.0	U
Chloromethane		ug/kg	<1400	U	NS		<430	U
Cyclohexane		ug/kg	<1300	U	NS		<250	U
Dibromochloromethane		ug/kg	<1000	U	NS		<65.0	U
Dichlorodifluoromethane		ug/kg	<1100	U	NS		<420	U
Methylene Chloride		ug/kg	<3300	U	NS		<1100	U
Ethylbenzene		ug/kg	<1000	U	NS		<65.0	U
Isopropylbenzene (Cumene)		ug/kg	<1000	U	NS		<50.0	U
Methyl Acetate		ug/kg	<1700	U	NS		<440	U
Tert-Butyl Methyl Ether		ug/kg	<1000	U	NS		<93.0	U
Methylcyclohexane		ug/kg	<1000	U	NS		<280	U
Styrene		ug/kg	<1000	U	NS		150	J
Tetrachloroethylene (PCE)		ug/kg	<1100	U	<93.0		<91.0	U
Toluene		ug/kg	<1000	U	NS		440	J
Trichloroethylene (TCE)		ug/kg	<1000	U	<65.0		<63.0	U
Trichlorofluoromethane		ug/kg	<1200	U	NS		<320	U
Vinyl Chloride		ug/kg	<1000	U	<160		<160	U
Cis-1,2-Dichloroethylene		ug/kg	<1200	U	NS		<81.0	U
Cis-1,3-Dichloropropene		ug/kg	<1000	U	NS		<73.0	U



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	Contents:		Black Sludgy Liquid		Crystalline solid		Black Oil	
	Hazardous Waste Code(s):		NA		D026			
	Lab Report Number(s):		R2101263, L2235331					
	TCLP Standards (ug/L)	Units	RC04 - Rail Car No. 4					
m,p-Xylene		ug/kg	1000	J	NS		670	J
O-Xylene (1,2-Dimethylbenzene)		ug/kg	<1000	U	NS		240	J
Trans-1,2-Dichloroethene		ug/kg	<1000	U	NS		<63.0	U
Trans-1,3-Dichloropropene		ug/kg	<1200	U	NS		<130	U
SVOCs SW8270D								
1,2,4,5-Tetrachlorobenzene		ug/kg	<12000	U	NS		<63000	U
2,3,4,6-Tetrachlorophenol		ug/kg	<12000	U	NS		NS	
2,4,5-Trichlorophenol		ug/kg	<11000	U	NS		<120000	U
2,4,6-Trichlorophenol		ug/kg	<14000	U	NS		<110000	U
2,4-Dichlorophenol		ug/kg	<13000	U	NS		<97000	U
2,4-Dimethylphenol		ug/kg	480000		NS		370000	J
2,4-Dinitrophenol		ug/kg	<200000	U	NS		<280000	U
2,4-Dinitrotoluene		ug/kg	<24000	U	NS		<120000	U
2,6-Dinitrotoluene		ug/kg	<14000	U	NS		<100000	U
2-Chloronaphthalene		ug/kg	<14000	U	NS		<60000	U
2-Chlorophenol		ug/kg	<11000	U	NS		<71000	U
2-Methylnaphthalene		ug/kg	<260000	U	NS		<73000	U
2-Methylphenol (O-Cresol)		ug/kg	2500000	D	NS		4000000	
2-Nitroaniline		ug/kg	<14000	U	NS		<120000	U
2-Nitrophenol		ug/kg	<15000	U	NS		<220000	U
3,3'-Dichlorobenzidine		ug/kg	<12000	U	NS		<160000	U
Cresols, M & P		ug/kg	8800000	D	NS		12000000	
3-Nitroaniline		ug/kg	<25000	U	NS		<110000	U
4,6-Dinitro-2-Methylphenol		ug/kg	<200000	U	NS		<290000	U
4-Bromophenyl Phenyl Ether		ug/kg	<17000	U	NS		<92000	U
4-Chloro-3-Methylphenol		ug/kg	<11000	U	NS		<90000	U
4-Chloroaniline		ug/kg	<10000	U	NS		<110000	U
4-Chlorophenyl Phenyl Ether		ug/kg	<15000	U	NS		<64000	U
4-Nitroaniline		ug/kg	<27000	U	NS		<250000	U
4-Nitrophenol		ug/kg	<64000	U	NS		<240000	U
Acenaphthene		ug/kg	<14000	U	NS		<62000	U
Acenaphthylene		ug/kg	25000	J	NS		<93000	U
Acetophenone		ug/kg	<13000	U	NS		<74000	U
Anthracene		ug/kg	43000	J	NS		<120000	U
Atrazine		ug/kg	<21000	U	NS		NS	
Benzo(A)Anthracene		ug/kg	51000	J	NS		<68000	U
Benzaldehyde		ug/kg	<37000	U	NS		NS	
Benzo(A)Pyrene		ug/kg	57000	J	NS		<150000	U
Benzo(B)Fluoranthene		ug/kg	62000	J	NS		<100000	U
Benzo(G,H,I)Perylene		ug/kg	38000	J	NS		<71000	U
Benzo(K)Fluoranthene		ug/kg	18000	J	NS		<96000	U
Biphenyl (Diphenyl)		ug/kg	<14000	U	NS		<78000	U
Bis(2-Chloroisopropyl) Ether		ug/kg	<14000	U	NS		<100000	U
Bis(2-Chloroethoxy) Methane		ug/kg	<19000	U	NS		<60000	U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)		ug/kg	<13000	U	NS		<81000	U
Bis(2-Ethylhexyl) Phthalate		ug/kg	<78000	U	NS		<210000	U
Benzyl Butyl Phthalate		ug/kg	<14000	U	NS		<150000	U
Caprolactam		ug/kg	<10000	U	NS		NS	



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	Hazardous Waste Code(s):		NA		D026			
	Lab Report Number(s):		R2101263, L2235331					
	TCLP Standards (ug/L)	Units	RC04 - Rail Car No. 4					
Carbazole		ug/kg	140000		NS		81000	J
Chrysene		ug/kg	57000	J	NS		<62000	U
Di-N-Butyl Phthalate		ug/kg	<17000	U	NS		<110000	U
Di-N-Octylphthalate		ug/kg	<33000	U	NS		<200000	U
Dibenz(A,H)Anthracene		ug/kg	<11000	U	NS		<69000	U
Dibenzofuran		ug/kg	20000	J	NS		<57000	U
Diethyl Phthalate		ug/kg	<11000	U	NS		<56000	U
Dimethyl Phthalate		ug/kg	<13000	U	NS		<130000	U
Fluoranthene		ug/kg	170000		NS		110000	J
Fluorene		ug/kg	34000	J	NS		<58000	U
Hexachlorobenzene		ug/kg	<16000	U	NS		<67000	U
Hexachlorobutadiene		ug/kg	<10000	U	NS		<88000	U
Hexachlorocyclopentadiene		ug/kg	<22000	U	NS		<540000	U
Hexachloroethane		ug/kg	<11000	U	NS		<97000	U
Indeno(1,2,3-C,D)Pyrene		ug/kg	39000	J	NS		<84000	U
Isophorone		ug/kg	<14000	U	NS		<78000	U
N-Nitrosodi-N-Propylamine		ug/kg	<12000	U	NS		<93000	U
N-Nitrosodiphenylamine		ug/kg	<27000	U	NS		<68000	U
Naphthalene		ug/kg	160000		NS		76000	
Nitrobenzene		ug/kg	<15000	U	NS		<89000	U
Pentachlorophenol		ug/kg	<97000	U	NS		<130000	U
Phenanthrene		ug/kg	200000		NS		100000	J
Phenol		ug/kg	13000000	D	NS		15000000	
Pyrene		ug/kg	120000		NS		81000	J
TAL Metals SW6010								
Aluminum		mg/kg	73.3		NS		23.1	J
Antimony		mg/kg	<0.529	U	NS		<1.23	U
Arsenic		mg/kg	3.1		NS		5.14	
Barium		mg/kg	1.5	J	NS		<0.563	U
Beryllium		mg/kg	<0.059	U	NS		<0.107	U
Cadmium		mg/kg	<0.235	U	NS		<0.317	U
Calcium		mg/kg	52.1	J	NS		16.9	J
Chromium, Total		mg/kg	0.578	J	NS		<0.311	U
Cobalt		mg/kg	<0.451	U	NS		<0.537	U
Copper		mg/kg	1.7	J	NS		0.938	J
Iron		mg/kg	1320		NS		344	
Lead		mg/kg	4.8	J	NS		1.978	J
Magnesium		mg/kg	17.3	J	NS		5.7	J
Manganese		mg/kg	4.7		NS		1.23	J
Nickel		mg/kg	1.1	J	NS		1.13	J
Potassium		mg/kg	1410		NS		1550	
Selenium		mg/kg	0.569	J	NS		1.42	J
Silver		mg/kg	<0.088	U	NS		<0.502	U
Sodium		mg/kg	103000		NS		101000	
Sulfur		mg/kg	NS		NS		NS	
Thallium		mg/kg	<0.637	U	NS		<1.02	U
Tin		mg/kg	NS		NS		NS	
Vanadium		mg/kg	0.902	J	NS		2.59	J



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	Contents:		Black Sludgy Liquid		Crystalline solid		Black Oil	
	Hazardous Waste Code(s):		NA		D026			
	Lab Report Number(s):		R2101263, L2235331					
	TCLP Standards (ug/L)	Units	RC04 - Rail Car No. 4					
Zinc		mg/kg	6.9		NS		3.43	J
Total Mercury SW7471								
Mercury		mg/kg	0.308		NS		0.159	
Ammonia E350.1M								
Nitrogen, Ammonia (As N)		mg/kg	52.3		NS		9.6	
Cyanide SW9012B								
Cyanide		mg/kg	NA		4.1		5.4	
PCBs 8082A								
PCB-1016 (Aroclor 1016)		ug/kg	<2000	U	NS		<364	U
PCB-1221 (Aroclor 1221)		ug/kg	<3900	U	NS		<410	U
PCB-1232 (Aroclor 1232)		ug/kg	<2000	U	NS		<868	U
PCB-1242 (Aroclor 1242)		ug/kg	<2000	U	NS		<552	U
PCB-1248 (Aroclor 1248)		ug/kg	<2000	U	NS		<614	U
PCB-1254 (Aroclor 1254)		ug/kg	<2000	U	NS		<448	U
PCB-1260 (Aroclor 1260)		ug/kg	<2000	U	NS		<756	U
Pesticides 8081B								
P,P'-DDD		ug/kg	<96	U	NS		NS	
P,P'-DDE		ug/kg	<96	U	NS		NS	
P,P'-DDT		ug/kg	<96	U	NS		NS	
Aldrin		ug/kg	<96	U	NS		NS	
Dieldrin		ug/kg	<96	U	NS		NS	
Alpha Endosulfan		ug/kg	<96	U	NS		NS	
Beta Endosulfan		ug/kg	<96	U	NS		NS	
Endosulfan Sulfate		ug/kg	<96	U	NS		NS	
Endrin		ug/kg	<96	U	NS		NS	
Endrin Aldehyde		ug/kg	<96	U	NS		NS	
Endrin Ketone		ug/kg	<96	U	NS		NS	
Heptachlor		ug/kg	<96	U	NS		NS	
Heptachlor Epoxide		ug/kg	<96	U	NS		NS	
Methoxychlor		ug/kg	<96	U	NS		NS	
Toxaphene		ug/kg	<96	U	NS		NS	
Alpha Bhc (Alpha Hexachlorocyclohexane)		ug/kg	<96	U	NS		NS	
cis-Chlordane		ug/kg	<96	U	NS		NS	
Beta Bhc (Beta Hexachlorocyclohexane)		ug/kg	<96	U	NS		NS	
Delta BHC (Delta Hexachlorocyclohexane)		ug/kg	<96	U	NS		NS	
Gamma Bhc (Lindane)		ug/kg	<96	U	NS		NS	
Chlordane (Technical)		ug/kg	<96	U	NS		NS	
Herbicides SW8151A								
Acetic acid, (2,4,5-trichlorophenoxy)-		ug/kg	<88	U	NS		NS	
Silvex (2,4,5-TP)		ug/kg	<88	U	NS		NS	
2,4-D (Dichlorophenoxyacetic Acid)		ug/kg	<88	U	NS		NS	
Dicamba		ug/kg	<88	U	NS		NS	



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	TCLP Standards (ug/L)	Units	RC04 - Rail Car No. 4					
TCLP - SW8260C								
1,2-Dichloroethane	500	ug/l	NA		NA		NA	
Chlorobenzene	100,000	ug/l	NA		NA		NA	
Tetrachloroethylene (PCE)	700	ug/l	NA		NA		NA	
Carbon Tetrachloride	500	ug/l	NA		NA		NA	
Chloroform	6,000	ug/l	NA		NA		NA	
Benzene	500	ug/l	NA		NA		NA	
Vinyl Chloride	200	ug/l	NA		NA		NA	
1,1-Dichloroethene	700	ug/l	NA		NA		NA	
Methyl Ethyl Ketone (2-Butanone)	200,000	ug/l	NA		NA		NA	
Trichloroethylene (TCE)	500	ug/l	NA		NA		NA	
TCLP - SW8270D								
1,4-Dichlorobenzene	7,500	ug/l	NA		NS		NS	
2,4,5-Trichlorophenol	400,000	ug/l	NA		<3800	U	<3800	U
2,4,6-Trichlorophenol	2,000	ug/l	NA		<4900	U	<4900	U
2,4-Dinitrotoluene	130	ug/l	NA		<3800	U	<3800	U
2-Methylphenol (O-Cresol)	200,000	ug/l	NA		120000		190000	
Cresols, M & P	200,000	ug/l	NA		590000		950000	
Cresols (m, p, o - Cresol)	-	ug/l	NA		NS		NS	
Hexachlorobenzene	130	ug/l	NA		<6900	U	<6900	U
Hexachlorobutadiene	500	ug/l	NA		<6000	U	<6000	U
Hexachloroethane	3,000	ug/l	NA		<4400	U	<4400	U
Nitrobenzene	2,000	ug/l	NA		<6600	U	<6600	U
Pentachlorophenol	100,000	ug/l	NA		<20000	U	<20000	U
Pyridine	5,000	ug/l	NA		<9000	U	<9000	U
TCLP - SW6010								
Arsenic	5,000	ug/l	NA		111	J	250	J
Barium	100,000	ug/l	NA		<21	U	<53	U
Cadmium	1,000	ug/l	NA		<10	U	<25	U
Chromium, Total	5,000	ug/l	NA		<21	U	<53	U
Lead	5,000	ug/l	NA		<27	U	<68	U
Selenium	1,000	ug/l	NA		<35	U	<88	U
Silver	5,000	ug/l	NA		<28	U	<70	U
TCLP- SW7470								
Mercury	200	ug/l	NA		5.9	J	<9.2	U
TCLP - 8081B								
Chlordane	30	ug/l	NA		<0.232	U	<0.232	U
Endrin	20	ug/l	NA		<0.021	U	<0.021	U
Gamma Bhc (Lindane)	400	ug/l	NA		<0.022	U	<0.022	U
Heptachlor	8	ug/l	NA		<0.016	U	<0.016	U
Heptachlor Epoxide	8	ug/l	NA		<0.021	U	<0.021	U
Methoxychlor	10,000	ug/l	NA		<0.034	U	<0.034	U
Toxaphene	500	ug/l	NA		<0.314	U	<0.314	U



Table 1
Tank Management & Closure CCR
RC04 Analytical Results
Riverview Innovation & Technology Campus, Inc.
Town of Tonawanda, New York

Analytes	Sample ID:		TK-SD-RC04-0210		TK-SD-RC04-06302022		TK-LQ-RC04-06302022	
	Sample Date:		2/10/2021		6/30/2022			
	Contents:		Black Sludgy Liquid		Crystalline solid		Black Oil	
	Hazardous Waste Code(s):		NA		D026			
	Lab Report Number(s):		R2101263, L2235331					
	TCLP Standards (ug/L)	Units	RC04 - Rail Car No. 4					
TCLP- SW8151A								
2,4-D (Dichlorophenoxyacetic Acid)	10,000	ug/l	NA		<6	U	<6	U
Silvex (2,4,5-TP)	1,000	ug/l	NA		<7	U	<7	U
SW9045D								
pH	<2, >=12.5	ph units	NA		11.3		12.1	
SW1010								
Flash Point	<140	deg f	Did Not Flash		NS		Did Not Flash	
Ignite 1010MOD								
Ignitability of Solids		deg f	Not Ignitable		NS		NS	
SW7.3.3.2								
Reactive Cyanide		mg/kg	<0.011		NS		<10.0	U
SW7.3.4.2								
Reactive Sulfide		mg/kg	11.2		NS		<10.0	U
A2540G								
Moisture, Percent		%	NS		32.9		NS	
Total Solids		%	NS		67.1		NS	
BTU								
Calorific Value		but/lb	NS		1346		5505	
Notes:								
NS: Not Sampled								
NA: Sample collected, but not analyzed due to matrix interference								
" < ": Analyzed for but detected at or above the quantitation limit								
J: Analyte detected below quantitation limit								
C: Continuing Calibration Verification (CCV) below acceptable limits								
S: Lab Control Sample (LCS) Spike recovery is below acceptable limits								
P: Concentration >40% difference between the two GC columns.								
L: Laboratory Control Sample recovery outside accepted QC limits.								
D: Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range.								
(RSI)*: Additional metals analytes requested by disposal facility RSI								
Bold: Analyte was detected								
Bold with red highlight: Analyte exceeds TCLP standards or is characteristically hazardous for corrosivity, flammability, or reactivity.								



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Attachment B – Photographic Log

Client Name: RITC	Date Photo was Taken: 4/13/2022	Project: RITC
Photo No. 1		
Direction Photo Taken: View is southeast.		
Description: Rail Car RC04 was located on the southeastern property line.		
Client Name: RITC	Date Photo was Taken: 6/2/2023	Project: RITC
Photo No. 2		
Direction Photo Taken: View is southeast.		
Description: The area around RC04 has been cleared and graded to provide access to remove railcar contents.		



Client Name: RITC	Date Photo was Taken: 6/28/2023	Project: RITC
Photo No. 3		
Direction Photo Taken: View is northeast.		
Description: RC04 is sheared to allow full removal of tank contents.		
Client Name: RITC	Date Photo was Taken: 6/28/2023	Project: RITC
Photo No. 4		
Direction Photo Taken: View is east.		
Description: RC04 is sheared open.		



Client Name: RITC	Date Photo was Taken: 6/28/2023	Project: RITC
Photo No. 5 Direction Photo Taken: View is east.		
Description: Contents have been containerized in steel drums and an excavator scrapes and consolidates remaining residuals.		
Client Name: RITC	Date Photo was Taken: 6/29/2023	Project: RITC
Photo No. 6 Direction Photo Taken: View is east.		
Description: All residuals have been removed and containerized for disposal.		



Client Name: RITC	Date Photo was Taken: 6/29/2023	Project: RITC
Photo No. 7 Direction Photo Taken: View is north.		
Description: All rail car residuals have been containerized and are prepared for transportation to the disposal facility.		
Client Name: RITC	Date Photo was Taken: 6/29/2023	Project: RITC
Photo No. 8 Direction Photo Taken: View is west.		
Description: The drums are loaded for transportation and disposal.		





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Attachment C – Waste Manifests

Generator acknowledges that no material change has occurred either in the characteristics or in the process generating the waste.

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number NY0009413877	2. Page 1 of 1	3. Emergency Response Phone (800) 453-3718	4. Manifest Tracking Number 018628193 FLE		
5. Generator's Name and Mailing Address RiverView Innovation and Technology Campus 140 Lee Street Suite 200 Buffalo, NY 14210			Generator's Site Address (if different than mailing address) 3875 River Road Tonawanda, NY 14150				
6. Transporter 1 Company Name Clean Harbors Environmental Services, Inc.			U.S. EPA ID Number MAD039322250				
7. Transporter 2 Company Name			U.S. EPA ID Number				
8. Designated Facility Name and Site Address Clean Harbors El Dorado LLC 309 American Circle El Dorado, AR 71730 Facility's Phone: 8701863-7173			U.S. EPA ID Number ARD069748192				
GENERATOR	9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt/Vol.	13. Waste Codes
	X	1. UN3082, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S., (RC04 OIL, WATER, AND SLUDGE), 9, PG III	32	Dr	14,400	D	0026 B
		2.					
		3.					
		4.					
14. Special Handling Instructions and Additional Information 1. CH257S652 ERG#171 32x55							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Officer's Printed/Typed Name Matt Pearson on behalf of RITC Signature Matt Pearson on behalf of RITC Month Day Year 7 12 23							
TRANSPORTER INTL	16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:						
	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Walt St. Armand Signature Walt St. Armand Month Day Year 7 12 23 Transporter 2 Printed/Typed Name Signature Month Day Year						
DESIGNATED FACILITY	18. Discrepancy						
	18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
	18b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number						
	Facility's Phone:						
	18c. Signature of Alternate Facility (or Generator) Month Day Year						
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H040 2. 3. 4.							
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name Jeannie Harris Signature Jeannie Harris Month Day Year 7 29 23							

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping

DESIGNATED FACILITY TO GENERATOR
72 2303627619
FPW



Land Disposal Restriction
Notification Form

Page : 1 of 1

Printed Date : Jul 10, 2023

MANIFEST INFORMATION

Generator : Riverview Innovation and Technology Campus
Address: 3875 River Road
Tonawanda, NY 14150

Manifest Tracking Info.

018628193FLE

EPA ID #: NYD008413877

Sales Order No: 2303627819

LINE ITEM INFORMATION

Line Item:	Page No:	Profile No:	Treatability Group:	LDR Disposal Category:
1.	1	CH2575652	NON-WASTEWATER	2 (This is subject to LDR.)

EPA Waste Code
D028

EPA Waste SubCategory
NONE

LDR Chemical Data

Chemical	Underlying Hazardous Constituents	Constituents of Concern	Contaminants Subject to Treatment
BENZENE	Y	N	N
NAPHTHALENE	Y	N	N
PHENOL	Y	N	N

Certification

Applies to
Manifest Line
Items

Pursuant to 40 CFR 268.7(a), I hereby notify that this shipment contains waste restricted under 40 CFR Part 268.

1.

Waste analysis data, where available, is attached.

Signature : Matt Pearson on behalf of RITE Print Name

Title : Supervisor Date :

Matt Pearson on behalf of RITE
7/12/23



INVENTUM ENGINEERING, PC

Attachment D – Laboratory Reports



March 22, 2021

Service Request No:R2101263

Mr. John Black
Inventum Engineering
481 Carlisle Drive
Herndon, VA 20170

Laboratory Results for: RTTC Tanks

Dear Mr.Black,

Enclosed are the results of the sample(s) submitted to our laboratory February 11, 2021
For your reference, these analyses have been assigned our service request number **R2101263**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7475. You may also contact me via email at Meghan.Pedro@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Meghan Pedro
Project Manager

ADDRESS

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

PHONE +1 585 288 5380 | **FAX** +1 585 288 8475

ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com



Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Received: 02/11/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Five nonaq liquid samples were received for analysis at ALS Environmental on 02/11/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 02/24/2021: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 02/24/2021: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 02/24/2021: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

4,6-Dinitro-2-methylphenol has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. 4,6-Dinitro-2-methylphenol was detected at 90% and 98% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.

Method 8270D, R2101263-002, -005: The control limits were exceeded for one or more surrogates due to matrix interferences. A re-extraction and reanalysis was performed, but produced similar results. Sample results confirm. Only original analysis is reported. No further corrective action was required.

Method 8270D, 02/19/2021: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 02/19/2021: 2,4-Dinitrophenol has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. 2,4-Dinitrophenol was detected at 48% and 50% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.

Method 8270D, 02/19/2021: 4,6-dinitro-2-methylphenol has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. 4,6-dinitro-2-methylphenol was detected at 35% and 39% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.

Method 8270D, 02/25/2021: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Approved by _____

Date 03/19/2021

Method 8270D, 02/25/2021: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 71R2101263-004: The control limits were exceeded for one or more surrogates in the sample(s). Since the exceedance may indicate a potential bias in the analytical batch, all associated field samples were re-extracted and reanalyzed. The surrogates met control limits for the reanalysis. Since the results for the field samples were comparable for both determinations, the exceedance in the initial analysis was likely restricted to the surrogate recovery. Therefore, the results from the original analysis are reported and flagged.

Semivolatile GC:

Method 8081B, 02/22/2021: The upper control limit was exceeded for one or more analytes in the closing Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8081B, 02/22/2021: The lower control limit was exceeded for one or more analytes in the opening Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. CCV passed on secondary column. The data quality was not significantly affected and no further corrective action was taken.

Method 8081B, 714023s: The control limits were exceeded for one or more surrogates due to matrix interferences. Due to the presence of non-target background components that prevented adequate resolution of the surrogate, accurate quantitation was not possible. No further corrective action was appropriate.

Method 8151A, 02/23/2021: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8151A, r2101263-005: The control limits were exceeded for one or more surrogates due to matrix interferences. Due to the presence of non-target background components that prevented adequate resolution of the surrogate, accurate quantitation was not possible. No further corrective action was appropriate.

Method 8151A, 02/25/2021: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Metals:

Method 6010C, R2101263-001,003: Sample(s) required dilution due to the nature of the matrix. The reporting limits are adjusted to reflect the dilution.

General Chemistry:

No significant anomalies were noted with this analysis.

Subcontracted Analytical Parameters:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Method 8260C, 02/23/2021: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 713860: Sample(s) required dilution due to the foaming nature of the matrix and/or the presence of non-target compounds at high concentrations. The reporting limits are adjusted to reflect the dilution.



Approved by _____

Date 03/19/2021

This report was revised 3/22/21, the inorganic QC portion was missing.

Approved by 

Date 03/19/2021

SAMPLE DETECTION SUMMARY

CLIENT ID: TK-LQ-ST07-02092021	Lab ID: R2101263-001
---------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen, undistilled	4.2	J	3.1	5.0	mg/Kg	350.1M
Benzene	7100	J	3900	97000	ug/Kg	8260C
Cyclohexane	190000		5100	190000	ug/Kg	8260C
Ethylbenzene	120000		3900	97000	ug/Kg	8260C
Isopropylbenzene (Cumene)	47000	J	3900	97000	ug/Kg	8260C
Methylcyclohexane	570000		3900	190000	ug/Kg	8260C
Tetrachloroethene (PCE)	22000	J	4100	97000	ug/Kg	8260C
Toluene	260000		3900	97000	ug/Kg	8260C
m,p-Xylenes	940000		3900	97000	ug/Kg	8260C
o-Xylene	280000		3900	97000	ug/Kg	8260C
2-Methylnaphthalene	110000	J	65000	490000	ug/Kg	8270D
Naphthalene	240000	J	60000	490000	ug/Kg	8270D
Endrin Aldehyde	1200			96	ug/Kg	8081B
beta-BHC	340			96	ug/Kg	8081B

CLIENT ID: TK-LQ-ST04-02092021	Lab ID: R2101263-002
---------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Benzene	20000	J	4000	98000	ug/Kg	8260C
Cyclohexane	82000	J	5100	200000	ug/Kg	8260C
Ethylbenzene	600000		4000	98000	ug/Kg	8260C
Isopropylbenzene (Cumene)	450000		4000	98000	ug/Kg	8260C
Methylcyclohexane	600000		4000	200000	ug/Kg	8260C
Toluene	810000		4000	98000	ug/Kg	8260C
m,p-Xylenes	2000000		4000	98000	ug/Kg	8260C
o-Xylene	810000		4000	98000	ug/Kg	8260C
2,4-Dimethylphenol	140000		14000	99000	ug/Kg	8270D
2-Methylnaphthalene	2700000	D	65000	500000	ug/Kg	8270D
Acenaphthene	320000		14000	99000	ug/Kg	8270D
Anthracene	32000	J	13000	99000	ug/Kg	8270D
Biphenyl	250000		14000	99000	ug/Kg	8270D
Fluorene	320000		13000	99000	ug/Kg	8270D
Naphthalene	1400000	D	60000	500000	ug/Kg	8270D

CLIENT ID: TL-LQ-RC01-0210	Lab ID: R2101263-003
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Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen, undistilled	7.1		3.1	5.0	mg/Kg	350.1M
2-Butanone (MEK)	3200	J	1600	20000	ug/Kg	8260C
Methyl Acetate	820	J	660	20000	ug/Kg	8260C
2-Methylnaphthalene	340000	J	65000	490000	ug/Kg	8270D
Acenaphthylene	200000	J	70000	490000	ug/Kg	8270D
Anthracene	160000	J	65000	490000	ug/Kg	8270D
Benz(a)anthracene	150000	J	80000	490000	ug/Kg	8270D

SAMPLE DETECTION SUMMARY

CLIENT ID: TL-LQ-RC01-0210	Lab ID: R2101263-003
-----------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Benzo(a)pyrene	170000	J	60000	490000	ug/Kg	8270D
Benzo(b)fluoranthene	170000	J	60000	490000	ug/Kg	8270D
Benzo(g,h,i)perylene	160000	J	50000	490000	ug/Kg	8270D
Benzo(k)fluoranthene	66000	J	65000	490000	ug/Kg	8270D
Biphenyl	100000	J	70000	490000	ug/Kg	8270D
Caprolactam	140000	J	50000	490000	ug/Kg	8270D
Carbazole	110000	J	80000	490000	ug/Kg	8270D
Chrysene	130000	J	60000	490000	ug/Kg	8270D
Dibenzofuran	160000	J	70000	490000	ug/Kg	8270D
Fluoranthene	560000		75000	490000	ug/Kg	8270D
Fluorene	210000	J	65000	490000	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	140000	J	90000	490000	ug/Kg	8270D
Naphthalene	98000	J	60000	490000	ug/Kg	8270D
Phenanthrene	840000		70000	490000	ug/Kg	8270D
Pyrene	440000	J	75000	490000	ug/Kg	8270D
Aldrin	520			98	ug/Kg	8081B
Heptachlor	230			98	ug/Kg	8081B
alpha-BHC	470			98	ug/Kg	8081B
alpha-Chlordane	220			98	ug/Kg	8081B
beta-BHC	1000			98	ug/Kg	8081B

CLIENT ID: TK-LQ-RC03-02100	Lab ID: R2101263-004
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Analyte	Results	Flag	MDL	MRL	Units	Method
Benzene	580000		4000	100000	ug/Kg	8260C
Ethylbenzene	130000		4000	100000	ug/Kg	8260C
Isopropylbenzene (Cumene)	250000		4000	100000	ug/Kg	8260C
Methylcyclohexane	9000	J	4000	200000	ug/Kg	8260C
Styrene	120000		4000	100000	ug/Kg	8260C
Toluene	520000		4000	100000	ug/Kg	8260C
m,p-Xylenes	320000		4000	100000	ug/Kg	8260C
o-Xylene	370000		4000	100000	ug/Kg	8260C
2-Methylnaphthalene	2100000		65000	480000	ug/Kg	8270D
3- and 4-Methylphenol Coelution	330000	J	60000	480000	ug/Kg	8270D
Acenaphthene	330000	J	70000	480000	ug/Kg	8270D
Acenaphthylene	660000		70000	480000	ug/Kg	8270D
Anthracene	320000	J	65000	480000	ug/Kg	8270D
Benz(a)anthracene	270000	J	80000	480000	ug/Kg	8270D
Benzo(a)pyrene	250000	J	60000	480000	ug/Kg	8270D
Benzo(b)fluoranthene	290000	J	60000	480000	ug/Kg	8270D
Benzo(g,h,i)perylene	180000	J	50000	480000	ug/Kg	8270D
Benzo(k)fluoranthene	120000	J	65000	480000	ug/Kg	8270D
Biphenyl	400000	J	70000	480000	ug/Kg	8270D

SAMPLE DETECTION SUMMARY

CLIENT ID: TK-LQ-RC03-02100	Lab ID: R2101263-004
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Carbazole	95000	J	80000	480000	ug/Kg	8270D
Chrysene	270000	J	60000	480000	ug/Kg	8270D
Dibenzofuran	550000		70000	480000	ug/Kg	8270D
Fluoranthene	1200000		75000	480000	ug/Kg	8270D
Fluorene	490000		65000	480000	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	190000	J	90000	480000	ug/Kg	8270D
Naphthalene	3700000		60000	480000	ug/Kg	8270D
Phenanthrene	1700000		70000	480000	ug/Kg	8270D
Phenol	1900000		50000	480000	ug/Kg	8270D
Pyrene	940000		75000	480000	ug/Kg	8270D
4,4'-DDE	470			95	ug/Kg	8081B
2,4-D	150			95	ug/Kg	8151A
Heptachlor	650			95	ug/Kg	8081B
alpha-Chlordane	4900			95	ug/Kg	8081B
delta-BHC	150			95	ug/Kg	8081B
gamma-Chlordane	5600			95	ug/Kg	8081B

CLIENT ID: TK-SD-RC04-0210	Lab ID: R2101263-005
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Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen, undistilled	52.3		3.1	5.0	mg/Kg	350.1M
2-Butanone (MEK)	4000	J	3900	50000	ug/Kg	8260C
Benzene	1200	J	1000	25000	ug/Kg	8260C
m,p-Xylenes	1000	J	1000	25000	ug/Kg	8260C
2,4-Dimethylphenol	480000		14000	93000	ug/Kg	8270D
2-Methylphenol	2500000	D	50000	460000	ug/Kg	8270D
3- and 4-Methylphenol Coelution	8800000	D	240000	1900000	ug/Kg	8270D
Acenaphthylene	25000	J	14000	93000	ug/Kg	8270D
Anthracene	43000	J	13000	93000	ug/Kg	8270D
Benz(a)anthracene	51000	J	16000	93000	ug/Kg	8270D
Benzo(a)pyrene	57000	J	12000	93000	ug/Kg	8270D
Benzo(b)fluoranthene	62000	J	12000	93000	ug/Kg	8270D
Benzo(g,h,i)perylene	38000	J	10000	93000	ug/Kg	8270D
Benzo(k)fluoranthene	18000	J	13000	93000	ug/Kg	8270D
Carbazole	140000		16000	93000	ug/Kg	8270D
Chrysene	57000	J	12000	93000	ug/Kg	8270D
Dibenzofuran	20000	J	14000	93000	ug/Kg	8270D
Fluoranthene	170000		15000	93000	ug/Kg	8270D
Fluorene	34000	J	13000	93000	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	39000	J	18000	93000	ug/Kg	8270D
Naphthalene	160000		12000	93000	ug/Kg	8270D
Phenanthrene	200000		14000	93000	ug/Kg	8270D
Phenol	13000000	D	200000	1900000	ug/Kg	8270D

SAMPLE DETECTION SUMMARY**CLIENT ID: TK-SD-RC04-0210****Lab ID: R2101263-005**

Analyte	Results	Flag	MDL	MRL	Units	Method
Pyrene	120000		15000	93000	ug/Kg	8270D



Sample Receipt Information

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com

Client: Inventum Engineering
Project: RTTC Tanks

Service Request:R2101263

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2101263-001	TK-LQ-ST07-02092021	2/9/2021	1200
R2101263-002	TK-LQ-ST04-02092021	2/9/2021	1350
R2101263-003	TL-LQ-RC01-0210	2/10/2021	0930
R2101263-004	TK-LQ-RC03-02100	2/10/2021	1050
R2101263-005	TK-SD-RC04-0210	2/10/2021	1050

