

Tank Management and Closure Construction Completion Report Tank No. ST10

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.:	ST10
Grid Location:	AC5
Location Notes:	ST10 was located north adjacent to the former Boiler House.
Date of Closure:	7/28/2020
Tank Dimensions:	Horizontal Cylinder
Storage Capacity:	4,000 gallons
Tank Exterior Coating Description:	Fiberglass tank, discolored.
Tank Piping Description:	Supply and loading lines present from tank to Boiler House.
Secondary Containment Description:	Concrete secondary containment in poor condition.
Contents Description:	A few inches of a grey and white caustic solid, historically used to supply the lime still in the former Boiler House.



3. AST Closure Procedure

Contractor:	OSC
Contractor Address:	140 Lee Street, Buffalo, New York 14210
Dates of Cleaning:	7/29/2020
Cleaning Method:	Mechanical removal.
Disposition of tank shell and piping:	Disposed as construction and demolition debris (C&D).
Recycler or Disposal Facility Address:	Modern Landfill 1445 Pletcher Rd, Model City, NY 14107
Contents Volume Disposed:	2 drums decontamination water (1,000 pounds), 6 drums tank residuals (4,000 pounds), and 1 drum of PPE (200 pounds).
Disposition of Contents & Hazardous Waste Code(s):	PPE was disposed as non-hazardous solid waste; decontamination water and residuals disposed as hazardous waste at Chemtron Corporation, Corrosive D002.
Disposal Facility Address:	Chemtron Corporation 35850 Schneider Court, Avon, Ohio 44011
Disposal Facility EPA No.:	OHD066060609
Hazardous Waste Transporter Name:	Frank's Vacuum Truck Service Inc
Hazardous Waste Transporter EPA No.:	NYD982792814



4. Inspection Summary

Tank closure inspection:	Tank residuals were completely removed. Tank was cleared for disposal in July 2020.
Evidence of Leaks and/or additional observations:	Tank residuals were observed within the secondary containment. The northwest corner of the secondary containment had broken, and residuals were observed at seam and outside of containment.
	Note that a secondary containment inspection, concrete and sub-slab soil sampling, and disposal were completed and documented under separate cover in the Secondary Containment CCR (Inventum).

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	7/27/2020
Contents Removal	7/29/2020
Cleaning	7/29/2020
Decommissioning	7/28/2020 - 7/29/2020
Disposal	10/20/2020

Additional Notes:

None.

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.

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John P. Black, P.E

Date: 8.18.2025

License No: 067818.

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.



Attachment A – Analytical Tables



	Sample ID:	ST10 073	72020
Lab Report N		203534	
	Contents:	Grey and White Solid	
Hazardous Was	ste Code(s):	D00)2
TCLP Standards (ug/L)	Units	ST10 - Cau	stic Tank
	ug/kg	<41.8	U
	ug/kg	<105	U
	ug/kg	<105	U
	ug/kg	<209	U
	ug/kg	<41.8	U
		<41.8	U
	ug/kg	<41.8	U
		<209	U
		<105	U
	ug/kg	<105	U
	ug/kg	<209	U
	ug/kg	186	
	ug/kg	<105	U
	ug/kg	<41.8	U
		<105	U
		<41.8	U
		<41.8	U
		<41.8	U
			U
			U
		<41.8	U
			U
		<209	U
		<41.8	U
		<41.8	U
		<105	U
			U
			U
			U
			U
			U
	Lab Report Hazardous Was TCLP Standards	Hazardous Waste Code(s): TCLP Standards (ug/L) ug/kg	Sample Date: 7/27/2 2035 2035 2035 2036 2041.8 2054 2054 2054 2055 2064 2055 2064 2055 2064 2055 2064 2055 2064 2055 20



		Sample ID:	ST1	0-07272020	
	Sa	Sample Date: Lab Report Number(s):		7/27/2020	
	Lab Report			203534	
Analytes	the state of the s		Grey and White Soli		
	Hazardous Was	ste Code(s):	D002		
	TCLP Standards				
	(ug/L)	Units	ST10 -	- Caustic Tank	
Styrene		ug/kg	<41.8	U	
Tetrachloroethylene (PCE)		ug/kg	<41.8	U	
Toluene		ug/kg	<41.8	U	
Trichloroethylene (TCE)		ug/kg	<41.8	U	
Trichlorofluoromethane		ug/kg	<41.8	U	
Vinyl Chloride		ug/kg	<41.8	U	
Cis-1,2-Dichloroethylene		ug/kg	<41.8	U	
Cis-1,3-Dichloropropene		ug/kg	<41.8	U	
m,p-Xylene		ug/kg	261		
O-Xylene (1,2-Dimethylbenzene)		ug/kg	44.6		
Trans-1,2-Dichloroethene		ug/kg	<41.8	U	
Trans-1,3-Dichloropropene		ug/kg	<41.8	U	
		<u> </u>			
SVOCs SW8270D				,	
1,2,4,5-Tetrachlorobenzene		ug/kg	<276	U	
2,3,4,6-Tetrachlorophenol		ug/kg	<276	U	
2,4,5-Trichlorophenol		ug/kg	<276	U	
2,4,6-Trichlorophenol		ug/kg	<276	U	
2,4-Dichlorophenol		ug/kg	<276	U	
2,4-Dimethylphenol		ug/kg	756		
2,4-Dinitrophenol		ug/kg	<1100	U	
2,4-Dinitrotoluene			<276	U	
2,6-Dinitrotoluene		ug/kg	<276	U	
•		ug/kg			
2-Chloronaphthalene		ug/kg	<276	U	
2-Chlorophenol		ug/kg	<276	U	
2-Methylnaphthalene		ug/kg	1110		
2-Methylphenol (O-Cresol)		ug/kg	<276	U	
2-Nitroaniline		ug/kg	<276	U	
2-Nitrophenol		ug/kg	<276	U	
3,3'-Dichlorobenzidine		ug/kg	<276	U	
Cresols, M & P		ug/kg	<276	U	
3-Nitroaniline		ug/kg	<276	U	
4,6-Dinitro-2-Methylphenol		ug/kg	<370	U	
4-Bromophenyl Phenyl Ether		ug/kg	<276	U	
4-Chloro-3-Methylphenol		ug/kg	<276	U	
4-Chloroaniline		ug/kg	<276	U	
4-Chlorophenyl Phenyl Ether		ug/kg	<276	U	
4-Nitroaniline		ug/kg	<276	U	
4-Nitrophenol		ug/kg	<276	U	
Acenaphthene		ug/kg	<276	U	
Acenaphthylene		ug/kg	<276	U	



		Sample ID:	ST10-072	772020
	Sample Date:			
Analytes	Lab Report Number(s): Analytes Contents:			
Allalytes				
	Hazardous Wa	ste Code(s):	D002	
	TCLP Standards (ug/L)	Units	ST10 - Cau	stic Tank
Acetophenone		ug/kg	<276	U
Anthracene		ug/kg	968	
Atrazine		ug/kg	<276	U
Benzo(A)Anthracene		ug/kg	<276	U
Benzaldehyde		ug/kg	<276	U
Benzo(A)Pyrene		ug/kg	<276	U
Benzo(B)Fluoranthene		ug/kg	<276	U
Benzo(G,H,I)Perylene		ug/kg	<276	U
Benzo(K)Fluoranthene		ug/kg	<276	U
Biphenyl (Diphenyl)		ug/kg	<276	U
Bis(2-Chloroisopropyl) Ether		ug/kg	<276	U
Bis(2-Chloroethoxy) Methane		ug/kg	<276	U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)		ug/kg	<276	U
Bis(2-Ethylhexyl) Phthalate		ug/kg	<276	U
Benzyl Butyl Phthalate		ug/kg	<276	U
Caprolactam		ug/kg	<276	U
Carbazole		ug/kg	<276	U
Chrysene		ug/kg	2850	
Di-N-Butyl Phthalate		ug/kg	<276	U
Di-N-Octylphthalate		ug/kg	<276	U
Dibenz(A,H)Anthracene		ug/kg	<276	U
Dibenzofuran		ug/kg	<276	U
Diethyl Phthalate		ug/kg	<276	U
Dimethyl Phthalate		ug/kg	<276	U
Fluoranthene		ug/kg	321	
Fluorene		ug/kg	<276	U
Hexachlorobenzene		ug/kg	<276	U
Hexachlorobutadiene		ug/kg	<276	U
Hexachlorocyclopentadiene		ug/kg	<1100	U
Hexachloroethane		ug/kg	<276	U
Indeno(1,2,3-C,D)Pyrene		ug/kg	<276	U
Isophorone	+	ug/kg ug/kg	420	J
N-Nitrosodi-N-Propylamine			<276	U
		ug/kg	<276	U
N-Nitrosodiphenylamine		ug/kg	3640	U
Naphthalene	+	ug/kg		11
Nitrobenzene	+	ug/kg	<276	U
Pentachlorophenol		ug/kg	<552	U
Phenanthrene		ug/kg	333	
Phenol		ug/kg	<276	U
Pyrene	+	ug/kg	<276	U



Table 1 Tank Management Closure Work Plan ST10 Analytical Results

Riverview Innovation & Technology Campus, Inc.
Town of Tonawanda, New York

		Sample ID:	ST10-07	272020
	Sample Date: Lab Report Number(s): Contents:		: 203534	
Analytes				
	Hazardous Wa	ste Code(s):	D002 ST10 - Caustic Tank	
	TCLP Standards (ug/L)	Units		
TAL Metals SW6010				
Aluminum		mg/kg	<20.7	U
Antimony		mg/kg	<2.48	U
Arsenic		mg/kg	<0.413	U
Barium		mg/kg	<4.13	U
Beryllium		mg/kg	<0.207	
Cadmium		mg/kg	0.569	
Calcium		mg/kg	<103	U
Chromium, Total		mg/kg	8.33	
Cobalt		mg/kg	<2.07	U
Copper		mg/kg	14.2	
Iron		mg/kg	5790	
Lead		mg/kg	5.30	
Magnesium		mg/kg	<103	U
Manganese		mg/kg	16.3	
Nickel		mg/kg	77.2	
Potassium		mg/kg	232	
Selenium		mg/kg	<0.826	U
Silver		mg/kg	<0.413	U
Sodium		mg/kg	250000	
Thallium		mg/kg	<1.03	U
Vanadium		mg/kg	<1.03	U
Zinc		mg/kg	3.04	
Mercury SW7471			_	,
Mercury		mg/kg	<0.020	U
TCLP VOCs - SW8260C				
1,2-Dichloroethane	500	ug/l	<20.0	U
Chlorobenzene	100,000	ug/l	<20.0	U
Tetrachloroethylene (PCE)	700	ug/l	<20.0	U
Carbon Tetrachloride	500	ug/l	<20.0	U
Chloroform	6,000	ug/l	<20.0	U
Benzene	500	ug/l	<20.0	U
Vinyl Chloride	200	ug/l	<20.0	U
1,1-Dichloroethene	700	ug/l	<20.0	U
Methyl Ethyl Ketone (2-Butanone)	200,000	ug/l	<100	U
Trichloroethylene (TCE)	500	ug/l	<20.0	U



		Sample ID:	ST1	0-07272020	
	Sa	Sample Date:		: 7/27/2020	
	Lab Report	Number(s):			
Analytes		Contents:			
	Hazardous Was	ste Code(s):		D002	
	TCLP Standards (ug/L)	Units	ST10	· Caustic Tank	
TCLP SVOCs - SW8270D					
1,4-Dichlorobenzene	7,500	ug/l	<50.0	U	
2,4,5-Trichlorophenol	400,000	ug/l	<50.0	U	
2,4,6-Trichlorophenol	2,000	ug/l	<50.0	U	
2,4-Dinitrotoluene	130	ug/l	<50.0	U	
2-Methylphenol (O-Cresol)	200,000	ug/l	NA		
Cresols, M & P	200,000	ug/l	NA		
Cresols (as m,p,0-Cresol)	-	ug/l	<100	U	
Hexachlorobenzene	130		<50.0	U	
Hexachlorobutadiene	500	ug/l	<50.0	U	
Hexachloroethane		ug/l	<50.0	U	
Nitrobenzene	2,000		<50.0	U	
Pentachlorophenol			<100	U	
Pyridine	5,000	ug/l	<50.0	U	
,	2,300	U,		-	
TCLP Metals - SW6010					
Arsenic	5,000	ug/l	<500	U	
Barium	100,000	ug/l	<500	U	
Cadmium	,		<25.0	U	
Chromium, Total	,		<500	U	
Lead	5,000		<500	U	
Selenium	1,000	ug/l	<200	U	
Silver	5,000	ug/l	<500	U	
JIIVCI	3,000	ч <u></u> б/ і	-300	0	
TCLP Mercury- SW7470					
Mercury	200	ug/l	<2	U	
		- 0/			
TCLP Pesticides - 8081B					
Chlordane	30	ug/l	<2.00	U	
Endrin	20	ug/l	<1.00	U	
Gamma Bhc (Lindane)	400	ug/l	<1.00	U	
Heptachlor	8	ug/l	<1.00	U	
Heptachlor Epoxide	8	ug/l	<2.00	U	
Methoxychlor	10,000	ug/l	<1.00	U	
Toxaphene	500	ug/l	<20.0	U	
	330	OI.			
TCLP Herbicides- SW8151A					
2,4-D (Dichlorophenoxyacetic Acid)	10,000	ug/l	<500	U	
Silvex (2,4,5-TP)	1,000	ug/l	<100	U	
\ 1 '1 - '' 1	2,300	- 01 -			