[illegible]



Cooler Receipt and Preservation Check Form

R2101263

Inventum Engineering
RTTC Tanks

5

Project/Client Inventum Folder Number _____

Cooler received on 2/11/21 by: SW

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y ☒ N
2	Custody papers properly completed (ink, signed)?	☒ Y N
3	Did all bottles arrive in good condition (unbroken)?	☒ Y N
4	Circle: Wet Ice Dry Ice Gel packs present?	☒ Y N

5a	Perchlorate samples have required headspace?	Y N ☒ NA
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y N NA
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore 5035set	☒ NA

3. Temperature Readings Date: 2/11/21 Time: 1612 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>113</u>	<u>0.7°</u>					
Within 0-6°C?	☒ Y N	☒ Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule
& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by SW on 2/11/21 at 1612
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 2/12/21 Time: 1210 by: SW

9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
10. Did all bottle labels and tags agree with custody papers? YES NO
11. Were correct containers used for the tests indicated? YES NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
13. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2		HNO ₃								
≤2		H ₂ SO ₄								
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 071320-17W

Explain all Discrepancies/ Other Comments:

Resid 1 from unlabelled and can't identify location

HPROD	BULK
HTR	FLDT
<u>SUB</u>	HGFB
ALS	LL3541

Labels secondary reviewed by: SW

PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

ALS Group USA, Corp.
dba ALS Environmental

Internal Chain of Custody Report

Client: Inventum Engineering
Project: RTTC Tanks

Service Request: R2101263

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R2101263-001.01	8081B,8082A,350.1M	2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
		2/18/2021	0808	In Lab / VSTAUFFER	
		2/18/2021	1543	R-A03 / VSTAUFFER	
R2101263-001.03	6010C,6010C,6010C,6010C,6010C,6010C,6010C,7471B,6010C,6010C,6010C,6010 C,6010C,6010C,6010C,6010C,6010C,6010C,6010C,6010C,6010C,6010C	2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-001.27	8260C	2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
		2/23/2021	1224	In Lab / KRUEST	
		2/23/2021	1705	R-A03 / KRUEST	
R2101263-001.28		2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-001.29		2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-001.32		2/12/2021	1216	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-001.33		2/12/2021	1308	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-001.34	8270D,8151A	2/12/2021	1309	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-002.01	8151A,8081B,8082A,8270D,350.1M,8270D,8270D	2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	

ALS Group USA, Corp.
dba ALS Environmental

Internal Chain of Custody Report

Client: Inventum Engineering
Project: RTTC Tanks

Service Request: R2101263

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
	8151A,8081B,8082A,8270D,350.1M,8270D,8270D	2/18/2021	0808	In Lab / VSTAUFFER	
		2/18/2021	1543	R-A03 / VSTAUFFER	
		2/19/2021	0758	In Lab / VSTAUFFER	
		2/19/2021	1358	R-A03 / VSTAUFFER	
		R2101263-002.03			
	7471B,6010C	2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
		2/16/2021	0926	In Lab / AKONZEL	
		2/16/2021	1030	R-A03 / AKONZEL	
		R2101263-002.27			
	8260C	2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
		2/23/2021	1224	In Lab / KRUEST	
		2/23/2021	1705	R-A03 / KRUEST	
R2101263-002.28					
		2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-002.29					
		2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-002.31					
		2/12/2021	1215	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-002.32					
		2/12/2021	1216	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-003.01					
	8081B,8082A,350.1M	2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
		2/18/2021	0808	In Lab / VSTAUFFER	
		2/18/2021	1542	R-A03 / VSTAUFFER	
R2101263-003.03					

Internal Chain of Custody Report

Service Request: R2101263

[illegible]

ALS Group USA, Corp.
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Internal Chain of Custody Report

Client: Inventum Engineering
Project: RTTC Tanks

Service Request: R2101263

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R2101263-004.27	7471B,6010C,6010C,6010C,6010C,6010C,6010C,6010C,6010C,6010C,6010C,6010 C,6010C,6010C,6010C,6010C,6010C,6010C,6010C,6010C,6010C,6010C,6010C	2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
		2/16/2021	0926	In Lab / AKONZEL	
		2/16/2021	1030	R-A03 / AKONZEL	
R2101263-004.28	8260C	2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
		2/23/2021	1225	In Lab / KRUEST	
R2101263-004.29		2/12/2021	1214	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-004.31		2/12/2021	1215	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-004.32		2/12/2021	1216	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-004.33		2/12/2021	1246	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
		2/16/2021	0926	In Lab / AKONZEL	
		2/16/2021	1030	R-A03 / AKONZEL	
R2101263-004.34	350.1M	2/12/2021	1246	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-005.01	8270D,350.1M,8270D,8270D,8151A,8081B,8082A,8270D	2/12/2021	1307	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	

ALS Group USA, Corp.
dba ALS Environmental
Internal Chain of Custody Report

Client: Inventum Engineering
Project: RTTC Tanks

Service Request: R2101263

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
	8270D,350.1M,8270D,8270D,8151A,8081B,8082A,8270D	2/18/2021	0808	In Lab / VSTAUFFER	
		2/18/2021	1542	R-A03 / VSTAUFFER	
		2/19/2021	0758	In Lab / VSTAUFFER	
		2/19/2021	1357	R-A03 / VSTAUFFER	
R2101263-005.03					
	7471B,6010C	2/12/2021	1307	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
		2/16/2021	0926	In Lab / AKONZEL	
		2/16/2021	1030	R-A03 / AKONZEL	
R2101263-005.27					
		2/12/2021	1307	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-005.28					
	8260C	2/12/2021	1307	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
		2/23/2021	1225	In Lab / KRUEST	
		2/23/2021	1705	R-A03 / KRUEST	
R2101263-005.31					
		2/12/2021	1307	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-005.32					
		2/12/2021	1307	SMO / GLAFORCE	
		2/12/2021	1309	R-A03 / GLAFORCE	
R2101263-005.33					
		2/12/2021	1311	SMO / GLAFORCE	
		2/23/2021	0812	In Lab / VSTAUFFER	
		2/23/2021	1557	R-A03 / VSTAUFFER	



Miscellaneous Forms

ALS Environmental—Rochester Laboratory

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www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.	+	Correlation coefficient for MSA is <0.995.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).	N	Inorganics- Matrix spike recovery was outside laboratory limits.
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.	N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.	S	Concentration has been determined using Method of Standard Additions (MSA).
E	Organics- Concentration has exceeded the calibration range for that specific analysis.	W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.	P	Concentration >40% difference between the two GC columns.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.	C	Confirmed by GC/MS
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.	Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (100% Difference between two GC columns).
#	Spike was diluted out.	X	See Case Narrative for discussion.
		MRL	Method Reporting Limit. Also known as:
		LOQ	Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
		MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
		LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
		ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.



Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: RTTC Tanks/

Service Request: R2101263

Sample Name: TK-LQ-ST07-02092021
Lab Code: R2101263-001
Sample Matrix: NonAq Liquid

Date Collected: 02/9/21
Date Received: 02/11/21

Analysis Method	Extracted/Digested By	Analyzed By
350.1M	CWOODS	SMEDBURY
6010C	AKONZEL	KMCLAEN
7471B	AKONZEL	AKONZEL
8081B	JMISIUREWICZ	AFELSER
8082A	JMISIUREWICZ	BALLGEIER
8151A	JMISIUREWICZ	BALLGEIER
8260C		KRUEST
8270D	VSTAUFFER	JMISIUREWICZ

Sample Name: TK-LQ-ST04-02092021
Lab Code: R2101263-002
Sample Matrix: NonAq Liquid

Date Collected: 02/9/21
Date Received: 02/11/21

Analysis Method	Extracted/Digested By	Analyzed By
350.1M	CWOODS	SMEDBURY
6010C	AKONZEL	KMCLAEN
7471B	AKONZEL	AKONZEL
8081B	JMISIUREWICZ	AFELSER
8082A	JMISIUREWICZ	BALLGEIER
8151A	JMISIUREWICZ	BALLGEIER
8260C		KRUEST
8270D	VSTAUFFER	JMISIUREWICZ

Sample Name: TK-LQ-ST04-02092021
Lab Code: R2101263-002.R01
Sample Matrix: NonAq Liquid

Date Collected: 02/9/21
Date Received: 02/11/21

Analysis Method	Extracted/Digested By	Analyzed By
8270D	VSTAUFFER	JMISIUREWICZ

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: RTTC Tanks/

Service Request: R2101263

Sample Name: TK-LQ-ST04-02092021
Lab Code: R2101263-002.R02
Sample Matrix: NonAq Liquid

Date Collected: 02/9/21
Date Received: 02/11/21

Analysis Method
8270D

Extracted/Digested By
VSTAUFFER

Analyzed By
JMISIUREWICZ

Sample Name: TL-LQ-RC01-0210
Lab Code: R2101263-003
Sample Matrix: NonAq Liquid

Date Collected: 02/10/21
Date Received: 02/11/21

Analysis Method

350.1M
6010C
7471B
8081B
8082A
8151A
8260C
8270D

Extracted/Digested By

CWOODS
AKONZEL
AKONZEL
JMISIUREWICZ
JMISIUREWICZ
JMISIUREWICZ
VSTAUFFER

Analyzed By

SMEDBURY
KMCLAEN
AKONZEL
AFELSER
BALLGEIER
BALLGEIER
KRUEST
JMISIUREWICZ

Sample Name: TK-LQ-RC03-02100
Lab Code: R2101263-004
Sample Matrix: NonAq Liquid

Date Collected: 02/10/21
Date Received: 02/11/21

Analysis Method

350.1M
6010C
7471B
8081B
8082A
8151A
8260C
8270D

Extracted/Digested By

CWOODS
AKONZEL
AKONZEL
JMISIUREWICZ
JMISIUREWICZ
JMISIUREWICZ
VSTAUFFER

Analyzed By

SMEDBURY
KMCLAEN
AKONZEL
AFELSER
BALLGEIER
BALLGEIER
KRUEST
JMISIUREWICZ

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: RTTC Tanks/

Service Request: R2101263

Sample Name: TK-LQ-RC03-02100
Lab Code: R2101263-004.R01
Sample Matrix: NonAq Liquid

Date Collected: 02/10/21**Date Received:** 02/11/21**Analysis Method**

8270D

Extracted/Digested By

VSTAUFFER

Analyzed By

JMISIUREWICZ

Sample Name: TK-SD-RC04-0210
Lab Code: R2101263-005
Sample Matrix: NonAq Liquid

Date Collected: 02/10/21**Date Received:** 02/11/21**Analysis Method**

350.1M

6010C

7471B

8081B

8082A

8151A

8260C

8270D

Extracted/Digested By

CWOODS

AKONZEL

AKONZEL

JMISIUREWICZ

JMISIUREWICZ

JMISIUREWICZ

VSTAUFFER

Analyzed By

SMEDBURY

KMCLAEN

AKONZEL

AFELSER

BALLGEIER

BALLGEIER

KRUEST

JMISIUREWICZ

Sample Name: TK-SD-RC04-0210
Lab Code: R2101263-005.R01
Sample Matrix: NonAq Liquid

Date Collected: 02/10/21**Date Received:** 02/11/21**Analysis Method**

8270D

Extracted/Digested By

VSTAUFFER

Analyzed By

JMISIUREWICZ

Sample Name: TK-SD-RC04-0210
Lab Code: R2101263-005.R02
Sample Matrix: NonAq Liquid

Date Collected: 02/10/21**Date Received:** 02/11/21**Analysis Method**

8270D

Extracted/Digested By

VSTAUFFER

Analyzed By

JMISIUREWICZ

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Inventum Engineering
Project: RTTC Tanks/

Service Request: R2101263

Sample Name: TK-SD-RC04-0210
Lab Code: R2101263-005.R03
Sample Matrix: NonAq Liquid

Date Collected: 02/10/21
Date Received: 02/11/21

Analysis Method
8270D

Extracted/Digested By
VSTAUFFER

Analyzed By
JMISIUREWICZ



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	



Sample Results

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/09/21 12:00
Date Received: 02/11/21 14:00

Sample Name: TK-LQ-ST07-02092021
Lab Code: R2101263-001

Units: ug/Kg
Basis: As Received

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	3900 U	97000	3900	19420	02/23/21 15:31	
1,1,2,2-Tetrachloroethane	3900 U	97000	3900	19420	02/23/21 15:31	
1,1,2-Trichloroethane	3900 U	97000	3900	19420	02/23/21 15:31	
1,1,2-Trichloro-1,2,2-trifluoroethane	3900 U	97000	3900	19420	02/23/21 15:31	
1,1-Dichloroethane (1,1-DCA)	3900 U	97000	3900	19420	02/23/21 15:31	
1,1-Dichloroethene (1,1-DCE)	3900 U	97000	3900	19420	02/23/21 15:31	
1,2,3-Trichlorobenzene	4900 U	97000	4900	19420	02/23/21 15:31	
1,2,4-Trichlorobenzene	6700 U	97000	6700	19420	02/23/21 15:31	
1,2-Dibromo-3-chloropropane (DBCP)	8800 U	97000	8800	19420	02/23/21 15:31	
1,2-Dibromoethane	3900 U	97000	3900	19420	02/23/21 15:31	
1,2-Dichlorobenzene	3900 U	97000	3900	19420	02/23/21 15:31	
1,2-Dichloroethane	3900 U	97000	3900	19420	02/23/21 15:31	
1,2-Dichloropropane	3900 U	97000	3900	19420	02/23/21 15:31	
1,3-Dichlorobenzene	3900 U	97000	3900	19420	02/23/21 15:31	
1,4-Dichlorobenzene	3900 U	97000	3900	19420	02/23/21 15:31	
1,4-Dioxane	260000 U	1900000	260000	19420	02/23/21 15:31	
2-Butanone (MEK)	16000 U	190000	16000	19420	02/23/21 15:31	
2-Hexanone	3900 U	190000	3900	19420	02/23/21 15:31	
4-Methyl-2-pentanone	3900 U	190000	3900	19420	02/23/21 15:31	
Acetone	41000 U	190000	41000	19420	02/23/21 15:31	
Benzene	7100 J	97000	3900	19420	02/23/21 15:31	
Bromochloromethane	3900 U	97000	3900	19420	02/23/21 15:31	
Bromodichloromethane	3900 U	97000	3900	19420	02/23/21 15:31	
Bromoform	4900 U	97000	4900	19420	02/23/21 15:31	
Bromomethane	14000 U	97000	14000	19420	02/23/21 15:31	
Carbon Disulfide	8200 U	190000	8200	19420	02/23/21 15:31	
Carbon Tetrachloride	6700 U	97000	6700	19420	02/23/21 15:31	
Chlorobenzene	3900 U	97000	3900	19420	02/23/21 15:31	
Chloroethane	4500 U	97000	4500	19420	02/23/21 15:31	
Chloroform	4700 U	97000	4700	19420	02/23/21 15:31	
Chloromethane	5500 U	97000	5500	19420	02/23/21 15:31	
Cyclohexane	190000	190000	5100	19420	02/23/21 15:31	
Dibromochloromethane	3900 U	97000	3900	19420	02/23/21 15:31	
Dichlorodifluoromethane (CFC 12)	4100 U	97000	4100	19420	02/23/21 15:31	
Dichloromethane	13000 U	97000	13000	19420	02/23/21 15:31	
Ethylbenzene	120000	97000	3900	19420	02/23/21 15:31	
Isopropylbenzene (Cumene)	47000 J	97000	3900	19420	02/23/21 15:31	
Methyl Acetate	6500 U	190000	6500	19420	02/23/21 15:31	
Methyl tert-Butyl Ether	3900 U	97000	3900	19420	02/23/21 15:31	
Methylcyclohexane	570000	190000	3900	19420	02/23/21 15:31	
Styrene	3900 U	97000	3900	19420	02/23/21 15:31	
Tetrachloroethene (PCE)	22000 J	97000	4100	19420	02/23/21 15:31	
Toluene	260000	97000	3900	19420	02/23/21 15:31	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Sample Name: TK-LQ-ST07-02092021
Lab Code: R2101263-001

Service Request: R2101263
Date Collected: 02/09/21 12:00
Date Received: 02/11/21 14:00

Units: ug/Kg
Basis: As Received

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	3900 U	97000	3900	19420	02/23/21 15:31	
Trichlorofluoromethane (CFC 11)	4700 U	97000	4700	19420	02/23/21 15:31	
Vinyl Chloride	3900 U	97000	3900	19420	02/23/21 15:31	
cis-1,2-Dichloroethene	4500 U	97000	4500	19420	02/23/21 15:31	
cis-1,3-Dichloropropene	3900 U	97000	3900	19420	02/23/21 15:31	
m,p-Xylenes	940000	97000	3900	19420	02/23/21 15:31	
o-Xylene	280000	97000	3900	19420	02/23/21 15:31	
trans-1,2-Dichloroethene	3900 U	97000	3900	19420	02/23/21 15:31	
trans-1,3-Dichloropropene	4500 U	97000	4500	19420	02/23/21 15:31	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	31 - 154	02/23/21 15:31	
Dibromofluoromethane	102	63 - 138	02/23/21 15:31	
Toluene-d8	103	66 - 138	02/23/21 15:31	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/09/21 13:50
Date Received: 02/11/21 14:00

Sample Name: TK-LQ-ST04-02092021
Lab Code: R2101263-002

Units: ug/Kg
Basis: As Received

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	4000 U	98000	4000	19600	02/23/21 15:53	
1,1,2,2-Tetrachloroethane	4000 U	98000	4000	19600	02/23/21 15:53	
1,1,2-Trichloroethane	4000 U	98000	4000	19600	02/23/21 15:53	
1,1,2-Trichloro-1,2,2-trifluoroethane	4000 U	98000	4000	19600	02/23/21 15:53	
1,1-Dichloroethane (1,1-DCA)	4000 U	98000	4000	19600	02/23/21 15:53	
1,1-Dichloroethene (1,1-DCE)	4000 U	98000	4000	19600	02/23/21 15:53	
1,2,3-Trichlorobenzene	4900 U	98000	4900	19600	02/23/21 15:53	
1,2,4-Trichlorobenzene	6700 U	98000	6700	19600	02/23/21 15:53	
1,2-Dibromo-3-chloropropane (DBCP)	8900 U	98000	8900	19600	02/23/21 15:53	
1,2-Dibromoethane	4000 U	98000	4000	19600	02/23/21 15:53	
1,2-Dichlorobenzene	4000 U	98000	4000	19600	02/23/21 15:53	
1,2-Dichloroethane	4000 U	98000	4000	19600	02/23/21 15:53	
1,2-Dichloropropane	4000 U	98000	4000	19600	02/23/21 15:53	
1,3-Dichlorobenzene	4000 U	98000	4000	19600	02/23/21 15:53	
1,4-Dichlorobenzene	4000 U	98000	4000	19600	02/23/21 15:53	
1,4-Dioxane	260000 U	2000000	260000	19600	02/23/21 15:53	
2-Butanone (MEK)	16000 U	200000	16000	19600	02/23/21 15:53	
2-Hexanone	4000 U	200000	4000	19600	02/23/21 15:53	
4-Methyl-2-pentanone	4000 U	200000	4000	19600	02/23/21 15:53	
Acetone	42000 U	200000	42000	19600	02/23/21 15:53	
Benzene	20000 J	98000	4000	19600	02/23/21 15:53	
Bromochloromethane	4000 U	98000	4000	19600	02/23/21 15:53	
Bromodichloromethane	4000 U	98000	4000	19600	02/23/21 15:53	
Bromoform	4900 U	98000	4900	19600	02/23/21 15:53	
Bromomethane	14000 U	98000	14000	19600	02/23/21 15:53	
Carbon Disulfide	8300 U	200000	8300	19600	02/23/21 15:53	
Carbon Tetrachloride	6700 U	98000	6700	19600	02/23/21 15:53	
Chlorobenzene	4000 U	98000	4000	19600	02/23/21 15:53	
Chloroethane	4600 U	98000	4600	19600	02/23/21 15:53	
Chloroform	4800 U	98000	4800	19600	02/23/21 15:53	
Chloromethane	5500 U	98000	5500	19600	02/23/21 15:53	
Cyclohexane	82000 J	200000	5100	19600	02/23/21 15:53	
Dibromochloromethane	4000 U	98000	4000	19600	02/23/21 15:53	
Dichlorodifluoromethane (CFC 12)	4200 U	98000	4200	19600	02/23/21 15:53	
Dichloromethane	13000 U	98000	13000	19600	02/23/21 15:53	
Ethylbenzene	600000	98000	4000	19600	02/23/21 15:53	
Isopropylbenzene (Cumene)	450000	98000	4000	19600	02/23/21 15:53	
Methyl Acetate	6500 U	200000	6500	19600	02/23/21 15:53	
Methyl tert-Butyl Ether	4000 U	98000	4000	19600	02/23/21 15:53	
Methylcyclohexane	600000	200000	4000	19600	02/23/21 15:53	
Styrene	4000 U	98000	4000	19600	02/23/21 15:53	
Tetrachloroethene (PCE)	4200 U	98000	4200	19600	02/23/21 15:53	
Toluene	810000	98000	4000	19600	02/23/21 15:53	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Sample Name: TK-LQ-ST04-02092021
Lab Code: R2101263-002

Service Request: R2101263
Date Collected: 02/09/21 13:50
Date Received: 02/11/21 14:00

Units: ug/Kg
Basis: As Received

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	4000 U	98000	4000	19600	02/23/21 15:53	
Trichlorofluoromethane (CFC 11)	4800 U	98000	4800	19600	02/23/21 15:53	
Vinyl Chloride	4000 U	98000	4000	19600	02/23/21 15:53	
cis-1,2-Dichloroethene	4600 U	98000	4600	19600	02/23/21 15:53	
cis-1,3-Dichloropropene	4000 U	98000	4000	19600	02/23/21 15:53	
m,p-Xylenes	2000000	98000	4000	19600	02/23/21 15:53	
o-Xylene	810000	98000	4000	19600	02/23/21 15:53	
trans-1,2-Dichloroethene	4000 U	98000	4000	19600	02/23/21 15:53	
trans-1,3-Dichloropropene	4600 U	98000	4600	19600	02/23/21 15:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	31 - 154	02/23/21 15:53	
Dibromofluoromethane	100	63 - 138	02/23/21 15:53	
Toluene-d8	104	66 - 138	02/23/21 15:53	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 09:30
Date Received: 02/11/21 14:00

Sample Name: TL-LQ-RC01-0210
Lab Code: R2101263-003

Units: ug/Kg
Basis: As Received

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	400 U	10000	400	2000	02/23/21 20:15	
1,1,2,2-Tetrachloroethane	400 U	10000	400	2000	02/23/21 20:15	
1,1,2-Trichloroethane	400 U	10000	400	2000	02/23/21 20:15	
1,1,2-Trichloro-1,2,2-trifluoroethane	400 U	10000	400	2000	02/23/21 20:15	
1,1-Dichloroethane (1,1-DCA)	400 U	10000	400	2000	02/23/21 20:15	
1,1-Dichloroethene (1,1-DCE)	400 U	10000	400	2000	02/23/21 20:15	
1,2,3-Trichlorobenzene	500 U	10000	500	2000	02/23/21 20:15	
1,2,4-Trichlorobenzene	680 U	10000	680	2000	02/23/21 20:15	
1,2-Dibromo-3-chloropropane (DBCP)	900 U	10000	900	2000	02/23/21 20:15	
1,2-Dibromoethane	400 U	10000	400	2000	02/23/21 20:15	
1,2-Dichlorobenzene	400 U	10000	400	2000	02/23/21 20:15	
1,2-Dichloroethane	400 U	10000	400	2000	02/23/21 20:15	
1,2-Dichloropropane	400 U	10000	400	2000	02/23/21 20:15	
1,3-Dichlorobenzene	400 U	10000	400	2000	02/23/21 20:15	
1,4-Dichlorobenzene	400 U	10000	400	2000	02/23/21 20:15	
1,4-Dioxane	26000 U	200000	26000	2000	02/23/21 20:15	
2-Butanone (MEK)	3200 J	20000	1600	2000	02/23/21 20:15	
2-Hexanone	400 U	20000	400	2000	02/23/21 20:15	
4-Methyl-2-pentanone	400 U	20000	400	2000	02/23/21 20:15	
Acetone	4200 U	20000	4200	2000	02/23/21 20:15	
Benzene	400 U	10000	400	2000	02/23/21 20:15	
Bromochloromethane	400 U	10000	400	2000	02/23/21 20:15	
Bromodichloromethane	400 U	10000	400	2000	02/23/21 20:15	
Bromoform	500 U	10000	500	2000	02/23/21 20:15	
Bromomethane	1400 U	10000	1400	2000	02/23/21 20:15	
Carbon Disulfide	840 U	20000	840	2000	02/23/21 20:15	
Carbon Tetrachloride	680 U	10000	680	2000	02/23/21 20:15	
Chlorobenzene	400 U	10000	400	2000	02/23/21 20:15	
Chloroethane	460 U	10000	460	2000	02/23/21 20:15	
Chloroform	480 U	10000	480	2000	02/23/21 20:15	
Chloromethane	560 U	10000	560	2000	02/23/21 20:15	
Cyclohexane	520 U	20000	520	2000	02/23/21 20:15	
Dibromochloromethane	400 U	10000	400	2000	02/23/21 20:15	
Dichlorodifluoromethane (CFC 12)	420 U	10000	420	2000	02/23/21 20:15	
Dichloromethane	1300 U	10000	1300	2000	02/23/21 20:15	
Ethylbenzene	400 U	10000	400	2000	02/23/21 20:15	
Isopropylbenzene (Cumene)	400 U	10000	400	2000	02/23/21 20:15	
Methyl Acetate	820 J	20000	660	2000	02/23/21 20:15	
Methyl tert-Butyl Ether	400 U	10000	400	2000	02/23/21 20:15	
Methylcyclohexane	400 U	20000	400	2000	02/23/21 20:15	
Styrene	400 U	10000	400	2000	02/23/21 20:15	
Tetrachloroethene (PCE)	420 U	10000	420	2000	02/23/21 20:15	
Toluene	400 U	10000	400	2000	02/23/21 20:15	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 09:30
Date Received: 02/11/21 14:00

Sample Name: TL-LQ-RC01-0210
Lab Code: R2101263-003

Units: ug/Kg
Basis: As Received

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	400 U	10000	400	2000	02/23/21 20:15	
Trichlorofluoromethane (CFC 11)	480 U	10000	480	2000	02/23/21 20:15	
Vinyl Chloride	400 U	10000	400	2000	02/23/21 20:15	
cis-1,2-Dichloroethene	460 U	10000	460	2000	02/23/21 20:15	
cis-1,3-Dichloropropene	400 U	10000	400	2000	02/23/21 20:15	
m,p-Xylenes	400 U	10000	400	2000	02/23/21 20:15	
o-Xylene	400 U	10000	400	2000	02/23/21 20:15	
trans-1,2-Dichloroethene	400 U	10000	400	2000	02/23/21 20:15	
trans-1,3-Dichloropropene	460 U	10000	460	2000	02/23/21 20:15	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	31 - 154	02/23/21 20:15	
Dibromofluoromethane	100	63 - 138	02/23/21 20:15	
Toluene-d8	103	66 - 138	02/23/21 20:15	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-LQ-RC03-02100
Lab Code: R2101263-004

Units: ug/Kg
Basis: As Received

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	4000 U	100000	4000	20000	02/23/21 16:36	
1,1,2,2-Tetrachloroethane	4000 U	100000	4000	20000	02/23/21 16:36	
1,1,2-Trichloroethane	4000 U	100000	4000	20000	02/23/21 16:36	
1,1,2-Trichloro-1,2,2-trifluoroethane	4000 U	100000	4000	20000	02/23/21 16:36	
1,1-Dichloroethane (1,1-DCA)	4000 U	100000	4000	20000	02/23/21 16:36	
1,1-Dichloroethene (1,1-DCE)	4000 U	100000	4000	20000	02/23/21 16:36	
1,2,3-Trichlorobenzene	5000 U	100000	5000	20000	02/23/21 16:36	
1,2,4-Trichlorobenzene	6900 U	100000	6900	20000	02/23/21 16:36	
1,2-Dibromo-3-chloropropane (DBCP)	9000 U	100000	9000	20000	02/23/21 16:36	
1,2-Dibromoethane	4000 U	100000	4000	20000	02/23/21 16:36	
1,2-Dichlorobenzene	4000 U	100000	4000	20000	02/23/21 16:36	
1,2-Dichloroethane	4000 U	100000	4000	20000	02/23/21 16:36	
1,2-Dichloropropane	4000 U	100000	4000	20000	02/23/21 16:36	
1,3-Dichlorobenzene	4000 U	100000	4000	20000	02/23/21 16:36	
1,4-Dichlorobenzene	4000 U	100000	4000	20000	02/23/21 16:36	
1,4-Dioxane	260000 U	2000000	260000	20000	02/23/21 16:36	
2-Butanone (MEK)	16000 U	200000	16000	20000	02/23/21 16:36	
2-Hexanone	4000 U	200000	4000	20000	02/23/21 16:36	
4-Methyl-2-pentanone	4000 U	200000	4000	20000	02/23/21 16:36	
Acetone	42000 U	200000	42000	20000	02/23/21 16:36	
Benzene	580000	100000	4000	20000	02/23/21 16:36	
Bromochloromethane	4000 U	100000	4000	20000	02/23/21 16:36	
Bromodichloromethane	4000 U	100000	4000	20000	02/23/21 16:36	
Bromoform	5000 U	100000	5000	20000	02/23/21 16:36	
Bromomethane	14000 U	100000	14000	20000	02/23/21 16:36	
Carbon Disulfide	8400 U	200000	8400	20000	02/23/21 16:36	
Carbon Tetrachloride	6900 U	100000	6900	20000	02/23/21 16:36	
Chlorobenzene	4000 U	100000	4000	20000	02/23/21 16:36	
Chloroethane	4600 U	100000	4600	20000	02/23/21 16:36	
Chloroform	4800 U	100000	4800	20000	02/23/21 16:36	
Chloromethane	5700 U	100000	5700	20000	02/23/21 16:36	
Cyclohexane	5200 U	200000	5200	20000	02/23/21 16:36	
Dibromochloromethane	4000 U	100000	4000	20000	02/23/21 16:36	
Dichlorodifluoromethane (CFC 12)	4200 U	100000	4200	20000	02/23/21 16:36	
Dichloromethane	13000 U	100000	13000	20000	02/23/21 16:36	
Ethylbenzene	130000	100000	4000	20000	02/23/21 16:36	
Isopropylbenzene (Cumene)	250000	100000	4000	20000	02/23/21 16:36	
Methyl Acetate	6600 U	200000	6600	20000	02/23/21 16:36	
Methyl tert-Butyl Ether	4000 U	100000	4000	20000	02/23/21 16:36	
Methylcyclohexane	9000 J	200000	4000	20000	02/23/21 16:36	
Styrene	120000	100000	4000	20000	02/23/21 16:36	
Tetrachloroethene (PCE)	4200 U	100000	4200	20000	02/23/21 16:36	
Toluene	520000	100000	4000	20000	02/23/21 16:36	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-LQ-RC03-02100
Lab Code: R2101263-004

Units: ug/Kg
Basis: As Received

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	4000 U	100000	4000	20000	02/23/21 16:36	
Trichlorofluoromethane (CFC 11)	4800 U	100000	4800	20000	02/23/21 16:36	
Vinyl Chloride	4000 U	100000	4000	20000	02/23/21 16:36	
cis-1,2-Dichloroethene	4600 U	100000	4600	20000	02/23/21 16:36	
cis-1,3-Dichloropropene	4000 U	100000	4000	20000	02/23/21 16:36	
m,p-Xylenes	320000	100000	4000	20000	02/23/21 16:36	
o-Xylene	370000	100000	4000	20000	02/23/21 16:36	
trans-1,2-Dichloroethene	4000 U	100000	4000	20000	02/23/21 16:36	
trans-1,3-Dichloropropene	4600 U	100000	4600	20000	02/23/21 16:36	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	31 - 154	02/23/21 16:36	
Dibromofluoromethane	98	63 - 138	02/23/21 16:36	
Toluene-d8	103	66 - 138	02/23/21 16:36	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-SD-RC04-0210
Lab Code: R2101263-005

Units: ug/Kg
Basis: As Received

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1000 U	25000	1000	5000	02/23/21 19:53	
1,1,2,2-Tetrachloroethane	1000 U	25000	1000	5000	02/23/21 19:53	
1,1,2-Trichloroethane	1000 U	25000	1000	5000	02/23/21 19:53	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000 U	25000	1000	5000	02/23/21 19:53	
1,1-Dichloroethane (1,1-DCA)	1000 U	25000	1000	5000	02/23/21 19:53	
1,1-Dichloroethene (1,1-DCE)	1000 U	25000	1000	5000	02/23/21 19:53	
1,2,3-Trichlorobenzene	1300 U	25000	1300	5000	02/23/21 19:53	
1,2,4-Trichlorobenzene	1700 U	25000	1700	5000	02/23/21 19:53	
1,2-Dibromo-3-chloropropane (DBCP)	2300 U	25000	2300	5000	02/23/21 19:53	
1,2-Dibromoethane	1000 U	25000	1000	5000	02/23/21 19:53	
1,2-Dichlorobenzene	1000 U	25000	1000	5000	02/23/21 19:53	
1,2-Dichloroethane	1000 U	25000	1000	5000	02/23/21 19:53	
1,2-Dichloropropane	1000 U	25000	1000	5000	02/23/21 19:53	
1,3-Dichlorobenzene	1000 U	25000	1000	5000	02/23/21 19:53	
1,4-Dichlorobenzene	1000 U	25000	1000	5000	02/23/21 19:53	
1,4-Dioxane	65000 U	500000	65000	5000	02/23/21 19:53	
2-Butanone (MEK)	4000 J	50000	3900	5000	02/23/21 19:53	
2-Hexanone	1000 U	50000	1000	5000	02/23/21 19:53	
4-Methyl-2-pentanone	1000 U	50000	1000	5000	02/23/21 19:53	
Acetone	11000 U	50000	11000	5000	02/23/21 19:53	
Benzene	1200 J	25000	1000	5000	02/23/21 19:53	
Bromochloromethane	1000 U	25000	1000	5000	02/23/21 19:53	
Bromodichloromethane	1000 U	25000	1000	5000	02/23/21 19:53	
Bromoform	1300 U	25000	1300	5000	02/23/21 19:53	
Bromomethane	3500 U	25000	3500	5000	02/23/21 19:53	
Carbon Disulfide	2100 U	50000	2100	5000	02/23/21 19:53	
Carbon Tetrachloride	1700 U	25000	1700	5000	02/23/21 19:53	
Chlorobenzene	1000 U	25000	1000	5000	02/23/21 19:53	
Chloroethane	1200 U	25000	1200	5000	02/23/21 19:53	
Chloroform	1200 U	25000	1200	5000	02/23/21 19:53	
Chloromethane	1400 U	25000	1400	5000	02/23/21 19:53	
Cyclohexane	1300 U	50000	1300	5000	02/23/21 19:53	
Dibromochloromethane	1000 U	25000	1000	5000	02/23/21 19:53	
Dichlorodifluoromethane (CFC 12)	1100 U	25000	1100	5000	02/23/21 19:53	
Dichloromethane	3300 U	25000	3300	5000	02/23/21 19:53	
Ethylbenzene	1000 U	25000	1000	5000	02/23/21 19:53	
Isopropylbenzene (Cumene)	1000 U	25000	1000	5000	02/23/21 19:53	
Methyl Acetate	1700 U	50000	1700	5000	02/23/21 19:53	
Methyl tert-Butyl Ether	1000 U	25000	1000	5000	02/23/21 19:53	
Methylcyclohexane	1000 U	50000	1000	5000	02/23/21 19:53	
Styrene	1000 U	25000	1000	5000	02/23/21 19:53	
Tetrachloroethene (PCE)	1100 U	25000	1100	5000	02/23/21 19:53	
Toluene	1000 U	25000	1000	5000	02/23/21 19:53	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-SD-RC04-0210
Lab Code: R2101263-005

Units: ug/Kg
Basis: As Received

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	1000 U	25000	1000	5000	02/23/21 19:53	
Trichlorofluoromethane (CFC 11)	1200 U	25000	1200	5000	02/23/21 19:53	
Vinyl Chloride	1000 U	25000	1000	5000	02/23/21 19:53	
cis-1,2-Dichloroethene	1200 U	25000	1200	5000	02/23/21 19:53	
cis-1,3-Dichloropropene	1000 U	25000	1000	5000	02/23/21 19:53	
m,p-Xylenes	1000 J	25000	1000	5000	02/23/21 19:53	
o-Xylene	1000 U	25000	1000	5000	02/23/21 19:53	
trans-1,2-Dichloroethene	1000 U	25000	1000	5000	02/23/21 19:53	
trans-1,3-Dichloropropene	1200 U	25000	1200	5000	02/23/21 19:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	31 - 154	02/23/21 19:53	
Dibromofluoromethane	98	63 - 138	02/23/21 19:53	
Toluene-d8	103	66 - 138	02/23/21 19:53	



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Sample Name: TK-LQ-ST07-02092021
Lab Code: R2101263-001

Service Request: R2101263
Date Collected: 02/09/21 12:00
Date Received: 02/11/21 14:00

Units: ug/Kg
Basis: As Received

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	60000 U	490000	60000	5	02/19/21 00:55	2/18/21	
2,3,4,6-Tetrachlorophenol	60000 U	490000	60000	5	02/19/21 00:55	2/18/21	
2,4,5-Trichlorophenol	55000 U	490000	55000	5	02/19/21 00:55	2/18/21	
2,4,6-Trichlorophenol	70000 U	490000	70000	5	02/19/21 00:55	2/18/21	
2,4-Dichlorophenol	65000 U	490000	65000	5	02/19/21 00:55	2/18/21	
2,4-Dimethylphenol	70000 U	490000	70000	5	02/19/21 00:55	2/18/21	
2,4-Dinitrophenol	1000000 U	2400000	1000000	5	02/19/21 00:55	2/18/21	
2,4-Dinitrotoluene	120000 U	490000	120000	5	02/19/21 00:55	2/18/21	
2,6-Dinitrotoluene	70000 U	490000	70000	5	02/19/21 00:55	2/18/21	
2-Chloronaphthalene	70000 U	490000	70000	5	02/19/21 00:55	2/18/21	
2-Chlorophenol	55000 U	490000	55000	5	02/19/21 00:55	2/18/21	
2-Methylnaphthalene	110000 J	490000	65000	5	02/19/21 00:55	2/18/21	
2-Methylphenol	50000 U	490000	50000	5	02/19/21 00:55	2/18/21	
2-Nitroaniline	70000 U	2400000	70000	5	02/19/21 00:55	2/18/21	
2-Nitrophenol	75000 U	490000	75000	5	02/19/21 00:55	2/18/21	
3,3'-Dichlorobenzidine	60000 U	490000	60000	5	02/19/21 00:55	2/18/21	
3- and 4-Methylphenol Coelution	60000 U	490000	60000	5	02/19/21 00:55	2/18/21	
3-Nitroaniline	130000 U	2400000	130000	5	02/19/21 00:55	2/18/21	
4,6-Dinitro-2-methylphenol	1000000 U	2400000	1000000	5	02/19/21 00:55	2/18/21	
4-Bromophenyl Phenyl Ether	85000 U	490000	85000	5	02/19/21 00:55	2/18/21	
4-Chloro-3-methylphenol	55000 U	490000	55000	5	02/19/21 00:55	2/18/21	
4-Chloroaniline	50000 U	490000	50000	5	02/19/21 00:55	2/18/21	
4-Chlorophenyl Phenyl Ether	75000 U	490000	75000	5	02/19/21 00:55	2/18/21	
4-Nitroaniline	140000 U	2400000	140000	5	02/19/21 00:55	2/18/21	
4-Nitrophenol	320000 U	2400000	320000	5	02/19/21 00:55	2/18/21	
Acenaphthene	70000 U	490000	70000	5	02/19/21 00:55	2/18/21	
Acenaphthylene	70000 U	490000	70000	5	02/19/21 00:55	2/18/21	
Acetophenone	65000 U	490000	65000	5	02/19/21 00:55	2/18/21	
Anthracene	65000 U	490000	65000	5	02/19/21 00:55	2/18/21	
Atrazine	110000 U	490000	110000	5	02/19/21 00:55	2/18/21	
Benz(a)anthracene	80000 U	490000	80000	5	02/19/21 00:55	2/18/21	
Benzaldehyde	190000 U	2400000	190000	5	02/19/21 00:55	2/18/21	
Benzo(a)pyrene	60000 U	490000	60000	5	02/19/21 00:55	2/18/21	
Benzo(b)fluoranthene	60000 U	490000	60000	5	02/19/21 00:55	2/18/21	
Benzo(g,h,i)perylene	50000 U	490000	50000	5	02/19/21 00:55	2/18/21	
Benzo(k)fluoranthene	65000 U	490000	65000	5	02/19/21 00:55	2/18/21	
Biphenyl	70000 U	490000	70000	5	02/19/21 00:55	2/18/21	
2,2'-Oxybis(1-chloropropane)	70000 U	490000	70000	5	02/19/21 00:55	2/18/21	
Bis(2-chloroethoxy)methane	95000 U	490000	95000	5	02/19/21 00:55	2/18/21	
Bis(2-chloroethyl) Ether	65000 U	490000	65000	5	02/19/21 00:55	2/18/21	
Bis(2-ethylhexyl) Phthalate	390000 U	490000	390000	5	02/19/21 00:55	2/18/21	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Sample Name: TK-LQ-ST07-02092021
Lab Code: R2101263-001

Service Request: R2101263
Date Collected: 02/09/21 12:00
Date Received: 02/11/21 14:00

Units: ug/Kg
Basis: As Received

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Butyl Benzyl Phthalate	70000 U	490000	70000	5	02/19/21 00:55	2/18/21	
Caprolactam	50000 U	490000	50000	5	02/19/21 00:55	2/18/21	
Carbazole	80000 U	490000	80000	5	02/19/21 00:55	2/18/21	
Chrysene	60000 U	490000	60000	5	02/19/21 00:55	2/18/21	
Di-n-butyl Phthalate	85000 U	490000	85000	5	02/19/21 00:55	2/18/21	
Di-n-octyl Phthalate	170000 U	490000	170000	5	02/19/21 00:55	2/18/21	
Dibenz(a,h)anthracene	55000 U	490000	55000	5	02/19/21 00:55	2/18/21	
Dibenzofuran	70000 U	490000	70000	5	02/19/21 00:55	2/18/21	
Diethyl Phthalate	55000 U	490000	55000	5	02/19/21 00:55	2/18/21	
Dimethyl Phthalate	65000 U	490000	65000	5	02/19/21 00:55	2/18/21	
Fluoranthene	75000 U	490000	75000	5	02/19/21 00:55	2/18/21	
Fluorene	65000 U	490000	65000	5	02/19/21 00:55	2/18/21	
Hexachlorobenzene	80000 U	490000	80000	5	02/19/21 00:55	2/18/21	
Hexachlorobutadiene	50000 U	490000	50000	5	02/19/21 00:55	2/18/21	
Hexachlorocyclopentadiene	110000 U	490000	110000	5	02/19/21 00:55	2/18/21	
Hexachloroethane	55000 U	490000	55000	5	02/19/21 00:55	2/18/21	
Indeno(1,2,3-cd)pyrene	90000 U	490000	90000	5	02/19/21 00:55	2/18/21	
Isophorone	70000 U	490000	70000	5	02/19/21 00:55	2/18/21	
N-Nitrosodi-n-propylamine	60000 U	490000	60000	5	02/19/21 00:55	2/18/21	
N-Nitrosodiphenylamine	140000 U	490000	140000	5	02/19/21 00:55	2/18/21	
Naphthalene	240000 J	490000	60000	5	02/19/21 00:55	2/18/21	
Nitrobenzene	75000 U	490000	75000	5	02/19/21 00:55	2/18/21	
Pentachlorophenol (PCP)	490000 U	2400000	490000	5	02/19/21 00:55	2/18/21	
Phenanthrene	70000 U	490000	70000	5	02/19/21 00:55	2/18/21	
Phenol	50000 U	490000	50000	5	02/19/21 00:55	2/18/21	
Pyrene	75000 U	490000	75000	5	02/19/21 00:55	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	81	10 - 180	02/19/21 00:55	
2-Fluorobiphenyl	90	49 - 157	02/19/21 00:55	
2-Fluorophenol	81	59 - 113	02/19/21 00:55	
Nitrobenzene-d5	119	66 - 143	02/19/21 00:55	
Phenol-d6	82	35 - 125	02/19/21 00:55	
Terphenyl-d14	98	72 - 172	02/19/21 00:55	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Sample Name: TK-LQ-ST04-02092021
Lab Code: R2101263-002

Service Request: R2101263
Date Collected: 02/09/21 13:50
Date Received: 02/11/21 14:00

Units: ug/Kg
Basis: As Received

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	12000 U	99000	12000	1	02/19/21 01:22	2/18/21	
2,3,4,6-Tetrachlorophenol	12000 U	99000	12000	1	02/19/21 01:22	2/18/21	
2,4,5-Trichlorophenol	11000 U	99000	11000	1	02/19/21 01:22	2/18/21	
2,4,6-Trichlorophenol	14000 U	99000	14000	1	02/19/21 01:22	2/18/21	
2,4-Dichlorophenol	13000 U	99000	13000	1	02/19/21 01:22	2/18/21	
2,4-Dimethylphenol	140000	99000	14000	1	02/19/21 01:22	2/18/21	
2,4-Dinitrophenol	200000 U	500000	200000	1	02/19/21 01:22	2/18/21	
2,4-Dinitrotoluene	24000 U	99000	24000	1	02/19/21 01:22	2/18/21	
2,6-Dinitrotoluene	14000 U	99000	14000	1	02/19/21 01:22	2/18/21	
2-Chloronaphthalene	14000 U	99000	14000	1	02/19/21 01:22	2/18/21	
2-Chlorophenol	11000 U	99000	11000	1	02/19/21 01:22	2/18/21	
2-Methylnaphthalene	2700000 D	500000	65000	5	02/22/21 17:52	2/18/21	
2-Methylphenol	10000 U	99000	10000	1	02/19/21 01:22	2/18/21	
2-Nitroaniline	14000 U	500000	14000	1	02/19/21 01:22	2/18/21	
2-Nitrophenol	15000 U	99000	15000	1	02/19/21 01:22	2/18/21	
3,3'-Dichlorobenzidine	12000 U	99000	12000	1	02/19/21 01:22	2/18/21	
3- and 4-Methylphenol Coelution	12000 U	99000	12000	1	02/19/21 01:22	2/18/21	
3-Nitroaniline	25000 U	500000	25000	1	02/19/21 01:22	2/18/21	
4,6-Dinitro-2-methylphenol	200000 U	500000	200000	1	02/19/21 01:22	2/18/21	
4-Bromophenyl Phenyl Ether	17000 U	99000	17000	1	02/19/21 01:22	2/18/21	
4-Chloro-3-methylphenol	11000 U	99000	11000	1	02/19/21 01:22	2/18/21	
4-Chloroaniline	10000 U	99000	10000	1	02/19/21 01:22	2/18/21	
4-Chlorophenyl Phenyl Ether	15000 U	99000	15000	1	02/19/21 01:22	2/18/21	
4-Nitroaniline	27000 U	500000	27000	1	02/19/21 01:22	2/18/21	
4-Nitrophenol	64000 U	500000	64000	1	02/19/21 01:22	2/18/21	
Acenaphthene	320000	99000	14000	1	02/19/21 01:22	2/18/21	
Acenaphthylene	14000 U	99000	14000	1	02/19/21 01:22	2/18/21	
Acetophenone	13000 U	99000	13000	1	02/19/21 01:22	2/18/21	
Anthracene	32000 J	99000	13000	1	02/19/21 01:22	2/18/21	
Atrazine	21000 U	99000	21000	1	02/19/21 01:22	2/18/21	
Benz(a)anthracene	16000 U	99000	16000	1	02/19/21 01:22	2/18/21	
Benzaldehyde	37000 U	500000	37000	1	02/19/21 01:22	2/18/21	
Benzo(a)pyrene	12000 U	99000	12000	1	02/19/21 01:22	2/18/21	
Benzo(b)fluoranthene	12000 U	99000	12000	1	02/19/21 01:22	2/18/21	
Benzo(g,h,i)perylene	10000 U	99000	10000	1	02/19/21 01:22	2/18/21	
Benzo(k)fluoranthene	13000 U	99000	13000	1	02/19/21 01:22	2/18/21	
Biphenyl	250000	99000	14000	1	02/19/21 01:22	2/18/21	
2,2'-Oxybis(1-chloropropane)	14000 U	99000	14000	1	02/19/21 01:22	2/18/21	
Bis(2-chloroethoxy)methane	19000 U	99000	19000	1	02/19/21 01:22	2/18/21	
Bis(2-chloroethyl) Ether	13000 U	99000	13000	1	02/19/21 01:22	2/18/21	
Bis(2-ethylhexyl) Phthalate	78000 U	99000	78000	1	02/19/21 01:22	2/18/21	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Sample Name: TK-LQ-ST04-02092021
Lab Code: R2101263-002

Service Request: R2101263
Date Collected: 02/09/21 13:50
Date Received: 02/11/21 14:00

Units: ug/Kg
Basis: As Received

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Butyl Benzyl Phthalate	14000 U	99000	14000	1	02/19/21 01:22	2/18/21	
Caprolactam	10000 U	99000	10000	1	02/19/21 01:22	2/18/21	
Carbazole	16000 U	99000	16000	1	02/19/21 01:22	2/18/21	
Chrysene	12000 U	99000	12000	1	02/19/21 01:22	2/18/21	
Di-n-butyl Phthalate	17000 U	99000	17000	1	02/19/21 01:22	2/18/21	
Di-n-octyl Phthalate	33000 U	99000	33000	1	02/19/21 01:22	2/18/21	
Dibenz(a,h)anthracene	11000 U	99000	11000	1	02/19/21 01:22	2/18/21	
Dibenzofuran	14000 U	99000	14000	1	02/19/21 01:22	2/18/21	
Diethyl Phthalate	11000 U	99000	11000	1	02/19/21 01:22	2/18/21	
Dimethyl Phthalate	13000 U	99000	13000	1	02/19/21 01:22	2/18/21	
Fluoranthene	15000 U	99000	15000	1	02/19/21 01:22	2/18/21	
Fluorene	320000	99000	13000	1	02/19/21 01:22	2/18/21	
Hexachlorobenzene	16000 U	99000	16000	1	02/19/21 01:22	2/18/21	
Hexachlorobutadiene	10000 U	99000	10000	1	02/19/21 01:22	2/18/21	
Hexachlorocyclopentadiene	22000 U	99000	22000	1	02/19/21 01:22	2/18/21	
Hexachloroethane	11000 U	99000	11000	1	02/19/21 01:22	2/18/21	
Indeno(1,2,3-cd)pyrene	18000 U	99000	18000	1	02/19/21 01:22	2/18/21	
Isophorone	14000 U	99000	14000	1	02/19/21 01:22	2/18/21	
N-Nitrosodi-n-propylamine	12000 U	99000	12000	1	02/19/21 01:22	2/18/21	
N-Nitrosodiphenylamine	27000 U	99000	27000	1	02/19/21 01:22	2/18/21	
Naphthalene	1400000 D	500000	60000	5	02/22/21 17:52	2/18/21	
Nitrobenzene	15000 U	99000	15000	1	02/19/21 01:22	2/18/21	
Pentachlorophenol (PCP)	97000 U	500000	97000	1	02/19/21 01:22	2/18/21	
Phenanthrene	14000 U	99000	14000	1	02/19/21 01:22	2/18/21	
Phenol	10000 U	99000	10000	1	02/19/21 01:22	2/18/21	
Pyrene	15000 U	99000	15000	1	02/19/21 01:22	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	67	10 - 180	02/19/21 01:22	
2-Fluorobiphenyl	102	49 - 157	02/19/21 01:22	
2-Fluorophenol	98	59 - 113	02/19/21 01:22	
Nitrobenzene-d5	605 *	66 - 143	02/19/21 01:22	*
Phenol-d6	98	35 - 125	02/19/21 01:22	
Terphenyl-d14	86	72 - 172	02/19/21 01:22	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 09:30
Date Received: 02/11/21 14:00

Sample Name: TL-LQ-RC01-0210
Lab Code: R2101263-003

Units: ug/Kg
Basis: As Received

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	60000 U	490000	60000	5	02/19/21 01:49	2/18/21	
2,3,4,6-Tetrachlorophenol	60000 U	490000	60000	5	02/19/21 01:49	2/18/21	
2,4,5-Trichlorophenol	55000 U	490000	55000	5	02/19/21 01:49	2/18/21	
2,4,6-Trichlorophenol	70000 U	490000	70000	5	02/19/21 01:49	2/18/21	
2,4-Dichlorophenol	65000 U	490000	65000	5	02/19/21 01:49	2/18/21	
2,4-Dimethylphenol	70000 U	490000	70000	5	02/19/21 01:49	2/18/21	
2,4-Dinitrophenol	1000000 U	2400000	1000000	5	02/19/21 01:49	2/18/21	
2,4-Dinitrotoluene	120000 U	490000	120000	5	02/19/21 01:49	2/18/21	
2,6-Dinitrotoluene	70000 U	490000	70000	5	02/19/21 01:49	2/18/21	
2-Chloronaphthalene	70000 U	490000	70000	5	02/19/21 01:49	2/18/21	
2-Chlorophenol	55000 U	490000	55000	5	02/19/21 01:49	2/18/21	
2-Methylnaphthalene	340000 J	490000	65000	5	02/19/21 01:49	2/18/21	
2-Methylphenol	50000 U	490000	50000	5	02/19/21 01:49	2/18/21	
2-Nitroaniline	70000 U	2400000	70000	5	02/19/21 01:49	2/18/21	
2-Nitrophenol	75000 U	490000	75000	5	02/19/21 01:49	2/18/21	
3,3'-Dichlorobenzidine	60000 U	490000	60000	5	02/19/21 01:49	2/18/21	
3- and 4-Methylphenol Coelution	60000 U	490000	60000	5	02/19/21 01:49	2/18/21	
3-Nitroaniline	130000 U	2400000	130000	5	02/19/21 01:49	2/18/21	
4,6-Dinitro-2-methylphenol	1000000 U	2400000	1000000	5	02/19/21 01:49	2/18/21	
4-Bromophenyl Phenyl Ether	85000 U	490000	85000	5	02/19/21 01:49	2/18/21	
4-Chloro-3-methylphenol	55000 U	490000	55000	5	02/19/21 01:49	2/18/21	
4-Chloroaniline	50000 U	490000	50000	5	02/19/21 01:49	2/18/21	
4-Chlorophenyl Phenyl Ether	75000 U	490000	75000	5	02/19/21 01:49	2/18/21	
4-Nitroaniline	140000 U	2400000	140000	5	02/19/21 01:49	2/18/21	
4-Nitrophenol	320000 U	2400000	320000	5	02/19/21 01:49	2/18/21	
Acenaphthene	70000 U	490000	70000	5	02/19/21 01:49	2/18/21	
Acenaphthylene	200000 J	490000	70000	5	02/19/21 01:49	2/18/21	
Acetophenone	65000 U	490000	65000	5	02/19/21 01:49	2/18/21	
Anthracene	160000 J	490000	65000	5	02/19/21 01:49	2/18/21	
Atrazine	110000 U	490000	110000	5	02/19/21 01:49	2/18/21	
Benz(a)anthracene	150000 J	490000	80000	5	02/19/21 01:49	2/18/21	
Benzaldehyde	190000 U	2400000	190000	5	02/19/21 01:49	2/18/21	
Benzo(a)pyrene	170000 J	490000	60000	5	02/19/21 01:49	2/18/21	
Benzo(b)fluoranthene	170000 J	490000	60000	5	02/19/21 01:49	2/18/21	
Benzo(g,h,i)perylene	160000 J	490000	50000	5	02/19/21 01:49	2/18/21	
Benzo(k)fluoranthene	66000 J	490000	65000	5	02/19/21 01:49	2/18/21	
Biphenyl	100000 J	490000	70000	5	02/19/21 01:49	2/18/21	
2,2'-Oxybis(1-chloropropane)	70000 U	490000	70000	5	02/19/21 01:49	2/18/21	
Bis(2-chloroethoxy)methane	95000 U	490000	95000	5	02/19/21 01:49	2/18/21	
Bis(2-chloroethyl) Ether	65000 U	490000	65000	5	02/19/21 01:49	2/18/21	
Bis(2-ethylhexyl) Phthalate	390000 U	490000	390000	5	02/19/21 01:49	2/18/21	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 09:30
Date Received: 02/11/21 14:00

Sample Name: TL-LQ-RC01-0210
Lab Code: R2101263-003

Units: ug/Kg
Basis: As Received

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Butyl Benzyl Phthalate	70000 U	490000	70000	5	02/19/21 01:49	2/18/21	
Caprolactam	140000 J	490000	50000	5	02/19/21 01:49	2/18/21	
Carbazole	110000 J	490000	80000	5	02/19/21 01:49	2/18/21	
Chrysene	130000 J	490000	60000	5	02/19/21 01:49	2/18/21	
Di-n-butyl Phthalate	85000 U	490000	85000	5	02/19/21 01:49	2/18/21	
Di-n-octyl Phthalate	170000 U	490000	170000	5	02/19/21 01:49	2/18/21	
Dibenz(a,h)anthracene	55000 U	490000	55000	5	02/19/21 01:49	2/18/21	
Dibenzofuran	160000 J	490000	70000	5	02/19/21 01:49	2/18/21	
Diethyl Phthalate	55000 U	490000	55000	5	02/19/21 01:49	2/18/21	
Dimethyl Phthalate	65000 U	490000	65000	5	02/19/21 01:49	2/18/21	
Fluoranthene	560000	490000	75000	5	02/19/21 01:49	2/18/21	
Fluorene	210000 J	490000	65000	5	02/19/21 01:49	2/18/21	
Hexachlorobenzene	80000 U	490000	80000	5	02/19/21 01:49	2/18/21	
Hexachlorobutadiene	50000 U	490000	50000	5	02/19/21 01:49	2/18/21	
Hexachlorocyclopentadiene	110000 U	490000	110000	5	02/19/21 01:49	2/18/21	
Hexachloroethane	55000 U	490000	55000	5	02/19/21 01:49	2/18/21	
Indeno(1,2,3-cd)pyrene	140000 J	490000	90000	5	02/19/21 01:49	2/18/21	
Isophorone	70000 U	490000	70000	5	02/19/21 01:49	2/18/21	
N-Nitrosodi-n-propylamine	60000 U	490000	60000	5	02/19/21 01:49	2/18/21	
N-Nitrosodiphenylamine	140000 U	490000	140000	5	02/19/21 01:49	2/18/21	
Naphthalene	98000 J	490000	60000	5	02/19/21 01:49	2/18/21	
Nitrobenzene	75000 U	490000	75000	5	02/19/21 01:49	2/18/21	
Pentachlorophenol (PCP)	490000 U	2400000	490000	5	02/19/21 01:49	2/18/21	
Phenanthrene	840000	490000	70000	5	02/19/21 01:49	2/18/21	
Phenol	50000 U	490000	50000	5	02/19/21 01:49	2/18/21	
Pyrene	440000 J	490000	75000	5	02/19/21 01:49	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	69	10 - 180	02/19/21 01:49	
2-Fluorobiphenyl	77	49 - 157	02/19/21 01:49	
2-Fluorophenol	73	59 - 113	02/19/21 01:49	
Nitrobenzene-d5	77	66 - 143	02/19/21 01:49	
Phenol-d6	66	35 - 125	02/19/21 01:49	
Terphenyl-d14	91	72 - 172	02/19/21 01:49	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-LQ-RC03-02100
Lab Code: R2101263-004

Units: ug/Kg
Basis: As Received

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	60000 U	480000	60000	5	02/19/21 02:17	2/18/21	
2,3,4,6-Tetrachlorophenol	60000 U	480000	60000	5	02/19/21 02:17	2/18/21	
2,4,5-Trichlorophenol	55000 U	480000	55000	5	02/19/21 02:17	2/18/21	
2,4,6-Trichlorophenol	70000 U	480000	70000	5	02/19/21 02:17	2/18/21	
2,4-Dichlorophenol	65000 U	480000	65000	5	02/19/21 02:17	2/18/21	
2,4-Dimethylphenol	70000 U	480000	70000	5	02/19/21 02:17	2/18/21	
2,4-Dinitrophenol	1000000 U	2400000	1000000	5	02/19/21 02:17	2/18/21	
2,4-Dinitrotoluene	120000 U	480000	120000	5	02/19/21 02:17	2/18/21	
2,6-Dinitrotoluene	70000 U	480000	70000	5	02/19/21 02:17	2/18/21	
2-Chloronaphthalene	70000 U	480000	70000	5	02/19/21 02:17	2/18/21	
2-Chlorophenol	55000 U	480000	55000	5	02/19/21 02:17	2/18/21	
2-Methylnaphthalene	2100000	480000	65000	5	02/19/21 02:17	2/18/21	
2-Methylphenol	50000 U	480000	50000	5	02/19/21 02:17	2/18/21	
2-Nitroaniline	70000 U	2400000	70000	5	02/19/21 02:17	2/18/21	
2-Nitrophenol	75000 U	480000	75000	5	02/19/21 02:17	2/18/21	
3,3'-Dichlorobenzidine	60000 U	480000	60000	5	02/19/21 02:17	2/18/21	
3- and 4-Methylphenol Coelution	330000 J	480000	60000	5	02/19/21 02:17	2/18/21	
3-Nitroaniline	130000 U	2400000	130000	5	02/19/21 02:17	2/18/21	
4,6-Dinitro-2-methylphenol	1000000 U	2400000	1000000	5	02/19/21 02:17	2/18/21	
4-Bromophenyl Phenyl Ether	85000 U	480000	85000	5	02/19/21 02:17	2/18/21	
4-Chloro-3-methylphenol	55000 U	480000	55000	5	02/19/21 02:17	2/18/21	
4-Chloroaniline	50000 U	480000	50000	5	02/19/21 02:17	2/18/21	
4-Chlorophenyl Phenyl Ether	75000 U	480000	75000	5	02/19/21 02:17	2/18/21	
4-Nitroaniline	140000 U	2400000	140000	5	02/19/21 02:17	2/18/21	
4-Nitrophenol	320000 U	2400000	320000	5	02/19/21 02:17	2/18/21	
Acenaphthene	330000 J	480000	70000	5	02/19/21 02:17	2/18/21	
Acenaphthylene	660000	480000	70000	5	02/19/21 02:17	2/18/21	
Acetophenone	65000 U	480000	65000	5	02/19/21 02:17	2/18/21	
Anthracene	320000 J	480000	65000	5	02/19/21 02:17	2/18/21	
Atrazine	110000 U	480000	110000	5	02/19/21 02:17	2/18/21	
Benz(a)anthracene	270000 J	480000	80000	5	02/19/21 02:17	2/18/21	
Benzaldehyde	190000 U	2400000	190000	5	02/19/21 02:17	2/18/21	
Benzo(a)pyrene	250000 J	480000	60000	5	02/19/21 02:17	2/18/21	
Benzo(b)fluoranthene	290000 J	480000	60000	5	02/19/21 02:17	2/18/21	
Benzo(g,h,i)perylene	180000 J	480000	50000	5	02/19/21 02:17	2/18/21	
Benzo(k)fluoranthene	120000 J	480000	65000	5	02/19/21 02:17	2/18/21	
Biphenyl	400000 J	480000	70000	5	02/19/21 02:17	2/18/21	
2,2'-Oxybis(1-chloropropane)	70000 U	480000	70000	5	02/19/21 02:17	2/18/21	
Bis(2-chloroethoxy)methane	95000 U	480000	95000	5	02/19/21 02:17	2/18/21	
Bis(2-chloroethyl) Ether	65000 U	480000	65000	5	02/19/21 02:17	2/18/21	
Bis(2-ethylhexyl) Phthalate	390000 U	480000	390000	5	02/19/21 02:17	2/18/21	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-LQ-RC03-02100
Lab Code: R2101263-004

Units: ug/Kg
Basis: As Received

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Butyl Benzyl Phthalate	70000 U	480000	70000	5	02/19/21 02:17	2/18/21	
Caprolactam	50000 U	480000	50000	5	02/19/21 02:17	2/18/21	
Carbazole	95000 J	480000	80000	5	02/19/21 02:17	2/18/21	
Chrysene	270000 J	480000	60000	5	02/19/21 02:17	2/18/21	
Di-n-butyl Phthalate	85000 U	480000	85000	5	02/19/21 02:17	2/18/21	
Di-n-octyl Phthalate	170000 U	480000	170000	5	02/19/21 02:17	2/18/21	
Dibenz(a,h)anthracene	55000 U	480000	55000	5	02/19/21 02:17	2/18/21	
Dibenzofuran	550000	480000	70000	5	02/19/21 02:17	2/18/21	
Diethyl Phthalate	55000 U	480000	55000	5	02/19/21 02:17	2/18/21	
Dimethyl Phthalate	65000 U	480000	65000	5	02/19/21 02:17	2/18/21	
Fluoranthene	1200000	480000	75000	5	02/19/21 02:17	2/18/21	
Fluorene	490000	480000	65000	5	02/19/21 02:17	2/18/21	
Hexachlorobenzene	80000 U	480000	80000	5	02/19/21 02:17	2/18/21	
Hexachlorobutadiene	50000 U	480000	50000	5	02/19/21 02:17	2/18/21	
Hexachlorocyclopentadiene	110000 U	480000	110000	5	02/19/21 02:17	2/18/21	
Hexachloroethane	55000 U	480000	55000	5	02/19/21 02:17	2/18/21	
Indeno(1,2,3-cd)pyrene	190000 J	480000	90000	5	02/19/21 02:17	2/18/21	
Isophorone	70000 U	480000	70000	5	02/19/21 02:17	2/18/21	
N-Nitrosodi-n-propylamine	60000 U	480000	60000	5	02/19/21 02:17	2/18/21	
N-Nitrosodiphenylamine	140000 U	480000	140000	5	02/19/21 02:17	2/18/21	
Naphthalene	3700000	480000	60000	5	02/19/21 02:17	2/18/21	
Nitrobenzene	75000 U	480000	75000	5	02/19/21 02:17	2/18/21	
Pentachlorophenol (PCP)	490000 U	2400000	490000	5	02/19/21 02:17	2/18/21	
Phenanthrene	1700000	480000	70000	5	02/19/21 02:17	2/18/21	
Phenol	1900000	480000	50000	5	02/19/21 02:17	2/18/21	
Pyrene	940000	480000	75000	5	02/19/21 02:17	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	77	10 - 180	02/19/21 02:17	
2-Fluorobiphenyl	90	49 - 157	02/19/21 02:17	
2-Fluorophenol	87	59 - 113	02/19/21 02:17	
Nitrobenzene-d5	95	66 - 143	02/19/21 02:17	
Phenol-d6	87	35 - 125	02/19/21 02:17	
Terphenyl-d14	71 *	72 - 172	02/19/21 02:17	*

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-SD-RC04-0210
Lab Code: R2101263-005

Units: ug/Kg
Basis: As Received

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	12000 U	93000	12000	1	02/19/21 02:44	2/18/21	
2,3,4,6-Tetrachlorophenol	12000 U	93000	12000	1	02/19/21 02:44	2/18/21	
2,4,5-Trichlorophenol	11000 U	93000	11000	1	02/19/21 02:44	2/18/21	
2,4,6-Trichlorophenol	14000 U	93000	14000	1	02/19/21 02:44	2/18/21	
2,4-Dichlorophenol	13000 U	93000	13000	1	02/19/21 02:44	2/18/21	
2,4-Dimethylphenol	480000	93000	14000	1	02/19/21 02:44	2/18/21	
2,4-Dinitrophenol	200000 U	460000	200000	1	02/19/21 02:44	2/18/21	
2,4-Dinitrotoluene	24000 U	93000	24000	1	02/19/21 02:44	2/18/21	
2,6-Dinitrotoluene	14000 U	93000	14000	1	02/19/21 02:44	2/18/21	
2-Chloronaphthalene	14000 U	93000	14000	1	02/19/21 02:44	2/18/21	
2-Chlorophenol	11000 U	93000	11000	1	02/19/21 02:44	2/18/21	
2-Methylnaphthalene	260000 U	1900000	260000	20	02/25/21 14:34	2/18/21	
2-Methylphenol	2500000 D	460000	50000	5	02/22/21 18:21	2/18/21	
2-Nitroaniline	14000 U	460000	14000	1	02/19/21 02:44	2/18/21	
2-Nitrophenol	15000 U	93000	15000	1	02/19/21 02:44	2/18/21	
3,3'-Dichlorobenzidine	12000 U	93000	12000	1	02/19/21 02:44	2/18/21	
3- and 4-Methylphenol Coelution	8800000 D	1900000	240000	20	02/25/21 14:34	2/18/21	
3-Nitroaniline	25000 U	460000	25000	1	02/19/21 02:44	2/18/21	
4,6-Dinitro-2-methylphenol	200000 U	460000	200000	1	02/19/21 02:44	2/18/21	
4-Bromophenyl Phenyl Ether	17000 U	93000	17000	1	02/19/21 02:44	2/18/21	
4-Chloro-3-methylphenol	11000 U	93000	11000	1	02/19/21 02:44	2/18/21	
4-Chloroaniline	10000 U	93000	10000	1	02/19/21 02:44	2/18/21	
4-Chlorophenyl Phenyl Ether	15000 U	93000	15000	1	02/19/21 02:44	2/18/21	
4-Nitroaniline	27000 U	460000	27000	1	02/19/21 02:44	2/18/21	
4-Nitrophenol	64000 U	460000	64000	1	02/19/21 02:44	2/18/21	
Acenaphthene	14000 U	93000	14000	1	02/19/21 02:44	2/18/21	
Acenaphthylene	25000 J	93000	14000	1	02/19/21 02:44	2/18/21	
Acetophenone	13000 U	93000	13000	1	02/19/21 02:44	2/18/21	
Anthracene	43000 J	93000	13000	1	02/19/21 02:44	2/18/21	
Atrazine	21000 U	93000	21000	1	02/19/21 02:44	2/18/21	
Benz(a)anthracene	51000 J	93000	16000	1	02/19/21 02:44	2/18/21	
Benzaldehyde	37000 U	460000	37000	1	02/19/21 02:44	2/18/21	
Benzo(a)pyrene	57000 J	93000	12000	1	02/19/21 02:44	2/18/21	
Benzo(b)fluoranthene	62000 J	93000	12000	1	02/19/21 02:44	2/18/21	
Benzo(g,h,i)perylene	38000 J	93000	10000	1	02/19/21 02:44	2/18/21	
Benzo(k)fluoranthene	18000 J	93000	13000	1	02/19/21 02:44	2/18/21	
Biphenyl	14000 U	93000	14000	1	02/19/21 02:44	2/18/21	
2,2'-Oxybis(1-chloropropane)	14000 U	93000	14000	1	02/19/21 02:44	2/18/21	
Bis(2-chloroethoxy)methane	19000 U	93000	19000	1	02/19/21 02:44	2/18/21	
Bis(2-chloroethyl) Ether	13000 U	93000	13000	1	02/19/21 02:44	2/18/21	
Bis(2-ethylhexyl) Phthalate	78000 U	93000	78000	1	02/19/21 02:44	2/18/21	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-SD-RC04-0210
Lab Code: R2101263-005