Table 1 Tank Management Closure Work Plan ST10 Analytical Results

Riverview Innovation & Technology Campus, Inc.
Town of Tonawanda, New York

		Sample ID:	ST10-072	772020
	•		ST10-07272020	
	Sa	imple Date:	7/27/2	2020
	Lab Report	Number(s):	2035	34
Analytes		Contents:	Grey and W	hite Solid
	Hazardous Was	ste Code(s):	D00)2
	TCLP Standards (ug/L)	Units	ST10 - Cau	stic Tank
рН	<2, >=12.5	ph units	13.39	
Ignitability 1010MOD				
Ignitability		deg f	No Burn	
Notes:				
NS: Not Sampled				
NA: Sample collected, but not analyzed due to matrix	interference			
"<": Analyzed for but detected at or above the quantit	ation limit			
J: Analyte detected below quantitation limit				
C: Continuing Calibration Verification (CCV) below acce	eptable limits			
S: Lab Control Sample (LCS) Spike recovery is below ac	ceptable 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 sec	condary analysis o	f the sample	due to exceeding	g the calibratio
(RSI)*: Additional metals analytes requested by dispos	al facility RSI			
Bold: Analyte was detected				
Bold with red highlight: Analyte exceeds TCLP standard	ds or is characteris	stically hazai	dous for corrosiv	ity, flammabili



Attachment B – Photographic Log

Client Name: RITC	Date Photo was Taken: 10/8/2019	Project: RITC
Photo No. 1 Direction Photo		
Taken:		
View is south.		
Description		N. T.
Description:		
The northern face of ST10. ST10 was		
located in a secondary	100	37
containment north		
adjacent to the		
former Boiler House.		
Client Name:	Date Photo was Taken:	Project:
RITC	10/8/2019	RITC
Photo No. 2		1
Direction Photo Taken:	A A	
View is south.		- P
Description:		200
ST10 residuals are a		
white and grey dry		
solid.		



Client Name:	Date Photo was Taken:	Project:
RITC	7/29/2020	RITC
Photo No. 3		
Direction Photo		
Taken:		
View is southwest.		
Description:		
The upper section of		SANY
ST10 is removed to		
access remaining		
residuals and		
containerize for		C
disposal.	3.3	





Attachment C – Waste Manifests

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 4. Manifest Tracking Number 003045803 GBF 1. Generator ID Number 2. Page 1 of 3. Emergency Response Phone UNIFORM HAZARDOUS 716-580-3008 NYD088413877 WASTE MANIFEST Generator's Site Address (if different than mailing address) 5. Generator's Name and Mailing Address Att: Dan Flanigan Riverview Innovation & Technology Campus Inc. 3875 River Road Tonawanda NY 14150 Generator's Phone: 7 1 8 580-3006 U.S. EPA ID Number 792 814 FRANKS VACUUM TRUCK SERVICE INC NYD 982 7. Transporter 2 Company Name U.S. EPA ID Numbe Designated Facility Name and Site Address
 Chemtron Corporation U.S. EPA ID Number 35850 Schneider Court Avon OH 44011 Facility's Phone: 440 937-5950 OHD066060609 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number 10. Containers 11. Total 12. Unit 13. Waste Codes and Packing Group (if any)) HM Quantity Wt./Vol. No Type RQ UN1780, Waste Corrosive liquids, n.o.s 1,000 GENERATOR 0002 X (Sodium Hydroxide) 8, PGIII WORSH WOLF DM RQ UN1780, Waste Corrosive liquids, n.o.s D002 4,000 X (Sodium Hydroxide) 8, PGIII DM Non-Hazardous, Non-Regulated SOLID VONE 200 Material DM P 14. Special Handling Instructions and Additional Information 1) ERG#154 20201015-005 2) ERG#154 20201015-021 3) 20201015-009 Line 1 - washwater Line 2 - caustic studge 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) (il a n a small goantity generator) is true. Year 20 29 N Import to U.S. Export from U.S. Port of entry/exit: Transporter signature (for exports only): Date leaving U.S. 17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Signature O'Shen 20 TR 18. Discrepancy 18a. Discrepancy Indication Space Туре Quantity Residue Partial Rejection Full Rejection Manifest Reference Number: FACILITY 18b. Alternate Facility (or Generator) U.S. EPA ID Number Facility's Phone: 18c. Signature of Alternate Facility (or Generator) Month Day Year DESIGNAT 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 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 Day Year JOSEPH

LAND DISPOSAL RESTRICTION NOTIFICATION & CERTIFICATION FORM (LDR) CHEMTRON CORPORATION 35850 SCHNEIDER COURT, AVON, OH 44011 PHONE (440) 937-6348 FAX (440) 937-6845

CENTER ATTORNEY PLANT 1 1 1 1 1 6	PAGE <u>1</u> OF <u>1</u>
GENERATOR NAME RIVERVIEW Innovations + Tech. Compus EPA ID NUMBER NYD	088 413 877
MANIFEST DOCUMENT NO. 003045803 GBF DATE	
SIGNATURE PRINT NAME	

***PLEASE REFER TO INSTRUCTIONS FOR IMPORTANT INFORMATION AND CODES FOR UHC'S AND

COMPLETE ALL APPLICABLE ITEMS.

LINE NO.	APPROVAL NO.	EPA WASTE NO.(S)	NWW	33/33/	GY TO G + ST	T	
[.]	20201015-005		14 44 44	WW	SUBCAT.	UHC'S	CERT.
2	20201015-021	0002	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		53	156, 179, 120, 119 -13	A
	202010(3 02)	0002			53	156 179 120 119 43	<u></u>
		_				70,111,120,114, 43	
 							
			\vdash				
			 				
			 				
							
			 				
			l				

FOR F001-F005 SPENT SOLVENTS, LIST THE NUMBER NEXT TO THE CONSTITUENT THAT IS PRESENT

NO.(S)	LINE NO.(S)	UMBER NEXT TO THE CON F001-F005 SOLVENT	LINE	F001-F005 SOLVENT
ACETONE BENZENE N-BUTANOL CARBON DISULFIDE CARBON TETRACHLORIDE CHLOROBENZENE O-CRESOL M-CRESOL P-CRESOL CRESOLS/CRESYLIC ACID		CYCLOHEXANONE O-DICHLOROBENZENE ETHYL ACETATE ETHYL BENZENE ETHYL ETHER ISOBUTANOL METHANOL METHYLENE CHLORIDE METHYL ETHYL KETONE METHYL ISOBUTYL KETONE	NO.(S)	NITROBENZENE PYRIDINE TETRACHLOROETHYLENE TOLUENE 1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE TRICHLOROETHANE TRICHLOROETHYLENE TRICHLOROMONOFLUO ROMETHANE XYLENES (MIXED)

UHC'S OR "UNDERLYING HAZARDOUS CONSTITUENTS" ARE REGULATED WITHIN THE UNIVERSAL TREATMENT STANDARDS. GENERATOR'S ARE REQUIRED TO IDENTIFY THE UNDERLYING CONSTITUENTS IN WASTE WITH THE FOLLOWING EPA WASTE NUMBERS: D001 (EXCEPT D001 WASTES WHICH CAN BE TREATED BY CMBST), D002, D012-D043. FOR MORE INFORMATION REFER TO 40 C.F.R. PART 268.



Attachment D – Laboratory Reports



Analytical Report For

Inventum Engineering, P.C.

For Lab Project ID

203534

Referencing

Riverview

Prepared

Thursday, August 6, 2020

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below.

Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958



Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST08-07272020

Lab Sample ID: 203534-01 **Date Sampled:** 7/27/2020

Matrix: Solid Date Received: 7/30/2020

Corrosivity as pH

<u>Analyte</u> <u>Result</u> <u>Units</u> <u>Qualifier</u> <u>Date Analyzed</u>

Corrosivity (as pH) 7.07 @ 23.0 C S.U.

8/4/2020 12:10

8/5/2020

Method Reference(s): EPA 9045D

Ignitability

<u>Analyte</u> <u>Result</u> <u>Units</u> <u>Qualifier</u> <u>Date Analyzed</u>

Ignitability No Burn mm / sec

Method Reference(s): EPA 1030

Mercury

Analyte Result Units Qualifier Date Analyzed

Mercury **2.57** mg/Kg 8/3/2020

Method Reference(s): EPA 7471B
Subcontractor ELAP ID: 10709

TAL Metals (ICP)

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Qualifier	Date Analyzed
Aluminum	687	mg/Kg		8/5/2020 19:02
Antimony	< 2.83	mg/Kg		8/4/2020 20:35
Arsenic	3.01	mg/Kg		8/4/2020 20:35
Barium	20.6	mg/Kg		8/4/2020 20:35
Beryllium	< 0.236	mg/Kg		8/4/2020 20:35
Cadmium	0.859	mg/Kg		8/4/2020 20:35
Calcium	44500	mg/Kg		8/5/2020 18:58
Chromium	9.29	mg/Kg		8/4/2020 20:35
Cobalt	< 2.36	mg/Kg		8/4/2020 20:35
Copper	34.7	mg/Kg		8/4/2020 20:35
Iron	7470	mg/Kg		8/5/2020 19:02
Lead	21.7	mg/Kg		8/4/2020 20:35
Magnesium	21700	mg/Kg		8/4/2020 20:35

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST08-07272020

 Lab Sample ID:
 203534-01
 Date Sampled:
 7/27/2020

 Matrix:
 Solid
 Date Received:
 7/30/2020

Manganese	251	mg/Kg	8/4/2020 20:35
Nickel	5.99	mg/Kg	8/4/2020 20:35
Potassium	889	mg/Kg	8/5/2020 19:02
Selenium	< 1.89	mg/Kg	8/5/2020 18:58
Silver	< 0.472	mg/Kg	8/4/2020 20:35
Sodium	404	mg/Kg	8/4/2020 20:35
Thallium	< 1.18	mg/Kg	8/4/2020 20:35
Vanadium	< 1.18	mg/Kg	8/4/2020 20:35
Zinc	26.4	mg/Kg	8/5/2020 19:02

Method Reference(s): EPA 6010C

EPA 3050B

Preparation Date: 8/3/2020 Data File: 200805C

Paint Filter Test

AnalyteResultUnitsQualifierDate AnalyzedPaint Filter TestPassN/A8/5/2020

Method Reference(s): EPA 9095B

Semi-Volatile Organics (Acid/Base Neutrals)

<u>Analyte</u>	Result	<u>Units</u>	Qualifier	Date Analyzed	
1,1-Biphenyl	1050000	ug/Kg		8/5/2020 17:14	4
1,2,4,5-Tetrachlorobenzene	< 477000	ug/Kg		8/5/2020 17:14	4
1,2,4-Trichlorobenzene	< 477000	ug/Kg		8/5/2020 17:14	4
1,2-Dichlorobenzene	< 477000	ug/Kg		8/5/2020 17:14	4
1,3-Dichlorobenzene	< 477000	ug/Kg		8/5/2020 17:14	4
1,4-Dichlorobenzene	< 477000	ug/Kg		8/5/2020 17:14	4
2,2-Oxybis (1-chloropropane)	< 477000	ug/Kg		8/5/2020 17:14	4
2,3,4,6-Tetrachlorophenol	< 477000	ug/Kg		8/5/2020 17:14	4
2,4,5-Trichlorophenol	< 477000	ug/Kg		8/5/2020 17:14	4
2,4,6-Trichlorophenol	< 477000	ug/Kg		8/5/2020 17:14	4
2,4-Dichlorophenol	< 477000	ug/Kg		8/5/2020 17:14	4

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST08-07272020

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 203534-01
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 Matrix:
 Solid
 Date Received:
 7/30/2020