Units: ug/Kg
Basis: As Received

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Butyl Benzyl Phthalate	14000 U	93000	14000	1	02/19/21 02:44	2/18/21	
Caprolactam	10000 U	93000	10000	1	02/19/21 02:44	2/18/21	
Carbazole	140000	93000	16000	1	02/19/21 02:44	2/18/21	
Chrysene	57000 J	93000	12000	1	02/19/21 02:44	2/18/21	
Di-n-butyl Phthalate	17000 U	93000	17000	1	02/19/21 02:44	2/18/21	
Di-n-octyl Phthalate	33000 U	93000	33000	1	02/19/21 02:44	2/18/21	
Dibenz(a,h)anthracene	11000 U	93000	11000	1	02/19/21 02:44	2/18/21	
Dibenzofuran	20000 J	93000	14000	1	02/19/21 02:44	2/18/21	
Diethyl Phthalate	11000 U	93000	11000	1	02/19/21 02:44	2/18/21	
Dimethyl Phthalate	13000 U	93000	13000	1	02/19/21 02:44	2/18/21	
Fluoranthene	170000	93000	15000	1	02/19/21 02:44	2/18/21	
Fluorene	34000 J	93000	13000	1	02/19/21 02:44	2/18/21	
Hexachlorobenzene	16000 U	93000	16000	1	02/19/21 02:44	2/18/21	
Hexachlorobutadiene	10000 U	93000	10000	1	02/19/21 02:44	2/18/21	
Hexachlorocyclopentadiene	22000 U	93000	22000	1	02/19/21 02:44	2/18/21	
Hexachloroethane	11000 U	93000	11000	1	02/19/21 02:44	2/18/21	
Indeno(1,2,3-cd)pyrene	39000 J	93000	18000	1	02/19/21 02:44	2/18/21	
Isophorone	14000 U	93000	14000	1	02/19/21 02:44	2/18/21	
N-Nitrosodi-n-propylamine	12000 U	93000	12000	1	02/19/21 02:44	2/18/21	
N-Nitrosodiphenylamine	27000 U	93000	27000	1	02/19/21 02:44	2/18/21	
Naphthalene	160000	93000	12000	1	02/19/21 02:44	2/18/21	
Nitrobenzene	15000 U	93000	15000	1	02/19/21 02:44	2/18/21	
Pentachlorophenol (PCP)	97000 U	460000	97000	1	02/19/21 02:44	2/18/21	
Phenanthrene	200000	93000	14000	1	02/19/21 02:44	2/18/21	
Phenol	13000000 D	1900000	200000	20	02/25/21 14:34	2/18/21	
Pyrene	120000	93000	15000	1	02/19/21 02:44	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	0 *	10 - 180	02/19/21 02:44	*
2-Fluorobiphenyl	112	49 - 157	02/19/21 02:44	
2-Fluorophenol	0 *	59 - 113	02/19/21 02:44	*
Nitrobenzene-d5	75	66 - 143	02/19/21 02:44	
Phenol-d6	6 *	35 - 125	02/19/21 02:44	*
Terphenyl-d14	124	72 - 172	02/19/21 02:44	



Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Sample Name: TK-LQ-ST07-02092021
Lab Code: R2101263-001

Service Request: R2101263
Date Collected: 02/09/21 12:00
Date Received: 02/11/21 14:00

Units: ug/Kg
Basis: As Received

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	96 U	96	-	1	02/22/21 15:24	2/18/21	
4,4'-DDE	96 U	96	-	1	02/22/21 15:24	2/18/21	
4,4'-DDT	96 U	96	-	1	02/22/21 15:24	2/18/21	
Aldrin	96 U	96	-	1	02/22/21 15:24	2/18/21	
Dieldrin	96 U	96	-	1	02/22/21 15:24	2/18/21	
Endosulfan I	96 U	96	-	1	02/22/21 15:24	2/18/21	
Endosulfan II	96 U	96	-	1	02/22/21 15:24	2/18/21	
Endosulfan Sulfate	96 U	96	-	1	02/22/21 15:24	2/18/21	
Endrin	96 U	96	-	1	02/22/21 15:24	2/18/21	
Endrin Aldehyde	1200	96	-	1	02/22/21 15:24	2/18/21	
Endrin Ketone	96 U	96	-	1	02/22/21 15:24	2/18/21	
Heptachlor	96 U	96	-	1	02/22/21 15:24	2/18/21	
Heptachlor Epoxide	96 U	96	-	1	02/22/21 15:24	2/18/21	
Methoxychlor	96 U	96	-	1	02/22/21 15:24	2/18/21	
Toxaphene	96 U	96	-	1	02/22/21 15:24	2/18/21	
alpha-BHC	96 U	96	-	1	02/22/21 15:24	2/18/21	
alpha-Chlordane	96 U	96	-	1	02/22/21 15:24	2/18/21	
beta-BHC	340	96	-	1	02/22/21 15:24	2/18/21	
delta-BHC	96 U	96	-	1	02/22/21 15:24	2/18/21	
gamma-BHC (Lindane)	96 U	96	-	1	02/22/21 15:24	2/18/21	
gamma-Chlordane	96 U	96	-	1	02/22/21 15:24	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	89	10 - 164	02/22/21 15:24	
Tetrachloro-m-xylene	78	10 - 147	02/22/21 15:24	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Sample Name: TK-LQ-ST04-02092021
Lab Code: R2101263-002

Service Request: R2101263
Date Collected: 02/09/21 13:50
Date Received: 02/11/21 14:00

Units: ug/Kg
Basis: As Received

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	91 U	91	-	1	02/22/21 15:43	2/18/21	
4,4'-DDE	91 U	91	-	1	02/22/21 15:43	2/18/21	
4,4'-DDT	91 U	91	-	1	02/22/21 15:43	2/18/21	
Aldrin	91 U	91	-	1	02/22/21 15:43	2/18/21	
Dieldrin	91 U	91	-	1	02/22/21 15:43	2/18/21	
Endosulfan I	91 U	91	-	1	02/22/21 15:43	2/18/21	
Endosulfan II	91 U	91	-	1	02/22/21 15:43	2/18/21	
Endosulfan Sulfate	91 U	91	-	1	02/22/21 15:43	2/18/21	
Endrin	91 U	91	-	1	02/22/21 15:43	2/18/21	
Endrin Aldehyde	91 U	91	-	1	02/22/21 15:43	2/18/21	
Endrin Ketone	91 U	91	-	1	02/22/21 15:43	2/18/21	
Heptachlor	91 U	91	-	1	02/22/21 15:43	2/18/21	
Heptachlor Epoxide	91 U	91	-	1	02/22/21 15:43	2/18/21	
Methoxychlor	91 U	91	-	1	02/22/21 15:43	2/18/21	
Toxaphene	91 U	91	-	1	02/22/21 15:43	2/18/21	
alpha-BHC	91 U	91	-	1	02/22/21 15:43	2/18/21	
alpha-Chlordane	91 U	91	-	1	02/22/21 15:43	2/18/21	
beta-BHC	91 U	91	-	1	02/22/21 15:43	2/18/21	
delta-BHC	91 U	91	-	1	02/22/21 15:43	2/18/21	
gamma-BHC (Lindane)	91 U	91	-	1	02/22/21 15:43	2/18/21	
gamma-Chlordane	91 U	91	-	1	02/22/21 15:43	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	84	10 - 164	02/22/21 15:43	
Tetrachloro-m-xylene	72	10 - 147	02/22/21 15:43	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 09:30
Date Received: 02/11/21 14:00

Sample Name: TL-LQ-RC01-0210
Lab Code: R2101263-003

Units: ug/Kg
Basis: As Received

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	98 U	98	-	1	02/24/21 01:51	2/18/21	
4,4'-DDE	98 U	98	-	1	02/24/21 01:51	2/18/21	
4,4'-DDT	98 U	98	-	1	02/24/21 01:51	2/18/21	
Aldrin	520	98	-	1	02/24/21 01:51	2/18/21	
Dieldrin	98 U	98	-	1	02/24/21 01:51	2/18/21	
Endosulfan I	98 U	98	-	1	02/24/21 01:51	2/18/21	
Endosulfan II	98 U	98	-	1	02/24/21 01:51	2/18/21	
Endosulfan Sulfate	98 U	98	-	1	02/24/21 01:51	2/18/21	
Endrin	98 U	98	-	1	02/24/21 01:51	2/18/21	
Endrin Aldehyde	98 U	98	-	1	02/24/21 01:51	2/18/21	
Endrin Ketone	98 U	98	-	1	02/24/21 01:51	2/18/21	
Heptachlor	230	98	-	1	02/24/21 01:51	2/18/21	
Heptachlor Epoxide	98 U	98	-	1	02/24/21 01:51	2/18/21	
Methoxychlor	98 U	98	-	1	02/24/21 01:51	2/18/21	
Toxaphene	98 U	98	-	1	02/24/21 01:51	2/18/21	
alpha-BHC	470	98	-	1	02/24/21 01:51	2/18/21	
alpha-Chlordane	220	98	-	1	02/24/21 01:51	2/18/21	
beta-BHC	1000	98	-	1	02/24/21 01:51	2/18/21	
delta-BHC	98 U	98	-	1	02/24/21 01:51	2/18/21	
gamma-BHC (Lindane)	98 U	98	-	1	02/24/21 01:51	2/18/21	
gamma-Chlordane	98 U	98	-	1	02/24/21 01:51	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	74	10 - 164	02/24/21 01:51	
Tetrachloro-m-xylene	83	10 - 147	02/24/21 01:51	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-LQ-RC03-02100
Lab Code: R2101263-004

Units: ug/Kg
Basis: As Received

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	95 U	95	-	1	02/24/21 02:10	2/18/21	
4,4'-DDE	470	95	-	1	02/24/21 02:10	2/18/21	
4,4'-DDT	95 U	95	-	1	02/24/21 02:10	2/18/21	
Aldrin	95 U	95	-	1	02/24/21 02:10	2/18/21	
Dieldrin	95 U	95	-	1	02/24/21 02:10	2/18/21	
Endosulfan I	95 U	95	-	1	02/24/21 02:10	2/18/21	
Endosulfan II	95 U	95	-	1	02/24/21 02:10	2/18/21	
Endosulfan Sulfate	95 U	95	-	1	02/24/21 02:10	2/18/21	
Endrin	95 U	95	-	1	02/24/21 02:10	2/18/21	
Endrin Aldehyde	95 U	95	-	1	02/24/21 02:10	2/18/21	
Endrin Ketone	95 U	95	-	1	02/24/21 02:10	2/18/21	
Heptachlor	650	95	-	1	02/24/21 02:10	2/18/21	
Heptachlor Epoxide	95 U	95	-	1	02/24/21 02:10	2/18/21	
Methoxychlor	95 U	95	-	1	02/24/21 02:10	2/18/21	
Toxaphene	95 U	95	-	1	02/24/21 02:10	2/18/21	
alpha-BHC	95 U	95	-	1	02/24/21 02:10	2/18/21	
alpha-Chlordane	4900	95	-	1	02/24/21 02:10	2/18/21	
beta-BHC	95 U	95	-	1	02/24/21 02:10	2/18/21	
delta-BHC	150	95	-	1	02/24/21 02:10	2/18/21	
gamma-BHC (Lindane)	95 U	95	-	1	02/24/21 02:10	2/18/21	
gamma-Chlordane	5600	95	-	1	02/24/21 02:10	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	25	10 - 164	02/24/21 02:10	
Tetrachloro-m-xylene	72	10 - 147	02/24/21 02:10	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-SD-RC04-0210
Lab Code: R2101263-005

Units: ug/Kg
Basis: As Received

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	96 U	96	-	1	02/22/21 16:40	2/18/21	
4,4'-DDE	96 U	96	-	1	02/22/21 16:40	2/18/21	
4,4'-DDT	96 U	96	-	1	02/22/21 16:40	2/18/21	
Aldrin	96 U	96	-	1	02/22/21 16:40	2/18/21	
Dieldrin	96 U	96	-	1	02/22/21 16:40	2/18/21	
Endosulfan I	96 U	96	-	1	02/22/21 16:40	2/18/21	
Endosulfan II	96 U	96	-	1	02/22/21 16:40	2/18/21	
Endosulfan Sulfate	96 U	96	-	1	02/22/21 16:40	2/18/21	
Endrin	96 U	96	-	1	02/22/21 16:40	2/18/21	
Endrin Aldehyde	96 U	96	-	1	02/22/21 16:40	2/18/21	
Endrin Ketone	96 U	96	-	1	02/22/21 16:40	2/18/21	
Heptachlor	96 U	96	-	1	02/22/21 16:40	2/18/21	
Heptachlor Epoxide	96 U	96	-	1	02/22/21 16:40	2/18/21	
Methoxychlor	96 U	96	-	1	02/22/21 16:40	2/18/21	
Toxaphene	96 U	96	-	1	02/22/21 16:40	2/18/21	
alpha-BHC	96 U	96	-	1	02/22/21 16:40	2/18/21	
alpha-Chlordane	96 U	96	-	1	02/22/21 16:40	2/18/21	
beta-BHC	96 U	96	-	1	02/22/21 16:40	2/18/21	
delta-BHC	96 U	96	-	1	02/22/21 16:40	2/18/21	
gamma-BHC (Lindane)	96 U	96	-	1	02/22/21 16:40	2/18/21	
gamma-Chlordane	96 U	96	-	1	02/22/21 16:40	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	71	10 - 164	02/22/21 16:40	
Tetrachloro-m-xylene	76	10 - 147	02/22/21 16:40	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Sample Name: TK-LQ-ST07-02092021
Lab Code: R2101263-001

Service Request: R2101263
Date Collected: 02/09/21 12:00
Date Received: 02/11/21 14:00

Units: ug/Kg
Basis: As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	2000 U	2000	2000	1	02/22/21 17:56	2/18/21	
Aroclor 1221	3900 U	3900	3900	1	02/22/21 17:56	2/18/21	
Aroclor 1232	2000 U	2000	2000	1	02/22/21 17:56	2/18/21	
Aroclor 1242	2000 U	2000	2000	1	02/22/21 17:56	2/18/21	
Aroclor 1248	2000 U	2000	2000	1	02/22/21 17:56	2/18/21	
Aroclor 1254	2000 U	2000	2000	1	02/22/21 17:56	2/18/21	
Aroclor 1260	2000 U	2000	2000	1	02/22/21 17:56	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	68	44 - 131	02/22/21 17:56	
Tetrachloro-m-xylene	64	33 - 139	02/22/21 17:56	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Sample Name: TK-LQ-ST04-02092021
Lab Code: R2101263-002

Service Request: R2101263
Date Collected: 02/09/21 13:50
Date Received: 02/11/21 14:00

Units: ug/Kg
Basis: As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	1900 U	1900	1900	1	02/22/21 18:16	2/18/21	
Aroclor 1221	3700 U	3700	3700	1	02/22/21 18:16	2/18/21	
Aroclor 1232	1900 U	1900	1900	1	02/22/21 18:16	2/18/21	
Aroclor 1242	1900 U	1900	1900	1	02/22/21 18:16	2/18/21	
Aroclor 1248	1900 U	1900	1900	1	02/22/21 18:16	2/18/21	
Aroclor 1254	1900 U	1900	1900	1	02/22/21 18:16	2/18/21	
Aroclor 1260	1900 U	1900	1900	1	02/22/21 18:16	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	83	44 - 131	02/22/21 18:16	
Tetrachloro-m-xylene	51	33 - 139	02/22/21 18:16	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 09:30
Date Received: 02/11/21 14:00

Sample Name: TL-LQ-RC01-0210
Lab Code: R2101263-003

Units: ug/Kg
Basis: As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	2000 U	2000	2000	1	02/22/21 18:35	2/18/21	
Aroclor 1221	4000 U	4000	4000	1	02/22/21 18:35	2/18/21	
Aroclor 1232	2000 U	2000	2000	1	02/22/21 18:35	2/18/21	
Aroclor 1242	2000 U	2000	2000	1	02/22/21 18:35	2/18/21	
Aroclor 1248	2000 U	2000	2000	1	02/22/21 18:35	2/18/21	
Aroclor 1254	2000 U	2000	2000	1	02/22/21 18:35	2/18/21	
Aroclor 1260	2000 U	2000	2000	1	02/22/21 18:35	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	67	44 - 131	02/22/21 18:35	
Tetrachloro-m-xylene	55	33 - 139	02/22/21 18:35	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-LQ-RC03-02100
Lab Code: R2101263-004

Units: ug/Kg
Basis: As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	2000 U	2000	2000	1	02/22/21 18:55	2/18/21	
Aroclor 1221	3900 U	3900	3900	1	02/22/21 18:55	2/18/21	
Aroclor 1232	2000 U	2000	2000	1	02/22/21 18:55	2/18/21	
Aroclor 1242	2000 U	2000	2000	1	02/22/21 18:55	2/18/21	
Aroclor 1248	2000 U	2000	2000	1	02/22/21 18:55	2/18/21	
Aroclor 1254	2000 U	2000	2000	1	02/22/21 18:55	2/18/21	
Aroclor 1260	2000 U	2000	2000	1	02/22/21 18:55	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	67	44 - 131	02/22/21 18:55	
Tetrachloro-m-xylene	56	33 - 139	02/22/21 18:55	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-SD-RC04-0210
Lab Code: R2101263-005

Units: ug/Kg
Basis: As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	2000 U	2000	2000	1	02/22/21 19:15	2/18/21	
Aroclor 1221	3900 U	3900	3900	1	02/22/21 19:15	2/18/21	
Aroclor 1232	2000 U	2000	2000	1	02/22/21 19:15	2/18/21	
Aroclor 1242	2000 U	2000	2000	1	02/22/21 19:15	2/18/21	
Aroclor 1248	2000 U	2000	2000	1	02/22/21 19:15	2/18/21	
Aroclor 1254	2000 U	2000	2000	1	02/22/21 19:15	2/18/21	
Aroclor 1260	2000 U	2000	2000	1	02/22/21 19:15	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	74	44 - 131	02/22/21 19:15	
Tetrachloro-m-xylene	74	33 - 139	02/22/21 19:15	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Sample Name: TK-LQ-ST07-02092021
Lab Code: R2101263-001

Service Request: R2101263
Date Collected: 02/09/21 12:00
Date Received: 02/11/21 14:00

Units: ug/Kg
Basis: As Received

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	71 U	71	-	1	02/25/21 09:43	2/19/21	
2,4,5-TP	71 U	71	-	1	02/25/21 09:43	2/19/21	
2,4-D	71 U	71	-	1	02/25/21 09:43	2/19/21	
Dicamba	71 U	71	-	1	02/25/21 09:43	2/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	61	10 - 151	02/25/21 09:43	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Sample Name: TK-LQ-ST04-02092021
Lab Code: R2101263-002

Service Request: R2101263
Date Collected: 02/09/21 13:50
Date Received: 02/11/21 14:00

Units: ug/Kg
Basis: As Received

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	66 U	66	-	1	02/23/21 19:29	2/19/21	
2,4,5-TP	66 U	66	-	1	02/23/21 19:29	2/19/21	
2,4-D	66 U	66	-	1	02/23/21 19:29	2/19/21	
Dicamba	66 U	66	-	1	02/23/21 19:29	2/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	39	10 - 151	02/23/21 19:29	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 09:30
Date Received: 02/11/21 14:00

Sample Name: TL-LQ-RC01-0210
Lab Code: R2101263-003

Units: ug/Kg
Basis: As Received

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	96 U	96	-	1	02/23/21 18:29	2/19/21	
2,4,5-TP	96 U	96	-	1	02/23/21 18:29	2/19/21	
2,4-D	96 U	96	-	1	02/23/21 18:29	2/19/21	
Dicamba	96 U	96	-	1	02/23/21 18:29	2/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	81	10 - 151	02/23/21 18:29	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-LQ-RC03-02100
Lab Code: R2101263-004

Units: ug/Kg
Basis: As Received

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	95 U	95	-	1	02/25/21 10:03	2/19/21	
2,4,5-TP	95 U	95	-	1	02/25/21 10:03	2/19/21	
2,4-D	150	95	-	1	02/25/21 10:03	2/19/21	
Dicamba	95 U	95	-	1	02/25/21 10:03	2/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	42	10 - 151	02/25/21 10:03	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00

Sample Name: TK-SD-RC04-0210
Lab Code: R2101263-005

Units: ug/Kg
Basis: As Received

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	88 U	88	-	1	02/23/21 19:09	2/19/21	
2,4,5-TP	88 U	88	-	1	02/23/21 19:09	2/19/21	
2,4-D	88 U	88	-	1	02/23/21 19:09	2/19/21	
Dicamba	88 U	88	-	1	02/23/21 19:09	2/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	90	10 - 151	02/23/21 19:09	



Metals

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METALS
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Inventum Engineering	Service Request: TK-LQ-ST07-02092021
Project No.: R2101263	Date Collected: 2/9/2021
Project Name:	Date Received: 2/11/2021
Matrix: NON-AQUEOUS	Units: mg/Kg
	Basis:

Sample Name: TK-LQ-ST07-02092021	Lab Code: R2101263-001
----------------------------------	------------------------

Analyte	Analysis Method	PQL	MDL	Dil. Factor	Result	C	Q
Aluminum	6010C	192	115	10.0	192	U	
Antimony	6010C	57.7	5.2	10.0	57.7	U	
Arsenic	6010C	9.6	6.7	10.0	9.6	U	
Barium	6010C	19.2	14.4	10.0	19.2	U	
Beryllium	6010C	2.9	0.577	10.0	2.9	U	
Cadmium	6010C	4.8	2.3	10.0	4.8	U	
Mercury	7471B	0.031	0.012	1.0	0.031	U	
Calcium	6010C	962	308	10.0	962	U	
Chromium	6010C	9.6	3.4	10.0	9.6	U	
Cobalt	6010C	48.1	4.4	10.0	48.1	U	
Copper	6010C	19.2	6.1	10.0	13.2	J	
Iron	6010C	192	125	10.0	153	J	
Lead	6010C	48.1	3.9	10.0	17.7	J	
Magnesium	6010C	962	125	10.0	962	U	
Manganese	6010C	19.2	14.4	10.0	19.2	U	
Nickel	6010C	38.5	6.4	10.0	38.5	U	
Potassium	6010C	1920	481	10.0	1920	U	
Selenium	6010C	9.6	5.2	10.0	9.6	U	
Silver	6010C	9.6	0.865	10.0	9.6	U	
Sodium	6010C	962	500	10.0	962	U	
Thallium	6010C	9.6	6.3	10.0	9.6	U	
Vanadium	6010C	48.1	6.8	10.0	48.1	U	
Zinc	6010C	19.2	13.5	10.0	38.3		

% Solids: 100.0

Comments:

METALS
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Inventum Engineering	Service Request: TK-LQ-ST07-02092021
Project No.: R2101263	Date Collected: 2/9/2021
Project Name:	Date Received: 2/11/2021
Matrix: NON-AQUEOUS	Units: mg/Kg
	Basis:

Sample Name: TK-LQ-ST04-02092021	Lab Code: R2101263-002
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Analyte	Analysis Method	PQL	MDL	Dil. Factor	Result	C	Q
Aluminum	6010C	20.0	12.0	1.0	20.0	U	
Antimony	6010C	6.0	0.540	1.0	6.0	U	
Arsenic	6010C	1.0	0.700	1.0	1.0	U	
Barium	6010C	2.0	1.5	1.0	2.0	U	
Beryllium	6010C	0.300	0.060	1.0	0.300	U	
Cadmium	6010C	0.500	0.240	1.0	0.500	U	
Mercury	7471B	0.033	0.013	1.0	0.033	U	
Calcium	6010C	100	32.0	1.0	100	U	
Chromium	6010C	1.0	0.350	1.0	1.0	U	
Cobalt	6010C	5.0	0.460	1.0	5.0	U	
Copper	6010C	2.0	0.630	1.0	2.0	U	
Iron	6010C	20.0	13.0	1.0	20.0	U	
Lead	6010C	5.0	0.400	1.0	5.0	U	
Magnesium	6010C	100	13.0	1.0	100	U	
Manganese	6010C	2.0	1.5	1.0	2.0	U	
Nickel	6010C	4.0	0.660	1.0	4.0	U	
Potassium	6010C	200	50.0	1.0	200	U	
Selenium	6010C	1.0	0.540	1.0	1.0	U	
Silver	6010C	1.0	0.090	1.0	1.0	U	
Sodium	6010C	100	52.0	1.0	100	U	
Thallium	6010C	1.0	0.650	1.0	1.0	U	
Vanadium	6010C	5.0	0.710	1.0	5.0	U	
Zinc	6010C	2.0	1.4	1.0	2.0	U	

% Solids: 100.0

Comments:

METALS
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Inventum Engineering	Service Request: TK-LQ-ST07-02092021
Project No.: R2101263	Date Collected: 2/10/2021
Project Name:	Date Received: 2/11/2021
Matrix: NON-AQUEOUS	Units: mg/Kg
	Basis:

Sample Name: TL-LQ-RC01-0210	Lab Code: R2101263-003
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Analyte	Analysis Method	PQL	MDL	Dil. Factor	Result	C	Q
Aluminum	6010C	200	120	10.0	6650		
Antimony	6010C	60.0	5.4	10.0	6.1	J	
Arsenic	6010C	10.0	7.0	10.0	7.6	J	
Barium	6010C	20.0	15.0	10.0	183		
Beryllium	6010C	3.0	0.600	10.0	3.0	U	
Cadmium	6010C	5.0	2.4	10.0	3.0	J	
Mercury	7471B	0.635	0.248	20.0	26.9		
Calcium	6010C	1000	320	10.0	1220		
Chromium	6010C	10.0	3.5	10.0	60.9		
Cobalt	6010C	50.0	4.6	10.0	50.0	U	
Copper	6010C	20.0	6.3	10.0	358		
Iron	6010C	200	130	10.0	6000		
Lead	6010C	50.0	4.0	10.0	3110		
Magnesium	6010C	1000	130	10.0	318	J	
Manganese	6010C	20.0	15.0	10.0	57.3		
Nickel	6010C	40.0	6.6	10.0	18.2	J	
Potassium	6010C	2000	500	10.0	2000	U	
Selenium	6010C	10.0	5.4	10.0	10.0	U	
Silver	6010C	10.0	0.900	10.0	10.0	U	
Sodium	6010C	1000	520	10.0	1000	U	
Thallium	6010C	10.0	6.5	10.0	10.0	U	
Vanadium	6010C	50.0	7.1	10.0	50.0	U	
Zinc	6010C	20.0	14.0	10.0	813		

% Solids: 100.0

Comments:

METALS
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Inventum Engineering	Service Request: TK-LQ-ST07-02092021
Project No.: R2101263	Date Collected: 2/10/2021
Project Name:	Date Received: 2/11/2021
Matrix: NON-AQUEOUS	Units: mg/Kg
	Basis:

Sample Name: TK-LQ-RC03-02100	Lab Code: R2101263-004
-------------------------------	------------------------

Analyte	Analysis Method	PQL	MDL	Dil. Factor	Result	C	Q
Aluminum	6010C	18.2	10.9	1.0	18.2	U	
Antimony	6010C	5.5	0.491	1.0	5.5	U	
Arsenic	6010C	0.909	0.636	1.0	0.909	U	
Barium	6010C	1.8	1.4	1.0	1.8	U	
Beryllium	6010C	0.273	0.055	1.0	0.273	U	
Cadmium	6010C	0.455	0.218	1.0	0.455	U	
Mercury	7471B	0.032	0.013	1.0	0.042		
Calcium	6010C	90.9	29.1	1.0	90.9	U	
Chromium	6010C	0.909	0.318	1.0	0.909	U	
Cobalt	6010C	4.6	0.418	1.0	4.6	U	
Copper	6010C	1.8	0.573	1.0	1.8	U	
Iron	6010C	18.2	11.8	1.0	17.6	J	
Lead	6010C	4.6	0.364	1.0	0.564	J	
Magnesium	6010C	90.9	11.8	1.0	90.9	U	
Manganese	6010C	1.8	1.4	1.0	1.8	U	
Nickel	6010C	3.6	0.600	1.0	3.6	U	
Potassium	6010C	182	45.5	1.0	182	U	
Selenium	6010C	0.909	0.491	1.0	0.909	U	
Silver	6010C	0.909	0.082	1.0	0.909	U	
Sodium	6010C	90.9	47.3	1.0	90.9	U	
Thallium	6010C	0.909	0.591	1.0	0.909	U	
Vanadium	6010C	4.6	0.645	1.0	4.6	U	
Zinc	6010C	1.8	1.3	1.0	23.5		

% Solids: 100.0

Comments:

METALS
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Inventum Engineering	Service Request: TK-LQ-ST07-02092021
Project No.: R2101263	Date Collected: 2/10/2021
Project Name:	Date Received: 2/11/2021
Matrix: NON-AQUEOUS	Units: mg/Kg
	Basis:

Sample Name: TK-SD-RC04-0210	Lab Code: R2101263-005
-------------------------------------	-------------------------------

Analyte	Analysis Method	PQL	MDL	Dil. Factor	Result	C	Q
Aluminum	6010C	19.6	11.8	1.0	73.3		
Antimony	6010C	5.9	0.529	1.0	5.9	U	
Arsenic	6010C	0.980	0.686	1.0	3.1		
Barium	6010C	2.0	1.5	1.0	1.5	J	
Beryllium	6010C	0.294	0.059	1.0	0.294	U	
Cadmium	6010C	0.490	0.235	1.0	0.490	U	
Mercury	7471B	0.033	0.013	1.0	0.308		
Calcium	6010C	98.0	31.4	1.0	52.1	J	
Chromium	6010C	0.980	0.343	1.0	0.578	J	
Cobalt	6010C	4.9	0.451	1.0	4.9	U	
Copper	6010C	2.0	0.618	1.0	1.7	J	
Iron	6010C	19.6	12.7	1.0	1320		
Lead	6010C	4.9	0.392	1.0	4.8	J	
Magnesium	6010C	98.0	12.7	1.0	17.3	J	
Manganese	6010C	2.0	1.5	1.0	4.7		
Nickel	6010C	3.9	0.647	1.0	1.1	J	
Potassium	6010C	196	49.0	1.0	1410		
Selenium	6010C	0.980	0.529	1.0	0.569	J	
Silver	6010C	0.980	0.088	1.0	0.980	U	
Sodium	6010C	980	510	10.0	103000		
Thallium	6010C	0.980	0.637	1.0	0.980	U	
Vanadium	6010C	4.9	0.696	1.0	0.902	J	
Zinc	6010C	2.0	1.4	1.0	6.9		

% Solids: 100.0

Comments:



General Chemistry

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid
Sample Name: TK-LQ-ST07-02092021
Lab Code: R2101263-001

Service Request: R2101263
Date Collected: 02/09/21 12:00
Date Received: 02/11/21 14:00
Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Ammonia as Nitrogen, undistilled	350.1M	4.2 J	mg/Kg	5.0	3.1	1	02/23/21 16:33	02/22/21	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid
Sample Name: TK-LQ-ST04-02092021
Lab Code: R2101263-002

Service Request: R2101263
Date Collected: 02/09/21 13:50
Date Received: 02/11/21 14:00
Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Ammonia as Nitrogen, undistilled	350.1M	3.1 U	mg/Kg	5.0	3.1	1	02/23/21 16:35	02/22/21	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid
Sample Name: TL-LQ-RC01-0210
Lab Code: R2101263-003

Service Request: R2101263
Date Collected: 02/10/21 09:30
Date Received: 02/11/21 14:00
Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Ammonia as Nitrogen, undistilled	350.1M	7.1	mg/Kg	5.0	3.1	1	02/23/21 16:36	02/22/21	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid
Sample Name: TK-LQ-RC03-02100
Lab Code: R2101263-004

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00
Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Ammonia as Nitrogen, undistilled	350.1M	3.1 U	mg/Kg	5.0	3.1	1	02/23/21 16:38	02/22/21	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid
Sample Name: TK-SD-RC04-0210
Lab Code: R2101263-005

Service Request: R2101263
Date Collected: 02/10/21 10:50
Date Received: 02/11/21 14:00
Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Ammonia as Nitrogen, undistilled	350.1M	52.3	mg/Kg	5.0	3.1	1	02/23/21 16:39	02/22/21	



QC Summary Forms

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Volatile Organic Compounds by GC/MS

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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		31-154	63-138	66-138
TK-LQ-ST07-02092021	R2101263-001	101	102	103
TK-LQ-ST04-02092021	R2101263-002	103	100	104
TL-LQ-RC01-0210	R2101263-003	102	100	103
TK-LQ-RC03-02100	R2101263-004	100	98	103
TK-SD-RC04-0210	R2101263-005	96	98	103
Method Blank	RQ2101850-04	111	99	105
Lab Control Sample	RQ2101850-03	109	99	103

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2101850-04

Units: ug/Kg
Basis: As Received

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	10 U	250	10	50	02/23/21 12:57	
1,1,2,2-Tetrachloroethane	10 U	250	10	50	02/23/21 12:57	
1,1,2-Trichloroethane	10 U	250	10	50	02/23/21 12:57	
1,1,2-Trichloro-1,2,2-trifluoroethane	10 U	250	10	50	02/23/21 12:57	
1,1-Dichloroethane (1,1-DCA)	10 U	250	10	50	02/23/21 12:57	
1,1-Dichloroethene (1,1-DCE)	10 U	250	10	50	02/23/21 12:57	
1,2,3-Trichlorobenzene	13 U	250	13	50	02/23/21 12:57	
1,2,4-Trichlorobenzene	17 U	250	17	50	02/23/21 12:57	
1,2-Dibromo-3-chloropropane (DBCP)	23 U	250	23	50	02/23/21 12:57	
1,2-Dibromoethane	10 U	250	10	50	02/23/21 12:57	
1,2-Dichlorobenzene	10 U	250	10	50	02/23/21 12:57	
1,2-Dichloroethane	10 U	250	10	50	02/23/21 12:57	
1,2-Dichloropropane	10 U	250	10	50	02/23/21 12:57	
1,3-Dichlorobenzene	10 U	250	10	50	02/23/21 12:57	
1,4-Dichlorobenzene	10 U	250	10	50	02/23/21 12:57	
1,4-Dioxane	650 U	5000	650	50	02/23/21 12:57	
2-Butanone (MEK)	170 J	500	39	50	02/23/21 12:57	
2-Hexanone	10 U	500	10	50	02/23/21 12:57	
4-Methyl-2-pentanone	10 U	500	10	50	02/23/21 12:57	
Acetone	110 U	500	110	50	02/23/21 12:57	
Benzene	10 U	250	10	50	02/23/21 12:57	
Bromochloromethane	10 U	250	10	50	02/23/21 12:57	
Bromodichloromethane	10 U	250	10	50	02/23/21 12:57	
Bromoform	13 U	250	13	50	02/23/21 12:57	
Bromomethane	35 U	250	35	50	02/23/21 12:57	
Carbon Disulfide	21 U	500	21	50	02/23/21 12:57	
Carbon Tetrachloride	17 U	250	17	50	02/23/21 12:57	
Chlorobenzene	10 U	250	10	50	02/23/21 12:57	
Chloroethane	12 U	250	12	50	02/23/21 12:57	
Chloroform	12 U	250	12	50	02/23/21 12:57	
Chloromethane	33 J	250	14	50	02/23/21 12:57	
Cyclohexane	13 U	500	13	50	02/23/21 12:57	
Dibromochloromethane	10 U	250	10	50	02/23/21 12:57	
Dichlorodifluoromethane (CFC 12)	11 U	250	11	50	02/23/21 12:57	
Dichloromethane	33 U	250	33	50	02/23/21 12:57	
Ethylbenzene	10 U	250	10	50	02/23/21 12:57	
Isopropylbenzene (Cumene)	10 U	250	10	50	02/23/21 12:57	
Methyl Acetate	40 J	500	17	50	02/23/21 12:57	
Methyl tert-Butyl Ether	10 U	250	10	50	02/23/21 12:57	
Methylcyclohexane	10 U	500	10	50	02/23/21 12:57	
Styrene	10 U	250	10	50	02/23/21 12:57	
Tetrachloroethene (PCE)	11 U	250	11	50	02/23/21 12:57	
Toluene	10 U	250	10	50	02/23/21 12:57	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2101850-04

Units: ug/Kg
Basis: As Received

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	10 U	250	10	50	02/23/21 12:57	
Trichlorofluoromethane (CFC 11)	12 U	250	12	50	02/23/21 12:57	
Vinyl Chloride	10 U	250	10	50	02/23/21 12:57	
cis-1,2-Dichloroethene	12 U	250	12	50	02/23/21 12:57	
cis-1,3-Dichloropropene	10 U	250	10	50	02/23/21 12:57	
m,p-Xylenes	10 U	250	10	50	02/23/21 12:57	
o-Xylene	10 U	250	10	50	02/23/21 12:57	
trans-1,2-Dichloroethene	10 U	250	10	50	02/23/21 12:57	
trans-1,3-Dichloropropene	12 U	250	12	50	02/23/21 12:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	111	31 - 154	02/23/21 12:57	
Dibromofluoromethane	99	63 - 138	02/23/21 12:57	
Toluene-d8	105	66 - 138	02/23/21 12:57	

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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Analyzed: 02/23/21

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Units:ug/Kg
Basis:As Received

Lab Control Sample
RQ2101850-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	19.2	20.0	96	68-123
1,1,2,2-Tetrachloroethane	8260C	19.9	20.0	100	78-121
1,1,2-Trichloroethane	8260C	22.0	20.0	110	84-117
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	18.5	20.0	92	54-121
1,1-Dichloroethane (1,1-DCA)	8260C	19.9	20.0	100	76-123
1,1-Dichloroethene (1,1-DCE)	8260C	22.5	20.0	112	65-115
1,2,3-Trichlorobenzene	8260C	18.3	20.0	92	60-128
1,2,4-Trichlorobenzene	8260C	18.3	20.0	92	62-130
1,2-Dibromo-3-chloropropane (DBCP)	8260C	17.6	20.0	88	54-135
1,2-Dibromoethane	8260C	19.7	20.0	99	77-117
1,2-Dichlorobenzene	8260C	19.4	20.0	97	75-116
1,2-Dichloroethane	8260C	20.1	20.0	101	74-116
1,2-Dichloropropane	8260C	19.5	20.0	98	79-112
1,3-Dichlorobenzene	8260C	19.5	20.0	98	72-118
1,4-Dichlorobenzene	8260C	19.2	20.0	96	72-117
1,4-Dioxane	8260C	417	400	104	59-147
2-Butanone (MEK)	8260C	24.5	20.0	122	67-129
2-Hexanone	8260C	22.9	20.0	115	68-118
4-Methyl-2-pentanone	8260C	22.6	20.0	113	64-123
Acetone	8260C	21.9	20.0	110	32-154
Benzene	8260C	19.7	20.0	98	77-114
Bromochloromethane	8260C	20.4	20.0	102	78-117
Bromodichloromethane	8260C	19.4	20.0	97	72-118
Bromoform	8260C	18.9	20.0	94	55-134
Bromomethane	8260C	5.53	20.0	28	10-150
Carbon Disulfide	8260C	20.2	20.0	101	44-139
Carbon Tetrachloride	8260C	17.2	20.0	86	51-123
Chlorobenzene	8260C	19.7	20.0	98	79-115
Chloroethane	8260C	6.11	20.0	31	10-140
Chloroform	8260C	21.1	20.0	106	76-115
Chloromethane	8260C	24.2	20.0	121	10-131
Cyclohexane	8260C	18.4	20.0	92	67-122
Dibromochloromethane	8260C	20.1	20.0	100	68-121

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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Analyzed: 02/23/21

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Units:ug/Kg
Basis:As Received

Lab Control Sample
RQ2101850-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Dichlorodifluoromethane (CFC 12)	8260C	21.6	20.0	108	51-144
Dichloromethane	8260C	20.4	20.0	102	72-118
Ethylbenzene	8260C	18.8	20.0	94	64-118
Isopropylbenzene (Cumene)	8260C	19.0	20.0	95	60-123
Methyl Acetate	8260C	20.8	20.0	104	31-122
Methyl tert-Butyl Ether	8260C	21.6	20.0	108	76-118
Methylcyclohexane	8260C	21.0	20.0	105	70-124
Styrene	8260C	20.1	20.0	101	74-117
Tetrachloroethene (PCE)	8260C	18.3	20.0	92	58-124
Toluene	8260C	19.8	20.0	99	72-116
Trichloroethene (TCE)	8260C	19.3	20.0	97	69-118
Trichlorofluoromethane (CFC 11)	8260C	15.9	20.0	79	52-127
Vinyl Chloride	8260C	17.2	20.0	86	59-153
cis-1,2-Dichloroethene	8260C	20.6	20.0	103	79-113
cis-1,3-Dichloropropene	8260C	19.6	20.0	98	66-117
m,p-Xylenes	8260C	40.1	40.0	100	68-118
o-Xylene	8260C	19.9	20.0	100	71-116
trans-1,2-Dichloroethene	8260C	21.4	20.0	107	73-114
trans-1,3-Dichloropropene	8260C	20.6	20.0	103	57-135



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263

SURROGATE RECOVERY SUMMARY
Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3580A

Sample Name	Lab Code	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol
		10-180	49-157	59-113
TK-LQ-ST07-02092021	R2101263-001	81	90	81
TK-LQ-ST04-02092021	R2101263-002	67	102	98
TL-LQ-RC01-0210	R2101263-003	69	77	73
TK-LQ-RC03-02100	R2101263-004	77	90	87
TK-SD-RC04-0210	R2101263-005	0*	112	0*
Method Blank	RQ2101630-01	82	83	81
Lab Control Sample	RQ2101630-02	76	78	73
Duplicate Lab Control Sample	RQ2101630-03	76	79	74

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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263

SURROGATE RECOVERY SUMMARY
Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3580A

Sample Name	Lab Code	Nitrobenzene-d5	Phenol-d6	Terphenyl-d14
		66-143	35-125	72-172
TK-LQ-ST07-02092021	R2101263-001	119	82	98
TK-LQ-ST04-02092021	R2101263-002	605*	98	86
TL-LQ-RC01-0210	R2101263-003	77	66	91
TK-LQ-RC03-02100	R2101263-004	95	87	71*
TK-SD-RC04-0210	R2101263-005	75	6*	124
Method Blank	RQ2101630-01	82	73	94
Lab Control Sample	RQ2101630-02	77	67	77
Duplicate Lab Control Sample	RQ2101630-03	76	70	77

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2101630-01

Units: ug/Kg
Basis: As Received

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	12000 U	100000	12000	1	02/18/21 23:33	2/18/21	
2,3,4,6-Tetrachlorophenol	12000 U	100000	12000	1	02/18/21 23:33	2/18/21	
2,4,5-Trichlorophenol	11000 U	100000	11000	1	02/18/21 23:33	2/18/21	
2,4,6-Trichlorophenol	14000 U	100000	14000	1	02/18/21 23:33	2/18/21	
2,4-Dichlorophenol	13000 U	100000	13000	1	02/18/21 23:33	2/18/21	
2,4-Dimethylphenol	14000 U	100000	14000	1	02/18/21 23:33	2/18/21	
2,4-Dinitrophenol	200000 U	500000	200000	1	02/18/21 23:33	2/18/21	
2,4-Dinitrotoluene	24000 U	100000	24000	1	02/18/21 23:33	2/18/21	
2,6-Dinitrotoluene	14000 U	100000	14000	1	02/18/21 23:33	2/18/21	
2-Chloronaphthalene	14000 U	100000	14000	1	02/18/21 23:33	2/18/21	
2-Chlorophenol	11000 U	100000	11000	1	02/18/21 23:33	2/18/21	
2-Methylnaphthalene	13000 U	100000	13000	1	02/18/21 23:33	2/18/21	
2-Methylphenol	10000 U	100000	10000	1	02/18/21 23:33	2/18/21	
2-Nitroaniline	14000 U	500000	14000	1	02/18/21 23:33	2/18/21	
2-Nitrophenol	15000 U	100000	15000	1	02/18/21 23:33	2/18/21	
3,3'-Dichlorobenzidine	12000 U	100000	12000	1	02/18/21 23:33	2/18/21	
3- and 4-Methylphenol Coelution	12000 U	100000	12000	1	02/18/21 23:33	2/18/21	
3-Nitroaniline	25000 U	500000	25000	1	02/18/21 23:33	2/18/21	
4,6-Dinitro-2-methylphenol	200000 U	500000	200000	1	02/18/21 23:33	2/18/21	
4-Bromophenyl Phenyl Ether	17000 U	100000	17000	1	02/18/21 23:33	2/18/21	
4-Chloro-3-methylphenol	11000 U	100000	11000	1	02/18/21 23:33	2/18/21	
4-Chloroaniline	10000 U	100000	10000	1	02/18/21 23:33	2/18/21	
4-Chlorophenyl Phenyl Ether	15000 U	100000	15000	1	02/18/21 23:33	2/18/21	
4-Nitroaniline	27000 U	500000	27000	1	02/18/21 23:33	2/18/21	
4-Nitrophenol	64000 U	500000	64000	1	02/18/21 23:33	2/18/21	
Acenaphthene	14000 U	100000	14000	1	02/18/21 23:33	2/18/21	
Acenaphthylene	14000 U	100000	14000	1	02/18/21 23:33	2/18/21	
Acetophenone	13000 U	100000	13000	1	02/18/21 23:33	2/18/21	
Anthracene	13000 U	100000	13000	1	02/18/21 23:33	2/18/21	
Atrazine	21000 U	100000	21000	1	02/18/21 23:33	2/18/21	
Benz(a)anthracene	16000 U	100000	16000	1	02/18/21 23:33	2/18/21	
Benzaldehyde	37000 U	500000	37000	1	02/18/21 23:33	2/18/21	
Benzo(a)pyrene	12000 U	100000	12000	1	02/18/21 23:33	2/18/21	
Benzo(b)fluoranthene	12000 U	100000	12000	1	02/18/21 23:33	2/18/21	
Benzo(g,h,i)perylene	10000 U	100000	10000	1	02/18/21 23:33	2/18/21	
Benzo(k)fluoranthene	13000 U	100000	13000	1	02/18/21 23:33	2/18/21	
Biphenyl	14000 U	100000	14000	1	02/18/21 23:33	2/18/21	
2,2'-Oxybis(1-chloropropane)	14000 U	100000	14000	1	02/18/21 23:33	2/18/21	
Bis(2-chloroethoxy)methane	19000 U	100000	19000	1	02/18/21 23:33	2/18/21	
Bis(2-chloroethyl) Ether	13000 U	100000	13000	1	02/18/21 23:33	2/18/21	
Bis(2-ethylhexyl) Phthalate	78000 U	100000	78000	1	02/18/21 23:33	2/18/21	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2101630-01

Units: ug/Kg
Basis: As Received

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Butyl Benzyl Phthalate	14000 U	100000	14000	1	02/18/21 23:33	2/18/21	
Caprolactam	10000 U	100000	10000	1	02/18/21 23:33	2/18/21	
Carbazole	16000 U	100000	16000	1	02/18/21 23:33	2/18/21	
Chrysene	12000 U	100000	12000	1	02/18/21 23:33	2/18/21	
Di-n-butyl Phthalate	17000 U	100000	17000	1	02/18/21 23:33	2/18/21	
Di-n-octyl Phthalate	33000 U	100000	33000	1	02/18/21 23:33	2/18/21	
Dibenz(a,h)anthracene	11000 U	100000	11000	1	02/18/21 23:33	2/18/21	
Dibenzofuran	14000 U	100000	14000	1	02/18/21 23:33	2/18/21	
Diethyl Phthalate	11000 U	100000	11000	1	02/18/21 23:33	2/18/21	
Dimethyl Phthalate	13000 U	100000	13000	1	02/18/21 23:33	2/18/21	
Fluoranthene	15000 U	100000	15000	1	02/18/21 23:33	2/18/21	
Fluorene	13000 U	100000	13000	1	02/18/21 23:33	2/18/21	
Hexachlorobenzene	16000 U	100000	16000	1	02/18/21 23:33	2/18/21	
Hexachlorobutadiene	10000 U	100000	10000	1	02/18/21 23:33	2/18/21	
Hexachlorocyclopentadiene	22000 U	100000	22000	1	02/18/21 23:33	2/18/21	
Hexachloroethane	11000 U	100000	11000	1	02/18/21 23:33	2/18/21	
Indeno(1,2,3-cd)pyrene	18000 U	100000	18000	1	02/18/21 23:33	2/18/21	
Isophorone	14000 U	100000	14000	1	02/18/21 23:33	2/18/21	
N-Nitrosodi-n-propylamine	12000 U	100000	12000	1	02/18/21 23:33	2/18/21	
N-Nitrosodiphenylamine	27000 U	100000	27000	1	02/18/21 23:33	2/18/21	
Naphthalene	12000 U	100000	12000	1	02/18/21 23:33	2/18/21	
Nitrobenzene	15000 U	100000	15000	1	02/18/21 23:33	2/18/21	
Pentachlorophenol (PCP)	97000 U	500000	97000	1	02/18/21 23:33	2/18/21	
Phenanthrene	14000 U	100000	14000	1	02/18/21 23:33	2/18/21	
Phenol	10000 U	100000	10000	1	02/18/21 23:33	2/18/21	
Pyrene	15000 U	100000	15000	1	02/18/21 23:33	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	82	10 - 180	02/18/21 23:33	
2-Fluorobiphenyl	83	49 - 157	02/18/21 23:33	
2-Fluorophenol	81	59 - 113	02/18/21 23:33	
Nitrobenzene-d5	82	66 - 143	02/18/21 23:33	
Phenol-d6	73	35 - 125	02/18/21 23:33	
Terphenyl-d14	94	72 - 172	02/18/21 23:33	

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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Analyzed: 02/19/21

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:As Received

Analyte Name	Lab Control Sample RQ2101630-02				Duplicate Lab Control Sample RQ2101630-03				RPD	RPD Limit
	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits		
1,2,4,5-Tetrachlorobenzene	8270D	150000	200000	75	152000	200000	76	50-150	1	30
2,3,4,6-Tetrachlorophenol	8270D	168000	200000	84	168000	200000	84	50-150	<1	30
2,4,5-Trichlorophenol	8270D	148000	200000	74	153000	200000	76	50-150	3	30
2,4,6-Trichlorophenol	8270D	146000	200000	73	145000	200000	72	50-150	<1	30
2,4-Dichlorophenol	8270D	140000	200000	70	144000	200000	72	50-150	3	30
2,4-Dimethylphenol	8270D	149000	200000	75	146000	200000	73	50-150	2	30
2,4-Dinitrophenol	8270D	200000 U	200000	0 *	200000 U	200000	0 *	30-178	NC	30
2,4-Dinitrotoluene	8270D	147000	200000	74	154000	200000	77	50-161	4	30
2,6-Dinitrotoluene	8270D	178000	200000	89	182000	200000	91	50-150	2	30
2-Chloronaphthalene	8270D	160000	200000	80	160000	200000	80	50-150	<1	30
2-Chlorophenol	8270D	141000	200000	70	143000	200000	71	50-150	1	30
2-Methylnaphthalene	8270D	157000	200000	78	156000	200000	78	50-150	<1	30
2-Methylphenol	8270D	140000	200000	70	152000	200000	76	50-150	8	30
2-Nitroaniline	8270D	164000 J	200000	82	167000 J	200000	83	50-150	2	30
2-Nitrophenol	8270D	155000	200000	77	157000	200000	79	50-150	1	30
3,3'-Dichlorobenzidine	8270D	138000	200000	69	136000	200000	68	50-150	2	30
3- and 4-Methylphenol Coelution	8270D	140000	200000	70	146000	200000	73	50-150	5	30
3-Nitroaniline	8270D	129000 J	200000	64	130000 J	200000	65	50-150	<1	30
4,6-Dinitro-2-methylphenol	8270D	200000 U	200000	0 *	200000 U	200000	0 *	15-180	NC	30
4-Bromophenyl Phenyl Ether	8270D	159000	200000	79	163000	200000	82	50-150	3	30
4-Chloro-3-methylphenol	8270D	138000	200000	69	144000	200000	72	39-168	4	30
4-Chloroaniline	8270D	88800 J	200000	44	93400 J	200000	47	10-86	5	30
4-Chlorophenyl Phenyl Ether	8270D	146000	200000	73	151000	200000	75	50-150	3	30
4-Nitroaniline	8270D	143000 J	200000	71	151000 J	200000	76	50-150	6	30
4-Nitrophenol	8270D	111000 J	200000	55	112000 J	200000	56	28-164	2	30
Acenaphthene	8270D	155000	200000	77	154000	200000	77	50-150	<1	30
Acenaphthylene	8270D	168000	200000	84	173000	200000	87	50-150	3	30
Acetophenone	8270D	272000	400000	68	277000	400000	69	50-150	2	30
Anthracene	8270D	161000	200000	80	162000	200000	81	50-150	<1	30
Atrazine	8270D	187000	200000	93	177000	200000	88	50-150	5	30
Benz(a)anthracene	8270D	145000	200000	73	145000	200000	72	50-150	<1	30
Benzaldehyde	8270D	141000 J	200000	70	147000 J	200000	73	50-150	4	30
Benzo(a)pyrene	8270D	182000	200000	91	182000	200000	91	50-150	<1	30

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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Analyzed: 02/19/21

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg
Basis:As Received

Lab Control Sample RQ2101630-02					Duplicate Lab Control Sample RQ2101630-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Benzo(b)fluoranthene	8270D	141000	200000	70	142000	200000	71	50-150	<1	30
Benzo(g,h,i)perylene	8270D	167000	200000	84	166000	200000	83	50-150	<1	30
Benzo(k)fluoranthene	8270D	157000	200000	78	160000	200000	80	50-150	2	30
Biphenyl	8270D	152000	200000	76	151000	200000	75	50-150	<1	30
2,2'-Oxybis(1-chloropropane)	8270D	150000	200000	75	154000	200000	77	50-150	3	30
Bis(2-chloroethoxy)methane	8270D	157000	200000	78	153000	200000	77	50-150	2	30
Bis(2-chloroethyl) Ether	8270D	155000	200000	78	154000	200000	77	50-150	<1	30
Bis(2-ethylhexyl) Phthalate	8270D	159000	200000	79	156000	200000	78	50-150	2	30
Butyl Benzyl Phthalate	8270D	147000	200000	73	143000	200000	72	50-150	2	30
Caprolactam	8270D	135000	200000	67	134000	200000	67	50-150	<1	30
Carbazole	8270D	176000	200000	88	177000	200000	89	50-150	<1	30
Chrysene	8270D	155000	200000	78	156000	200000	78	50-150	<1	30
Di-n-butyl Phthalate	8270D	186000	200000	93	185000	200000	92	50-150	<1	30
Di-n-octyl Phthalate	8270D	162000	200000	81	158000	200000	79	50-150	2	30
Dibenz(a,h)anthracene	8270D	163000	200000	81	163000	200000	82	50-150	<1	30
Dibenzofuran	8270D	160000	200000	80	163000	200000	82	50-150	2	30
Diethyl Phthalate	8270D	137000	200000	68	139000	200000	69	50-150	1	30
Dimethyl Phthalate	8270D	158000	200000	79	162000	200000	81	50-150	2	30
Fluoranthene	8270D	167000	200000	83	168000	200000	84	50-150	<1	30
Fluorene	8270D	157000	200000	79	161000	200000	81	50-150	3	30
Hexachlorobenzene	8270D	157000	200000	79	159000	200000	79	50-150	1	30
Hexachlorobutadiene	8270D	161000	200000	80	164000	200000	82	50-150	2	30
Hexachlorocyclopentadiene	8270D	156000	200000	78	152000	200000	76	50-150	2	30
Hexachloroethane	8270D	143000	200000	71	150000	200000	75	50-150	5	30
Indeno(1,2,3-cd)pyrene	8270D	152000	200000	76	153000	200000	77	50-150	<1	30
Isophorone	8270D	134000	200000	67	132000	200000	66	50-150	1	30
N-Nitrosodi-n-propylamine	8270D	149000	200000	74	151000	200000	75	47-145	1	30
N-Nitrosodiphenylamine	8270D	195000	200000	98	196000	200000	98	50-150	<1	30
Naphthalene	8270D	171000	200000	85	171000	200000	85	50-150	<1	30
Nitrobenzene	8270D	152000	200000	76	153000	200000	77	50-150	<1	30
Pentachlorophenol (PCP)	8270D	161000 J	200000	81	162000 J	200000	81	10-164	<1	30
Phenanthrene	8270D	155000	200000	78	155000	200000	77	50-150	<1	30
Phenol	8270D	145000	200000	73	150000	200000	75	50-150	3	30

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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Analyzed: 02/19/21

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/Kg**Basis:**As Received

Analyte Name	Analytical Method	Result	Lab Control Sample		Duplicate Lab Control Sample		% Rec	% Rec Limits	RPD	RPD Limit
			Spike Amount	% Rec	Result	Spike Amount				
Pyrene	8270D	162000	200000	81	161000	200000	80	50-150	<1	30



Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory

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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263

SURROGATE RECOVERY SUMMARY
Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Extraction Method: EPA 3580A

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-164	10-147
TK-SD-RC04-0210	R2101263-005	71	76
Method Blank	RQ2101673-01	97	109
Lab Control Sample	RQ2101673-02	97	106
Duplicate Lab Control Sample	RQ2101673-03	96	103
TK-LQ-ST07-02092021	R2101263-001	89	78
TK-LQ-ST04-02092021	R2101263-002	84	72
TL-LQ-RC01-0210	R2101263-003	74	83
TK-LQ-RC03-02100	R2101263-004	25	72
Method Blank	RQ2101634-01	97	109
Method Blank	RQ2101634-01	91	102
Lab Control Sample	RQ2101634-02	97	106
Lab Control Sample	RQ2101634-02	91	99
Duplicate Lab Control Sample	RQ2101634-03	96	103
Duplicate Lab Control Sample	RQ2101634-03	89	96

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2101634-01

Units: ug/Kg
Basis: As Received

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	100 U	100	-	1	02/24/21 00:54	2/18/21	
4,4'-DDE	100 U	100	-	1	02/24/21 00:54	2/18/21	
4,4'-DDT	100 U	100	-	1	02/24/21 00:54	2/18/21	
Aldrin	100 U	100	-	1	02/24/21 00:54	2/18/21	
Dieldrin	100 U	100	-	1	02/24/21 00:54	2/18/21	
Endosulfan I	100 U	100	-	1	02/24/21 00:54	2/18/21	
Endosulfan II	100 U	100	-	1	02/24/21 00:54	2/18/21	
Endosulfan Sulfate	100 U	100	-	1	02/24/21 00:54	2/18/21	
Endrin	100 U	100	-	1	02/24/21 00:54	2/18/21	
Endrin Aldehyde	100 U	100	-	1	02/24/21 00:54	2/18/21	
Endrin Ketone	100 U	100	-	1	02/24/21 00:54	2/18/21	
Heptachlor	100 U	100	-	1	02/24/21 00:54	2/18/21	
Heptachlor Epoxide	100 U	100	-	1	02/24/21 00:54	2/18/21	
Methoxychlor	100 U	100	-	1	02/24/21 00:54	2/18/21	
Toxaphene	100 U	100	-	1	02/24/21 00:54	2/18/21	
alpha-BHC	100 U	100	-	1	02/24/21 00:54	2/18/21	
alpha-Chlordane	100 U	100	-	1	02/24/21 00:54	2/18/21	
beta-BHC	100 U	100	-	1	02/24/21 00:54	2/18/21	
delta-BHC	100 U	100	-	1	02/24/21 00:54	2/18/21	
gamma-BHC (Lindane)	100 U	100	-	1	02/24/21 00:54	2/18/21	
gamma-Chlordane	100 U	100	-	1	02/24/21 00:54	2/18/21	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2101634-01

Units: ug/Kg
Basis: As Received

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3580A

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	91	10 - 164	02/24/21 00:54	
Tetrachloro-m-xylene	102	10 - 147	02/24/21 00:54	

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2101634-01

Units: ug/Kg
Basis: As Received

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	100 U	100	-	1	02/22/21 14:27	2/18/21	
4,4'-DDE	100 U	100	-	1	02/22/21 14:27	2/18/21	
4,4'-DDT	100 U	100	-	1	02/22/21 14:27	2/18/21	
Aldrin	100 U	100	-	1	02/22/21 14:27	2/18/21	
Dieldrin	100 U	100	-	1	02/22/21 14:27	2/18/21	
Endosulfan I	100 U	100	-	1	02/22/21 14:27	2/18/21	
Endosulfan II	100 U	100	-	1	02/22/21 14:27	2/18/21	
Endosulfan Sulfate	100 U	100	-	1	02/22/21 14:27	2/18/21	
Endrin	100 U	100	-	1	02/22/21 14:27	2/18/21	
Endrin Aldehyde	100 U	100	-	1	02/22/21 14:27	2/18/21	
Endrin Ketone	100 U	100	-	1	02/22/21 14:27	2/18/21	
Heptachlor	100 U	100	-	1	02/22/21 14:27	2/18/21	
Heptachlor Epoxide	100 U	100	-	1	02/22/21 14:27	2/18/21	
Methoxychlor	100 U	100	-	1	02/22/21 14:27	2/18/21	
Toxaphene	100 U	100	-	1	02/22/21 14:27	2/18/21	
alpha-BHC	100 U	100	-	1	02/22/21 14:27	2/18/21	
alpha-Chlordane	100 U	100	-	1	02/22/21 14:27	2/18/21	
beta-BHC	100 U	100	-	1	02/22/21 14:27	2/18/21	
delta-BHC	100 U	100	-	1	02/22/21 14:27	2/18/21	
gamma-BHC (Lindane)	100 U	100	-	1	02/22/21 14:27	2/18/21	
gamma-Chlordane	100 U	100	-	1	02/22/21 14:27	2/18/21	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2101634-01

Units: ug/Kg
Basis: As Received

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3580A

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	97	10 - 164	02/22/21 14:27	
Tetrachloro-m-xylene	109	10 - 147	02/22/21 14:27	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2101673-01

Units: ug/Kg
Basis: As Received

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	100 U	100	-	1	02/22/21 14:27	2/18/21	
4,4'-DDE	100 U	100	-	1	02/22/21 14:27	2/18/21	
4,4'-DDT	100 U	100	-	1	02/22/21 14:27	2/18/21	
Aldrin	100 U	100	-	1	02/22/21 14:27	2/18/21	
Dieldrin	100 U	100	-	1	02/22/21 14:27	2/18/21	
Endosulfan I	100 U	100	-	1	02/22/21 14:27	2/18/21	
Endosulfan II	100 U	100	-	1	02/22/21 14:27	2/18/21	
Endosulfan Sulfate	100 U	100	-	1	02/22/21 14:27	2/18/21	
Endrin	100 U	100	-	1	02/22/21 14:27	2/18/21	
Endrin Aldehyde	100 U	100	-	1	02/22/21 14:27	2/18/21	
Endrin Ketone	100 U	100	-	1	02/22/21 14:27	2/18/21	
Heptachlor	100 U	100	-	1	02/22/21 14:27	2/18/21	
Heptachlor Epoxide	100 U	100	-	1	02/22/21 14:27	2/18/21	
Methoxychlor	100 U	100	-	1	02/22/21 14:27	2/18/21	
Toxaphene	100 U	100	-	1	02/22/21 14:27	2/18/21	
alpha-BHC	100 U	100	-	1	02/22/21 14:27	2/18/21	
alpha-Chlordane	100 U	100	-	1	02/22/21 14:27	2/18/21	
beta-BHC	100 U	100	-	1	02/22/21 14:27	2/18/21	
delta-BHC	100 U	100	-	1	02/22/21 14:27	2/18/21	
gamma-BHC (Lindane)	100 U	100	-	1	02/22/21 14:27	2/18/21	
gamma-Chlordane	100 U	100	-	1	02/22/21 14:27	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	97	10 - 164	02/22/21 14:27	
Tetrachloro-m-xylene	109	10 - 147	02/22/21 14:27	

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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Analyzed: 02/22/21

Duplicate Lab Control Sample Summary
Organochlorine Pesticides by Gas Chromatography

Units:ug/Kg
Basis:As Received

Lab Control Sample RQ2101634-02					Duplicate Lab Control Sample RQ2101634-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
4,4'-DDD	8081B	2200	2000	110	2160	2000	108	42-159	2	30
4,4'-DDE	8081B	2220	2000	111	2170	2000	109	47-147	2	30
4,4'-DDT	8081B	2210	2000	110	2180	2000	109	41-149	1	30
Aldrin	8081B	2180	2000	109	2130	2000	107	22-137	2	30
Dieldrin	8081B	2180	2000	109	2130	2000	107	52-144	2	30
Endosulfan I	8081B	2180	2000	109	2140	2000	107	52-136	2	30
Endosulfan II	8081B	2210	2000	111	2190	2000	109	57-138	1	30
Endosulfan Sulfate	8081B	2240	2000	112	2220	2000	111	34-156	<1	30
Endrin	8081B	2200	2000	110	2150	2000	108	56-143	2	30
Endrin Aldehyde	8081B	2050	2000	103	2050	2000	103	10-166	<1	30
Endrin Ketone	8081B	2140	2000	107	2090	2000	105	59-143	2	30
Heptachlor	8081B	2210	2000	111	2160	2000	108	32-141	2	30
Heptachlor Epoxide	8081B	2140	2000	107	2090	2000	105	51-143	2	30
Methoxychlor	8081B	2090	2000	104	2090	2000	105	56-149	<1	30
alpha-BHC	8081B	2190	2000	110	2140	2000	107	36-151	3	30
alpha-Chlordane	8081B	2140	2000	107	2100	2000	105	50-139	2	30
beta-BHC	8081B	2080	2000	104	2050	2000	102	55-149	2	30
delta-BHC	8081B	2260	2000	113	2210	2000	110	29-159	2	30
gamma-BHC (Lindane)	8081B	2180	2000	109	2130	2000	106	41-149	3	30

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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Analyzed: 02/22/21

Duplicate Lab Control Sample Summary
Organochlorine Pesticides by Gas Chromatography

Units:ug/Kg
Basis:As Received

Lab Control Sample RQ2101673-02					Duplicate Lab Control Sample RQ2101673-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
4,4'-DDD	8081B	2200	2000	110	2160	2000	108	42-159	2	30
4,4'-DDE	8081B	2220	2000	111	2170	2000	109	47-147	2	30
4,4'-DDT	8081B	2210	2000	110	2180	2000	109	41-149	1	30
Aldrin	8081B	2180	2000	109	2130	2000	107	22-137	2	30
Dieldrin	8081B	2180	2000	109	2130	2000	107	52-144	2	30
Endosulfan I	8081B	2180	2000	109	2140	2000	107	52-136	2	30
Endosulfan II	8081B	2210	2000	111	2190	2000	109	57-138	1	30
Endosulfan Sulfate	8081B	2240	2000	112	2220	2000	111	34-156	<1	30
Endrin	8081B	2200	2000	110	2150	2000	108	56-143	2	30
Endrin Aldehyde	8081B	2050	2000	103	2050	2000	103	10-166	<1	30
Endrin Ketone	8081B	2140	2000	107	2090	2000	105	59-143	2	30
Heptachlor	8081B	2210	2000	111	2160	2000	108	32-141	2	30
Heptachlor Epoxide	8081B	2140	2000	107	2090	2000	105	51-143	2	30
Methoxychlor	8081B	2090	2000	104	2090	2000	105	56-149	<1	30
alpha-BHC	8081B	2190	2000	110	2140	2000	107	36-151	3	30
alpha-Chlordane	8081B	2140	2000	107	2100	2000	105	50-139	2	30
beta-BHC	8081B	2080	2000	104	2050	2000	102	55-149	2	30
delta-BHC	8081B	2260	2000	113	2210	2000	110	29-159	2	30
gamma-BHC (Lindane)	8081B	2180	2000	109	2130	2000	106	41-149	3	30