2,4-Dimethylphenol	< 477000	ug/Kg	8/5/2020	17:14
2,4-Dinitrophenol	< 1910000	ug/Kg	8/5/2020	17:14
2,4-Dinitrotoluene	< 477000	ug/Kg	8/5/2020	17:14
2,6-Dinitrotoluene	< 477000	ug/Kg	8/5/2020	17:14
2-Chloronaphthalene	< 477000	ug/Kg	8/5/2020	17:14
2-Chlorophenol	< 477000	ug/Kg	8/5/2020	17:14
2-Methylnapthalene	7010000	ug/Kg	8/5/2020	17:14
2-Methylphenol	< 477000	ug/Kg	8/5/2020	17:14
2-Nitroaniline	< 477000	ug/Kg	8/5/2020	17:14
2-Nitrophenol	< 477000	ug/Kg	8/5/2020	17:14
3&4-Methylphenol	< 477000	ug/Kg	8/5/2020	17:14
3,3'-Dichlorobenzidine	< 477000	ug/Kg	8/5/2020	17:14
3-Nitroaniline	< 477000	ug/Kg	8/5/2020	17:14
4,6-Dinitro-2-methylphenol	< 638000	ug/Kg	8/5/2020	17:14
4-Bromophenyl phenyl ether	< 477000	ug/Kg	8/5/2020	17:14
4-Chloro-3-methylphenol	< 477000	ug/Kg	8/5/2020	17:14
4-Chloroaniline	< 477000	ug/Kg	8/5/2020	17:14
4-Chlorophenyl phenyl ether	< 477000	ug/Kg	8/5/2020	17:14
4-Nitroaniline	< 477000	ug/Kg	8/5/2020	17:14
4-Nitrophenol	< 477000	ug/Kg	8/5/2020	17:14
Acenaphthene	< 477000	ug/Kg	8/5/2020	17:14
Acenaphthylene	1960000	ug/Kg	8/5/2020	17:14
Acetophenone	< 477000	ug/Kg	8/5/2020	17:14
Anthracene	< 477000	ug/Kg	8/5/2020	17:14
Atrazine	< 477000	ug/Kg	8/5/2020	17:14
Benzaldehyde	< 477000	ug/Kg	8/5/2020	17:14
Benzo (a) anthracene	< 477000	ug/Kg	8/5/2020	17:14
Benzo (a) pyrene	< 477000	ug/Kg	8/5/2020	17:14
Benzo (b) fluoranthene	< 477000	ug/Kg	8/5/2020	17:14
Benzo (g,h,i) perylene	< 477000	ug/Kg	8/5/2020	17:14

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST08-07272020

 Lab Sample ID:
 203534-01
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 Solid
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 7/30/2020

Benzo (k) fluoranthene	< 477000	ug/Kg	8/5/2020	17:14
Bis (2-chloroethoxy) methane	< 477000	ug/Kg	8/5/2020	17:14
Bis (2-chloroethyl) ether	< 477000	ug/Kg	8/5/2020	17:14
Bis (2-ethylhexyl) phthalate	< 477000	ug/Kg	8/5/2020	17:14
Butylbenzylphthalate	< 477000	ug/Kg	8/5/2020	17:14
Caprolactam	< 477000	ug/Kg	8/5/2020	17:14
Carbazole	< 477000	ug/Kg	8/5/2020	17:14
Chrysene	< 477000	ug/Kg	8/5/2020	17:14
Dibenz (a,h) anthracene	< 477000	ug/Kg	8/5/2020	17:14
Dibenzofuran	1790000	ug/Kg	8/5/2020	17:14
Diethyl phthalate	< 477000	ug/Kg	8/5/2020	17:14
Dimethyl phthalate	< 477000	ug/Kg	8/5/2020	17:14
Di-n-butyl phthalate	< 477000	ug/Kg	8/5/2020	17:14
Di-n-octylphthalate	< 477000	ug/Kg	8/5/2020	17:14
Fluoranthene	563000	ug/Kg	8/5/2020	17:14
Fluorene	1720000	ug/Kg	8/5/2020	17:14
Hexachlorobenzene	< 477000	ug/Kg	8/5/2020	17:14
Hexachlorobutadiene	< 477000	ug/Kg	8/5/2020	17:14
Hexachlorocyclopentadiene	< 1910000	ug/Kg	8/5/2020	17:14
Hexachloroethane	< 477000	ug/Kg	8/5/2020	17:14
Indeno (1,2,3-cd) pyrene	< 477000	ug/Kg	8/5/2020	17:14
Isophorone	< 477000	ug/Kg	8/5/2020	17:14
Naphthalene	11700000	ug/Kg	8/5/2020	17:14
Nitrobenzene	< 477000	ug/Kg	8/5/2020	17:14
N-Nitroso-di-n-propylamine	< 477000	ug/Kg	8/5/2020	17:14
N-Nitrosodiphenylamine	< 477000	ug/Kg	8/5/2020	17:14
Pentachlorophenol	< 954000	ug/Kg	8/5/2020	17:14
Phenanthrene	1510000	ug/Kg	8/5/2020	17:14
Phenol	< 477000	ug/Kg	8/5/2020	17:14
Pyrene	< 477000	ug/Kg	8/5/2020	17:14

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST08-07272020

 Lab Sample ID:
 203534-01
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 7/27/2020

 Matrix:
 Solid
 Date Received:
 7/30/2020

<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	Date Anal	yzed
2,4,6-Tribromophenol	NC	37.8 - 85.8		8/5/2020	17:14
2-Fluorobiphenyl	NC	40.4 - 80.4		8/5/2020	17:14
2-Fluorophenol	NC	38.8 - 77.4		8/5/2020	17:14
Nitrobenzene-d5	NC	37.4 - 75.9		8/5/2020	17:14
Phenol-d5	NC	40.4 - 78		8/5/2020	17:14
Terphenyl-d14	NC	40.2 - 90		8/5/2020	17:14

Method Reference(s): EPA 8270D

EPA 3546

Preparation Date: 8/4/2020 Data File: 848419.D

Volatile Organics

Analyte	Result	<u>Units</u>	Qualifier Date Analyzed
1,1,1-Trichloroethane	< 292	ug/Kg	8/4/2020 21:51
1,1,2,2-Tetrachloroethane	< 292	ug/Kg	8/4/2020 21:51
1,1,2-Trichloroethane	< 292	ug/Kg	8/4/2020 21:51
1,1-Dichloroethane	< 292	ug/Kg	8/4/2020 21:51
1,1-Dichloroethene	< 292	ug/Kg	8/4/2020 21:51
1,2,3-Trichlorobenzene	< 729	ug/Kg	8/4/2020 21:51
1,2,4-Trichlorobenzene	< 729	ug/Kg	8/4/2020 21:51
1,2-Dibromo-3-Chloropropane	< 1460	ug/Kg	8/4/2020 21:51
1,2-Dibromoethane	< 292	ug/Kg	8/4/2020 21:51
1,2-Dichlorobenzene	< 292	ug/Kg	8/4/2020 21:51
1,2-Dichloroethane	< 292	ug/Kg	8/4/2020 21:51
1,2-Dichloropropane	< 292	ug/Kg	8/4/2020 21:51
1,3-Dichlorobenzene	< 292	ug/Kg	8/4/2020 21:51
1,4-Dichlorobenzene	< 292	ug/Kg	8/4/2020 21:51
1,4-Dioxane	< 2920	ug/Kg	8/4/2020 21:51
2-Butanone	< 1460	ug/Kg	8/4/2020 21:51
2-Hexanone	< 729	ug/Kg	8/4/2020 21:51
4-Methyl-2-pentanone	< 729	ug/Kg	8/4/2020 21:51

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST08-07272020

 Lab Sample ID:
 203534-01
 Date Sampled:
 7/27/2020

 Matrix:
 Solid
 Date Received:
 7/30/2020

Acetone	< 1460	ug/Kg	8/4/2020	21:51
Benzene	< 292	ug/Kg	8/4/2020	21:51
Bromochloromethane	< 729	ug/Kg	8/4/2020	21:51
Bromodichloromethane	< 292	ug/Kg	8/4/2020	21:51
Bromoform	< 729	ug/Kg	8/4/2020	21:51
Bromomethane	< 292	ug/Kg	8/4/2020	21:51
Carbon disulfide	454	ug/Kg	8/4/2020	21:51
Carbon Tetrachloride	< 292	ug/Kg	8/4/2020	21:51
Chlorobenzene	< 292	ug/Kg	8/4/2020	21:51
Chloroethane	< 292	ug/Kg	8/4/2020	21:51
Chloroform	< 292	ug/Kg	8/4/2020	21:51
Chloromethane	< 292	ug/Kg	8/4/2020	21:51
cis-1,2-Dichloroethene	< 292	ug/Kg	8/4/2020	21:51
cis-1,3-Dichloropropene	< 292	ug/Kg	8/4/2020	21:51
Cyclohexane	< 1460	ug/Kg	8/4/2020	21:51
Dibromochloromethane	< 292	ug/Kg	8/4/2020	21:51
Dichlorodifluoromethane	< 292	ug/Kg	8/4/2020	21:51
Ethylbenzene	< 292	ug/Kg	8/4/2020	21:51
Freon 113	< 292	ug/Kg	8/4/2020	21:51
Isopropylbenzene	< 292	ug/Kg	8/4/2020	21:51
m,p-Xylene	< 292	ug/Kg	8/4/2020	21:51
Methyl acetate	< 292	ug/Kg	8/4/2020	21:51
Methyl tert-butyl Ether	< 292	ug/Kg	8/4/2020	21:51
Methylcyclohexane	< 292	ug/Kg	8/4/2020	21:51
Methylene chloride	< 729	ug/Kg	8/4/2020	21:51
o-Xylene	< 292	ug/Kg	8/4/2020	21:51
Styrene	1380	ug/Kg	8/4/2020	21:51
Tetrachloroethene	< 292	ug/Kg	8/4/2020	21:51
Toluene	< 292	ug/Kg	8/4/2020	21:51
trans-1,2-Dichloroethene	< 292	ug/Kg	8/4/2020	21:51

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST08-07272020

 Lab Sample ID:
 203534-01
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 7/27/2020

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 Solid
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 7/30/2020

1.2 Dichloroothano d4		101	75 - 12/		9/4/2020	21.51
<u>Surrogate</u>	<u>Perce</u>	Percent Recovery		<u>Outliers</u>	Date Anal	vzed
Vinyl chloride	< 292	ug/Kg			8/4/2020	21:51
Trichlorofluoromethane	< 292	ug/Kg			8/4/2020	21:51
Trichloroethene	< 292	ug/Kg			8/4/2020	21:51
trans-1,3-Dichloropropene	< 292	ug/Kg			8/4/2020	21:51

101	75 - 134		8/4/2020	21:51
92.5	59.5 - 129		8/4/2020	21:51
101	88.8 - 118		8/4/2020	21:51
83.6	84 - 114	*	8/4/2020	21:51
	92.5 101	92.5 59.5 - 129 101 88.8 - 118	92.5 59.5 - 129 101 88.8 - 118	92.5 59.5 - 129 8/4/2020 101 88.8 - 118 8/4/2020

Method Reference(s): EPA 8260C

EPA 5035A - L

Data File: x72266.D



Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST08-07272020

Lab Sample ID:203534-01ADate Sampled:7/27/2020Matrix:TCLP ExtractDate Received:7/30/2020

TCLP Semi-Volatile Organics

Analyte	Result	<u>Units</u>	Regulatory Limit Q	ualifier Date Analyzed
1,4-Dichlorobenzene	< 40.0	ug/L	7500	8/3/2020 19:04
2,4,5-Trichlorophenol	< 40.0	ug/L	400000	8/3/2020 19:04
2,4,6-Trichlorophenol	< 40.0	ug/L	2000	8/3/2020 19:04
2,4-Dinitrotoluene	< 40.0	ug/L	130	8/3/2020 19:04
Cresols (as m,p,o-Cresol)	115	ug/L	200000	8/3/2020 19:04
Hexachlorobenzene	< 40.0	ug/L	130	8/3/2020 19:04
Hexachlorobutadiene	< 40.0	ug/L	500	8/3/2020 19:04
Hexachloroethane	< 40.0	ug/L	3000	8/3/2020 19:04
Nitrobenzene	< 40.0	ug/L	2000	8/3/2020 19:04
Pentachlorophenol	< 80.0	ug/L	100000	8/3/2020 19:04
Pyridine	< 40.0	ug/L	5000	8/3/2020 19:04
Surrogate	Percer	<u>nt Recovery</u>	<u>Limits</u> <u>O</u>	utliers Date Analyzed

Surrogate	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	Date Anal	yzed
2,4,6-Tribromophenol	87.8	53.8 - 116		8/3/2020	19:04
2-Fluorobiphenyl	80.3	36.5 - 95.3		8/3/2020	19:04
2-Fluorophenol	63.4	11.1 - 99.3		8/3/2020	19:04
Nitrobenzene-d5	94.7	49.4 - 100		8/3/2020	19:04
Phenol-d5	61.7	10 - 103		8/3/2020	19:04
Terphenyl-d14	84.2	54.3 - 109		8/3/2020	19:04

Method Reference(s): EPA 8270D

EPA 1311 / 3510C

Preparation Date: 8/3/2020 **Data File:** 848339.D

TCLP Herbicides

<u>Analyte</u>	Result	<u>Units</u>	Regulatory Limit Qualifier	Date Analyzed
2,4,5-TP (Silvex)	< 0.10	mg/L	1	7/31/2020
2,4-D	< 0.50	mg/L	10	7/31/2020

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST08-07272020

Lab Sample ID:203534-01ADate Sampled:7/27/2020Matrix:TCLP ExtractDate Received:7/30/2020

Method Reference(s): EPA 8321B

EPA 1311

Subcontractor ELAP ID: 10709

TCLP Mercury

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Regulatory Limit Qualifier	Date Analyzed
Mercury	< 0.002	mg/L	0.2	8/3/2020