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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Extraction Method: EPA 3580A

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		44-131	33-139
TK-SD-RC04-0210	R2101263-005	74	74
Method Blank	RQ2101673-01	113	105
Lab Control Sample	RQ2101673-02	114	106
Duplicate Lab Control Sample	RQ2101673-03	112	105
TK-LQ-ST07-02092021	R2101263-001	68	64
TK-LQ-ST04-02092021	R2101263-002	83	51
TL-LQ-RC01-0210	R2101263-003	67	55
TK-LQ-RC03-02100	R2101263-004	67	56
Method Blank	RQ2101634-01	113	105
Lab Control Sample	RQ2101634-02	114	106
Duplicate Lab Control Sample	RQ2101634-03	112	105

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2101634-01

Units: ug/Kg
Basis: As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3580A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	2000 U	2000	2000	1	02/22/21 16:57	2/18/21	
Aroclor 1221	4000 U	4000	4000	1	02/22/21 16:57	2/18/21	
Aroclor 1232	2000 U	2000	2000	1	02/22/21 16:57	2/18/21	
Aroclor 1242	2000 U	2000	2000	1	02/22/21 16:57	2/18/21	
Aroclor 1248	2000 U	2000	2000	1	02/22/21 16:57	2/18/21	
Aroclor 1254	2000 U	2000	2000	1	02/22/21 16:57	2/18/21	
Aroclor 1260	2000 U	2000	2000	1	02/22/21 16:57	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	113	44 - 131	02/22/21 16:57	
Tetrachloro-m-xylene	105	33 - 139	02/22/21 16:57	

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2101673-01

Units: ug/Kg
Basis: As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	2000 U	2000	2000	1	02/22/21 16:57	2/18/21	
Aroclor 1221	4000 U	4000	4000	1	02/22/21 16:57	2/18/21	
Aroclor 1232	2000 U	2000	2000	1	02/22/21 16:57	2/18/21	
Aroclor 1242	2000 U	2000	2000	1	02/22/21 16:57	2/18/21	
Aroclor 1248	2000 U	2000	2000	1	02/22/21 16:57	2/18/21	
Aroclor 1254	2000 U	2000	2000	1	02/22/21 16:57	2/18/21	
Aroclor 1260	2000 U	2000	2000	1	02/22/21 16:57	2/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	113	44 - 131	02/22/21 16:57	
Tetrachloro-m-xylene	105	33 - 139	02/22/21 16:57	

ALS Group USA, Corp.
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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Analyzed: 02/22/21

Duplicate Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Units:ug/Kg
Basis:As Received

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ2101634-02			RQ2101634-03				
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aroclor 1016	8082A	21100	20000	106	20900	20000	104	40-140	1	30
Aroclor 1260	8082A	22500	20000	112	21500	20000	107	53-127	4	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Analyzed: 02/22/21

Duplicate Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Units:ug/Kg
Basis:As Received

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ2101673-02			RQ2101673-03				
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aroclor 1016	8082A	21100	20000	106	20900	20000	104	40-140	1	30
Aroclor 1260	8082A	22500	20000	112	21500	20000	107	53-127	4	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic
		Acid 10-151
TK-LQ-ST07-02092021	R2101263-001	61
TK-LQ-ST04-02092021	R2101263-002	39
TL-LQ-RC01-0210	R2101263-003	81
TK-LQ-RC03-02100	R2101263-004	42
TK-SD-RC04-0210	R2101263-005	90
Method Blank	RQ2101693-02	43
Lab Control Sample	RQ2101693-03	61
Duplicate Lab Control Sample	RQ2101693-04	69

ALS Group USA, Corp.
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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2101693-02

Units: ug/Kg
Basis: As Received

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	2.0 U	2.0	-	1	02/23/21 17:09	2/19/21	
2,4,5-TP	2.0 U	2.0	-	1	02/23/21 17:09	2/19/21	
2,4-D	2.0 U	2.0	-	1	02/23/21 17:09	2/19/21	
Dicamba	2.0 U	2.0	-	1	02/23/21 17:09	2/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	43	10 - 151	02/23/21 17:09	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Analyzed: 02/23/21

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Units:ug/Kg
Basis:As Received

Lab Control Sample					Duplicate Lab Control Sample					
RQ2101693-03					RQ2101693-04					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2,4,5-T	8151A	24.1	49.5	49	30.6	49.9	61	19-127	24	30
2,4,5-TP	8151A	26.2	49.5	53	32.4	49.9	65	18-122	21	30
2,4-D	8151A	25.5	49.5	52	33.3	49.9	67	24-165	27	30
Dicamba	8151A	24.0	49.5	48	29.4	49.9	59	26-128	20	30



Metals

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BLANKS

Contract: R2101263

Lab Code: Case No.: SAS No.: SDG NO.: TK-LQ-ST07-0

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L, ppt, or mg/kg): MG/KG

Analyte	Initial Calib. Blank ug/L	Continuing Calibration Blank ug/L						Preparation Blank		M	
	C	1	C	2	C	3	C				
Aluminum	120.00	U	120.00	U	120.00	U	120.00	U	12.000	U	P
Antimony	5.40	U	5.40	U	5.40	U	5.40	U	0.540	U	P
Arsenic	7.00	U	7.00	U	7.00	U	7.00	U	0.700	U	P
Barium	15.00	U	15.00	U	15.00	U	15.00	U	1.500	U	P
Beryllium	0.60	U	0.60	U	0.60	U	0.60	U	0.060	U	P
Cadmium	2.40	U	2.40	U	2.40	U	2.40	U	0.240	U	P
Mercury	0.078	U	0.078	U	0.078	U	0.078	U	0.013	U	CV
Calcium	320.00	U	320.00	U	320.00	U	320.00	U	32.000	U	P
Chromium	3.50	U	3.50	U	3.50	U	3.50	U	0.350	U	P
Cobalt	4.60	U	4.60	U	4.60	U	4.60	U	0.460	U	P
Copper	6.30	U	6.30	U	6.30	U	6.30	U	0.630	U	P
Iron	130.00	U	130.00	U	130.00	U	130.00	U	13.000	U	P
Lead	4.00	U	4.00	U	4.00	U	4.00	U	0.400	U	P
Magnesium	130.00	U	130.00	U	130.00	U	130.00	U	13.000	U	P
Manganese	15.00	U	15.00	U	15.00	U	15.00	U	1.500	U	P
Nickel	6.60	U	6.60	U	6.60	U	6.60	U	0.660	U	P
Potassium	500.00	U	500.00	U	500.00	U	500.00	U	50.000	U	P
Selenium	5.40	U	5.40	U	5.40	U	5.40	U	0.540	U	P
Silver	0.90	U	0.90	U	0.90	U	0.90	U	0.090	U	P
Sodium	520.00	U	520.00	U	520.00	U	520.00	U	52.000	U	P
Thallium	6.50	U	6.50	U	6.50	U	6.50	U	0.650	U	P
Vanadium	7.10	U	7.10	U	7.10	U	7.10	U	0.710	U	P
Zinc	14.00	U	14.00	U	14.00	U	14.00	U	1.400	U	P

Comments:

METALS

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BLANKS

Contract: R2101263

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: TK-LQ-ST07-0

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L, ppt, or mg/kg): UG/L

Analyte	Initial Calib. Blank ug/L	Continuing Calibration Blank ug/L						Preparation Blank	C	M
		1	C	2	C	3	C			
Aluminum		120.00	U	120.00	U	120.00	U			P
Antimony		5.40	U	5.40	U	5.40	U			P
Arsenic		7.00	U	7.00	U	7.00	U			P
Barium		15.00	U	15.00	U	15.00	U			P
Beryllium		0.60	U	0.60	U	0.60	U			P
Cadmium		2.40	U	2.40	U	2.40	U			P
Mercury		0.078	U	0.078	U					CV
Calcium		320.00	U	320.00	U	320.00	U			P
Chromium		3.50	U	3.50	U	3.50	U			P
Cobalt		4.60	U	4.60	U	4.60	U			P
Copper		6.30	U	6.30	U	6.30	U			P
Iron		130.00	U	130.00	U	130.00	U			P
Lead		4.00	U	4.00	U	4.00	U			P
Magnesium		130.00	U	130.00	U	130.00	U			P
Manganese		15.00	U	15.00	U	15.00	U			P
Nickel		6.60	U	6.60	U	6.60	U			P
Potassium		500.00	U	500.00	U	500.00	U			P
Selenium		5.40	U	5.40	U	5.40	U			P
Silver		0.90	U	0.90	U	0.90	U			P
Sodium		520.00	U	520.00	U	520.00	U			P
Thallium		6.50	U	-6.50	J	-7.50	J			P
Vanadium		7.10	U	7.10	U	7.10	U			P
Zinc		14.00	U	14.00	U	14.00	U			P

Comments:

METALS

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BLANKS

Contract: R2101263

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: TK-LQ-ST07-0

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L, ppt, or mg/kg): UG/L

Analyte	Initial Calib. Blank ug/L	Continuing Calibration Blank ug/L						Preparation Blank	C	M
		1	C	2	C	3	C			
Aluminum		120.00	U							P
Antimony		5.60	J							P
Arsenic		7.00	U							P
Barium		15.00	U							P
Beryllium		0.60	U							P
Cadmium		2.40	U							P
Calcium		320.00	U							P
Chromium		3.50	U							P
Cobalt		4.60	U							P
Copper		6.30	U							P
Iron		130.00	U							P
Lead		4.00	U							P
Magnesium		130.00	U							P
Manganese		15.00	U							P
Nickel		6.60	U							P
Potassium		500.00	U							P
Selenium		5.40	U							P
Silver		0.90	U							P
Sodium		520.00	U							P
Thallium		6.50	U							P
Vanadium		7.10	U							P
Zinc		14.00	U							P

Comments:

METALS

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LABORATORY CONTROL SAMPLE

Contract: R2101263

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: TK-LQ-ST07-0

Solid LCS Source: CPI

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L			Solid (mg/K				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum				200	195.11		160 240	98
Antimony				50	46.57		40 60	93
Arsenic				4	4.39		3.2 4.8	110
Barium				200	203.52		160 240	102
Beryllium				5	4.92		4 6	98
Cadmium				5	5.04		4 6	101
Mercury				0.166	0.18		.133 .199	108
Calcium				200	202.68		160 240	101
Chromium				20	20.38		16 24	102
Cobalt				50	50.49		40 60	101
Copper				25	24.85		20 30	99
Iron				100	100.94		80 120	101
Lead				50	50.21		40 60	100
Magnesium				200	196.10		160 240	98
Manganese				50	49.41		40 60	99
Nickel				50	50.36		40 60	101
Potassium				2000	1916.18		1600 2400	96
Selenium				101	88.46		80.8 121	88
Silver				5	4.75		4 6	95
Sodium				2000	1962.24		1600 2400	98
Thallium				200	181.78		160 240	91
Vanadium				50	49.62		40 60	99
Zinc				50	48.55		40 60	97

Comments: _____



General Chemistry

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Analytical Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid
Sample Name: Method Blank
Lab Code: R2101263-MB

Service Request: R2101263
Date Collected: NA
Date Received: NA
Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Ammonia as Nitrogen, undistilled	350.1M	3.1 U	mg/Kg	5.0	3.1	1	02/23/21 16:17	

ALS Group USA, Corp.

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QA/QC Report

Client: Inventum Engineering
Project: RTTC Tanks
Sample Matrix: NonAq Liquid

Service Request: R2101263
Date Analyzed: 02/23/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/Kg**Basis:**As Received**Lab Control Sample**

R2101263-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Ammonia as Nitrogen, undistilled	350.1M	25.0	25.0	100	90-110



Subcontracted Analytical Parameters

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February 25, 2021

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Certificate of Analysis

Project Name:	Custom EDD, MDL, QC	Workorder:	3158026
Purchase Order:	58-R2101263	Workorder ID:	AER558 R2101263

Dear Reports Invoices:

Enclosed are the analytical results for samples received by the laboratory on Monday, February 15, 2021.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Sarah S Leung (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Michael Chevalier , Mr. Brady Kalkman , Ms. Janice Jaeger

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.



Ms. Sarah S Leung
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 3158026 AER558|R2101263

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3158026001	TK-LQ-ST07-02092021	NY Non-Potable Water	2/9/2021 12:00	2/15/2021 09:26	Collected by Client
3158026002	TK-LQ-ST04-02092021	NY Non-Potable Water	2/9/2021 13:50	2/15/2021 09:26	Collected by Client
3158026003	TL-LW-RC01-0210	NY Non-Potable Water	2/10/2021 09:30	2/15/2021 09:26	Collected by Client
3158026004	TK-LQ-RC03-02100	NY Non-Potable Water	2/10/2021 10:50	2/15/2021 09:26	Collected by Client
3158026005	TK-SD-RC04-0210	NY Non-Potable Water	2/10/2021 10:50	2/15/2021 09:26	Collected by Client

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SAMPLE SUMMARY

Workorder: 3158026 AER558|R2101263

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

C	Please reference the Project Summary section of this Certificate of Analysis for case narrative comments.
J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 3158026 AER558|R2101263

Workorder Comments

Temperature of sample taken at time of sample receipt in the laboratory. See chain of custody for actual temperature.

Project was received at a temperature greater than six degrees Celsius.

Project was received without the presence of ice.

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ANALYTICAL RESULTS

Workorder: 3158026 AER558|R2101263

Lab ID: **3158026001**

Date Collected: 2/9/2021 12:00

Matrix: NY Non-Potable Water

Sample ID: **TK-LQ-ST07-02092021**

Date Received: 2/15/2021 09:26

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Reactive	ND	C	mg/kg	10	0.011	SW-846 7.3CN	2/23/21 16:45 VXF	2/24/21 11:15	MXF	A
Flashpoint/Ignitability	See Comment 2	C,1,	Deg. F			SW-846 1010A		2/17/21 07:45	II	A
Sulfide, Reactive	10.4	C	mg/kg	6.2	1.4	SW846 7.3	2/23/21 16:45 VXF	2/23/21 22:50	VXF	A

Ms. Sarah S Leung
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158026 AER558|R2101263

Lab ID: **3158026002**

Date Collected: 2/9/2021 13:50

Matrix: NY Non-Potable Water

Sample ID: **TK-LQ-ST04-02092021**

Date Received: 2/15/2021 09:26

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Reactive	ND	C	mg/kg	10	0.011	SW-846 7.3CN	2/23/21 16:45 VXF	2/24/21 11:15	MXF	A
Flashpoint/Ignitability	See Comment 2	C,1,	Deg. F			SW-846 1010A		2/17/21 07:45	II	A
Sulfide, Reactive	8.0	C	mg/kg	6.2	1.4	SW846 7.3	2/23/21 16:45 VXF	2/23/21 22:50	VXF	A

Ms. Sarah S Leung
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158026 AER558|R2101263

Lab ID: **3158026003**

Date Collected: 2/10/2021 09:30

Matrix: NY Non-Potable Water

Sample ID: **TL-LW-RC01-0210**

Date Received: 2/15/2021 09:26

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Reactive	ND	C	mg/kg	10.0	0.011	SW-846 7.3CN	2/23/21 16:45 VXF	2/24/21 11:15	MXF	A
Flashpoint/Ignitability	See Comment 2	C,1,	Deg. F			SW-846 1010A		2/17/21 07:45	II	A
Sulfide, Reactive	9.6	C	mg/kg	6.3	1.4	SW846 7.3	2/23/21 16:45 VXF	2/23/21 22:50	VXF	A

Ms. Sarah S Leung
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158026 AER558|R2101263

Lab ID: **3158026004**
Sample ID: **TK-LQ-RC03-02100**

Date Collected: 2/10/2021 10:50 Matrix: NY Non-Potable Water
Date Received: 2/15/2021 09:26

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Reactive	ND	C	mg/kg	10	0.011	SW-846 7.3CN	2/23/21 16:45 VXF	2/24/21 11:15	MXF	A
Flashpoint/Ignitability	See Comment 2	C,1,	Deg. F			SW-846 1010A		2/17/21 07:45	II	A
Sulfide, Reactive	8.8	C	mg/kg	6.2	1.4	SW846 7.3	2/23/21 16:45 VXF	2/23/21 22:50	VXF	A

Ms. Sarah S Leung
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158026 AER558|R2101263

Lab ID: **3158026005**

Date Collected: 2/10/2021 10:50

Matrix: NY Non-Potable Water

Sample ID: **TK-SD-RC04-0210**

Date Received: 2/15/2021 09:26

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Reactive	ND	C	mg/kg	10	0.011	SW-846 7.3CN	2/23/21 16:45 VXF	2/24/21 11:15	MXF	A
Flashpoint/Ignitability	See Comment 2	C,1,	Deg. F			SW-846 1010A		2/17/21 07:45	II	A
Sulfide, Reactive	11.2	C	mg/kg	6.2	1.4	SW846 7.3	2/23/21 16:45 VXF	2/23/21 22:50	VXF	A

Ms. Sarah S Leung
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158026 AER558|R2101263

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3158026001	1	TK-LQ-ST07-02092021	SW-846 1010A	Flashpoint/Ignitability
According to Pa/USEPA regulations, this sample is considered to be ignitable. (Ref 40 CFR 261.21)				
3158026001	2	TK-LQ-ST07-02092021	SW-846 1010A	Flashpoint/Ignitability
The sample flashed at 125°F				
3158026002	1	TK-LQ-ST04-02092021	SW-846 1010A	Flashpoint/Ignitability
According to Pa/USEPA regulations, this sample is considered to be ignitable. (Ref 40 CFR 261.21)				
3158026002	2	TK-LQ-ST04-02092021	SW-846 1010A	Flashpoint/Ignitability
The sample flashed at 122°F				
3158026003	1	TL-LW-RC01-0210	SW-846 1010A	Flashpoint/Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
3158026003	2	TL-LW-RC01-0210	SW-846 1010A	Flashpoint/Ignitability
The sample did not flash up to 199°F				
3158026004	1	TK-LQ-RC03-02100	SW-846 1010A	Flashpoint/Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
3158026004	2	TK-LQ-RC03-02100	SW-846 1010A	Flashpoint/Ignitability
The sample flashed at 188°F				
3158026005	1	TK-SD-RC04-0210	SW-846 1010A	Flashpoint/Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
3158026005	2	TK-SD-RC04-0210	SW-846 1010A	Flashpoint/Ignitability
The sample did not flash up to 199°F				

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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3158026 AER558|R2101263

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3158026001	TK-LQ-ST07-02092021	SW-846 1010A		
3158026001	TK-LQ-ST07-02092021	SW-846 7.3CN	SW-846 7.3CN	
3158026001	TK-LQ-ST07-02092021	SW846 7.3	SW846 7.3	
3158026002	TK-LQ-ST04-02092021	SW-846 1010A		
3158026002	TK-LQ-ST04-02092021	SW-846 7.3CN	SW-846 7.3CN	
3158026002	TK-LQ-ST04-02092021	SW846 7.3	SW846 7.3	
3158026003	TL-LW-RC01-0210	SW-846 1010A		
3158026003	TL-LW-RC01-0210	SW-846 7.3CN	SW-846 7.3CN	
3158026003	TL-LW-RC01-0210	SW846 7.3	SW846 7.3	
3158026004	TK-LQ-RC03-02100	SW-846 1010A		
3158026004	TK-LQ-RC03-02100	SW-846 7.3CN	SW-846 7.3CN	
3158026004	TK-LQ-RC03-02100	SW846 7.3	SW846 7.3	
3158026005	TK-SD-RC04-0210	SW-846 1010A		
3158026005	TK-SD-RC04-0210	SW-846 7.3CN	SW-846 7.3CN	
3158026005	TK-SD-RC04-0210	SW846 7.3	SW846 7.3	

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QUALITY CONTROL DATA

Workorder: 3158026 AER558|R2101263

QC Batch: WCPR/53974 **Analysis Method:** SW-846 7.3CN

QC Batch Method: SW-846 7.3CN

Associated Lab Samples: 3158026001, 3158026002, 3158026003, 3158026004, 3158026005

METHOD BLANK: 3282675

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	ND	mg/kg	10

LABORATORY CONTROL SAMPLE: 3282676

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Cyanide, Reactive	4.5	mg/kg	10	0.45J	0 - 92

SAMPLE DUPLICATE: 3282677 ORIGINAL: 3158924001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Cyanide, Reactive	0	mg/kg	0	NC	20

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QUALITY CONTROL DATA

Workorder: 3158026 AER558|R2101263

QC Batch: WCPR/53975 **Analysis Method:** SW846 7.3

QC Batch Method: SW846 7.3

Associated Lab Samples: 3158026001, 3158026002, 3158026003, 3158026004, 3158026005

METHOD BLANK: 3282678

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	4.8J	mg/kg	6.2

LABORATORY CONTROL SAMPLE: 3282679

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Sulfide, Reactive	72.7	mg/kg	567	412	49 - 148

SAMPLE DUPLICATE: 3282680 ORIGINAL: 3158924001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Sulfide, Reactive	6.38723	mg/kg	6	6.25	20

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**QUALITY CONTROL DATA**

Workorder: 3158026 AER558|R2101263

QC Batch: WETC/251164

Analysis Method: SW846 7.3

QC Batch Method: SW846 7.3

Associated Lab Samples:

METHOD BLANK: 3282737

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	ND	mg/kg	6.3

METHOD BLANK: 3282739

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	ND	mg/kg	6.3

METHOD BLANK: 3282741

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	ND	mg/kg	6.3

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QUALITY CONTROL DATA QUALIFIERS

Workorder: 3158026 AER558|R2101263

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
3279174	1	Duplicate	SW-846 1010A	Flashpoint/Ignitability
According to Pa/USEPA regulations, this sample is considered to be ignitable. (Ref 40 CFR 261.21)				
3279174	2	Duplicate	SW-846 1010A	Flashpoint/Ignitability
The sample flashed at 85°F				
3279175	3	Duplicate	SW-846 1010A	Flashpoint/Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
3279175	4	Duplicate	SW-846 1010A	Flashpoint/Ignitability
The sample did not flash up to 199°F				

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 3158026 AER558|R2101263

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
3158026001	TK-LQ-ST07-02092021	SW-846 7.3CN	WCPR/53974	SW-846 7.3CN	WETC/251198
3158026002	TK-LQ-ST04-02092021	SW-846 7.3CN	WCPR/53974	SW-846 7.3CN	WETC/251198
3158026003	TL-LW-RC01-0210	SW-846 7.3CN	WCPR/53974	SW-846 7.3CN	WETC/251198
3158026004	TK-LQ-RC03-02100	SW-846 7.3CN	WCPR/53974	SW-846 7.3CN	WETC/251198
3158026005	TK-SD-RC04-0210	SW-846 7.3CN	WCPR/53974	SW-846 7.3CN	WETC/251198
3158026001	TK-LQ-ST07-02092021	SW846 7.3	WCPR/53975	SW846 7.3	WETC/251164
3158026002	TK-LQ-ST04-02092021	SW846 7.3	WCPR/53975	SW846 7.3	WETC/251164
3158026003	TL-LW-RC01-0210	SW846 7.3	WCPR/53975	SW846 7.3	WETC/251164
3158026004	TK-LQ-RC03-02100	SW846 7.3	WCPR/53975	SW846 7.3	WETC/251164
3158026005	TK-SD-RC04-0210	SW846 7.3	WCPR/53975	SW846 7.3	WETC/251164

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ALS Environmental Chain of Custody

1565 Jefferson Rd, Building 300 • Rochester, NY 14623 • 585-288-5380 • FAX 585-288-8475

ALS Contact: Meghan Pedro

Project Number: R2101263
Project Manager: Meghan Pedro
QAP: LAB QAP

Lab Code	Sample ID	# of Cont.	Matrix	Sample		Lab ID	Flash 9014	Flash 1010A	Sulfide React 9034 Modified
				Date	Time				
R2101263-001	TK-LQ-ST07-02092021	2	NonAq Liquid	2/9/21	1200	Middletown ALS	X	X	X
R2101263-002	TK-LQ-ST04-02092021	1	NonAq Liquid	2/9/21	1350	Middletown ALS	X	X	X
R2101263-003	TL-LQ-RC01-0210	1	NonAq Liquid	2/10/21	0930	Middletown ALS	X	X	X
R2101263-004	TK-LQ-RC03-02100	1	NonAq Liquid	2/10/21	1050	Middletown ALS	X	X	X
R2101263-005	TK-SD-RC04-0210	1	NonAq Liquid	2/10/21	1050	Middletown ALS	X	X	X



Special Instructions/Comments	Turnaround Requirements RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 STANDARD Requested FAX Date: _____ Requested Report Date: 03/01/21	Report Requirements I. Results Only II. Results + QC Summaries III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data PQL/MDL/J Y Y EDD Y Y NYS DEC Equist 4	Invoice Information
			PO# 58R2101263 Bill to

Relinquished By: Sherry N. G. L. 2/12/21 1330 Received By: ew ALS 2-15-21 0920 Airbill Number: 175M

R2101263

— Ship To: Middletown ALS
ALS Environmental - Middletown
301 Fulling Mill Rd.
Middletown, PA 17057

PC MP Date 2/12/21
SMO _____ Date _____

Instructions:

Ice _____
Dry Ice _____
No Ice _____

Shipping:

Overnight _____
2nd Day _____
Ground _____

Bill to Client Account _____

Comments:

ALS Group USA, Corp.
www.alsglobal.com
An ALS Limited Company

ALS



301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client:	Work Order #:	Initials:	Date:
ALS NY	3158026		1/21/21

1. Were airbills / tracking numbers present and recorded?.....	NONE	☒ YES	NO
Tracking number: <u>17362434 7892</u>			
2. Are Custody Seals on shipping containers intact?.....	NONE	☒ YES	NO
3. Are Custody Seals on sample containers intact?.....	NONE	☒ YES	NO
4. Is there a COC (Chain-of-Custody) present?.....	☒ YES	☒ YES	NO
5. Are the COC and bottle labels complete, legible and in agreement?.....	YES	☒ YES	NO
5a. Does the COC contain sample locations?.....	☒ YES	☒ YES	NO
5b. Does the COC contain date and time of sample collection for all samples?.....	☒ YES	☒ YES	NO
5c. Does the COC contain sample collectors name?.....	n/a	☒ YES	NO
5d. Does the COC note the type(s) of preservation for all bottles?.....	1	☒ YES	NO
5e. Does the COC note the number of bottles submitted for each sample?.....	☒ YES	☒ YES	NO
5f. Does the COC note the type of sample, composite or grab?.....	n/a	☒ YES	NO
5g. Does the COC note the matrix of the sample(s)?.....	☒ YES	☒ YES	NO
6. Are all aqueous samples requiring preservation preserved correctly? ¹	N/A	☒ YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?.....	☒ YES	☒ YES	NO
8. Are all samples within holding times for the requested analyses?.....	☒ YES	☒ YES	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.).....	☒ YES	☒ YES	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?.....	N/A	☒ YES	NO
11. Were the samples received on ice?.....	☒ YES	☒ YES	NO
12. Were sample temperatures measured at 0.0-6.0°C.....	☒ YES	☒ YES	NO
13. Are the samples DW matrix? If YES, fill out Reportable Drinking Water questions below.....	☒ YES	☒ YES	NO
13a. Are the samples required for SDWA compliance reporting?.....	N/A	☒ YES	NO
13b. Did the client provide a SDWA PWS ID#?.....	N/A	☒ YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?.....	N/A	☒ YES	NO
13d. Did the client provide the SDWA sample location ID/Description?.....	N/A	☒ YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?.....	N/A	☒ YES	NO

Cooler #: _____
Temperature (°C): 12 _____
Thermometer ID: 524 _____
Radiological (µCi): _____

COMMENTS (Required for all NO responses above and any sample non-conformance):

No ice

2-16-

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis



ANALYTICAL REPORT

Lab Number:	L2235331
Client:	Inventum Engineering 441 Carlisle Drive Suite C Herndon, NY 20170
ATTN:	John Black
Phone:	(571) 752-6562
Project Name:	RITC
Project Number:	RC04
Report Date:	07/26/22

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-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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: RC04

Lab Number: L2235331
Report Date: 07/26/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2235331-01	TK-SD-RC04-06302022	SOIL	3875 RIVER ROAD, TONAWANDA	06/30/22 14:30	07/01/22
L2235331-02	TK-LQ-RC04-06302022	OIL	3875 RIVER ROAD, TONAWANDA	06/30/22 14:30	07/01/22
L2235331-03	TK-SD-RC04-06302022	OIL	3875 RIVER ROAD, TONAWANDA	06/30/22 14:30	07/01/22

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

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: RC04

Lab Number: L2235331
Report Date: 07/26/22

Case Narrative (continued)

Report Submission

July 26, 2022: This final report includes the results of all requested analyses.

July 25, 2022: 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.

The analysis of BTU was subcontracted. A copy of the laboratory report is included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

Sample Receipt

L2235331-01: Due to the sample matrix, the analysis of Volatile Organics was performed instead of TCLP Volatiles. The results are reported as L2235331-03.

Semivolatile Organics

L2235331-02D: 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 Semivolatiles

L2235331-01D and -02D: The sample has elevated detection limits due to the dilution required by the sample matrix.

L2235331-01D 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.

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Case Narrative (continued)

TCLP Herbicides

L2235331-01D and -02D: The sample has elevated detection limits due to the dilution required by the sample matrix.

L2235331-01D: The internal standard (IS) response for 1-bromo-2-nitrobenzene (523%) was above the acceptance criteria on column B; however, the sample was not re-analyzed due to obvious interferences. Since the IS response was above method criteria, all associated compounds reported from this column are considered to have a potentially low bias. The surrogate recovery is outside the method acceptance criteria for dcaa (15%) due to interference with the Internal Standard.

L2235331-02D: The surrogate recoveries are below the acceptance criteria for dcaa (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

The WG1663472-3 MS recovery for sodium (0%), performed on L2235331-02, does not apply because the sample concentration is greater than four times the spike amount added.

The WG1663473-3 MS recovery, performed on L2235331-02, is outside the acceptance criteria for mercury (70%). A post digestion spike was performed and was within acceptance criteria.

The WG1664145-3 MS recovery, performed on L2235331-02, is outside the acceptance criteria for silver (69%). A post digestion spike was performed and was within acceptance criteria.

The WG1663472-4 Laboratory Duplicate RPD for iron (24%), performed on L2235331-02, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

TCLP Metals

L2235331-02: The sample has elevated detection limits for all elements due to the prep dilution required by the sample matrix.

The WG1662792-2 LCS recovery, associated with L2235331-01, is above the acceptance criteria for mercury

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Case Narrative (continued)

(219%); however, the associated sample is non-detect to the RL for this target analyte. The results of the original analysis are reported.

Cyanide, Total

The WG1661176-2/-3 LCS/LCSD recoveries for cyanide, total (79%/79%), associated with L2235331-01, are 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:



Caitlin Walukevich

Title: Technical Director/Representative

Date: 07/26/22

ORGANICS

VOLATILES

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-02
Client ID: TK-LQ-RC04-06302022
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
Date Received: 07/01/22
Field Prep: Not Specified

Sample Depth:

Matrix: Oil
Analytical Method: 1,8260C
Analytical Date: 07/18/22 15:19
Analyst: KJD
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	2300	1100	1
1,1-Dichloroethane	ND		ug/kg	460	67.	1
Chloroform	ND		ug/kg	690	65.	1
Carbon tetrachloride	ND		ug/kg	460	110	1
1,2-Dichloropropane	ND		ug/kg	460	58.	1
Dibromochloromethane	ND		ug/kg	460	65.	1
1,1,2-Trichloroethane	ND		ug/kg	460	120	1
Tetrachloroethene	ND		ug/kg	230	91.	1
Chlorobenzene	ND		ug/kg	230	59.	1
Trichlorofluoromethane	ND		ug/kg	1800	320	1
1,2-Dichloroethane	ND		ug/kg	460	120	1
1,1,1-Trichloroethane	ND		ug/kg	230	77.	1
Bromodichloromethane	ND		ug/kg	230	50.	1
trans-1,3-Dichloropropene	ND		ug/kg	460	130	1
cis-1,3-Dichloropropene	ND		ug/kg	230	73.	1
1,3-Dichloropropene, Total	ND		ug/kg	230	73.	1
Bromoform	ND		ug/kg	1800	110	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	230	77.	1
Benzene	700		ug/kg	230	77.	1
Toluene	440	J	ug/kg	460	250	1
Ethylbenzene	ND		ug/kg	460	65.	1
Chloromethane	ND		ug/kg	1800	430	1
Bromomethane	ND		ug/kg	920	270	1
Vinyl chloride	ND		ug/kg	460	160	1
Chloroethane	ND		ug/kg	920	210	1
1,1-Dichloroethene	ND		ug/kg	460	110	1
trans-1,2-Dichloroethene	ND		ug/kg	690	63.	1
Trichloroethene	ND		ug/kg	230	63.	1

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-02
Client ID: TK-LQ-RC04-06302022
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
Date Received: 07/01/22
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	920	67.	1
1,3-Dichlorobenzene	ND		ug/kg	920	68.	1
1,4-Dichlorobenzene	ND		ug/kg	920	79.	1
Methyl tert butyl ether	ND		ug/kg	920	93.	1
p/m-Xylene	670	J	ug/kg	920	260	1
o-Xylene	240	J	ug/kg	460	130	1
Xylenes, Total	910	J	ug/kg	460	130	1
cis-1,2-Dichloroethene	ND		ug/kg	460	81.	1
1,2-Dichloroethene, Total	ND		ug/kg	460	63.	1
Styrene	150	J	ug/kg	460	91.	1
Dichlorodifluoromethane	ND		ug/kg	4600	420	1
Acetone	ND		ug/kg	4600	2200	1
Carbon disulfide	ND		ug/kg	4600	2100	1
2-Butanone	ND		ug/kg	4600	1000	1
4-Methyl-2-pentanone	ND		ug/kg	4600	590	1
2-Hexanone	ND		ug/kg	4600	550	1
Bromochloromethane	ND		ug/kg	920	95.	1
1,2-Dibromoethane	ND		ug/kg	460	130	1
n-Butylbenzene	ND		ug/kg	460	77.	1
sec-Butylbenzene	ND		ug/kg	460	68.	1
tert-Butylbenzene	ND		ug/kg	920	55.	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	1400	460	1
Isopropylbenzene	ND		ug/kg	460	50.	1
p-Isopropyltoluene	ND		ug/kg	460	50.	1
Naphthalene	76000		ug/kg	1800	300	1
n-Propylbenzene	ND		ug/kg	460	79.	1
1,2,3-Trichlorobenzene	ND		ug/kg	920	150	1
1,2,4-Trichlorobenzene	ND		ug/kg	920	120	1
1,3,5-Trimethylbenzene	430	J	ug/kg	920	89.	1
1,2,4-Trimethylbenzene	700	J	ug/kg	920	150	1
Methyl Acetate	ND		ug/kg	1800	440	1
Cyclohexane	ND		ug/kg	4600	250	1
1,4-Dioxane	ND		ug/kg	37000	16000	1
Freon-113	ND		ug/kg	1800	320	1
Methyl cyclohexane	ND		ug/kg	1800	280	1

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-02
Client ID: TK-LQ-RC04-06302022
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
Date Received: 07/01/22
Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	94		70-130

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-03
Client ID: TK-SD-RC04-06302022
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
Date Received: 07/01/22
Field Prep: Not Specified

Sample Depth:

Matrix: Oil
Analytical Method: 1,8260C
Analytical Date: 07/15/22 19:45
Analyst: LAC
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	710	67.	1
Carbon tetrachloride	ND		ug/kg	480	110	1
Tetrachloroethene	ND		ug/kg	240	93.	1
Chlorobenzene	ND		ug/kg	240	60.	1
1,2-Dichloroethane	ND		ug/kg	480	120	1
Benzene	870		ug/kg	240	79.	1
Vinyl chloride	ND		ug/kg	480	160	1
1,1-Dichloroethene	ND		ug/kg	480	110	1
Trichloroethene	ND		ug/kg	240	65.	1
1,4-Dichlorobenzene	ND		ug/kg	950	81.	1
2-Butanone	ND		ug/kg	4800	1000	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	94		70-130

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 07/15/22 10:49
 Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1663995-5					
Chloroform	ND		ug/kg	750	70.
Carbon tetrachloride	ND		ug/kg	500	120
Tetrachloroethene	ND		ug/kg	250	98.
Chlorobenzene	ND		ug/kg	250	64.
1,2-Dichloroethane	ND		ug/kg	500	130
Benzene	ND		ug/kg	250	83.
Vinyl chloride	ND		ug/kg	500	170
1,1-Dichloroethene	ND		ug/kg	500	120
Trichloroethene	ND		ug/kg	250	68.
1,4-Dichlorobenzene	130	J	ug/kg	1000	86.
2-Butanone	ND		ug/kg	5000	1100

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	99		70-130

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 07/18/22 13:32
 Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1664297-5					
Methylene chloride	ND		ug/kg	2500	1100
1,1-Dichloroethane	ND		ug/kg	500	72.
Chloroform	ND		ug/kg	750	70.
Carbon tetrachloride	ND		ug/kg	500	120
1,2-Dichloropropane	ND		ug/kg	500	62.
Dibromochloromethane	ND		ug/kg	500	70.
1,1,2-Trichloroethane	ND		ug/kg	500	130
Tetrachloroethene	ND		ug/kg	250	98.
Chlorobenzene	ND		ug/kg	250	64.
Trichlorofluoromethane	ND		ug/kg	2000	350
1,2-Dichloroethane	ND		ug/kg	500	130
1,1,1-Trichloroethane	ND		ug/kg	250	84.
Bromodichloromethane	ND		ug/kg	250	54.
trans-1,3-Dichloropropene	ND		ug/kg	500	140
cis-1,3-Dichloropropene	ND		ug/kg	250	79.
1,3-Dichloropropene, Total	ND		ug/kg	250	79.
Bromoform	ND		ug/kg	2000	120
1,1,2,2-Tetrachloroethane	ND		ug/kg	250	83.
Benzene	ND		ug/kg	250	83.
Toluene	ND		ug/kg	500	270
Ethylbenzene	ND		ug/kg	500	70.
Chloromethane	ND		ug/kg	2000	470
Bromomethane	340	J	ug/kg	1000	290
Vinyl chloride	ND		ug/kg	500	170
Chloroethane	ND		ug/kg	1000	230
1,1-Dichloroethene	ND		ug/kg	500	120
trans-1,2-Dichloroethene	ND		ug/kg	750	68.
Trichloroethene	ND		ug/kg	250	68.
1,2-Dichlorobenzene	ND		ug/kg	1000	72.

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 07/18/22 13:32
 Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1664297-5					
1,3-Dichlorobenzene	ND		ug/kg	1000	74.
1,4-Dichlorobenzene	ND		ug/kg	1000	86.
Methyl tert butyl ether	ND		ug/kg	1000	100
p/m-Xylene	ND		ug/kg	1000	280
o-Xylene	ND		ug/kg	500	140
Xylenes, Total	ND		ug/kg	500	140
cis-1,2-Dichloroethene	ND		ug/kg	500	88.
1,2-Dichloroethene, Total	ND		ug/kg	500	68.
Styrene	ND		ug/kg	500	98.
Dichlorodifluoromethane	ND		ug/kg	5000	460
Acetone	ND		ug/kg	5000	2400
Carbon disulfide	ND		ug/kg	5000	2300
2-Butanone	ND		ug/kg	5000	1100
4-Methyl-2-pentanone	ND		ug/kg	5000	640
2-Hexanone	ND		ug/kg	5000	590
Bromochloromethane	ND		ug/kg	1000	100
1,2-Dibromoethane	ND		ug/kg	500	140
n-Butylbenzene	ND		ug/kg	500	84.
sec-Butylbenzene	ND		ug/kg	500	73.
tert-Butylbenzene	ND		ug/kg	1000	59.
1,2-Dibromo-3-chloropropane	ND		ug/kg	1500	500
Isopropylbenzene	ND		ug/kg	500	54.
p-Isopropyltoluene	ND		ug/kg	500	54.
Naphthalene	ND		ug/kg	2000	320
n-Propylbenzene	ND		ug/kg	500	86.
1,2,3-Trichlorobenzene	ND		ug/kg	1000	160
1,2,4-Trichlorobenzene	ND		ug/kg	1000	140
1,3,5-Trimethylbenzene	ND		ug/kg	1000	96.
1,2,4-Trimethylbenzene	ND		ug/kg	1000	170

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 07/18/22 13:32
 Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1664297-5					
Methyl Acetate	ND		ug/kg	2000	480
Cyclohexane	ND		ug/kg	5000	270
1,4-Dioxane	ND		ug/kg	40000	18000
Freon-113	ND		ug/kg	2000	350
Methyl cyclohexane	ND		ug/kg	2000	300

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	97		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

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: WG1663995-3 WG1663995-4								
Chloroform	90		84		70-130	7		30
Carbon tetrachloride	90		79		70-130	13		30
Tetrachloroethene	90		82		70-130	9		30
Chlorobenzene	90		86		70-130	5		30
1,2-Dichloroethane	90		88		70-130	2		30
Benzene	90		84		70-130	7		30
Vinyl chloride	77		67		67-130	14		30
1,1-Dichloroethene	88		80		65-135	10		30
Trichloroethene	93		86		70-130	8		30
1,4-Dichlorobenzene	85		84		70-130	1		30
2-Butanone	86		90		70-130	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	98		100		70-130
Toluene-d8	97		98		70-130
4-Bromofluorobenzene	98		98		70-130
Dibromofluoromethane	101		100		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC

Project Number: RC04

Lab Number: L2235331

Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1664297-3 WG1664297-4								
Methylene chloride	92		94		70-130	2		30
1,1-Dichloroethane	96		94		70-130	2		30
Chloroform	95		96		70-130	1		30
Carbon tetrachloride	92		91		70-130	1		30
1,2-Dichloropropane	95		94		70-130	1		30
Dibromochloromethane	98		100		70-130	2		30
1,1,2-Trichloroethane	96		97		70-130	1		30
Tetrachloroethene	96		97		70-130	1		30
Chlorobenzene	95		96		70-130	1		30
Trichlorofluoromethane	77		88		70-139	13		30
1,2-Dichloroethane	93		94		70-130	1		30
1,1,1-Trichloroethane	96		95		70-130	1		30
Bromodichloromethane	97		98		70-130	1		30
trans-1,3-Dichloropropene	97		97		70-130	0		30
cis-1,3-Dichloropropene	101		100		70-130	1		30
Bromoform	102		100		70-130	2		30
1,1,2,2-Tetrachloroethane	96		87		70-130	10		30
Benzene	97		96		70-130	1		30
Toluene	90		90		70-130	0		30
Ethylbenzene	92		91		70-130	1		30
Chloromethane	64		59		52-130	8		30
Bromomethane	100		92		57-147	8		30
Vinyl chloride	76		69		67-130	10		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1664297-3 WG1664297-4								
Chloroethane	82		82		50-151	0		30
1,1-Dichloroethene	94		92		65-135	2		30
trans-1,2-Dichloroethene	98		97		70-130	1		30
Trichloroethene	99		103		70-130	4		30
1,2-Dichlorobenzene	94		95		70-130	1		30
1,3-Dichlorobenzene	94		94		70-130	0		30
1,4-Dichlorobenzene	90		89		70-130	1		30
Methyl tert butyl ether	100		101		66-130	1		30
p/m-Xylene	91		92		70-130	1		30
o-Xylene	96		96		70-130	0		30
cis-1,2-Dichloroethene	96		97		70-130	1		30
Styrene	91		92		70-130	1		30
Dichlorodifluoromethane	83		80		30-146	4		30
Acetone	90		91		54-140	1		30
Carbon disulfide	90		89		59-130	1		30
2-Butanone	87		80		70-130	8		30
4-Methyl-2-pentanone	96		93		70-130	3		30
2-Hexanone	88		86		70-130	2		30
Bromochloromethane	98		100		70-130	2		30
1,2-Dibromoethane	99		100		70-130	1		30
n-Butylbenzene	93		90		70-130	3		30
sec-Butylbenzene	94		92		70-130	2		30
tert-Butylbenzene	94		93		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1664297-3 WG1664297-4								
1,2-Dibromo-3-chloropropane	94		94		68-130	0		30
Isopropylbenzene	96		94		70-130	2		30
p-Isopropyltoluene	95		93		70-130	2		30
Naphthalene	96		94		70-130	2		30
n-Propylbenzene	95		92		70-130	3		30
1,2,3-Trichlorobenzene	94		95		70-130	1		30
1,2,4-Trichlorobenzene	94		94		70-130	0		30
1,3,5-Trimethylbenzene	96		93		70-130	3		30
1,2,4-Trimethylbenzene	95		93		70-130	2		30
Methyl Acetate	84		81		51-146	4		30
Cyclohexane	91		88		59-142	3		30
1,4-Dioxane	97		99		65-136	2		30
Freon-113	94		93		50-139	1		30
Methyl cyclohexane	94		92		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	96		96		70-130
Toluene-d8	98		99		70-130
4-Bromofluorobenzene	104		102		70-130
Dibromofluoromethane	98		99		70-130

SEMIVOLATILES

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-01 D
 Client ID: TK-SD-RC04-06302022
 Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
 Date Received: 07/01/22
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 07/19/22 10:45
 Analyst: SZ
 Percent Solids: 67%
 TCLP/SPLP Ext. Date: 07/11/22 16:22

Extraction Method: EPA 3510C
 Extraction Date: 07/13/22 07:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	20000	6900	2000
2,4-Dinitrotoluene	ND		ug/l	50000	3800	2000
Hexachlorobutadiene	ND		ug/l	20000	6000	2000
Hexachloroethane	ND		ug/l	20000	4400	2000
Nitrobenzene	ND		ug/l	20000	6600	2000
2,4,6-Trichlorophenol	ND		ug/l	50000	4900	2000
Pentachlorophenol	ND		ug/l	100000	20000	2000
2-Methylphenol	120000		ug/l	50000	11000	2000
3-Methylphenol/4-Methylphenol	590000		ug/l	50000	5500	2000
2,4,5-Trichlorophenol	ND		ug/l	50000	3800	2000
Pyridine	ND		ug/l	35000	9000	2000

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: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-02 D
 Client ID: TK-LQ-RC04-06302022
 Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
 Date Received: 07/01/22
 Field Prep: Not Specified

Sample Depth:

Matrix: Oil
 Analytical Method: 1,8270D
 Analytical Date: 07/19/22 11:09
 Analyst: SZ
 Percent Solids: Results reported on an 'AS RECEIVED' basis.
 TCLP/SPLP Ext. Date: 07/11/22 16:22

Extraction Method: EPA 3510C
 Extraction Date: 07/13/22 07:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	20000	6900	2000
2,4-Dinitrotoluene	ND		ug/l	50000	3800	2000
Hexachlorobutadiene	ND		ug/l	20000	6000	2000
Hexachloroethane	ND		ug/l	20000	4400	2000
Nitrobenzene	ND		ug/l	20000	6600	2000
2,4,6-Trichlorophenol	ND		ug/l	50000	4900	2000
Pentachlorophenol	ND		ug/l	100000	20000	2000
2-Methylphenol	190000		ug/l	50000	11000	2000
3-Methylphenol/4-Methylphenol	950000		ug/l	50000	5500	2000
2,4,5-Trichlorophenol	ND		ug/l	50000	3800	2000
Pyridine	ND		ug/l	35000	9000	2000

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: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-02 D
Client ID: TK-LQ-RC04-06302022
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
Date Received: 07/01/22
Field Prep: Not Specified

Sample Depth:

Matrix: Oil
Analytical Method: 1,8270D
Analytical Date: 07/19/22 14:00
Analyst: SZ
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3580A
Extraction Date: 07/09/22 10:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	480000	62000	20
1,2,4-Trichlorobenzene	ND		ug/kg	600000	69000	20
Hexachlorobenzene	ND		ug/kg	360000	67000	20
Bis(2-chloroethyl)ether	ND		ug/kg	540000	81000	20
2-Chloronaphthalene	ND		ug/kg	600000	60000	20
1,2-Dichlorobenzene	ND		ug/kg	600000	110000	20
1,3-Dichlorobenzene	ND		ug/kg	600000	100000	20
1,4-Dichlorobenzene	ND		ug/kg	600000	100000	20
3,3'-Dichlorobenzidine	ND		ug/kg	600000	160000	20
2,4-Dinitrotoluene	ND		ug/kg	600000	120000	20
2,6-Dinitrotoluene	ND		ug/kg	600000	100000	20
Fluoranthene	110000	J	ug/kg	360000	69000	20
4-Chlorophenyl phenyl ether	ND		ug/kg	600000	64000	20
4-Bromophenyl phenyl ether	ND		ug/kg	600000	92000	20
Bis(2-chloroisopropyl)ether	ND		ug/kg	720000	100000	20
Bis(2-chloroethoxy)methane	ND		ug/kg	650000	60000	20
Hexachlorobutadiene	ND		ug/kg	600000	88000	20
Hexachlorocyclopentadiene	ND		ug/kg	1700000	540000	20
Hexachloroethane	ND		ug/kg	480000	97000	20
Isophorone	ND		ug/kg	540000	78000	20
Naphthalene	80000	J	ug/kg	600000	73000	20
Nitrobenzene	ND		ug/kg	540000	89000	20
NDPA/DPA	ND		ug/kg	480000	68000	20
n-Nitrosodi-n-propylamine	ND		ug/kg	600000	93000	20
Bis(2-ethylhexyl)phthalate	ND		ug/kg	600000	210000	20
Butyl benzyl phthalate	ND		ug/kg	600000	150000	20
Di-n-butylphthalate	ND		ug/kg	600000	110000	20
Di-n-octylphthalate	ND		ug/kg	600000	200000	20

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-02 D
 Client ID: TK-LQ-RC04-06302022
 Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
 Date Received: 07/01/22
 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	600000	56000	20
Dimethyl phthalate	ND		ug/kg	600000	130000	20
Benzo(a)anthracene	ND		ug/kg	360000	68000	20
Benzo(a)pyrene	ND		ug/kg	480000	150000	20
Benzo(b)fluoranthene	ND		ug/kg	360000	100000	20
Benzo(k)fluoranthene	ND		ug/kg	360000	96000	20
Chrysene	ND		ug/kg	360000	62000	20
Acenaphthylene	ND		ug/kg	480000	93000	20
Anthracene	ND		ug/kg	360000	120000	20
Benzo(ghi)perylene	ND		ug/kg	480000	71000	20
Fluorene	ND		ug/kg	600000	58000	20
Phenanthrene	100000	J	ug/kg	360000	73000	20
Dibenzo(a,h)anthracene	ND		ug/kg	360000	69000	20
Indeno(1,2,3-cd)pyrene	ND		ug/kg	480000	84000	20
Pyrene	81000	J	ug/kg	360000	60000	20
Biphenyl	ND		ug/kg	1400000	78000	20
4-Chloroaniline	ND		ug/kg	600000	110000	20
2-Nitroaniline	ND		ug/kg	600000	120000	20
3-Nitroaniline	ND		ug/kg	600000	110000	20
4-Nitroaniline	ND		ug/kg	600000	250000	20
Dibenzofuran	ND		ug/kg	600000	57000	20
2-Methylnaphthalene	ND		ug/kg	720000	73000	20
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	600000	63000	20
Acetophenone	ND		ug/kg	600000	74000	20
2,4,6-Trichlorophenol	ND		ug/kg	360000	110000	20
p-Chloro-m-cresol	ND		ug/kg	600000	90000	20
2-Chlorophenol	ND		ug/kg	600000	71000	20
2,4-Dichlorophenol	ND		ug/kg	540000	97000	20
2,4-Dimethylphenol	370000	J	ug/kg	600000	200000	20
2-Nitrophenol	ND		ug/kg	1300000	220000	20
4-Nitrophenol	ND		ug/kg	840000	240000	20
2,4-Dinitrophenol	ND		ug/kg	2900000	280000	20
4,6-Dinitro-o-cresol	ND		ug/kg	1600000	290000	20
Pentachlorophenol	ND		ug/kg	480000	130000	20
Phenol	15000000		ug/kg	600000	91000	20
2-Methylphenol	4000000		ug/kg	600000	93000	20
3-Methylphenol/4-Methylphenol	12000000		ug/kg	860000	94000	20

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-02 D
Client ID: TK-LQ-RC04-06302022
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
Date Received: 07/01/22
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	600000	120000	20
Benzoic Acid	ND		ug/kg	1900000	610000	20
Benzyl Alcohol	ND		ug/kg	600000	180000	20
Carbazole	81000	J	ug/kg	600000	58000	20
1,4-Dioxane	ND		ug/kg	90000	28000	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: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/13/22 10:32
Analyst: SZ

Extraction Method: EPA 3580A
Extraction Date: 07/09/22 10:18

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1660745-1					
Acenaphthene	ND		ug/kg	37000	4700
1,2,4-Trichlorobenzene	ND		ug/kg	46000	5200
Hexachlorobenzene	ND		ug/kg	27000	5100
Bis(2-chloroethyl)ether	ND		ug/kg	41000	6200
2-Chloronaphthalene	ND		ug/kg	46000	4500
1,2-Dichlorobenzene	ND		ug/kg	46000	8200
1,3-Dichlorobenzene	ND		ug/kg	46000	7900
1,4-Dichlorobenzene	ND		ug/kg	46000	8000
3,3'-Dichlorobenzidine	ND		ug/kg	46000	12000
2,4-Dinitrotoluene	ND		ug/kg	46000	9200
2,6-Dinitrotoluene	ND		ug/kg	46000	7800
Fluoranthene	ND		ug/kg	27000	5200
4-Chlorophenyl phenyl ether	ND		ug/kg	46000	4900
4-Bromophenyl phenyl ether	ND		ug/kg	46000	7000
Bis(2-chloroisopropyl)ether	ND		ug/kg	55000	7800
Bis(2-chloroethoxy)methane	ND		ug/kg	49000	4600
Hexachlorobutadiene	ND		ug/kg	46000	6700
Hexachlorocyclopentadiene	ND		ug/kg	130000	41000
Hexachloroethane	ND		ug/kg	37000	7400
Isophorone	ND		ug/kg	41000	5900
Naphthalene	ND		ug/kg	46000	5600
Nitrobenzene	ND		ug/kg	41000	6800
NDPA/DPA	ND		ug/kg	37000	5200
n-Nitrosodi-n-propylamine	ND		ug/kg	46000	7100
Bis(2-ethylhexyl)phthalate	ND		ug/kg	46000	16000
Butyl benzyl phthalate	ND		ug/kg	46000	12000
Di-n-butylphthalate	ND		ug/kg	46000	8700
Di-n-octylphthalate	ND		ug/kg	46000	16000
Diethyl phthalate	ND		ug/kg	46000	4200

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/13/22 10:32
Analyst: SZ

Extraction Method: EPA 3580A
Extraction Date: 07/09/22 10:18

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1660745-1					
Dimethyl phthalate	ND		ug/kg	46000	9600
Benzo(a)anthracene	ND		ug/kg	27000	5200
Benzo(a)pyrene	ND		ug/kg	37000	11000
Benzo(b)fluoranthene	ND		ug/kg	27000	7700
Benzo(k)fluoranthene	ND		ug/kg	27000	7300
Chrysene	ND		ug/kg	27000	4800
Acenaphthylene	ND		ug/kg	37000	7100
Anthracene	ND		ug/kg	27000	8900
Benzo(ghi)perylene	ND		ug/kg	37000	5400
Fluorene	ND		ug/kg	46000	4400
Phenanthrene	ND		ug/kg	27000	5600
Dibenzo(a,h)anthracene	ND		ug/kg	27000	5300
Indeno(1,2,3-cd)pyrene	ND		ug/kg	37000	6400
Pyrene	ND		ug/kg	27000	4600
Biphenyl	ND		ug/kg	100000	6000
4-Chloroaniline	ND		ug/kg	46000	8300
2-Nitroaniline	ND		ug/kg	46000	8800
3-Nitroaniline	ND		ug/kg	46000	8600
4-Nitroaniline	ND		ug/kg	46000	19000
Dibenzofuran	ND		ug/kg	46000	4300
2-Methylnaphthalene	ND		ug/kg	55000	5500
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	46000	4800
Acetophenone	ND		ug/kg	46000	5700
2,4,6-Trichlorophenol	ND		ug/kg	27000	8700
p-Chloro-m-cresol	ND		ug/kg	46000	6800
2-Chlorophenol	ND		ug/kg	46000	5400
2,4-Dichlorophenol	ND		ug/kg	41000	7400
2,4-Dimethylphenol	ND		ug/kg	46000	15000
2-Nitrophenol	ND		ug/kg	99000	17000

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/13/22 10:32
Analyst: SZ

Extraction Method: EPA 3580A
Extraction Date: 07/09/22 10:18

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1660745-1					
4-Nitrophenol	ND		ug/kg	64000	19000
2,4-Dinitrophenol	ND		ug/kg	220000	21000
4,6-Dinitro-o-cresol	ND		ug/kg	120000	22000
Pentachlorophenol	ND		ug/kg	37000	10000
Phenol	ND		ug/kg	46000	6900
2-Methylphenol	ND		ug/kg	46000	7100
3-Methylphenol/4-Methylphenol	ND		ug/kg	66000	7200
2,4,5-Trichlorophenol	ND		ug/kg	46000	8800
Benzoic Acid	ND		ug/kg	150000	46000
Benzyl Alcohol	ND		ug/kg	46000	14000
Carbazole	ND		ug/kg	46000	4400
1,4-Dioxane	ND		ug/kg	6900	2100

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	95		25-120
Phenol-d6	91		10-120
Nitrobenzene-d5	78		23-120
2-Fluorobiphenyl	94		30-120
2,4,6-Tribromophenol	95		10-136
4-Terphenyl-d14	90		18-120

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D
 Analytical Date: 07/13/22 19:33
 Analyst: SLR
 TCLP/SPLP Extraction Date: 07/11/22 16:22

Extraction Method: EPA 3510C
 Extraction Date: 07/13/22 07:52

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Semivolatiles by EPA 1311 - Westborough Lab for sample(s): 01 Batch: WG1662214-1					
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	5.6	J	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	71		21-120
Phenol-d6	66		10-120
Nitrobenzene-d5	74		23-120
2-Fluorobiphenyl	69		15-120
2,4,6-Tribromophenol	70		10-120
4-Terphenyl-d14	73		33-120

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D
 Analytical Date: 07/13/22 19:33
 Analyst: SLR
 TCLP/SPLP Extraction Date: 07/11/22 16:22

Extraction Method: EPA 3510C
 Extraction Date: 07/13/22 07:52

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Semivolatiles by EPA 1311 - Westborough Lab for sample(s): 02 Batch: WG1662216-1					
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	5.6	J	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	71		21-120
Phenol-d6	66		10-120
Nitrobenzene-d5	74		23-120
2-Fluorobiphenyl	69		15-120
2,4,6-Tribromophenol	70		10-120
4-Terphenyl-d14	73		33-120

Lab Control Sample Analysis Batch Quality Control

Project Name: RITC

Project Number: RC04

Lab Number: L2235331

Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1660745-2 WG1660745-3								
Acenaphthene	90		96		31-137	6		50
1,2,4-Trichlorobenzene	80		87		38-107	8		50
Hexachlorobenzene	92		102		40-140	10		50
Bis(2-chloroethyl)ether	76		80		40-140	5		50
2-Chloronaphthalene	82		91		40-140	10		50
1,2-Dichlorobenzene	83		90		40-140	8		50
1,3-Dichlorobenzene	87		89		40-140	2		50
1,4-Dichlorobenzene	84		90		28-104	7		50
3,3'-Dichlorobenzidine	74		78		40-140	5		50
2,4-Dinitrotoluene	85		93		40-132	9		50
2,6-Dinitrotoluene	79		82		40-140	4		50
Fluoranthene	84		90		40-140	7		50
4-Chlorophenyl phenyl ether	90		96		40-140	6		50
4-Bromophenyl phenyl ether	87		89		40-140	2		50
Bis(2-chloroisopropyl)ether	66		69		40-140	4		50
Bis(2-chloroethoxy)methane	72		77		40-117	7		50
Hexachlorobutadiene	92		100		40-140	8		50
Hexachlorocyclopentadiene	12	Q	15	Q	40-140	22		50
Hexachloroethane	82		91		40-140	10		50
Isophorone	66		74		40-140	11		50
Naphthalene	83		89		40-140	7		50
Nitrobenzene	72		82		40-140	13		50
NDPA/DPA	87		94		36-157	8		50

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC

Project Number: RC04

Lab Number: L2235331

Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1660745-2 WG1660745-3								
n-Nitrosodi-n-propylamine	73		77		32-121	5		50
Bis(2-ethylhexyl)phthalate	85		91		40-140	7		50
Butyl benzyl phthalate	79		85		40-140	7		50
Di-n-butylphthalate	80		88		40-140	10		50
Di-n-octylphthalate	81		86		40-140	6		50
Diethyl phthalate	89		96		40-140	8		50
Dimethyl phthalate	80		92		40-140	14		50
Benzo(a)anthracene	92		100		40-140	8		50
Benzo(a)pyrene	94		103		40-140	9		50
Benzo(b)fluoranthene	95		105		40-140	10		50
Benzo(k)fluoranthene	92		94		40-140	2		50
Chrysene	95		102		40-140	7		50
Acenaphthylene	82		91		40-140	10		50
Anthracene	84		90		40-140	7		50
Benzo(ghi)perylene	87		96		40-140	10		50
Fluorene	90		95		40-140	5		50
Phenanthrene	86		92		40-140	7		50
Dibenzo(a,h)anthracene	81		92		40-140	13		50
Indeno(1,2,3-cd)pyrene	91		103		40-140	12		50
Pyrene	85		96		35-142	12		50
Biphenyl	78		86		37-127	10		50
4-Chloroaniline	72		84		40-140	15		50
2-Nitroaniline	78		83		47-134	6		50

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1660745-2 WG1660745-3								
3-Nitroaniline	80		85		26-129	6		50
4-Nitroaniline	76		84		41-125	10		50
Dibenzofuran	92		98		40-140	6		50
2-Methylnaphthalene	83		92		40-140	10		50
1,2,4,5-Tetrachlorobenzene	90		97		40-117	7		50
Acetophenone	72		78		14-144	8		50
2,4,6-Trichlorophenol	84		94		30-130	11		50
p-Chloro-m-cresol	85		87		26-103	2		50
2-Chlorophenol	82		90		25-102	9		50
2,4-Dichlorophenol	79		85		30-130	7		50
2,4-Dimethylphenol	73		78		30-130	7		50
2-Nitrophenol	77		76		30-130	1		50
4-Nitrophenol	92		87		11-114	6		50
2,4-Dinitrophenol	113		116		4-130	3		50
4,6-Dinitro-o-cresol	66		72		10-130	9		50
Pentachlorophenol	111	Q	118	Q	17-109	6		50
Phenol	74		82		26-90	10		50
2-Methylphenol	77		82		30-130.	6		50
3-Methylphenol/4-Methylphenol	78		85		30-130	9		50
2,4,5-Trichlorophenol	92		98		30-130	6		50
Benzoic Acid	60		65		10-110	8		50
Benzyl Alcohol	73		84		40-140	14		50
Carbazole	86		91		54-128	6		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1660745-2 WG1660745-3								
1,4-Dioxane	139		176	Q	40-140	23		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	91		91		25-120
Phenol-d6	81		89		10-120
Nitrobenzene-d5	75		80		23-120
2-Fluorobiphenyl	83		88		30-120
2,4,6-Tribromophenol	92		93		10-136
4-Terphenyl-d14	83		88		18-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Semivolatiles by EPA 1311 - Westborough Lab Associated sample(s): 01 Batch: WG1662214-2 WG1662214-3								
Hexachlorobenzene	70		49		40-140	35	Q	30
2,4-Dinitrotoluene	84		60		40-132	33	Q	30
Hexachlorobutadiene	68		47		28-111	37	Q	30
Hexachloroethane	65		44		21-105	39	Q	30
Nitrobenzene	76		52		40-140	38	Q	30
2,4,6-Trichlorophenol	78		54		30-130	36	Q	30
Pentachlorophenol	81		58		9-103	33	Q	30
2-Methylphenol	77		52		30-130	39	Q	30
3-Methylphenol/4-Methylphenol	85		59		30-130	36	Q	30
2,4,5-Trichlorophenol	78		55		30-130	35	Q	30
Pyridine	46		22		10-66	71	Q	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	78		53		21-120
Phenol-d6	75		52		10-120
Nitrobenzene-d5	82		54		23-120
2-Fluorobiphenyl	78		55		15-120
2,4,6-Tribromophenol	75		53		10-120
4-Terphenyl-d14	79		57		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Semivolatiles by EPA 1311 - Westborough Lab Associated sample(s): 02 Batch: WG1662216-2 WG1662216-3								
Hexachlorobenzene	70		49		40-140	35	Q	30
2,4-Dinitrotoluene	84		60		40-132	33	Q	30
Hexachlorobutadiene	68		47		28-111	37	Q	30
Hexachloroethane	65		44		21-105	39	Q	30
Nitrobenzene	76		52		40-140	38	Q	30
2,4,6-Trichlorophenol	78		54		30-130	36	Q	30
Pentachlorophenol	81		58		9-103	33	Q	30
2-Methylphenol	77		52		30-130	39	Q	30
3-Methylphenol/4-Methylphenol	85		59		30-130	36	Q	30
2,4,5-Trichlorophenol	78		55		30-130	35	Q	30
Pyridine	46		22		10-66	71	Q	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	78		53		21-120
Phenol-d6	75		52		10-120
Nitrobenzene-d5	82		54		23-120
2-Fluorobiphenyl	78		55		15-120
2,4,6-Tribromophenol	75		53		10-120
4-Terphenyl-d14	79		57		33-120

PCBS

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-02
Client ID: TK-LQ-RC04-06302022
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
Date Received: 07/01/22
Field Prep: Not Specified

Sample Depth:

Matrix: Oil
Analytical Method: 1,8082A
Analytical Date: 07/12/22 10:53
Analyst: MEO
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3580A
Extraction Date: 07/09/22 08:19
Cleanup Method: EPA 3665A
Cleanup Date: 07/09/22
Cleanup Method: EPA 3660B
Cleanup Date: 07/09/22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		mg/kg	4.09	0.364	1	A
Aroclor 1221	ND		mg/kg	4.09	0.410	1	A
Aroclor 1232	ND		mg/kg	4.09	0.868	1	A
Aroclor 1242	ND		mg/kg	4.09	0.552	1	A
Aroclor 1248	ND		mg/kg	4.09	0.614	1	A
Aroclor 1254	ND		mg/kg	4.09	0.448	1	A
Aroclor 1260	ND		mg/kg	4.09	0.756	1	A
Aroclor 1262	ND		mg/kg	4.09	0.520	1	A
Aroclor 1268	ND		mg/kg	4.09	0.424	1	A
PCBs, Total	ND		mg/kg	4.09	0.364	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	A
Decachlorobiphenyl	71		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	82		30-150	B

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 07/12/22 02:06
Analyst: MEO

Extraction Method: EPA 3580A
Extraction Date: 07/09/22 11:00
Cleanup Method: EPA 3665A
Cleanup Date: 07/09/22
Cleanup Method: EPA 3660B
Cleanup Date: 07/09/22

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 02 Batch: WG1664339-1						
Aroclor 1016	ND		mg/kg	4.62	0.411	A
Aroclor 1221	ND		mg/kg	4.62	0.463	A
Aroclor 1232	ND		mg/kg	4.62	0.980	A
Aroclor 1242	ND		mg/kg	4.62	0.623	A
Aroclor 1248	ND		mg/kg	4.62	0.694	A
Aroclor 1254	ND		mg/kg	4.62	0.506	A
Aroclor 1260	ND		mg/kg	4.62	0.854	A
Aroclor 1262	ND		mg/kg	4.62	0.587	A
Aroclor 1268	ND		mg/kg	4.62	0.479	A
PCBs, Total	ND		mg/kg	4.62	0.411	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	100		30-150	A
Decachlorobiphenyl	126		30-150	A
2,4,5,6-Tetrachloro-m-xylene	97		30-150	B
Decachlorobiphenyl	136		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 02 Batch: WG1664339-2 WG1664339-3									
Aroclor 1016	113		114		40-140	1		50	A
Aroclor 1260	103		104		40-140	1		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	110		111		30-150	A
Decachlorobiphenyl	139		140		30-150	A
2,4,5,6-Tetrachloro-m-xylene	106		107		30-150	B
Decachlorobiphenyl	150		157	Q	30-150	B

PESTICIDES

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-01
Client ID: TK-SD-RC04-06302022
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
Date Received: 07/01/22
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/15/22 15:26
Analyst: MMG
Percent Solids: 67%
TCLP/SPLP Ext. Date: 07/11/22 16:22

Extraction Method: EPA 3510C
Extraction Date: 07/13/22 07:49
Cleanup Method: EPA 3620B
Cleanup Date: 07/14/22
Cleanup Method: EPA 3660B
Cleanup Date: 07/14/22

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	44		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	36		30-150	B
Decachlorobiphenyl	73		30-150	B

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-01 D
Client ID: TK-SD-RC04-06302022
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
Date Received: 07/01/22
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/15/22 13:00
Analyst: AKM
Percent Solids: 67%
TCLP/SPLP Ext. Date: 07/11/22 16:22
Methylation Date: 07/14/22 06:11

Extraction Method: EPA 8151A
Extraction Date: 07/13/22 04:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.125	0.006	5	A
2,4,5-TP (Silvex)	ND		mg/l	0.025	0.007	5	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	111		30-150	A
DCAA	15	Q	30-150	B

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-02
Client ID: TK-LQ-RC04-06302022
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
Date Received: 07/01/22
Field Prep: Not Specified

Sample Depth:

Matrix: Oil
Analytical Method: 1,8081B
Analytical Date: 07/15/22 15:37
Analyst: MMG
Percent Solids: Results reported on an 'AS RECEIVED' basis.
TCLP/SPLP Ext. Date: 07/11/22 16:22