Method Reference(s): EPA 7470A
EPA 1311
Subcontractor ELAP ID: 10709

TCLP Pesticides

<u>Analyte</u>	Result	<u>Units</u>	Regulatory Limit	Qualifier	Date Analy	zed
Chlordane	3.17	ug/L	30	P	7/31/2020	17:18
Endrin	< 1.00	ug/L	20		7/31/2020	17:18
gamma-BHC (Lindane)	2.88	ug/L	400	P	7/31/2020	17:18
Heptachlor	1.34	ug/L	8	P	7/31/2020	17:18
Heptachlor Epoxide	< 2.00	ug/L	8		7/31/2020	17:18
Methoxychlor	< 1.00	ug/L	10000		7/31/2020	17:18
Toxaphene	< 20.0	ug/L	500		7/31/2020	17:18
<u>Surrogate</u>	Percent l	Recovery	<u>Limits</u>	Outliers	Date Analy	zed
Decachlorobiphenyl (1)	43	.1	19.3 - 157		7/31/2020	17:18
Tetrachloro-m-xylene (1)	75	.1	33.3 - 107		7/31/2020	17:18

Method Reference(s): EPA 8081B

EPA 1311 / 3510C

Preparation Date: 7/31/2020

TCLP RCRA Metals (ICP)

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Regulatory Limit Qualifier	Date Analyzed
Arsenic	< 0.500	mg/L	5	7/31/2020 13:53
Barium	< 0.500	mg/L	100	7/31/2020 13:53
Cadmium	< 0.0250	mg/L	1	7/31/2020 13:53
Chromium	< 0.500	mg/L	5	7/31/2020 13:53

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST08-07272020

Lab Sample ID:203534-01ADate Sampled:7/27/2020Matrix:TCLP ExtractDate Received:7/30/2020

 Lead
 < 0.500</td>
 mg/L
 5
 7/31/2020
 13:53

 Selenium
 < 0.200</td>
 mg/L
 1
 7/31/2020
 13:53

 Silver
 < 0.500</td>
 mg/L
 5
 7/31/2020
 13:53

Method Reference(s): EPA 6010C

EPA 1311 / 3005A

 Preparation Date:
 7/31/2020

 Data File:
 200731C

TCLP Volatile Organics

Analyte	<u>Result</u>	<u>Units</u>	Regulatory Limi	t Qualifier	Date Analy	vzed
1,1-Dichloroethene	< 20.0	ug/L	700		8/4/2020	17:01
1,2-Dichloroethane	< 20.0	ug/L	500		8/4/2020	17:01
2-Butanone	< 100	ug/L	200000		8/4/2020	17:01
Benzene	< 20.0	ug/L	500		8/4/2020	17:01
Carbon Tetrachloride	< 20.0	ug/L	500		8/4/2020	17:01
Chlorobenzene	< 20.0	ug/L	100000		8/4/2020	17:01
Chloroform	< 20.0	ug/L	6000		8/4/2020	17:01
Tetrachloroethene	< 20.0	ug/L	700		8/4/2020	17:01
Trichloroethene	< 20.0	ug/L	500		8/4/2020	17:01
Vinyl chloride	< 20.0	ug/L	200		8/4/2020	17:01
<u>Surrogate</u>	Percen	t Recovery	<u>Limits</u>	<u>Outliers</u>	Date Analy	zed
1,2-Dichloroethane-d4		122	70.9 - 139		8/4/2020	17:01
4-Bromofluorobenzene	(67.3	59.5 - 129		8/4/2020	17:01
Pentafluorobenzene		103	89.3 - 117		8/4/2020	17:01
Toluene-D8	8	80.1	82.9 - 115	*	8/4/2020	17:01

Method Reference(s): EPA 8260C

EPA 1311 / 5030C

Data File: x72253.D

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST10-07272020

Lab Sample ID: 203534-02 **Date Sampled:** 7/27/2020

Matrix: Solid Date Received: 7/30/2020

Corrosivity as pH

<u>Analyte</u> <u>Result</u> <u>Units</u> <u>Qualifier</u> <u>Date Analyzed</u>

Corrosivity (as pH) 13.39 @ 23.6 C S.U.

8/4/2020 12:36

Method Reference(s): EPA 9045D

Ignitability

<u>Analyte</u> <u>Result</u> <u>Units</u> <u>Qualifier</u> <u>Date Analyzed</u>

Ignitability No Burn mm / sec 8/5/2020

Method Reference(s): EPA 1030

Mercury

Analyte Result Units Qualifier Date Analyzed

Mercury <0.020 mg/Kg 8/3/2020

Method Reference(s): EPA 7471B
Subcontractor ELAP ID: 10709

TAL Metals (ICP)

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Qualifier	Date Analyzed
Aluminum	< 20.7	mg/Kg		8/5/2020 19:11
Antimony	< 2.48	mg/Kg		8/4/2020 20:39
Arsenic	< 0.413	mg/Kg		8/4/2020 20:39
Barium	< 4.13	mg/Kg		8/4/2020 20:39
Beryllium	< 0.207	mg/Kg		8/4/2020 20:39
Cadmium	0.569	mg/Kg		8/4/2020 20:39
Calcium	< 103	mg/Kg		8/5/2020 19:11
Chromium	8.33	mg/Kg		8/4/2020 20:39
Cobalt	< 2.07	mg/Kg		8/4/2020 20:39
Copper	14.2	mg/Kg		8/4/2020 20:39
Iron	5790	mg/Kg		8/5/2020 19:11
Lead	5.30	mg/Kg		8/4/2020 20:39
Magnesium	< 103	mg/Kg		8/4/2020 20:39

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST10-07272020

 Lab Sample ID:
 203534-02
 Date Sampled:
 7/27/2020

 Matrix:
 Solid
 Date Received:
 7/30/2020

Manganese	16.3	mg/Kg	8/4/2020 20:39
Nickel	77.2	mg/Kg	8/4/2020 20:39
Potassium	232	mg/Kg	8/5/2020 19:11
Selenium	< 0.826	mg/Kg	8/4/2020 20:39
Silver	< 0.413	mg/Kg	8/4/2020 20:39
Sodium	250000	mg/Kg	8/5/2020 19:07
Thallium	< 1.03	mg/Kg	8/4/2020 20:39
Vanadium	< 1.03	mg/Kg	8/4/2020 20:39
Zinc	3.04	mg/Kg	8/6/2020 10:19

Method Reference(s): EPA 6010C

EPA 3050B

Preparation Date: 8/3/2020 Data File: 200805C

Paint Filter Test

AnalyteResultUnitsQualifierDate AnalyzedPaint Filter TestPassN/A8/5/2020

Method Reference(s): EPA 9095B

Semi-Volatile Organics (Acid/Base Neutrals)

<u>Analyte</u>	Result	<u>Units</u>	Qualifier	Date Analyzed
1,1-Biphenyl	< 276	ug/Kg		8/4/2020 19:50
1,2,4,5-Tetrachlorobenzene	< 276	ug/Kg		8/4/2020 19:50
1,2,4-Trichlorobenzene	< 276	ug/Kg		8/4/2020 19:50
1,2-Dichlorobenzene	< 276	ug/Kg		8/4/2020 19:50
1,3-Dichlorobenzene	< 276	ug/Kg		8/4/2020 19:50
1,4-Dichlorobenzene	< 276	ug/Kg		8/4/2020 19:50
2,2-Oxybis (1-chloropropane)	< 276	ug/Kg		8/4/2020 19:50
2,3,4,6-Tetrachlorophenol	< 276	ug/Kg		8/4/2020 19:50
2,4,5-Trichlorophenol	< 276	ug/Kg		8/4/2020 19:50
2,4,6-Trichlorophenol	< 276	ug/Kg		8/4/2020 19:50
2,4-Dichlorophenol	< 276	ug/Kg		8/4/2020 19:50

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Thursday, August 6, 2020



Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST10-07272020

 Lab Sample ID:
 203534-02
 Date Sampled:
 7/27/2020

 Matrix:
 Solid
 Date Received:
 7/30/2020

2,4-Dimethylphenol	756	ug/Kg	8/4/2020 19:50
2,4-Dinitrophenol	< 1100	ug/Kg	8/4/2020 19:50
2,4-Dinitrotoluene	< 276	ug/Kg	8/4/2020 19:50
2,6-Dinitrotoluene	< 276	ug/Kg	8/4/2020 19:50
2-Chloronaphthalene	< 276	ug/Kg	8/4/2020 19:50
2-Chlorophenol	< 276	ug/Kg	8/4/2020 19:50
2-Methylnapthalene	1110	ug/Kg	8/4/2020 19:50
2-Methylphenol	< 276	ug/Kg	8/4/2020 19:50
2-Nitroaniline	< 276	ug/Kg	8/4/2020 19:50
2-Nitrophenol	< 276	ug/Kg	8/4/2020 19:50
3&4-Methylphenol	< 276	ug/Kg	8/4/2020 19:50
3,3'-Dichlorobenzidine	< 276	ug/Kg	8/4/2020 19:50
3-Nitroaniline	< 276	ug/Kg	8/4/2020 19:50
4,6-Dinitro-2-methylphenol	< 370	ug/Kg	8/4/2020 19:50
4-Bromophenyl phenyl ether	< 276	ug/Kg	8/4/2020 19:50
4-Chloro-3-methylphenol	< 276	ug/Kg	8/4/2020 19:50
4-Chloroaniline	< 276	ug/Kg	8/4/2020 19:50
4-Chlorophenyl phenyl ether	< 276	ug/Kg	8/4/2020 19:50
4-Nitroaniline	< 276	ug/Kg	8/4/2020 19:50
4-Nitrophenol	< 276	ug/Kg	8/4/2020 19:50
Acenaphthene	< 276	ug/Kg	8/4/2020 19:50
Acenaphthylene	< 276	ug/Kg	8/4/2020 19:50
Acetophenone	< 276	ug/Kg	8/4/2020 19:50
Anthracene	968	ug/Kg	8/4/2020 19:50
Atrazine	< 276	ug/Kg	8/4/2020 19:50
Benzaldehyde	< 276	ug/Kg	8/4/2020 19:50
Benzo (a) anthracene	< 276	ug/Kg	8/4/2020 19:50
Benzo (a) pyrene	< 276	ug/Kg	8/4/2020 19:50
Benzo (b) fluoranthene	< 276	ug/Kg	8/4/2020 19:50
Benzo (g,h,i) perylene	< 276	ug/Kg	8/4/2020 19:50

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST10-07272020

 Lab Sample ID:
 203534-02
 Date Sampled:
 7/27/2020

 Matrix:
 Solid
 Date Received:
 7/30/2020

Benzo (k) fluoranthene	< 276	ug/Kg	8/4/2020 19:50
Bis (2-chloroethoxy) methane	< 276	ug/Kg	8/4/2020 19:50
Bis (2-chloroethyl) ether	< 276	ug/Kg	8/4/2020 19:50
Bis (2-ethylhexyl) phthalate	< 276	ug/Kg	8/4/2020 19:50
Butylbenzylphthalate	< 276	ug/Kg	8/4/2020 19:50
Caprolactam	< 276	ug/Kg	8/4/2020 19:50
Carbazole	< 276	ug/Kg	8/4/2020 19:50
Chrysene	2850	ug/Kg	8/4/2020 19:50
Dibenz (a,h) anthracene	< 276	ug/Kg	8/4/2020 19:50
Dibenzofuran	< 276	ug/Kg	8/4/2020 19:50
Diethyl phthalate	< 276	ug/Kg	8/4/2020 19:50
Dimethyl phthalate	< 276	ug/Kg	8/4/2020 19:50
Di-n-butyl phthalate	< 276	ug/Kg	8/4/2020 19:50
Di-n-octylphthalate	< 276	ug/Kg	8/4/2020 19:50
Fluoranthene	321	ug/Kg	8/4/2020 19:50
Fluorene	< 276	ug/Kg	8/4/2020 19:50
Hexachlorobenzene	< 276	ug/Kg	8/4/2020 19:50
Hexachlorobutadiene	< 276	ug/Kg	8/4/2020 19:50
Hexachlorocyclopentadiene	< 1100	ug/Kg	8/4/2020 19:50
Hexachloroethane	< 276	ug/Kg	8/4/2020 19:50
Indeno (1,2,3-cd) pyrene	< 276	ug/Kg	8/4/2020 19:50
Isophorone	420	ug/Kg	8/4/2020 19:50
Naphthalene	3640	ug/Kg	8/4/2020 19:50
Nitrobenzene	< 276	ug/Kg	8/4/2020 19:50
N-Nitroso-di-n-propylamine	< 276	ug/Kg	8/4/2020 19:50
N-Nitrosodiphenylamine	< 276	ug/Kg	8/4/2020 19:50
Pentachlorophenol	< 552	ug/Kg	8/4/2020 19:50
Phenanthrene	333	ug/Kg	8/4/2020 19:50
Phenol	< 276	ug/Kg	8/4/2020 19:50
Pyrene	< 276	ug/Kg	8/4/2020 19:50

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST10-07272020

 Lab Sample ID:
 203534-02
 Date Sampled:
 7/27/2020

 Matrix:
 Solid
 Date Received:
 7/30/2020

<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	Date Anal	yzed
2,4,6-Tribromophenol	3.82	37.8 - 85.8	*	8/4/2020	19:50
2-Fluorobiphenyl	56.3	40.4 - 80.4		8/4/2020	19:50
2-Fluorophenol	0.00	38.8 - 77.4	*	8/4/2020	19:50
Nitrobenzene-d5	30.6	37.4 - 75.9	*	8/4/2020	19:50
Phenol-d5	0.00	40.4 - 78	*	8/4/2020	19:50
Terphenyl-d14	56.1	40.2 - 90		8/4/2020	19:50

Method Reference(s): EPA 8270D

EPA 3546

Preparation Date: 8/4/2020 Data File: 848381.D

Volatile Organics

Analyte	Result	<u>Units</u>	Qualifier Da	te Analyzed	l
1,1,1-Trichloroethane	< 41.8	ug/Kg	8/4	4/2020 22:3	14
1,1,2,2-Tetrachloroethane	< 41.8	ug/Kg	8/4	4/2020 22:1	14
1,1,2-Trichloroethane	< 41.8	ug/Kg	8/4	4/2020 22:1	14
1,1-Dichloroethane	< 41.8	ug/Kg	8/4	4/2020 22:1	14
1,1-Dichloroethene	< 41.8	ug/Kg	8/4	4/2020 22:1	14
1,2,3-Trichlorobenzene	< 105	ug/Kg	8/4	4/2020 22:1	14
1,2,4-Trichlorobenzene	< 105	ug/Kg	8/4	4/2020 22:1	14
1,2-Dibromo-3-Chloropropane	< 209	ug/Kg	8/4	4/2020 22:1	14
1,2-Dibromoethane	< 41.8	ug/Kg	8/4	4/2020 22:1	14
1,2-Dichlorobenzene	< 41.8	ug/Kg	8/4	4/2020 22:1	14
1,2-Dichloroethane	< 41.8	ug/Kg	8/4	4/2020 22:1	14
1,2-Dichloropropane	< 41.8	ug/Kg	8/4	4/2020 22:1	14
1,3-Dichlorobenzene	< 41.8	ug/Kg	8/4	4/2020 22:1	14
1,4-Dichlorobenzene	< 41.8	ug/Kg	8/4	4/2020 22:1	14
1,4-Dioxane	< 418	ug/Kg	8/4	4/2020 22:1	14
2-Butanone	< 209	ug/Kg	8/4	4/2020 22:1	14
2-Hexanone	< 105	ug/Kg	8/4	4/2020 22:1	14
4-Methyl-2-pentanone	< 105	ug/Kg	8/4	4/2020 22:1	14

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST10-07272020

 Lab Sample ID:
 203534-02
 Date Sampled:
 7/27/2020

 Matrix:
 Solid
 Date Received:
 7/30/2020

Acetone	< 209	ug/Kg	8/4/2020 22:14
Benzene	186	ug/Kg	8/4/2020 22:14
Bromochloromethane	< 105	ug/Kg	8/4/2020 22:14
Bromodichloromethane	< 41.8	ug/Kg	8/4/2020 22:14
Bromoform	< 105	ug/Kg	8/4/2020 22:14
Bromomethane	< 41.8	ug/Kg	8/4/2020 22:14
Carbon disulfide	< 41.8	ug/Kg	8/4/2020 22:14
Carbon Tetrachloride	< 41.8	ug/Kg	8/4/2020 22:14
Chlorobenzene	< 41.8	ug/Kg	8/4/2020 22:14
Chloroethane	< 41.8	ug/Kg	8/4/2020 22:14
Chloroform	< 41.8	ug/Kg	8/4/2020 22:14
Chloromethane	< 41.8	ug/Kg	8/4/2020 22:14
cis-1,2-Dichloroethene	< 41.8	ug/Kg	8/4/2020 22:14
cis-1,3-Dichloropropene	< 41.8	ug/Kg	8/4/2020 22:14
Cyclohexane	< 209	ug/Kg	8/4/2020 22:14
Dibromochloromethane	< 41.8	ug/Kg	8/4/2020 22:14
Dichlorodifluoromethane	< 41.8	ug/Kg	8/4/2020 22:14
Ethylbenzene	< 41.8	ug/Kg	8/4/2020 22:14
Freon 113	< 41.8	ug/Kg	8/4/2020 22:14
Isopropylbenzene	< 41.8	ug/Kg	8/4/2020 22:14
m,p-Xylene	261	ug/Kg	8/4/2020 22:14
Methyl acetate	< 41.8	ug/Kg	8/4/2020 22:14
Methyl tert-butyl Ether	< 41.8	ug/Kg	8/4/2020 22:14
Methylcyclohexane	< 41.8	ug/Kg	8/4/2020 22:14
Methylene chloride	< 105	ug/Kg	8/4/2020 22:14
o-Xylene	44.6	ug/Kg	8/4/2020 22:14
Styrene	< 105	ug/Kg	8/4/2020 22:14
Tetrachloroethene	< 41.8	ug/Kg	8/4/2020 22:14
Toluene	252	ug/Kg	8/4/2020 22:14
trans-1,2-Dichloroethene	< 41.8	ug/Kg	8/4/2020 22:14

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Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST10-07272020

 Lab Sample ID:
 203534-02
 Date Sampled:
 7/27/2020

 Matrix:
 Solid
 Date Received:
 7/30/2020

trans-1,3-Dichloropropene	< 41.8	ug/Kg	8/4/2020 22:1	4
Trichloroethene	< 41.8	ug/Kg	8/4/2020 22:1	4
Trichlorofluoromethane	< 41.8	ug/Kg	8/4/2020 22:1	4
Vinyl chloride	< 41.8	ug/Kg	8/4/2020 22:1	4

<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	Date Analy	<u>vzed</u>
1,2-Dichloroethane-d4	90.4	75 - 134		8/4/2020	22:14
4-Bromofluorobenzene	105	59.5 - 129		8/4/2020	22:14
Pentafluorobenzene	101	88.8 - 118		8/4/2020	22:14
Toluene-D8	101	84 - 114		8/4/2020	22:14

Method Reference(s): EPA 8260C

EPA 5035A - L

Data File: x72267.D



Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST10-07272020

Lab Sample ID:203534-02ADate Sampled:7/27/2020Matrix:TCLP ExtractDate Received:7/30/2020

TCLP Semi-Volatile Organics

<u>Result</u>	<u>Units</u>	Regulatory Limit Qualifier	Date Analyzed
< 50.0	ug/L	7500	8/3/2020 19:33
< 50.0	ug/L	400000	8/3/2020 19:33
< 50.0	ug/L	2000	8/3/2020 19:33
< 50.0	ug/L	130	8/3/2020 19:33
< 100	ug/L	200000	8/3/2020 19:33
< 50.0	ug/L	130	8/3/2020 19:33
< 50.0	ug/L	500	8/3/2020 19:33
< 50.0	ug/L	3000	8/3/2020 19:33
< 50.0	ug/L	2000	8/3/2020 19:33
< 100	ug/L	100000	8/3/2020 19:33
< 50.0	ug/L	5000	8/3/2020 19:33
	< 50.0 < 50.0 < 50.0 < 50.0 < 100 < 50.0 < 50.0 < 50.0 < 100	< 50.0 ug/L < 100 ug/L < 50.0 ug/L < 50.0 ug/L < 50.0 ug/L < 50.0 ug/L < 100 ug/L < 100 ug/L < 100 ug/L	< 50.0

Surrogate	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	Date Analy	vzed
2,4,6-Tribromophenol	88.7	53.8 - 116		8/3/2020	19:33
2-Fluorobiphenyl	77.0	36.5 - 95.3		8/3/2020	19:33
2-Fluorophenol	70.6	11.1 - 99.3		8/3/2020	19:33
Nitrobenzene-d5	78.5	49.4 - 100		8/3/2020	19:33
Phenol-d5	70.3	10 - 103		8/3/2020	19:33
Terphenyl-d14	84.2	54.3 - 109		8/3/2020	19:33

Method Reference(s): EPA 8270D

EPA 1311 / 3510C

Preparation Date: 8/3/2020 **Data File:** 848340.D

TCLP Herbicides

<u>Analyte</u>	Result	<u>Units</u>	Regulatory Limit Qualifier	Date Analyzed
2,4,5-TP (Silvex)	<0.10	mg/L	1	7/31/2020
2,4-D	< 0.50	mg/L	10	7/31/2020



Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST10-07272020

Lab Sample ID:203534-02ADate Sampled:7/27/2020Matrix:TCLP ExtractDate Received:7/30/2020

Method Reference(s): EPA 8321B

EPA 1311

Subcontractor ELAP ID: 10709

TCLP Mercury

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Regulatory Limit Qualifier	Date Analyzed
Mercury	< 0.002	mg/L	0.2	8/3/2020

Method Reference(s): EPA 7470A EPA 1311 Subcontractor ELAP ID: 10709

TCLP Pesticides

<u>Analyte</u>	Result	<u>Units</u>	Regulatory Limit	Qualifier	Date Analy	vzed
Chlordane	< 2.00	ug/L	30		7/31/2020	17:37
Endrin	< 1.00	ug/L	20		7/31/2020	17:37
gamma-BHC (Lindane)	< 1.00	ug/L	400		7/31/2020	17:37
Heptachlor	< 1.00	ug/L	8		7/31/2020	17:37
Heptachlor Epoxide	< 2.00	ug/L	8		7/31/2020	17:37
Methoxychlor	< 1.00	ug/L	10000		7/31/2020	17:37
Toxaphene	< 20.0	ug/L	500		7/31/2020	17:37
<u>Surrogate</u>	Percent	Recovery	<u>Limits</u>	Outliers	Date Analy	zed
Decachlorobiphenyl (1)	8	6.7	19.3 - 157		7/31/2020	17:37
Tetrachloro-m-xylene (1)	7	4.1	33.3 - 107		7/31/2020	17:37

Method Reference(s): EPA 8081B

EPA 1311 / 3510C

Preparation Date: 7/31/2020

TCLP RCRA Metals (ICP)

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Regulatory Limit Qualifier	Date Analyzed
Arsenic	< 0.500	mg/L	5	7/31/2020 13:57
Barium	< 0.500	mg/L	100	7/31/2020 13:57
Cadmium	< 0.0250	mg/L	1	7/31/2020 13:57
Chromium	< 0.500	mg/L	5	7/31/2020 13:57



Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview

Sample Identifier: ST10-07272020

Lab Sample ID:203534-02ADate Sampled:7/27/2020Matrix:TCLP ExtractDate Received:7/30/2020

 Lead
 < 0.500</td>
 mg/L
 5
 7/31/2020
 13:57

 Selenium
 < 0.200</td>
 mg/L
 1
 7/31/2020
 13:57

 Silver
 < 0.500</td>
 mg/L
 5
 7/31/2020
 13:57

Method Reference(s): EPA 6010C

EPA 1311 / 3005A

 Preparation Date:
 7/31/2020

 Data File:
 200731C

TCLP Volatile Organics

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Regulatory Limi	t <u>Qualifier</u>	Date Analy	<u>zed</u>
1,1-Dichloroethene	< 20.0	ug/L	700		8/4/2020	17:24
1,2-Dichloroethane	< 20.0	ug/L	500		8/4/2020	17:24
2-Butanone	< 100	ug/L	200000		8/4/2020	17:24
Benzene	< 20.0	ug/L	500		8/4/2020	17:24
Carbon Tetrachloride	< 20.0	ug/L	500		8/4/2020	17:24
Chlorobenzene	< 20.0	ug/L	100000		8/4/2020	17:24
Chloroform	< 20.0	ug/L	6000		8/4/2020	17:24
Tetrachloroethene	< 20.0	ug/L	700		8/4/2020	17:24
Trichloroethene	< 20.0	ug/L	500		8/4/2020	17:24
Vinyl chloride	< 20.0	ug/L	200		8/4/2020	17:24
Surrogate	Perce	nt Recovery	<u>Limits</u>	<u>Outliers</u>	Date Analy	zed
1,2-Dichloroethane-d4		117	70.9 - 139		8/4/2020	17:24
4-Bromofluorobenzene		67.0	59.5 - 129		8/4/2020	17:24
Pentafluorobenzene		99.4	89.3 - 117		8/4/2020	17:24
Toluene-D8		83.8	82.9 - 115		8/4/2020	17:24

Method Reference(s): EPA 8260C

EPA 1311 / 5030C

Data File: x72254.D



Client:

Inventum Engineering, P.C.