Extraction Method: EPA 3510C
Extraction Date: 07/13/22 07:49
Cleanup Method: EPA 3620B
Cleanup Date: 07/14/22
Cleanup Method: EPA 3660B
Cleanup Date: 07/14/22

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	41		30-150	A
Decachlorobiphenyl	60		30-150	A
2,4,5,6-Tetrachloro-m-xylene	21	Q	30-150	B
Decachlorobiphenyl	60		30-150	B

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-02 D
 Client ID: TK-LQ-RC04-06302022
 Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
 Date Received: 07/01/22
 Field Prep: Not Specified

Sample Depth:

Matrix: Oil
 Analytical Method: 1,8151A
 Analytical Date: 07/15/22 15:39
 Analyst: AKM
 Percent Solids: Results reported on an 'AS RECEIVED' basis.
 TCLP/SPLP Ext. Date: 07/11/22 16:22
 Methylation Date: 07/14/22 06:11

Extraction Method: EPA 8151A
 Extraction Date: 07/13/22 04:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.500	0.025	20	A
2,4,5-TP (Silvex)	ND		mg/l	0.100	0.027	20	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	0	Q	30-150	A
DCAA	0	Q	30-150	B

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8151A
 Analytical Date: 07/15/22 11:48
 Analyst: AKM
 TCLP/SPLP Extraction Date: 07/10/22 17:50
 Methylation Date: 07/14/22 06:11

Extraction Method: EPA 8151A
 Extraction Date: 07/13/22 04:23

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Herbicides by EPA 1311 - Westborough Lab for sample(s): 01 Batch: WG1662112-1						
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	67		30-150	A
DCAA	63		30-150	B

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8151A
 Analytical Date: 07/15/22 11:48
 Analyst: AKM
 TCLP/SPLP Extraction Date: 07/10/22 17:50
 Methylation Date: 07/14/22 06:11

Extraction Method: EPA 8151A
 Extraction Date: 07/13/22 04:23

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Herbicides by EPA 1311 - Westborough Lab for sample(s): 02 Batch: WG1662113-1						
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	67		30-150	A
DCAA	63		30-150	B

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8081B
 Analytical Date: 07/15/22 14:53
 Analyst: MMG
 TCLP/SPLP Extraction Date: 07/10/22 17:50

Extraction Method: EPA 3510C
 Extraction Date: 07/13/22 07:49
 Cleanup Method: EPA 3620B
 Cleanup Date: 07/14/22
 Cleanup Method: EPA 3660B
 Cleanup Date: 07/14/22

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Pesticides by EPA 1311 - Westborough Lab for sample(s): 01 Batch: WG1662205-1						
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	64		30-150	A
Decachlorobiphenyl	86		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	102		30-150	B

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8081B
 Analytical Date: 07/15/22 14:53
 Analyst: MMG
 TCLP/SPLP Extraction Date: 07/10/22 17:50

Extraction Method: EPA 3510C
 Extraction Date: 07/13/22 07:49
 Cleanup Method: EPA 3620B
 Cleanup Date: 07/14/22
 Cleanup Method: EPA 3660B
 Cleanup Date: 07/14/22

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Pesticides by EPA 1311 - Westborough Lab for sample(s): 02 Batch: WG1662211-1						
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	64		30-150	A
Decachlorobiphenyl	86		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	102		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

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 Batch: WG1662112-2 WG1662112-3									
2,4-D	176	Q	354	Q	30-150	67	Q	25	A
2,4,5-TP (Silvex)	45		64		30-150	35	Q	25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	48		68		30-150	A
DCAA	44		59		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Herbicides by EPA 1311 - Westborough Lab Associated sample(s): 02 Batch: WG1662113-2 WG1662113-3									
2,4-D	176	Q	354	Q	30-150	67	Q	25	A
2,4,5-TP (Silvex)	45		64		30-150	35	Q	25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	48		68		30-150	A
DCAA	44		59		30-150	B

Lab Control Sample Analysis **Batch Quality Control**

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

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 Batch: WG1662205-2 WG1662205-3									
Lindane	74		82		30-150	10		20	A
Heptachlor	73		82		30-150	12		20	A
Heptachlor epoxide	69		79		30-150	14		20	A
Endrin	70		82		30-150	16		20	A
Methoxychlor	70		85		30-150	19		20	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		68		30-150	A
Decachlorobiphenyl	75		93		30-150	A
2,4,5,6-Tetrachloro-m-xylene	65		68		30-150	B
Decachlorobiphenyl	89		114		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Pesticides by EPA 1311 - Westborough Lab Associated sample(s): 02 Batch: WG1662211-2 WG1662211-3									
Lindane	74		82		30-150	10		20	A
Heptachlor	73		82		30-150	12		20	A
Heptachlor epoxide	69		79		30-150	14		20	A
Endrin	70		82		30-150	16		20	A
Methoxychlor	70		85		30-150	19		20	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		68		30-150	A
Decachlorobiphenyl	75		93		30-150	A
2,4,5,6-Tetrachloro-m-xylene	65		68		30-150	B
Decachlorobiphenyl	89		114		30-150	B

METALS

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-01
 Client ID: TK-SD-RC04-06302022
 Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
 Date Received: 07/01/22
 Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 07/11/22 16:22
 Matrix: Soil
 Percent Solids: 67%

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	0.111	J	mg/l	1.00	0.019	1	07/14/22 15:37	07/18/22 07:32	EPA 3015	1,6010D	EW
Barium, TCLP	ND		mg/l	0.500	0.021	1	07/14/22 15:37	07/18/22 07:32	EPA 3015	1,6010D	EW
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	07/14/22 15:37	07/18/22 07:32	EPA 3015	1,6010D	EW
Chromium, TCLP	ND		mg/l	0.200	0.021	1	07/14/22 15:37	07/18/22 07:32	EPA 3015	1,6010D	EW
Lead, TCLP	ND		mg/l	0.500	0.027	1	07/14/22 15:37	07/18/22 07:32	EPA 3015	1,6010D	EW
Mercury, TCLP	0.0059	J	mg/l	0.0100	0.0046	1	07/14/22 16:48	07/15/22 07:45	EPA 7470A	1,7470A	DMB
Selenium, TCLP	ND		mg/l	0.500	0.035	1	07/14/22 15:37	07/18/22 07:32	EPA 3015	1,6010D	EW
Silver, TCLP	ND		mg/l	0.100	0.028	1	07/14/22 15:37	07/18/22 07:32	EPA 3015	1,6010D	EW



Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-02
 Client ID: TK-LQ-RC04-06302022
 Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
 Date Received: 07/01/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Oil
 Percent Solids: Results are reported on an 'AS RECEIVED' basis.

TCLP/SPLP Ext. Date: 07/11/22 16:22

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	0.250	J	mg/l	2.50	0.048	1	07/14/22 15:37	07/17/22 17:43	EPA 3015	1,6010D	DL
Barium, TCLP	ND		mg/l	1.25	0.053	1	07/14/22 15:37	07/17/22 17:43	EPA 3015	1,6010D	DL
Cadmium, TCLP	ND		mg/l	0.250	0.025	1	07/14/22 15:37	07/17/22 17:43	EPA 3015	1,6010D	DL
Chromium, TCLP	ND		mg/l	0.500	0.053	1	07/14/22 15:37	07/17/22 17:43	EPA 3015	1,6010D	DL
Lead, TCLP	ND		mg/l	1.25	0.068	1	07/14/22 15:37	07/17/22 17:43	EPA 3015	1,6010D	DL
Mercury, TCLP	ND		mg/l	0.0200	0.0092	1	07/15/22 15:01	07/18/22 11:34	EPA 7470A	1,7470A	AW
Selenium, TCLP	ND		mg/l	0.500	0.088	1	07/14/22 15:37	07/17/22 17:43	EPA 3015	1,6010D	DL
Silver, TCLP	ND		mg/l	0.250	0.070	1	07/14/22 15:37	07/17/22 17:43	EPA 3015	1,6010D	DL



Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-02
 Client ID: TK-LQ-RC04-06302022
 Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
 Date Received: 07/01/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Oil
 Percent Solids: Results are reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	23.1	J	mg/kg	32.4	8.74	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Antimony, Total	ND		mg/kg	16.2	1.23	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Arsenic, Total	5.14		mg/kg	3.24	0.673	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Barium, Total	ND		mg/kg	3.24	0.563	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Beryllium, Total	ND		mg/kg	1.62	0.107	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Cadmium, Total	ND		mg/kg	3.24	0.317	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Calcium, Total	16.9	J	mg/kg	32.4	11.3	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Chromium, Total	ND		mg/kg	3.24	0.311	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Cobalt, Total	ND		mg/kg	6.47	0.537	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Copper, Total	0.938	J	mg/kg	3.24	0.835	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Iron, Total	344		mg/kg	16.2	2.92	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Lead, Total	1.97	J	mg/kg	16.2	0.867	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Magnesium, Total	5.70	J	mg/kg	32.4	4.98	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Manganese, Total	1.23	J	mg/kg	3.24	0.514	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Mercury, Total	0.159		mg/kg	0.074	0.048	1	07/16/22 11:25	07/18/22 13:42	EPA 7471B	1,7471B	AW
Nickel, Total	1.13	J	mg/kg	8.09	0.783	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Potassium, Total	1550		mg/kg	809	46.6	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Selenium, Total	1.42	J	mg/kg	6.47	0.835	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Silver, Total	ND		mg/kg	1.77	0.502	1	07/18/22 11:26	07/18/22 17:24	EPA 3050B	1,6010D	SB
Sodium, Total	101000		mg/kg	647	10.2	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Thallium, Total	ND		mg/kg	6.47	1.02	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Vanadium, Total	2.59	J	mg/kg	3.24	0.657	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB
Zinc, Total	3.43	J	mg/kg	16.2	0.948	2	07/16/22 07:15	07/18/22 09:44	EPA 3050B	1,6010D	SB



Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

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 Batch: WG1662787-1										
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	07/14/22 15:37	07/18/22 07:09	1,6010D	EW
Barium, TCLP	ND		mg/l	0.500	0.021	1	07/14/22 15:37	07/18/22 07:09	1,6010D	EW
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	07/14/22 15:37	07/18/22 07:09	1,6010D	EW
Chromium, TCLP	ND		mg/l	0.200	0.021	1	07/14/22 15:37	07/18/22 07:09	1,6010D	EW
Lead, TCLP	ND		mg/l	0.500	0.027	1	07/14/22 15:37	07/18/22 07:09	1,6010D	EW
Selenium, TCLP	ND		mg/l	0.500	0.035	1	07/14/22 15:37	07/18/22 07:09	1,6010D	EW
Silver, TCLP	ND		mg/l	0.100	0.028	1	07/14/22 15:37	07/18/22 07:09	1,6010D	EW

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 07/10/22 17:50

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 Batch: WG1662792-1										
Mercury, TCLP	0.0009	J	mg/l	0.0010	0.0005	1	07/14/22 16:48	07/15/22 07:38	1,7470A	DMB

Prep Information

Digestion Method: EPA 7470A
TCLP/SPLP Extraction Date: 07/10/22 17:50

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): 02 Batch: WG1662964-1										
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	07/14/22 15:37	07/17/22 17:21	1,6010D	DL
Barium, TCLP	ND		mg/l	0.500	0.021	1	07/14/22 15:37	07/17/22 17:21	1,6010D	DL
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	07/14/22 15:37	07/17/22 17:21	1,6010D	DL
Chromium, TCLP	ND		mg/l	0.200	0.021	1	07/14/22 15:37	07/17/22 17:21	1,6010D	DL
Lead, TCLP	ND		mg/l	0.500	0.027	1	07/14/22 15:37	07/17/22 17:21	1,6010D	DL
Selenium, TCLP	ND		mg/l	0.200	0.035	1	07/14/22 15:37	07/17/22 17:21	1,6010D	DL
Silver, TCLP	ND		mg/l	0.100	0.028	1	07/14/22 15:37	07/17/22 17:21	1,6010D	DL

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 07/10/22 17:50

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): 02 Batch: WG1663414-1										
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	07/15/22 15:01	07/18/22 11:27	1,7470A	AW

Prep Information

Digestion Method: EPA 7470A
TCLP/SPLP Extraction Date: 07/10/22 17:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 02 Batch: WG1663472-1										
Aluminum, Total	ND		mg/kg	16.7	4.50	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Antimony, Total	0.733	J	mg/kg	8.33	0.633	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Arsenic, Total	ND		mg/kg	1.67	0.347	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Barium, Total	ND		mg/kg	1.67	0.290	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Beryllium, Total	ND		mg/kg	0.833	0.055	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Cadmium, Total	ND		mg/kg	1.67	0.163	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Calcium, Total	ND		mg/kg	16.7	5.83	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Chromium, Total	ND		mg/kg	1.67	0.160	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Cobalt, Total	ND		mg/kg	3.33	0.277	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Copper, Total	ND		mg/kg	1.67	0.430	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Iron, Total	ND		mg/kg	8.33	1.50	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Lead, Total	ND		mg/kg	8.33	0.447	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Magnesium, Total	ND		mg/kg	16.7	2.57	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Manganese, Total	ND		mg/kg	1.67	0.265	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Nickel, Total	ND		mg/kg	4.17	0.403	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Potassium, Total	ND		mg/kg	417	24.0	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Selenium, Total	0.600	J	mg/kg	3.33	0.430	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Sodium, Total	ND		mg/kg	333	5.25	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Thallium, Total	ND		mg/kg	3.33	0.525	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
Vanadium, Total	ND		mg/kg	1.67	0.338	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB



Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Method Blank Analysis Batch Quality Control

Zinc, Total	ND	mg/kg	8.33	0.488	1	07/16/22 07:15	07/18/22 09:16	1,6010D	SB
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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): 02 Batch: WG1663473-1									
Mercury, Total	ND	mg/kg	0.083	0.054	1	07/16/22 11:25	07/18/22 13:36	1,7471B	AW

Prep Information

Digestion Method: EPA 7471B

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 02 Batch: WG1664145-1									
Silver, Total	ND	mg/kg	0.980	0.277	1	07/18/22 11:26	07/18/22 16:59	1,6010D	SB

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01 Batch: WG1662787-2								
Arsenic, TCLP	99		-		75-125	-		20
Barium, TCLP	95		-		75-125	-		20
Cadmium, TCLP	99		-		75-125	-		20
Chromium, TCLP	94		-		75-125	-		20
Lead, TCLP	90		-		75-125	-		20
Selenium, TCLP	98		-		75-125	-		20
Silver, TCLP	96		-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01 Batch: WG1662792-2								
Mercury, TCLP	219	Q	-		80-120	-		
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 Batch: WG1662964-2								
Arsenic, TCLP	106		-		75-125	-		20
Barium, TCLP	100		-		75-125	-		20
Cadmium, TCLP	102		-		75-125	-		20
Chromium, TCLP	100		-		75-125	-		20
Lead, TCLP	99		-		75-125	-		20
Selenium, TCLP	105		-		75-125	-		20
Silver, TCLP	97		-		75-125	-		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 Batch: WG1663414-2					
Mercury, TCLP	97	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02 Batch: WG1663472-2					
Aluminum, Total	109	-	48-151	-	
Antimony, Total	99	-	1-208	-	
Arsenic, Total	105	-	79-121	-	
Barium, Total	108	-	83-117	-	
Beryllium, Total	105	-	83-117	-	
Cadmium, Total	99	-	83-117	-	
Calcium, Total	101	-	81-119	-	
Chromium, Total	98	-	80-120	-	
Cobalt, Total	96	-	84-115	-	
Copper, Total	102	-	81-118	-	
Iron, Total	107	-	45-155	-	
Lead, Total	98	-	81-117	-	
Magnesium, Total	98	-	76-124	-	
Manganese, Total	104	-	81-117	-	
Nickel, Total	95	-	83-117	-	
Potassium, Total	104	-	71-129	-	
Selenium, Total	106	-	78-122	-	
Sodium, Total	119	-	72-127	-	
Thallium, Total	94	-	80-120	-	
Vanadium, Total	107	-	78-122	-	
Zinc, Total	95	-	82-118	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02 Batch: WG1663473-2					
Mercury, Total	91	-	72-128	-	
Total Metals - Mansfield Lab Associated sample(s): 02 Batch: WG1664145-2					
Silver, Total	97	-	75-124	-	

Matrix Spike Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

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 QC Batch ID: WG1662787-3 QC Sample: L2235331-01 Client ID: TK-SD-RC04-06302022												
Arsenic, TCLP	0.111J	1.2	1.44	120		-	-		75-125	-		20
Barium, TCLP	ND	20	19.5	98		-	-		75-125	-		20
Cadmium, TCLP	ND	0.53	0.529	100		-	-		75-125	-		20
Chromium, TCLP	ND	2	1.92	96		-	-		75-125	-		20
Lead, TCLP	ND	5.3	4.59	87		-	-		75-125	-		20
Selenium, TCLP	ND	1.2	1.30	108		-	-		75-125	-		20
Silver, TCLP	ND	0.5	0.499	100		-	-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1662792-3 QC Sample: L2235331-01 Client ID: TK-SD-RC04-06302022												
Mercury, TCLP	0.0059J	0.25	0.2430	97		-	-		80-120	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1662964-3 QC Sample: L2235331-02 Client ID: TK-LQ-RC04-06302022												
Arsenic, TCLP	0.250J	3	3.50	117		-	-		75-125	-		20
Barium, TCLP	ND	50	49.2	98		-	-		75-125	-		20
Cadmium, TCLP	ND	1.32	1.36	103		-	-		75-125	-		20
Chromium, TCLP	ND	5	4.92	98		-	-		75-125	-		20
Lead, TCLP	ND	13.2	12.9	97		-	-		75-125	-		20
Selenium, TCLP	ND	3	3.28	109		-	-		75-125	-		20
Silver, TCLP	ND	1.25	1.21	97		-	-		75-125	-		20

Matrix Spike Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

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): 02 QC Batch ID: WG1663414-3 QC Sample: L2235331-02 Client ID: TK-LQ-RC04-06302022									
Mercury, TCLP	ND	0.5	0.4974	99	-	-	80-120	-	20

Matrix Spike Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

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): 02 QC Batch ID: WG1663472-3 QC Sample: L2235331-02 Client ID: TK-LQ-RC04-06302022									
Aluminum, Total	23.1J	597	682	114	-	-	75-125	-	20
Antimony, Total	ND	149	148	99	-	-	75-125	-	20
Arsenic, Total	5.14	35.8	43.4	107	-	-	75-125	-	20
Barium, Total	ND	597	661	111	-	-	75-125	-	20
Beryllium, Total	ND	14.9	15.9	107	-	-	75-125	-	20
Cadmium, Total	ND	15.8	15.7	99	-	-	75-125	-	20
Calcium, Total	16.9J	2980	3070	103	-	-	75-125	-	20
Chromium, Total	ND	59.7	59.2	99	-	-	75-125	-	20
Cobalt, Total	ND	149	141	94	-	-	75-125	-	20
Copper, Total	0.938J	74.6	80.4	108	-	-	75-125	-	20
Iron, Total	344	298	606	88	-	-	75-125	-	20
Lead, Total	1.97J	158	152	96	-	-	75-125	-	20
Magnesium, Total	5.70J	2980	2800	94	-	-	75-125	-	20
Manganese, Total	1.23J	149	160	107	-	-	75-125	-	20
Nickel, Total	1.13J	149	141	94	-	-	75-125	-	20
Potassium, Total	1550	2980	4710	106	-	-	75-125	-	20
Selenium, Total	1.42J	35.8	41.3	115	-	-	75-125	-	20
Sodium, Total	101000	2980	92300	0	Q	-	75-125	-	20
Thallium, Total	ND	35.8	30.7	86	-	-	75-125	-	20
Vanadium, Total	2.59J	149	166	111	-	-	75-125	-	20
Zinc, Total	3.43J	149	149	100	-	-	75-125	-	20

Matrix Spike Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

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): 02 QC Batch ID: WG1663473-3 QC Sample: L2235331-02 Client ID: TK-LQ-RC04-06302022									
Mercury, Total	0.159	0.149	0.263	70	Q	-	-	80-120	- 20
Total Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1664145-3 QC Sample: L2235331-02 Client ID: TK-LQ-RC04-06302022									
Silver, Total	ND	106	73.2	69	Q	-	-	75-125	- 20

Lab Duplicate Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1662787-4 QC Sample: L2235331-01 Client ID: TK-SD-RC04-06302022						
Arsenic, TCLP	0.111J	0.078J	mg/l	NC		20
Barium, TCLP	ND	ND	mg/l	NC		20
Cadmium, TCLP	ND	ND	mg/l	NC		20
Chromium, TCLP	ND	ND	mg/l	NC		20
Lead, TCLP	ND	ND	mg/l	NC		20
Selenium, TCLP	ND	ND	mg/l	NC		20
Silver, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1662792-4 QC Sample: L2235331-01 Client ID: TK-SD-RC04-06302022						
Mercury, TCLP	0.0059J	0.0059J	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1662964-4 QC Sample: L2235331-02 Client ID: TK-LQ-RC04-06302022						
Arsenic, TCLP	0.250J	0.265J	mg/l	NC		20
Barium, TCLP	ND	ND	mg/l	NC		20
Cadmium, TCLP	ND	ND	mg/l	NC		20
Chromium, TCLP	ND	ND	mg/l	NC		20
Lead, TCLP	ND	ND	mg/l	NC		20
Selenium, TCLP	ND	ND	mg/l	NC		20
Silver, TCLP	ND	ND	mg/l	NC		20

Project Name: RITC
Project Number: RC04

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2235331
Report Date: 07/26/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1663414-4 QC Sample: L2235331-02 Client ID: TK-LQ-RC04-06302022					
Mercury, TCLP	ND	ND	mg/l	NC	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: RITC

Project Number: RC04

Lab Number: L2235331

Report Date: 07/26/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1663472-4 QC Sample: L2235331-02 Client ID: TK-LQ-RC04-06302022					
Aluminum, Total	23.1J	17.6J	mg/kg	NC	20
Antimony, Total	ND	ND	mg/kg	NC	20
Arsenic, Total	5.14	4.59	mg/kg	11	20
Barium, Total	ND	ND	mg/kg	NC	20
Beryllium, Total	ND	ND	mg/kg	NC	20
Cadmium, Total	ND	ND	mg/kg	NC	20
Calcium, Total	16.9J	13.1J	mg/kg	NC	20
Chromium, Total	ND	ND	mg/kg	NC	20
Cobalt, Total	ND	ND	mg/kg	NC	20
Copper, Total	0.938J	0.795J	mg/kg	NC	20
Iron, Total	344	269	mg/kg	24	Q 20
Lead, Total	1.97J	1.90J	mg/kg	NC	20
Magnesium, Total	5.70J	ND	mg/kg	NC	20
Manganese, Total	1.23J	1.38J	mg/kg	NC	20
Nickel, Total	1.13J	0.978J	mg/kg	NC	20
Potassium, Total	1550	1270	mg/kg	20	20
Selenium, Total	1.42J	1.59J	mg/kg	NC	20
Sodium, Total	101000	83100	mg/kg	19	20
Thallium, Total	ND	ND	mg/kg	NC	20

Project Name: RITC
Project Number: RC04

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2235331
Report Date: 07/26/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1663472-4 QC Sample: L2235331-02 Client ID: TK-LQ-RC04-06302022					
Vanadium, Total	2.59J	2.11J	mg/kg	NC	20
Zinc, Total	3.43J	2.78J	mg/kg	NC	20
Total Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1663473-4 QC Sample: L2235331-02 Client ID: TK-LQ-RC04-06302022					
Mercury, Total	0.159	0.192	mg/kg	19	20
Total Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1664145-4 QC Sample: L2235331-02 Client ID: TK-LQ-RC04-06302022					
Silver, Total	ND	ND	mg/kg	NC	20

INORGANICS & MISCELLANEOUS

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-01
Client ID: TK-SD-RC04-06302022
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
Date Received: 07/01/22
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	67.1		%	0.100	NA	1	-	07/06/22 11:46	121,2540G	RI
Cyanide, Total	4.1		mg/kg	1.4	0.30	1	07/11/22 13:25	07/12/22 08:58	1,9010C/9012B	CS
pH (H)	11.3		SU	-	NA	1	-	07/11/22 20:59	1,9045D	AS



Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

SAMPLE RESULTS

Lab ID: L2235331-02
Client ID: TK-LQ-RC04-06302022
Sample Location: 3875 RIVER ROAD, TONAWANDA

Date Collected: 06/30/22 14:30
Date Received: 07/01/22
Field Prep: Not Specified

Sample Depth:
Matrix: Oil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	5.4		mg/kg	0.98	0.23	1	07/11/22 13:25	07/12/22 09:01	1,9010C/9012B	CS
pH (H)	12.1		SU	-	NA	1	-	07/11/22 20:59	1,9045D	AS
Nitrogen, Ammonia	9.6		mg/kg	7.4	0.05	1	07/23/22 07:10	07/25/22 14:18	121,4500NH3-BH	AT
Flash Point	>150		deg F	70	NA	1	-	07/13/22 19:11	1,1010A	MD
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/13/22 20:40	07/13/22 23:39	125,7.3	RM
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/13/22 20:40	07/13/22 23:09	125,7.3	RM



Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

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: WG1661176-1										
Cyanide, Total	ND		mg/kg	0.96	0.20	1	07/11/22 13:25	07/12/22 08:38	1,9010C/9012B	CS
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1662437-1										
Sulfide, Reactive	ND		mg/kg	10	10.	1	07/13/22 20:40	07/13/22 23:02	125,7.3	RM
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1662440-1										
Cyanide, Reactive	ND		mg/kg	10	10.	1	07/13/22 20:40	07/13/22 23:33	125,7.3	RM
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1666440-1										
Nitrogen, Ammonia	ND		mg/kg	7.5	0.05	1	07/23/22 07:10	07/25/22 14:12	121,4500NH3-BH	AT

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1661176-2 WG1661176-3								
Cyanide, Total	79	Q	79	Q	80-120	2		35
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1661474-1								
pH	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1662437-2								
Sulfide, Reactive	92		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1662440-2								
Cyanide, Reactive	83		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1662505-1								
Flash Point	101		-		96-104	-		
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1666440-2								
Nitrogen, Ammonia	108		-			-		

Matrix Spike Analysis

Batch Quality Control

Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

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: WG1661176-4 WG1661176-5 QC Sample: L2236418-01 Client ID: MS Sample												
Cyanide, Total	ND	11	11	100		11	100		75-125	0		35
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1666440-4 QC Sample: L2235331-02 Client ID: TK-LQ-RC04-06302022												
Nitrogen, Ammonia	9.6	378	300	76		-	-			-		

Lab Duplicate Analysis *Batch Quality Control*

Project Name: RITC

Project Number: RC04

Lab Number: L2235331

Report Date: 07/26/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1659370-1 QC Sample: L2235453-08 Client ID: DUP Sample						
Solids, Total	81.1	81.2	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1661474-2 QC Sample: L2234193-01 Client ID: DUP Sample						
pH	7.8	7.7	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1662437-3 QC Sample: L2235173-01 Client ID: DUP Sample						
Sulfide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1662440-3 QC Sample: L2235173-01 Client ID: DUP Sample						
Cyanide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1662505-2 QC Sample: L2235580-01 Client ID: DUP Sample						
Flash Point	<70	<70	deg F	NC		
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1666440-3 QC Sample: L2235331-02 Client ID: TK-LQ-RC04-06302022						
Nitrogen, Ammonia	9.6	9.0	mg/kg	7		

Project Name: RITC**Lab Number:** L2235331**Project Number:** RC04**Report Date:** 07/26/22**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(*)
L2235331-01A	Glass 120ml/4oz unpreserved	A	NA		4.4	Y	Absent		ARCHIVE()
L2235331-01B	Glass 120ml/4oz unpreserved	A	NA		4.4	Y	Absent		SUB-MOISTURE()
L2235331-01C	Glass 250ml/8oz unpreserved	A	NA		4.4	Y	Absent		SUB-BTU()
L2235331-01D	Glass 250ml/8oz unpreserved	A	NA		4.4	Y	Absent		TCN-9010(14),TS(7),PH-9045(1)
L2235331-01E	Glass 250ml/8oz unpreserved	A	NA		4.4	Y	Absent		TCN-9010(14),TS(7),PH-9045(1)
L2235331-01W	Amber 1000ml unpreserved Extracts	A	NA		4.4	Y	Absent		TCLP-8270(14),PEST-TCLP*(14),HERB-TCLP*(14)
L2235331-01X	Plastic 120ml HNO3 preserved Extracts	A	NA		4.4	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)
L2235331-01X9	Tumble Vessel	A	NA		4.4	Y	Absent		-
L2235331-02A	Vial unpreserved	A	NA		4.4	Y	Absent		NYTCL-8260-R2(14)
L2235331-02B	Vial unpreserved	A	NA		4.4	Y	Absent		NYTCL-8260-R2(14)
L2235331-02C	Vial unpreserved	A	NA		4.4	Y	Absent		NYTCL-8260-R2(14)
L2235331-02D	Glass 250ml/8oz unpreserved	A	NA		4.4	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),TL-TI(180),NI-TI(180),CR-TI(180),AL-TI(180),SE-TI(180),CU-TI(180),ZN-TI(180),PB-TI(180),SB-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MN-TI(180),MG-TI(180),NA-TI(180),CA-TI(180),CD-TI(180),K-TI(180)
L2235331-02E	Glass 250ml/8oz unpreserved	A	NA		4.4	Y	Absent		SUB-BTU()
L2235331-02F	Glass 250ml/8oz unpreserved	A	NA		4.4	Y	Absent		TCN-9010(14),NYTCL-8270(14),REACTS(14),FLASH(),PH-9045(1),NYTCL-8082(365),REACTCN(14),NH3-4500(28)
L2235331-02G	Amber 1000ml unpreserved	A	NA		4.4	Y	Absent		TCN-9010(14),NYTCL-8270(14),REACTS(14),FLASH(),PH-9045(1),NYTCL-8082(365),REACTCN(14),NH3-4500(28)
L2235331-02W	Amber 1000ml unpreserved Extracts	A	NA		4.4	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2235331-02X	Plastic 120ml HNO3 preserved Extracts	A	NA		4.4	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)
L2235331-02X9	Tumble Vessel	A	NA		4.4	Y	Absent		-
L2235331-02Z	Vial MeOH preserved split	A	NA		4.4	Y	Absent		NYTCL-8260-R2(14)
L2235331-03A	Vial unpreserved	NA	NA			Y	Absent		NYTCL-8260-R2(14)
L2235331-03X	Vial MeOH preserved split	A	NA		4.4	Y	Absent		NYTCL-8260-R2(14)
L2235331-03Z	Vial unpreserved	NA	NA			Y	Absent		NYTCL-8260-R2(14)

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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



Project Name: RITC
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Data Qualifiers

Identified Compounds (TICs).

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report with 'J' Qualifiers



Project Name: RITC
Project Number: RC04

Lab Number: L2235331
Report Date: 07/26/22

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.



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

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

 NEW YORK CHAIN OF CUSTODY 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 <u>7/2/22</u>		ALPHA Job # <u>C2235331</u>						
		Project Information: Project Name: <u>RITC</u> Project Location: <u>3875 RIVER ROAD, TONAWANDA</u> Project # <u>RC04</u> (Use Project name as Project #) ☐		Deliverables ☐ ASP-A ☐ ASP-B ☒ EQUIS (1 File) ☐ EQUIS (4 File) ☐ Other		Billing Information ☒ Same as Client Info PO #								
Client Information Client: <u>INVENTUM ENG</u> Address: <u>441 CARLISLE DR</u> <u>HERNDON VA, 20170</u> Phone: <u>585-734-5255</u> Fax: <u>inventumeng.com</u> Email: <u>roxanne.birx@green</u>		Project Manager: <u>JOHN BLACK</u> ALPHAQuote #: Turn-Around Time Standard ☒ Due Date: Rush (only if pre approved) ☐ # of Days:		Regulatory Requirement ☐ NY TOGS ☒ NY Part 375 ☐ AWQ Standards ☐ NY CP-51 ☐ NY Restricted Use ☐ Other ☐ NY Unrestricted Use ☐ NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: ☐ NJ ☒ NY ☐ Other:								
These samples have been previously analyzed by Alpha ☐ Other project specific requirements/comments: <u>-NOTE, CANNOT DETERMINE IF LIQUID IS AQUEOUS OR OIL. SENT AS MUCH VOL AS POSSIBLE, IF IT IS AQ, AND MORE IS NEEDED, CONTACT ME.</u> Please specify Metals or TAL. - IGNORE PARADIGM LABELS, LAB WAS UNABLE TO ANALYZE						ANALYSIS FULL TCLP TCLP 8260, 8270, 8010, 8081, 8151 TCL 8260, 8270 PCBs 8082 BTU TAL METALS TOTAL Hg 7471 TOTAL CYANIDE 90128 AMMONIA 350.1 FLASH POINT CORROSION (pH) REACTIVITY % MOISTURE		Sample Filtration ☐ Done ☐ Lab to do Preservation ☐ Lab to do (Please Specify below)		Total Bottles				
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date Time		Sample Matrix		Sampler's Initials			ANALYZE		Sample Specific Comments	
35331-01		TK-SD-RC04-06302022		6/30/22 1430		SD		RB			✓			
-02		TK-LQ-RC04-06302022		6/30/22 1430		OL(?)		RB			✓			
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type		Preservative		NONE FOR 8260!		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)		
Relinquished By: <u>ROXANNE BIRX</u> <u>MULL. AP</u>		Date/Time: <u>7/1/22 1200</u> <u>7/1/22 1200</u>		Received By: <u>MULL. AP</u> <u>[Signature]</u>		Date/Time: <u>7/1/22 1200</u> <u>7/2/22 0000</u>								

**Sterling Analytical, Inc.**

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Visit our website: www.sterlinganalytical.comReport Date July 13, 2022

Customer	Contact	Laboratory Supervisor	eMail
Alpha Analytical Lab	C. Fox	Dale Percoski	customerservice@sterlinganalytical.com
Sample Description Analysis of Solid and Oil Samples			

Samples Analyzed

Enclosed are Report No(s): 77447, 77448

BTU Reported on dry basis.

Thank you for your business*Dale Percoski**Dale Percoski, Laboratory Supervisor*7/13/2022**Date**

ALL the information contained in this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method.

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Sample Analysis

Sample	Description	Source	Taken/Time	Received
77447	L2235331 TK-SD-RC04	Alpha Analytical Lab	6/30/22 14:30	7/6/22
Parameter	Results	RDL	Method	Analyzed/Time Tech
BTU/Lb	1,346	500.00	ASTM D5865	07/13/22 sjr
Moisture, %	12.54	0.10	ASTM D3173	07/12/22 sjr

Sample	Description	Source	Taken/Time	Received
77448	L2235331 TK-LQ-RC04	Alpha Analytical Lab	6/30/22 14:30	7/6/22
Parameter	Results	RDL	Method	Analyzed/Time Tech
BTU/Lb	5,505	500.00	ASTM D240	07/13/22 sjr