Project Reference:

Riverview

Lab Project ID:

203534

Matrix:

Solid

TAL Metals (ICP)

<u>Analyte</u>	Result	<u>Units</u>	Qualifier	Date Analyzed	
Aluminum	<24.3	mg/Kg		8/4/2020	11:39
Antimony	<2.91	mg/Kg		8/4/2020	11:39
Arsenic	< 0.485	mg/Kg		8/4/2020	11:39
Barium	<4.85	mg/Kg		8/4/2020	11:39
Beryllium	< 0.243	mg/Kg		8/4/2020	11:39
Cadmium	< 0.243	mg/Kg	ki	8/4/2020	11:39
Calcium	<121	mg/Kg		8/4/2020	11:39
Chromium	< 0.485	mg/Kg		8/4/2020	11:39
Cobalt	<2.43	mg/Kg		8/4/2020	11:39
Copper	< 0.971	mg/Kg		8/4/2020	11:39
Iron	<9.71	mg/Kg		8/4/2020	11:39
Lead	< 0.485	mg/Kg		8/4/2020	11:39
Magnesium	<121	mg/Kg		8/4/2020	11:39
Manganese	< 0.728	mg/Kg		8/4/2020	11:39
Nickel	<1.94	mg/Kg		8/4/2020	19:57
Potassium	<121	mg/Kg		8/4/2020	11:39
Selenium	< 0.971	mg/Kg		8/4/2020	11:39
Silver	< 0.485	mg/Kg		8/4/2020	11:39
Sodium	<121	mg/Kg		8/4/2020	11:39
Thallium	<1.21	mg/Kg		8/4/2020	11:39
Vanadium	<1.21	mg/Kg		8/4/2020	19:57
Zinc	<2.91	mg/Kg		8/4/2020	11:39

Method Reference(s):

EPA 6010C

EPA 3050B

Preparation Date:

8/3/2020

Data File:

200804A

QC Batch ID:

QC200803soil

QC Number:

1



QC Report for Laboratory Control Sample and Control Sample Duplicate

Client: Inventum Engineering, P.C.

Project Reference:

Lab Project ID: Riverview 203534

Matrix: Solid

Metals

Nickel Lead Iron Copper Cobalt Potassium Manganese Magnesium Calcium Cadmiun Berylliun Barium Arsenic Antimony Aluminum Analyte Chromium Added 21.2 42.4 42.4 42.4 **LCS** 339 106 106 106 106 169 106 106 106 106 Added **LCSD** 40.3 20.2 101 101 101 40.3 101 161 101 101 101 101 mg/Kg Units Spike Result S:T 1600 97.7 96.9 99.6 42.5 314 94.2 99.6 99.9 40.3 202 102 159 40.4 18.5 106 Result LCSD 1560 93.4 89.1 93.4 94.6 38.2 96.8 38.3 93.1 40.2 191 298 155 17.5 100 Recovery Recovery LCS % 94.1 88.7 95.3 92.8 88.9 94.1 94.3 95.0 96.4 93.5 95.4 87.3 99.9 92.2 91.4 100 LCSD % 92.6 94.6 99.7 92.3 88.4 92.7 93.8 94.7 96.1 96.2 95.1 86.7 99.7 92.4 90.8 80 -80 -80 80 80 80 80 80 80 80 80 80 80 - 120 % Rec Limits 120 120 120 120 120 120 120 120 120 120 120 120 **Outliers Outliers Difference** LCS **LCSD** Relative % 0.557 0.528 0.298 0.3410.398 0.664 0.204 0.1200.658 2.53 0.674 0.661 0.496 1.46 2.82 Limit RPD 20 20 20 20 20 20 20 20 20 20 20 20 20 **Outliers** RPD 8/4/2020 8/4/2020 8/4/2020 8/4/2020 8/4/2020 8/4/2020 8/4/2020 8/4/2020 8/4/2020 8/4/2020 8/4/2020 8/4/2020 8/4/2020 8/4/2020 8/4/2020 8/4/2020 Analyzed Date

QC Report for Laboratory Control Sample and Control Sample Duplicate

Client: Inventum Engineering, P.C.

Project Reference: Riverview

Lab Project ID: 203534

Solid

Matrix:

Metals

	Zinc	Vanadium	Thallium	Sodium	Silver	Selenium	Analyte
Method Reference(s): Preparation Date: Data File: QC Number: QC Batch ID:	106	42.4	106	508	10.6	106	LCS Added
EPA EPA 8/3, 2008 1	101	40.3	101	484	10.1	101	LCSD Added
EPA 6010C EPA 3050B 8/3/2020 200804A 1 QC200803soil	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	Spike Units
	95.5	41.5	106	458	9.68	84.7	LCS Result
	90.8	39.3	101	446	9.20	80.8	LCSD Result
	90.2	98.0	99.9	90.1	91.3	80.0	LCS % Recovery
	90.1	97.6	100	92.2	91.2	80.2	LCS % LCSD % Recovery Recovery
	80 - 120	80 - 120	80 - 120	80 - 120	80 - 120	80 - 120	% Rec Limits
							LCS LCSD Relative % Outliers Outliers Difference
	0.109	0.460	0.152	2.37	0.122	0.211	•
	20	20	20	20	20	20	RPD Limit
							RPD Outliers
	8/4/2020	8/4/2020	8/4/2020	8/4/2020	8/4/2020	8/4/2020	Date Analyzed



Client:

Inventum Engineering, P.C.

Project Reference:

Riverview

Lab Project ID:

203534

Matrix:

Solid

Semi-Volatile Organics (Acid/Base Neutrals)

<u>Analyte</u>	Result	<u>Units</u>	Qualifier	Date Analy	zed
1,1-Biphenyl	<254	ug/Kg		8/4/2020	13:32
1,2,4,5-Tetrachlorobenzene	<254	ug/Kg		8/4/2020	13:32
1,2,4-Trichlorobenzene	<254	ug/Kg		8/4/2020	13:32
1,2-Dichlorobenzene	<254	ug/Kg		8/4/2020	13:32
1,3-Dichlorobenzene	<254	ug/Kg		8/4/2020	13:32
1,4-Dichlorobenzene	<254	ug/Kg		8/4/2020	13:32
2,2-Oxybis (1-chloropropane)	<254	ug/Kg		8/4/2020	13:32
2,3,4,6-Tetrachlorophenol	<254	ug/Kg		8/4/2020	13:32
2,4,5-Trichlorophenol	<254	ug/Kg		8/4/2020	13:32
2,4,6-Trichlorophenol	<254	ug/Kg		8/4/2020	13:32
2,4-Dichlorophenol	<254	ug/Kg		8/4/2020	13:32
2,4-Dimethylphenol	<254	ug/Kg		8/4/2020	13:32
2,4-Dinitrophenol	<1020	ug/Kg		8/4/2020	13:32
2,4-Dinitrotoluene	<254	ug/Kg		8/4/2020	13:32
2,6-Dinitrotoluene	<254	ug/Kg		8/4/2020	13:32
2-Chloronaphthalene	<254	ug/Kg		8/4/2020	13:32
2-Chlorophenol	<254	ug/Kg		8/4/2020	13:32
2-Methylnapthalene	<254	ug/Kg		8/4/2020	13:32
2-Methylphenol	<254	ug/Kg		8/4/2020	13:32
2-Nitroaniline	<254	ug/Kg		8/4/2020	13:32
2-Nitrophenol	<254	ug/Kg		8/4/2020	13:32
3&4-Methylphenol	<254	ug/Kg		8/4/2020	13:32
3,3'-Dichlorobenzidine	<254	ug/Kg		8/4/2020	13:32
3-Nitroaniline	<254	ug/Kg		8/4/2020	13:32
4,6-Dinitro-2-methylphenol	<508	ug/Kg		8/4/2020	13:32
4-Bromophenyl phenyl ether	<254	ug/Kg		8/4/2020	13:32
4-Chloro-3-methylphenol	<254	ug/Kg		8/4/2020	13:32
4-Chloroaniline	<254	ug/Kg		8/4/2020	13:32



Client:

Inventum Engineering, P.C.

Project Reference:

Riverview

Lab Project ID:

203534

Matrix:

Solid

Semi-Volatile Organics (Acid/Base Neutrals)

<u>Analyte</u>	Result	<u>Units</u>	Qualifier	Date Analy	zed
4-Chlorophenyl phenyl ether	<254	ug/Kg		8/4/2020	13:32
4-Nitroaniline	<254	ug/Kg		8/4/2020	13:32
4-Nitrophenol	<254	ug/Kg		8/4/2020	13:32
Acenaphthene	<254	ug/Kg		8/4/2020	13:32
Acenaphthylene	<254	ug/Kg		8/4/2020	13:32
Acetophenone	<254	ug/Kg		8/4/2020	13:32
Anthracene	<254	ug/Kg		8/4/2020	13:32
Atrazine	<254	ug/Kg		8/4/2020	13:32
Benzaldehyde	<254	ug/Kg		8/4/2020	13:32
Benzo (a) anthracene	<254	ug/Kg		8/4/2020	13:32
Benzo (a) pyrene	<254	ug/Kg		8/4/2020	13:32
Benzo (b) fluoranthene	<254	ug/Kg		8/4/2020	13:32
Benzo (g,h,i) perylene	<254	ug/Kg		8/4/2020	13:32
Benzo (k) fluoranthene	<254	ug/Kg		8/4/2020	13:32
Bis (2-chloroethoxy) methane	<254	ug/Kg		8/4/2020	13:32
Bis (2-chloroethyl) ether	<254	ug/Kg		8/4/2020	13:32
Bis (2-ethylhexyl) phthalate	<254	ug/Kg		8/4/2020	13:32
Butylbenzylphthalate	<254	ug/Kg		8/4/2020	13:32
Caprolactam	<254	ug/Kg		8/4/2020	13:32
Carbazole	<254	ug/Kg		8/4/2020	13:32
Chrysene	<254	ug/Kg		8/4/2020	13:32
Dibenz (a,h) anthracene	<254	ug/Kg		8/4/2020	13:32
Dibenzofuran	<254	ug/Kg		8/4/2020	13:32
Diethyl phthalate	<254	ug/Kg		8/4/2020	13:32
Dimethyl phthalate	<254	ug/Kg		8/4/2020	13:32
Di-n-butyl phthalate	<254	ug/Kg		8/4/2020	13:32
Di-n-octylphthalate	<254	ug/Kg		8/4/2020	13:32
Fluoranthene	<254	ug/Kg		8/4/2020	13:32



Client:

Inventum Engineering, P.C.

Project Reference:

Riverview

Lab Project ID:

203534

Matrix:

Solid

Semi-Volatile Organics (Acid/Base Neutrals)

<u>Analyte</u>	Result	<u>Units</u>	Qualifier	Date Analy	zed
,					
Fluorene	<254	ug/Kg		8/4/2020	13:32
Hexachlorobenzene	<254	ug/Kg		8/4/2020	13:32
Hexachlorobutadiene	<254	ug/Kg		8/4/2020	13:32
Hexachlorocyclopentadiene	<1020	ug/Kg		8/4/2020	13:32
Hexachloroethane	<254	ug/Kg		8/4/2020	13:32
Indeno (1,2,3-cd) pyrene	<254	ug/Kg		8/4/2020	13:32
Isophorone	<254	ug/Kg		8/4/2020	13:32
Naphthalene	<254	ug/Kg		8/4/2020	13:32
Nitrobenzene	<254	ug/Kg		8/4/2020	13:32
N-Nitroso-di-n-propylamine	<254	ug/Kg		8/4/2020	13:32
N-Nitrosodiphenylamine	<254	ug/Kg		8/4/2020	13:32
Pentachlorophenol	<508	ug/Kg		8/4/2020	13:32
Phenanthrene	<254	ug/Kg		8/4/2020	13:32
Phenol	<254	ug/Kg		8/4/2020	13:32
Pyrene	<254	ug/Kg		8/4/2020	13:32
Surrogate	Percent Recovery	<u>Limits</u>	Outliers	Date Anal	yzed
2,4,6-Tribromophenol	59.6	37.8 - 85.8		8/4/2020	13:32
2-Fluorobiphenyl	53.5	40.4 - 80.4		8/4/2020	13:32
2-Fluorophenol	54.0	38.8 - 77.4		8/4/2020	13:32
Nitrobenzene-d5	53.1	37.4 - 75.9		8/4/2020	13:32
Phenol-d5	59.4	40.4 - 78		8/4/2020	13:32
Terphenyl-d14	52.2	40.2 - 90		8/4/2020	13:32
Method Reference(s): EPA 827	0D				

EPA 3546

Preparation Date:

8/4/2020

Data File:

QC Batch ID:

B48368.D

QC Number:

QC200804ABNS 1



Client: Inventum Engineering, P.C.

Project Reference: Riverview

Lab Project ID: 203534

Matrix: Solid

Semi-Volatile Organics (Acid/Base Neutrals)

Method Reference(s): EP EP Preparation Date: 8/ Data File: B4 QC Number: 1	Pyrene	Phenol	Pentachlorophenol	N-Nitroso-di-n-propylamine	Acenaphthene	4-Nitrophenol	4-Chloro-3-methylphenol	2-Chlorophenol	2,4-Dinitrotoluene	1,4-Dichlorobenzene	1,2,4-Trichlorobenzene	Analyte	
EPA 8270D EPA 3546 8/4/2020 B48369.D 1 QC200804ABNS													
	2760	4140	4140	2760	2760	4140	4140	4140	2760	2760	2760	Added	Spike
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	Units	<u>Spike</u>
	1970	3030	2790	1940	1950	3220	3150	2860	1990	1660	1780	Result	<u>LCS</u>
	71.4	73.0	67.4	70.2	70.5	77.8	76.0	69.0	72.0	60.1	64.4	Recovery	LCS %
	47.1 - 88.4	47.5 - 78	32.1 - 116	43.2 78.2	46.4 - 78.8	42.7 - 85.9	50 - 82.5	48.8 - 77.3	44.4 🔹 83.4	43.1 - 68.3	45.7 - 73.3	Limits	% Rec
												Outliers	TCS
9	8/4/2020	8/4/2020	8/4/2020	8/4/2020	8/4/2020	8/4/2020	8/4/2020	8/4/2020	8/4/2020	8/4/2020	8/4/2020	<u>Analyzed</u>	Date



Client:

Inventum Engineering, P.C.

Project Reference:

Riverview

Lab Project ID:

203534

Matrix:

Solid

Volatile Organics

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Qualifier	Date Analy	zed
1,1,1-Trichloroethane	<2.00	ug/Kg		8/4/2020	12:56
1,1,2,2-Tetrachloroethane	<2.00	ug/Kg		8/4/2020	12:56
1,1,2-Trichloroethane	<2.00	ug/Kg		8/4/2020	12:56
1,1-Dichloroethane	<2.00	ug/Kg		8/4/2020	12:56
1,1-Dichloroethene	<2.00	ug/Kg		8/4/2020	12:56
1,2,3-Trichlorobenzene	< 5.00	ug/Kg		8/4/2020	12:56
1,2,4-Trichlorobenzene	<5.00	ug/Kg		8/4/2020	12:56
1,2-Dibromo-3-Chloropropane	<10.0	ug/Kg		8/4/2020	12:56
1,2-Dibromoethane	<2.00	ug/Kg		8/4/2020	12:56
1,2-Dichlorobenzene	<2.00	ug/Kg		8/4/2020	12:56
1,2-Dichloroethane	<2.00	ug/Kg		8/4/2020	12:56
1,2-Dichloropropane	<2.00	ug/Kg		8/4/2020	12:56
1,3-Dichlorobenzene	<2.00	ug/Kg		8/4/2020	12:56
1,4-Dichlorobenzene	<2.00	ug/Kg		8/4/2020	12:56
1,4-Dioxane	<20.0	ug/Kg		8/4/2020	12:56
2-Butanone	<10.0	ug/Kg		8/4/2020	12:56
2-Hexanone	<5.00	ug/Kg		8/4/2020	12:56
4-Methyl-2-pentanone	<5.00	ug/Kg		8/4/2020	12:56
Acetone	<10.0	ug/Kg		8/4/2020	12:56
Benzene	<2.00	ug/Kg		8/4/2020	12:56
Bromochloromethane	<5.00	ug/Kg		8/4/2020	12:56
Bromodichloromethane	<2.00	ug/Kg		8/4/2020	12:56
Bromoform	<5.00	ug/Kg		8/4/2020	12:56
Bromomethane	<2.00	ug/Kg		8/4/2020	12:56
Carbon disulfide	<2.00	ug/Kg		8/4/2020	12:56
Carbon Tetrachloride	<2.00	ug/Kg		8/4/2020	12:56
Chlorobenzene	<2.00	ug/Kg		8/4/2020	12:56



Client: <u>Inventum Engineering, P.C.</u>

Project Reference: Riverview **Lab Project ID:** 203534

Matrix: Solid

Volatile Organics

<u>Analyte</u>	Result	<u>Units</u>	Qualifier	Date Analy	zed
Chloroethane	<2.00	ug/Kg		8/4/2020	12:56
Chloroform	<2.00	ug/Kg		8/4/2020	12:56
Chloromethane	<2.00	ug/Kg		8/4/2020	12:56
cis-1,2-Dichloroethene	<2.00	ug/Kg		8/4/2020	12:56
cis-1,3-Dichloropropene	<2.00	ug/Kg		8/4/2020	12:56
Cyclohexane	<10.0	ug/Kg		8/4/2020	12:56
Dibromochloromethane	<2.00	ug/Kg		8/4/2020	12:56
Dichlorodifluoromethane	<2.00	ug/Kg		8/4/2020	12:56
Ethylbenzene	<2.00	ug/Kg		8/4/2020	12:56
Freon 113	<2.00	ug/Kg		8/4/2020	12:56
Isopropylbenzene	<2.00	ug/Kg		8/4/2020	12:56
m,p-Xylene	<2.00	ug/Kg		8/4/2020	12:56
Methyl acetate	<2.00	ug/Kg		8/4/2020	12:56
Methyl tert-butyl Ether	<2.00	ug/Kg		8/4/2020	12:56
Methylcyclohexane	<2.00	ug/Kg		8/4/2020	12:56
Methylene chloride	<5.00	ug/Kg		8/4/2020	12:56
o-Xylene	<2.00	ug/Kg		8/4/2020	12:56
Styrene	<5.00	ug/Kg		8/4/2020	12:56
Tetrachloroethene	<2.00	ug/Kg		8/4/2020	12:56
Toluene	<2.00	ug/Kg		8/4/2020	12:56
trans-1,2-Dichloroethene	<2.00	ug/Kg		8/4/2020	12:56
trans-1,3-Dichloropropene	<2.00	ug/Kg		8/4/2020	12:56
Trichloroethene	<2.00	ug/Kg		8/4/2020	12:56
Trichlorofluoromethane	<2.00	ug/Kg		8/4/2020	12:56
Vinyl chloride	<2.00	ug/Kg		8/4/2020	12:56

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



Client:

Inventum Engineering, P.C.

Project Reference:

Riverview

Lab Project ID:

203534

Matrix:

Solid

Volatile Organics

<u>Analyte</u>		Result	<u>Units</u>	Qualifier	Date Analy	zed
Surrogate		Percent Recovery	Limits	<u>Outliers</u>	Date Anal	yzed
1,2-Dichloroethane-d4		108	75 - 134		8/4/2020	12:56
4-Bromofluorobenzene		65.4	59.5 - 129		8/4/2020	12:56
Pentafluorobenzene		100	88.8 - 118		8/4/2020	12:56
Toluene-D8		84.7	84 - 114		8/4/2020	12:56
Method Reference(s):	EPA 8260C					

EPA 5035A - L

Data File: QC Batch ID: x72243.D

voas200804

QC Number:

Client: Inventum Engineering, P.C.

Project Reference: Riverview

Lab Project ID: 203534

Solid

Matrix:

Volatile Organics

	<u>Spike</u>	<u>Spike</u>	LCS	LCS %	% Rec	LCS	Date
Analyte	Added	Units	Result	Recovery	Limits	<u>Outliers</u>	<u>Analyzed</u>
1 1 1-Trichloroethane	3000	/V~))	1			
4 4 9 9 11))) i			0/1/2020
1,1,2,2-Tetrachloroethane	20.0	ug/Kg	24.5	123	71.9 - 134		8/4/2020
1,1,2-Trichloroethane	20.0	ug/Kg	22.1	110	74.2 129		8/4/2020
1,1-Dichloroethane	20.0	ug/Kg	22.6	113	61.6 = 134		8/4/2020
1,1-Dichloroethene	20.0	ug/Kg	23.4	117	60.6 - 128		8/4/2020
1,2-Dichlorobenzene	20.0	ug/Kg	21.8	109	70.9 = 129		8/4/2020
1,2-Dichloroethane	20.0	ug/Kg	22.7	114	67.2 = 143		8/4/2020
1,2-Dichloropropane	20.0	ug/Kg	18.1	90.7	68 - 123		8/4/2020
1,3-Dichlorobenzene	20.0	ug/Kg	20.0	100	67.2 - 124		8/4/2020
1,4-Dichlorobenzene	20.0	ug/Kg	20.4	102	66.8 = 123		8/4/2020
Benzene	20.0	ug/Kg	22.8	114	72.2 - 129		8/4/2020
Bromodichloromethane	20.0	ug/Kg	20.5	103	64.2 - 129		8/4/2020
Bromoform	20.0	ug/Kg	19.6	98.2	55.2 = 123		8/4/2020
Bromomethane	20.0	ug/Kg	22.9	114	65.2 - 146		8/4/2020
Carbon Tetrachloride	20.0	ug/Kg	23.0	115	61.2 - 137		8/4/2020
Chlorobenzene .	20.0	ug/Kg	21.8	109	71.6 = 127		8/4/2020
This report is part of a multipage document and should only be evaluated in its outlinest. The Chair of the	indicated in its	Satinate The Ci	hair afficient				



Client: Inventum Engineering, P.C.

Project Reference: Riverview

Lab Project ID: 203534

Matrix: Solid

Volatile Organics

	<u>Spike</u>	<u>Spike</u>	LCS	LCS %	% Rec	LCS	Date
Analyte	Added	Units	Result	Recovery	Limits	Outliers	<u>Analyzed</u>
Chloroethane	20.0	ug/Kg	22.6	113	60.4 - 137		8/4/2020
Chloroform	20.0	ug/Kg	22.8	114	69.4 = 134		8/4/2020
Chloromethane	20.0	ug/Kg	21.8	109	47.5 = 173		8/4/2020
cis-1,3-Dichloropropene	20.0	ug/Kg	14.7	73.5	61 - 115		8/4/2020
Dibromochloromethane	20.0	ug/Kg	20.4	102	65.3 - 130		8/4/2020
Ethylbenzene	20.0	ug/Kg	16.3	81.7	69.3 - 132		8/4/2020
Methylene chloride	20.0	ug/Kg	21.6	108	58.6 • 138		8/4/2020
Tetrachloroethene	20.0	ug/Kg	21.4	107	62.8 = 140		8/4/2020
Toluene	20.0	ug/Kg	18.4	92.1	74.9 - 130		8/4/2020
trans-1,2-Dichloroethene	20.0	ug/Kg	24.2	121	67.9 - 134		8/4/2020
trans-1,3-Dichloropropene	20.0	ug/Kg	16.8	84.1	54 - 117		8/4/2020
Trichloroethene	20.0	ug/Kg	20.7	103	73.5 - 122		8/4/2020
Trichlorofluoromethane	20.0	ug/Kg	24.2	121	60.6 - 155		8/4/2020
Vinyl chloride	20.0	ug/Kg	20.6	103	60.9 🔹 150		8/4/2020

compliance with the sample condition requirements upon receipt. This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including

Report Prepared Wednesday, August 05, 2020



Client: Project Reference: Riverview Inventum Engineering, P.C.

Matrix: Lab Project ID: 203534

Solid

QC Number: QC Batch ID: Data File:

x72242.D

EPA 5035A - L EPA 8260C

voas200804

Method Reference(s):

Volatile Organics Analyte Added <u>Spike</u> Spike Units Result LCS Recovery LCS % Limits % Rec **Outliers** LCS

> **Analyzed** Date



Client:

Inventum Engineering, P.C.

Project Reference:

Riverview

Lab Project ID:

203534

Matrix:

TCLP Fluid

TCLP Semi-Volatile Organics

<u>Analyte</u>		Result	<u>Units</u>	Qualifier	Date Analy	zed
1,4-Dichlorobenzene		<40.0	ug/L		8/3/2020	15:11
2,4,5-Trichlorophenol		<40.0	ug/L		8/3/2020	15:11
2,4,6-Trichlorophenol		<40.0	ug/L	5.	8/3/2020	15:11
2,4-Dinitrotoluene		<40.0	ug/L		8/3/2020	15:11
Cresols (as m,p,o-Cresol)		<80.0	ug/L		8/3/2020	15:11
Hexachlorobenzene		<40.0	ug/L		8/3/2020	15:11
Hexachlorobutadiene	7	<40.0	ug/L		8/3/2020	15:11
Hexachloroethane		<40.0	ug/L		8/3/2020	15:11
Nitrobenzene		<40.0	ug/L		8/3/2020	15:11
Pentachlorophenol		<80.0	ug/L		8/3/2020	15:11
Pyridine		<40.0	ug/L		8/3/2020	15:11
<u>Surrogate</u>		Percent Recovery	<u>Limits</u>	Outliers	Date Anal	yzed
2,4,6-Tribromophenol		97.3	61.4 - 115		8/3/2020	15:11
2-Fluorobiphenyl		77.7	38.4 - 101		8/3/2020	15:11
2-Fluorophenol		78.3	12.7 - 105		8/3/2020	15:11
Nitrobenzene-d5		86.0	57.3 - 100		8/3/2020	15:11
Phenol-d5		78.2	10 - 107	(2	8/3/2020	15:11
Terphenyl-d14		90.8	58.1 - 117		8/3/2020	15:11
Method Reference(s):	EPA 8270D					

Method Reference(s):

EPA 8270D

EPA 3510C

Preparation Date:

8/3/2020

Data File: QC Batch ID: B48331.D QC200803ABNT

QC Number:

, 1



Client: Inventum Engineering, P.C.

Project Reference: Riverview Lab Project ID: 203534

Matrix: TCLP Fluid

TCLP Semi-Volatile Organics

Method Reference(s): Preparation Date: Data File: QC Number: QC Batch ID:	Pentachlorophenol	2,4-Dinitrotoluene	2,4,6-Trichlorophenol	1,4-Dichlorobenzene	Analyte
EPA 8270D EPA 3510C 8/3/2020 B48332.D 1 QC200803ABNT					
	300	200	300	200	<u>Spike</u> Added
	ug/L	ug/L	ug/L	ug/L	<u>Spike</u> <u>Units</u>
œ.	288	190	287	144	<u>LCS</u> <u>Result</u>
	96.0	95.0	95.8	72.1	LCS ½ Recovery
	48 * 151	62.6 = 111	65.8 = 118	25.3 - 96.3	% Rec Limits
					LCS Outliers
	8/3/2020	8/3/2020	8/3/2020	8/3/2020	<u>Date</u> <u>Analyzed</u>



Client:

Inventum Engineering, P.C.

Project Reference:

Riverview

Lab Project ID:

203534

Matrix:

TCLP Fluid

TCLP Pesticides

<u>Analyte</u>	Result	<u>Units</u>	Qualifier	Date Analy	zed
Chlordane	<2.00	ug/L		7/31/2020	16:22
Endrin	<1.00	ug/L		7/31/2020	16:22
gamma-BHC (Lindane)	<1.00	ug/L		7/31/2020	16:22
Heptachlor	<1.00	ug/L		7/31/2020	16:22
Heptachlor Epoxide	<2.00	ug/L		7/31/2020	16:22
Methoxychlor	<1.00	ug/L		7/31/2020	16:22
Toxaphene	<20.0	ug/L		7/31/2020	16:22
Surrogate	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	Date Anal	yzed
Decachlorobiphenyl (1)	97.0	14.8 - 154		7/31/2020	16:22
Tetrachloro-m-xylene (1)	64.5	32.7 - 101		7/31/2020	16:22

Method Reference(s):

EPA 8081B

EPA 3510C

Preparation Date:

7/31/2020

QC Batch ID:

QC200731PESTT

QC Number:



Client: Inventum Engineering, P.C.

Project Reference: Riverview

Lab Project ID: 203534

TCLP Fluid

Matrix:

TCLP Pesticides

Method Reference(s): Preparation Date: QC Number: QC Batch ID:	Toxaphene (1)	Methoxychlor (1)	Heptachlor Epoxide (1)	Heptachlor (1)	gamma-BHC (Lindane) (1)	Endrin (1)	Chlordane (1)	Analyte	
EPA 8081B EPA 3510C 7/31/2020 1 QC200731PESTT									
	50.0	5.00	5.00	5.00	5.00	5.00	10.0	Added	<u>Spike</u>
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	Units	<u>Spike</u>
	41.8	3.77	3.10	2.93	2.78	3.00		Result	LCS
	83.7	75.5	62.1	58.6	55.7	60.1		Recovery	LCS %
	12.2 - 120	46.1 - 149	41.8 • 124	26.3 - 127	38.6 - 112	33.3 - 111	47.1 - 115	Limits	% Rec
				3.				<u>Outliers</u>	<u>LCS</u>
	7/31/2020	7/31/2020	7/31/2020	7/31/2020	7/31/2020	7/31/2020		<u>Analyzed</u>	Date



Client:

Inventum Engineering, P.C.

Project Reference:

Riverview

Lab Project ID:

203534

Matrix:

TCLP Fluid

TCLP RCRA Metals (ICP)

<u>Analyte</u>	Result	<u>Units</u>	Qualifier	Date Analy	zed
Arsenic	< 0.500	mg/L		7/31/2020	12:37
Barium	< 0.500	mg/L		7/31/2020	12:37
Cadmium	< 0.0250	mg/L		7/31/2020	12:37
Chromium	< 0.500	mg/L		7/31/2020	12:37
Lead	< 0.500	mg/L		7/31/2020	12:37
Selenium	< 0.200	mg/L		7/31/2020	12:37
Silver	< 0.500	mg/L		7/31/2020	12:37

Method Reference(s):

EPA 6010C

EPA 3005

Preparation Date:

7/31/2020

Data File: QC Batch ID: 200731C QC200731Tclp

QC Number:

1

QC Report for Laboratory Control Sample and Control Sample Duplicate

Inventum Engineering, P.C.

Client:

Project Reference: Riverview

Lab Project ID: 203534

TCLP Fluid

Matrix:

TCLP Metals (ICP)

	•													
	LCS	LCSD	Spike	LCS	LCSD	LCS %	LCSD %	% Rec	LCS	LCSD	Relative %	RPD	RPD	Date
<u>Analyte</u>	Added	Added	Units	Result	Result	Recovery	Recovery	Limits	Outliers	<u>Outliers</u>	Outliers Outliers Difference	Limit	Outliers	<u>Analyzed</u>
Arsenic	12.5	12.5	mg/L	12.4	12.3	98.9	98.0	80 - 120			0.916	20		7/31/2020
Barium	12.5	12.5	mg/L	12.8	12.6	102	101	80 - 120			1.26	20		7/31/2020
Cadmium	5.00	5.00	mg/L	5.22	5.18	104	104	80 - 120			0.666	20		7/31/2020
Chromium	12.5	12.5	mg/L	12.2	12.1	97.7	96.6	80 - 120			1.06	20		7/31/2020
Lead	12.5	12.5	mg/L	12.6	12.5	101	100	80 - 120			0.822	20		7/31/2020
Selenium	12.5	12.5	mg/L	12.5	12.6	100	100	80 - 120			0.0924	20		7/31/2020
Silver	1.25	1.25	mg/L	1.23	1.21	98.5	97.0	80 - 120			1.59	20		7/31/2020
	Method Reference(s):	EPA 6010C EPA 3005	010C 005											
		1												

Data File:

200731C 7/31/2020

Preparation Date:

QC Batch ID: QC Number:

QC200731Tclp



Client:

Inventum Engineering, P.C.

Project Reference:

Riverview

Lab Project ID:

203534

Matrix:

TCLP Fluid

TCLP Volatile Organics

Analyte		Result	<u>Units</u>	Qualifier	Date Analy	zed
1,1-Dichloroethene		<20.0	ug/L		8/4/2020	14:03
1,2-Dichloroethane		<20.0	ug/L		8/4/2020	14:03
2-Butanone		<100	ug/L		8/4/2020	14:03
Benzene		<20.0	ug/L		8/4/2020	14:03
Carbon Tetrachloride		<20.0	ug/L		8/4/2020	14:03
Chlorobenzene		<20.0	ug/L		8/4/2020	14:03
Chloroform		<20.0	ug/L		8/4/2020	14:03
Tetrachloroethene		<20.0	ug/L		8/4/2020	14:03
Trichloroethene		<20.0	ug/L		8/4/2020	14:03
Vinyl chloride		<20.0	ug/L		8/4/2020	14:03
•						
Surrogate		Percent Recovery	<u>Limits</u>	<u>Outliers</u>	Date Anal	<u>yzed</u>
1,2-Dichloroethane-d4		92.9	70.9 - 139		8/4/2020	14:03
4-Bromofluorobenzene		84.9	59.5 - 129		8/4/2020	14:03
Pentafluorobenzene		100	89.3 - 117		8/4/2020	14:03
Toluene-D8		91.2	82.9 - 115		8/4/2020	14:03
Method Reference(s):	EPA 8260C					
Data File: QC Batch ID:	EPA 5030 x72245.D voax200804					
QC Number:	1					



Inventum Engineering, P.C.

Client:

Project Reference: Riverview

Lab Project ID: 203534

TCLP Fluid

Matrix:

TCLP Volatile Organics

Analyte 1,1-Dichloroethene		Spike Added 20.0	Spike Units ug/L	Result 21.4	LCS % Recovery 107	% Rec Limits 59.9 - 127	<u>LCS</u> <u>Outliers</u>	Date Analyzed 8/4/2020
1,2-Dichloroethane		20.0	ug/L	21.6	108	62.8 - 144		8/4/2020
Benzene		20.0	ug/L	21.1	105	71.3 - 128		8/4/2020
Carbon Tetrachloride		20.0	ug/L	21.4	107	59 - 136		8/4/2020
Chlorobenzene		20.0	ug/L	20.3	101	70.2 - 125		8/4/2020
Chloroform		20.0	ug/L	22.0	110	66.2 - 134		8/4/2020
Tetrachloroethene		20.0	ug/L	20.1	101	60.6 - 139		8/4/2020
Trichloroethene		20.0	ug/L	18.9	94.6	72.2 - 122		8/4/2020
Vinyl chloride		20.0	ug/L	19.2	96.1	60.8 - 149		8/4/2020
Method Reference(s):	EPA 8260C EPA 5030							
Data File:	x72244.D							
QC Number:	1							
QC Batch ID:	voax200804							



Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

- "<" = Analyzed for but not detected at or above the quantitation limit.
- "E" = Result has been estimated, calibration limit exceeded.
- "Z" = See case narrative.
- "D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
- "M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
- "B" = Method blank contained trace levels of analyte. Refer to included method blank report.
- "I" = Result estimated between the quantitation limit and half the quantitation limit.
- "L" = Laboratory Control Sample recovery outside accepted QC limits.
- "P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
- "NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
- "*" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.
- "(1)" = Indicates data from primary column used for QC calculation.
- "A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.
- "F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.

GENERAL TERMS AND CONDITIONS LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, tern or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty.

Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB wi use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices.

Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability.

In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to reperform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB. Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against

any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure.

Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling.

Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises. Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment.

LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure.

LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law.

This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

CHAIN OF CUSTODY

onditions.	See additional page for sample conditions.	See addit			
	nditions (reverse).	By signing this form, client agrees to Paradigm Terms and Conditions (reverse).	Other EDD please indicate EDD needed :	Other please indicate package needed:	Date Neededplease indicate date needed:
	P.I.F.	Date/Time 1 30/2020 3y Date/Time		Category B	Rush 2 day
	K:30an	Relinquished By Date/Time 7/29/70	NYSDEC EDD	Batch QC Category A	Rush 3 day
	Total Cost:	Date/Time	/_	None Required	Standard 5 day
		Λ	Availability contingent upon lab approval; additional fees may apply.	nt upon lab appr	Availability continge
	11:30,5m	0.14/	Report Supplements		Turnaround Time
8/3/2020	more sample rout on s	mare:			
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9	Occor108/2 MM				
	teup extract	4 P.			
02.4		SD 3 VVVVVVVVVV	5710-07272020		
011		SD 3 VVVVVVVVVV	5108-07272020	~	7/27/20 1:50/2
PARADIGM LAB SAMPLE NUMBER	Phr email m. 8/4/20	X-RHDE WMDOON TO RMBECZ WAMZ->+ZOO TOLY VOC'S TOLY Herb TOLY WOC'S TOLY SVOC'S TOLY SVOC	SAMPLE IDENTIFIER	m → - v ○ च ≧ O ∩	DATE COLLECTED COLLECTED
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			Matrix Codes:	ENCE	PROJECT REFERENCE
	Email:	PHONE:	PHONE:		
	eta	ZIP CITY: STATE: ZIP:	CITY: STATE:	*	
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TID	LAB PROJECT ID	CLIENT:	GLIENT: John Black	3	PARADIGM
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		CHAIN OF CUSTODY	Vieto mon man year	C/1.6/2/	
/ - /			7		

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242



Chain of Custody Supplement

Client:	Inventium	Completed by:	molevail
Lab Project ID:	203534	Date:	7/30/2020
	Sample Condi Per NELAC/ELAF	tion Requirements 2210/241/242/243/244	
Condition	NELAC compliance with the samp Yes	ole condition requirements upo No	n receipt N/A
Container Type		5035	
Comments			
Transferred to method- compliant container			\Box
Headspace (<1 mL)		TCHPVOA	
Comments			 ,
Preservation			V.
Comments			/*
Chlorine Absent			
(<0.10 ppm per test strip) Comments			
Holding Time			
Comments			
:			
Temperature Comments	(e'c:cul		mes
		- R	
Compliant Sample Quantity/T	7	C 01 (1)	
comments	Wise single	for of was revel	m 8/312020

3 8 PROJECT NAME/SITE NAME **LAB USE ONLY BELOW THIS LINE**
Sample Condition: Per NELAC/ELAP 210/241/242/243/244 9 DATE 1330 Receipt Parameter Container Type: Temperature: Holding Time Preservation TIME 200731024 CHAIN OF CUSTODY CITY ADDRESS: COMMENTS: PHONE: w > zu a 203534-014 203534-02A 203534-0 203634-02 **NELAC Compliance** REPORT TO:
Paradigm Environmental Please email results to reporting@paradigmenv.com Reporting SAMPLE LOCATION/FIELD ID z Z STATE: Relinquished B) Sampled By Received @ Lab By Received By ZIP: 1900 Client ATTN: CITY: PHONE: ADDRESS: COMPANY: 70 m 00 3 C 2 REQUESTED ANALYSIS Accounts Payable Same INVOICE TO: FAX Date/Time Date/Time Date/Time Date/Time NEC Batch QC para dign 0830 TCUPSPUN a Date Due: TURNAROUND TIME: (WORKING DAYS) LAB PROJECT #: _D Total Cost: 8/6/20: CLIENT PROJEC SAN

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

ADIRONDACK: ELAP ID: