

Greenfield Environmental Multistate Trust LLC
Trustee of the Multistate Environmental Response Trust
Greenfield Environmental Trust Group, Inc., Member
1920 232nd Place SE
Bothell, WA 98021
(206)890-6293
ke@g-etg.com

June 26, 2018

### By E-mail - peter.ouderkirk@dec.ny.gov

Mr. Peter S. Ouderkirk, P.E.
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 6
Dulles State Office Building
317 Washington Street
Watertown, New York 13601-3787

Subject: <u>Cinder Ash Investigation Report</u>

Lots 3B, 5E, 5D, 4, and the Railroad Parcel

Former Federal Creosote Site Rome, Oneida County, New York P-Site #633088 and #633087

Dear Mr. Ouderkirk:

By this letter, Greenfield Environmental Multistate Trust LLC, not individually but solely in its representative capacity as Trustee of the Multistate Environmental Response Trust (the Multistate Trust), respectfully submits this Cinder Ash Investigation Report for the Former Federal Creosote Sites (P-Sites #633088 and #633087), collectively referred to herein as the "Site." The investigation work documented herein was performed in accordance with the New York State Department of Environmental Conservation (NYSDEC)-approved Cinder Ash Investigation Work Plan (CAI Work Plan) dated April 2, 2018. The Multistate Trust has implemented Environmental Actions pursuant to NYSDEC-approved work plans at the Site since assuming responsibility for the Site on February 14, 2011 in connection with the global resolution of the Tronox Inc. bankruptcy.

## **Purpose**

This investigation was conducted to further assess the nature and extent of historic cinder ash fill material typically present in layers of various thicknesses between ground surface and two feet below ground surface. The objective of the investigation was to test cinder ash fill found in the top two feet across the investigation area for the toxicity hazardous waste characteristic. Samples were collected from Lot 3B, Lot 5E, the Railroad Parcel, the northern portion of Lot 5D, and the western portion of Lot 4. The investigation area is shown on Figures 1A and 1B.

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## **Background**

As summarized in the CAI Work Plan, previous investigations conducted by Haley & Aldrich of New York (Haley & Aldrich) and others identified the presence of cinder ash in the investigation area and characterized it using direct analyses (metals and organic compounds). Toxicity Characteristic Leaching Procedure (TCLP) analysis was not performed as part of those previous investigations. It was found that the cinder ash fill contains elevated concentrations of metals, particularly arsenic (As) and, in some instances, mercury (Hg) and compounds indicative of incomplete combustion (i.e., various high molecular weight polycyclic aromatic hydrocarbons [PAHs]) typical of urban fill. The arsenic concentrations suggest the potential for leachable arsenic via TCLP analysis.

An Interim Remedial Measure (IRM) was conducted on Lot 3B during 2016 and 2017 to address creosote-saturated soil. It was known at the time that cinder ash fill material was present on Lot 3B and would need to be addressed in the future with appropriate cover since the focus of the IRM was creosote. Cinder ash fill remains on Lot 3B in the areas that were not excavated to remove creosote-saturated soil. These areas also contain wetland and, even though these areas were not excavated, they were disturbed during the IRM and are required to be restored as wetland. Wetland restoration will require removal of the cinder ash fill material in the top two-feet if it exhibits toxicity hazardous waste characteristic. If the cinder ash fill material does not exhibit toxicity hazardous characteristics, only one foot of material within the wetland would require removal followed by placement of at least one foot of clean imported soil suitable for the growth of wetland plant species. Wetland restoration may result in more or less cinder ash removal and disposal depending on what is necessary to achieve the appropriate hydrology. The investigation results provide insight on the likelihood that future waste characterization analysis (once cinder ash fill is excavated) could result in hazardous waste generation. The results also provide insight on the nature of the cinder ash fill that would remain in place.

An additional IRM will be planned to address creosote-saturated soil on Lot 5E and the Railroad Parcel. The investigation results will also be used to plan that IRM as cinder ash fill and wetlands are also present on those properties.

### **Cinder Ash Investigation Procedure**

Twenty (20) shallow test pits using a shovel were installed in the investigation area on May 9, 2018 by Haley & Aldrich. It is noted the CAI Work Plan indicated that the locations would be installed with a hand auger; however, due to soil conditions, the hand auger was not practical. The locations were geo-located using Global Position System (GPS) equipment. Each sample location was also staked for future location via survey. Sample locations are shown on Figures 1A and 1B. The shovel test pits were advanced to 24 inches below ground surface (bgs) in each location, with the exception of HA-STP-04 due to debris in the hole causing refusal. The thickness of the cinder ash fill layer, if encountered, was recorded as shown in the Shovel Test Pit Summary in Appendix A. Cinder ash fill was encountered in 14 out of the 20 borings as shown on Figures 1A and 1B and documented in Appendix A.

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One composite sample of cinder ash was collected from each of the 14 samples. Samples were collected in laboratory-supplied glassware and submitted to Alpha Analytical of Westborough, Massachusetts for analysis of TCLP metals by EPA SW-846 Method 1311/6010/7471, and corrosivity by EPA SW-846 Method 9045D. One duplicate sample was also collected from location HA-STP-20. A sample was not collected from locations where cinder ash was not observed. Following sampling, the test pits were backfilled with the soil cuttings.

## **Summary of Results**

Laboratory results were reported using NYSDEC ASP Category B equivalent data deliverables. The laboratory data generated was reduced and validated by a NYSDEC-approved Data Validator prior to reporting in accordance with National Functional Guidelines for Inorganic Superfund Methods Data Review (OLEM 9355.01-135) EPA-540/R-2017/001, dated January 2017. Results were compared to the US EPA Maximum Concentrations of Contaminants for the Toxicity Characteristic (TCLP limits) and the hazardous waste threshold for corrosivity, and are summarized on Table I. Laboratory data are included for reference in Appendix B.

Barium, lead, and selenium were detected in multiple samples by the TCLP method, but such detections were below the TCLP limits. Other metals, including arsenic, were not detected by the TCLP method. Corrosivity results were within a pH range of 4.9 and 7.8, which is not hazardous.

#### **Conclusions**

The investigation results indicate that the cinder ash fill was not present at every investigation location, and the cinder ash fill tested does not exhibit hazardous waste characteristics, toxicity (from metals), or corrosivity. Therefore, as the Multistate Trust understands it, removal of only one foot of fill containing cinder ash will be required for wetland restoration in the investigation area following completion of remedial actions.

It is noted that, if cinder ash fill is generated for disposal, additional testing, including TCLP for metals and corrosivity, may be required by the disposal facility. There is still potential that cinder ash fill material generated for disposal may exhibit hazardous waste characteristics upon additional testing and would therefore require management as hazardous waste.

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Sincerely,

Greenfield Multistate Environmental Trust LLC Trustee of the Multistate Environmental Response Trust By: Greenfield Environmental Trust Group, Inc., Member

Kipp W. Eckert, P.E.

Portfolio & Project Manager

Attachments: Table I – Summary of Analytical Results – Cinder Ash Investigation

Figure 1A – Cinder Ash Sample Locations (Lots 3B, 5E, 5D, and Railroad)

Figure 1B – Cinder Ash Sample Locations (Lot 4)

Appendix A – Shovel Test Pit Summary

Appendix B - Laboratory Data

Copies sent via email: Peter Taylor, NYSDEC

Mary Jo Crance, NYSDEC Greg Rys, NYSDOH Maureen Shuck, NYSDOH

Marc Weinreich, Multistate Trust Lauri Gorton, Multistate Trust Craig Kaufman, Multistate Trust Glenn White, Haley & Aldrich

## Table 1 Summary of Analytical Results – Cinder Ash Investigation

SUMMARY OF ANALYTICAL RESULTS CINDER ASH INVESTIGATION FORMER FEDERAL CREOSOTE SITE

ROME, NY

Location	Hazardous	HA-STP-01	HA-STP-02	HA-STP-03	HA-STP-04	HA-STP-05	HA-STP-07	HA-STP-08	HA-STP-09
Sample Date	Waste	05/09/2018	05/09/2018	05/09/2018	05/09/2018	05/09/2018	05/09/2018	05/09/2018	05/09/2018
Sample Name	Criteria 1	HASTP01-180509-1000	HASTP02-180509-1030	HASTP03-180509-1050	HASTP04-180509-1120	HASTP05-180509-1140	HASTP07-180509-1155	HASTP08-180509-1215	HASTP09-180509-1230
Other (pH units)									
pH (lab)	<2; >12.5	7.5	7.8	6.9	4.9	7.2	6	5.6	7.3
TCLP Inorganic Compounds (mg/L)									
Arsenic	5	ND (1)	ND (1)	ND (1)	0.093 J	ND (1)	0.023 J	ND (1)	ND (1)
Barium	100	0.201 J	0.732	0.3 J	0.089 J	0.118 J	0.132 J	0.174 J	0.657
Cadmium	1	ND (0.1)							
Chromium	5	ND (0.2)							
Lead	5	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	0.028 J	1.24	0.091 J	ND (0.5)
Mercury	0.2	ND (0.001)							
Selenium	1	0.036 J	ND (0.5)						
Silver	5	ND (0.1)							

### Notes:

- 1. Hazarous Waste Criteria include the following:
- a) pH was compared to US EPA hazardous waste criteria for corrosivity (less than 2 or greater than 12.5)
- b) TCLP Inorganics were compared to the US EPA Maximum Concentrations for Contaminants for the Toxicity Characteristic.
- c) Results in red exceed the Hazardous Waste Criteria
- 2. Results in **bold** were detected.
- 3. ND Results not detected above reporting limit.
- J Estimated value
- 4. Results have been validated by Haley & Aldrich

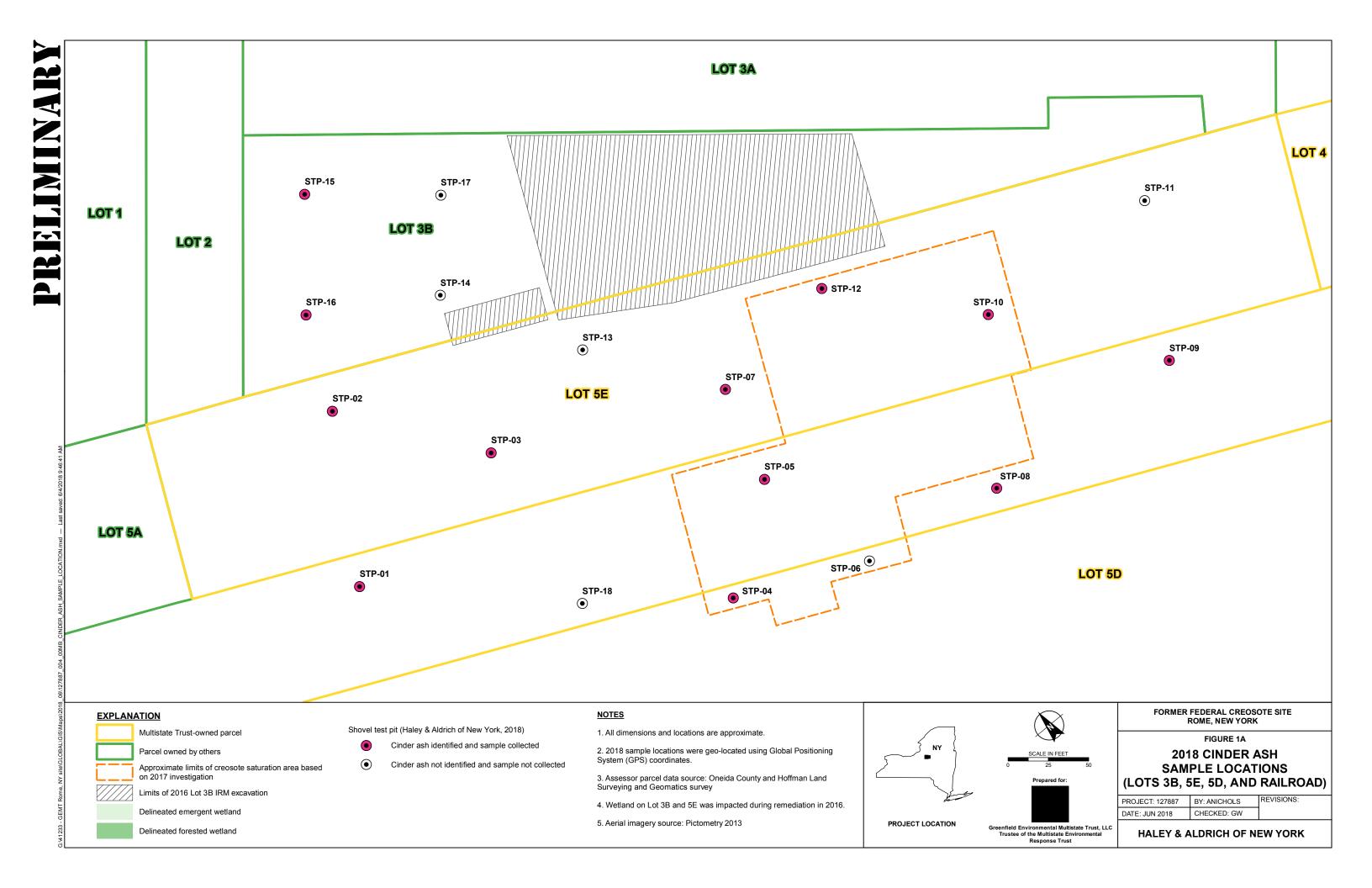
TABLE I SUMMARY OF ANALYTICAL RESULTS CINDER ASH INVESTIGATION FORMER FEDERAL CREOSOTE SITE ROME, NY

Location	Hazardous	HA-STP-10	HA-STP-12	HA-STP-15	HA-STP-16	HA-STP-19	HA-STP-20	HA-STP-20 (Dup)
Sample Date	Waste	05/09/2018	05/09/2018	05/09/2018	05/09/2018	05/09/2018	05/09/2018	05/09/2018
Sample Name	Criteria 1	HASTP10-180509-1245	HASTP12-180509-1255	HASTP15-180509-1350	HASTP16-180509-1335	HASTP19-180509-1420	HASTP20-180509-1445	3188-180509-0001
Other (pH units)								
pH (lab)	<2; >12.5	7	7.6	6.6	7.3	6.6	7.3	7.3
TCLP Inorganic Compounds (mg/L)								
Arsenic	5	ND (1)	ND (1)	0.073 J	ND (1)	ND (1)	ND (1)	ND (1)
Barium	100	0.281 J	0.221 J	0.348 J	0.727	0.109 J	0.219 J	0.184 J
Cadmium	1	ND (0.1)	ND (0.1)					
Chromium	5	ND (0.2)	ND (0.2)					
Lead	5	0.031 J	ND (0.5)	0.036 J	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Mercury	0.2	ND (0.001)	ND (0.001)					
Selenium	1	ND (0.5)	0.035 J	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Silver	5	ND (0.1)	ND (0.1)					

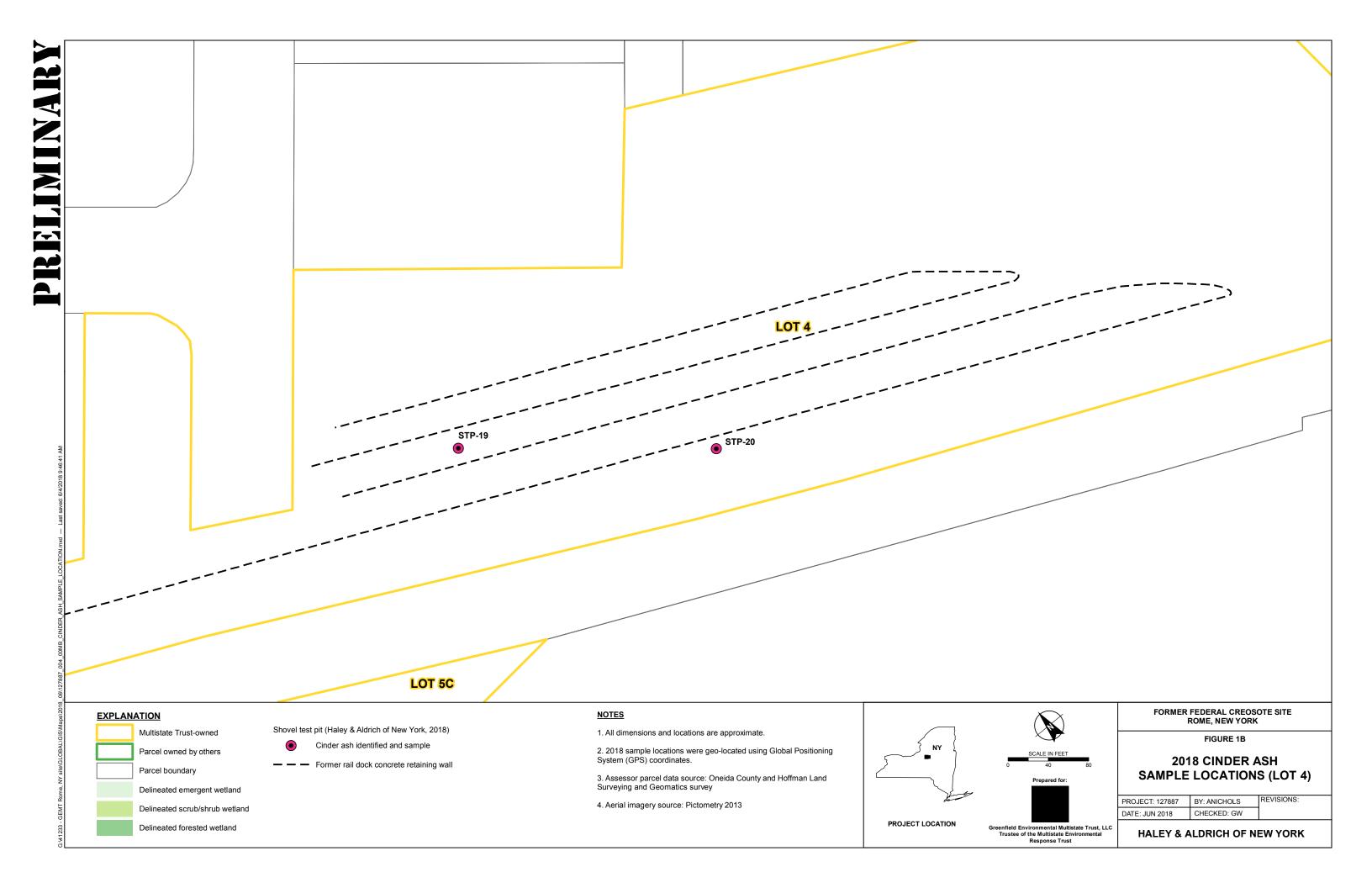
#### Notes:

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- b) TCLP Inorganics were compared to the US EPA Maximum Concentrations for Contaminants for the Toxicity Characteristic.
- c) Results in red exceed the Hazardous Waste Criteria
- 2. Results in **bold** were detected.
- 3. ND Results not detected above reporting limit.
- J Estimated value
- 4. Results have been validated by Haley & Aldrich

# Figure 1A Cinder Ash Sample Locations (Lots 3B, 5E, 5D, and Railroad)



## Figure 1B Cinder Ash Sample Locations (Lot 4)



# Appendix A Shovel Test Pit Summary

## ALDRICH

## **SHOVEL TEST PIT SUMMARY**

Page of PROJECT Former Federal Creosote Site - Cinder Ash Investigation H&A FILE NO. 127887-004/6.1.1 LOCATION Rome, New York PROJECT MGR. C. Mondello CLIENT Greenfield Environmental Multistate Trust, LLC S. Burke FIELD REP CONTRACTOR N/A DATE 5/9/2018 EQUIPMENT Hand Shovel DRILLER N/A

Test Pit		pth bed	Soil Strata Description	Depth to	Committee No.
No.	From (in.)	To (in.)	(top of pit to base of pit)	Water	Sample Name
HA-STP-01	0	24	0-6 in. CINDERS with sand-silt; 6-18 in. SAND with crushed gravel; 18-24 in. SAND	8 in.	HASTP01-180509 1000
HA-STP-02	0	24	0-8 in. CINDERS with silt-sand; 8-20 in SAND with crushed gravel; 20-24 in. SAND		HASTP02-180509 1030
HA-STP-03	0	24	0-10 in. CINDERS with organics and topsoil; 10-24 in. SAND with crushed gravel	15 in.	HASTP03-180509 1050
HA-STP-04	0	12	0-12 in. CINDERS with organics and topsoil; 12 in. refusal on debris.		HASTP04-180509 1120
HA-STP-05	0	24	0-24 in. CINDERS with sand	6 in.	HASTP05-180509 1140
HA-STP-06	0	24	0-9 in. ORGANICS; 9-24 in. SAND with crushed gravel		No Sample
HA-STP-07	0	24	0-8 in. CINDERS with sand and organics; 8-24 in. SAND	13 in.	HASTP07-180509 1155
HA-STP-08	0	24	0-10 in. CINDERS with sand and crushed gravel; 10-24 in. SAND with crushed gravel		HASTP08-180509 1215
HA-STP-09	0	24	0-10 in. CINDERS with sand; 10-24 in. SAND	6 in.	HASTP09-180509 1230
HA-STP-10	0	24	0-12 in. CINDERS with sand and crushed gravel; 12-24 in. SAND with crushed gravel		HASTP10-180509 1245
HA-STP-11	0	24	0-24 in. SAND with organics and topsoil and clay		No Sample
HA-STP-12	0	24	0-15 in. CINDER with sand; 15-24 in. SAND		HASTP12-180509 1255
HA-STP-13	0	24	0-6 in. BANK RUN; 6-24 in. SAND		No Sample
HA-STP-14	0	24	0-3 in. BANK RUN; 3-12 in. SAND with crushed gravel; 12-24 in. SAND	3 in.	No Sample
HA-STP-15	0	24	0-15 in. CINDER with sand; 15-24 in. SAND	2 in.	HASTP15-180509 1350
HA-STP-16	0	24	0-24 in. CINDER with sand and crushed gravel	5 in.	HASTP16-180509 1335
HA-STP-17	0	24	0-24 in. SAND with gravel	5 in.	No Sample
HA-STP-18	0	24	0-6 in. TOPSOIL; 6-24 in. SAND with crushed gravel	6 in.	No Sample
HA-STP-19	0	24	0-24 in. CINDERS with organics		HASTP19-180509 1420
HA-STP-20	0	24	0-24 in. CINDERS		HASTP20-180509 1445 3188-180509- 0001

## Appendix B Laboratory Data



#### ANALYTICAL REPORT

Lab Number: L1816866

Client: Haley & Aldrich

200 Town Centre Drive

Suite 2

Rochester, NY 14623-4264

ATTN: Sam Burke Phone: (585) 321-4263

Project Name: ROME-CINDER ASH

Project Number: 127887-004

Report Date: 05/15/18

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: ROME-CINDER ASH

Project Number: 127887-004

**Lab Number:** L1816866 **Report Date:** 05/15/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1816866-01	HASTP01-180509-1000	SOIL	ROME, NY	05/09/18 10:00	05/09/18
L1816866-02	HASTP02-180509-1030	SOIL	ROME, NY	05/09/18 10:30	05/09/18
L1816866-03	HASTP03-180509-1050	SOIL	ROME, NY	05/09/18 10:50	05/09/18
L1816866-04	HASTP04-180509-1120	SOIL	ROME, NY	05/09/18 11:20	05/09/18
L1816866-05	HASTP05-180509-1140	SOIL	ROME, NY	05/09/18 11:40	05/09/18
L1816866-06	HASTP07-180509-1155	SOIL	ROME, NY	05/09/18 11:55	05/09/18
L1816866-07	HASTP08-180509-1215	SOIL	ROME, NY	05/09/18 12:15	05/09/18
L1816866-08	HASTP09-180509-1230	SOIL	ROME, NY	05/09/18 12:30	05/09/18
L1816866-09	HASTP10-180509-1245	SOIL	ROME, NY	05/09/18 12:45	05/09/18
L1816866-10	HASTP12-180509-1255	SOIL	ROME, NY	05/09/18 12:55	05/09/18
L1816866-11	HASTP15-180509-1350	SOIL	ROME, NY	05/09/18 13:50	05/09/18
L1816866-12	HASTP16-180509-1335	SOIL	ROME, NY	05/09/18 13:35	05/09/18
L1816866-13	HASTP19-180509-1420	SOIL	ROME, NY	05/09/18 14:20	05/09/18
L1816866-14	HASTP20-180509-1445	SOIL	ROME, NY	05/09/18 14:45	05/09/18
L1816866-15	3188-180509-0001	SOIL	ROME, NY	05/09/18 00:00	05/09/18



Project Name: ROME-CINDER ASH Lab Number: L1816866

**Project Number:** 127887-004 **Report Date:** 05/15/18

#### **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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated 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.

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 table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### 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 Client Service Representative 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 Client Services at 800-624-9220 with any guestions.



Project Name: ROME-CINDER ASH Lab Number: L1816866

**Project Number:** 127887-004 **Report Date:** 05/15/18

## **Case Narrative (continued)**

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

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.

Michelle M. Morris

Authorized Signature:

Title: Technical Director/Representative

ANALYTICAL

Date: 05/15/18

## **METALS**



05/09/18 10:00

Date Collected:

**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number: Report Date:** 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-01

Client ID: HASTP01-180509-1000 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EP	A 1311 -	Mansfield L	_ab								
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 08:21	EPA 3015	1,6010C	LC
Barium, TCLP	0.201	J	mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 08:21	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 08:21	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 08:21	EPA 3015	1,6010C	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 08:21	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	05/14/18 19:15	EPA 7470A	1,7470A	EA
Selenium, TCLP	0.036	J	mg/l	0.500	0.035	1	05/12/18 11:00	05/14/18 08:21	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 08:21	EPA 3015	1,6010C	LC



05/09/18 10:30

Date Collected:

**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number: Report Date:** 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-02

Client ID: HASTP02-180509-1030 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EF	PA 1311 -	Mansfield I	_ab								
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 08:46	EPA 3015	1,6010C	LC
Barium, TCLP	0.732		mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 08:46	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 08:46	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 08:46	EPA 3015	1,6010C	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 08:46	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	3 05/14/18 19:21	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	05/12/18 11:00	05/14/18 08:46	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 08:46	EPA 3015	1,6010C	LC



**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number: Report Date:** 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-03

Date Collected: 05/09/18 10:50 Client ID: HASTP03-180509-1050 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by Ef	PA 1311 -	Mansfield I	Lab								
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 08:50	EPA 3015	1,6010C	LC
Barium, TCLP	0.300	J	mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 08:50	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 08:50	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 08:50	EPA 3015	1,6010C	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 08:50	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	05/14/18 19:22	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	05/12/18 11:00	05/14/18 08:50	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 08:50	EPA 3015	1,6010C	LC



05/09/18 11:20

Date Collected:

**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number: Report Date:** 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-04

Client ID: HASTP04-180509-1120 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by E	PA 1311 -	Mansfield I	ab								
•			_							4 00400	
Arsenic, TCLP	0.093	J	mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 08:55	EPA 3015	1,6010C	LC
Barium, TCLP	0.089	J	mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 08:55	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 08:55	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 08:55	EPA 3015	1,6010C	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 08:55	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	3 05/14/18 19:24	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	05/12/18 11:00	) 05/14/18 08:55	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 08:55	EPA 3015	1,6010C	LC



05/09/18 11:40

Date Collected:

**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number: Report Date:** 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-05

Client ID: HASTP05-180509-1140 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by E	PA 1311 -	Mansfield I	_ab								
•			_	4.00	0.040	4	05/40/40 44 0/	05/44/40 00:07	EDA 2045	1 60100	1.0
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 09:27	EPA 3015	1,6010C	LC
Barium, TCLP	0.118	J	mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 09:27	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 09:27	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 09:27	EPA 3015	1,6010C	LC
Lead, TCLP	0.028	J	mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 09:27	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	3 05/14/18 19:26	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	05/12/18 11:00	) 05/14/18 09:27	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 09:27	EPA 3015	1,6010C	LC



05/09/18 11:55

Date Collected:

**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number: Report Date:** 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-06

Client ID: HASTP07-180509-1155 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by E	:PA 1311 -	Mansfield I	_ab								
Arsenic, TCLP	0.023	J	mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 09:31	EPA 3015	1,6010C	LC
Barium, TCLP	0.132	J	mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 09:31	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 09:31	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 09:31	EPA 3015	1,6010C	LC
Lead, TCLP	1.24		mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 09:31	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	3 05/14/18 19:28	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	05/12/18 11:00	) 05/14/18 09:31	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 09:31	EPA 3015	1,6010C	LC



05/09/18 12:15

Date Collected:

**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number:** Report Date: 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-07

Client ID: HASTP08-180509-1215 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by E	PA 1311 -	Mansfield I	ab								
TOLI WIOLGIO BY L	17(1011	manonoia i	_ub								
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 09:36	EPA 3015	1,6010C	LC
Barium, TCLP	0.174	J	mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 09:36	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 09:36	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 09:36	EPA 3015	1,6010C	LC
Lead, TCLP	0.091	J	mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 09:36	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	3 05/14/18 19:33	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	05/12/18 11:00	05/14/18 09:36	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 09:36	EPA 3015	1,6010C	LC



05/09/18 12:30

Date Collected:

**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number: Report Date:** 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-08

Client ID: HASTP09-180509-1230 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EF	PA 1311 -	Mansfield I	₋ab								
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 09:41	EPA 3015	1,6010C	LC
Barium, TCLP	0.657		mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 09:41	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 09:41	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 09:41	EPA 3015	1,6010C	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 09:41	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	3 05/14/18 19:35	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	05/12/18 11:00	05/14/18 09:41	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	) 05/14/18 09:41	EPA 3015	1,6010C	LC



05/09/18 12:45

Date Collected:

**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number: Report Date:** 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-09

Client ID: HASTP10-180509-1245 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by E	PA 1311 -	Mansfield I	Lab								
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 09:45	EPA 3015	1,6010C	LC
Barium, TCLP	0.281	J	mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 09:45	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	) 05/14/18 09:45	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 09:45	EPA 3015	1,6010C	LC
Lead, TCLP	0.031	J	mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 09:45	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	3 05/14/18 19:37	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	05/12/18 11:00	) 05/14/18 09:45	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 09:45	EPA 3015	1,6010C	LC



05/09/18 12:55

Date Collected:

**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number:** Report Date: 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-10

Client ID: HASTP12-180509-1255 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by Ef	PA 1311 -	Mansfield L	₋ab								
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 09:50	EPA 3015	1,6010C	LC
Barium, TCLP	0.221	J	mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 09:50	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 09:50	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 09:50	EPA 3015	1,6010C	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 09:50	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	3 05/14/18 19:39	EPA 7470A	1,7470A	EA
Selenium, TCLP	0.035	J	mg/l	0.500	0.035	1	05/12/18 11:00	05/14/18 09:50	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 09:50	EPA 3015	1,6010C	LC



05/09/18 13:50

Date Collected:

**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number: Report Date:** 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-11

Client ID: HASTP15-180509-1350 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EF	PA 1311 -	Mansfield L	₋ab								
Arsenic, TCLP	0.073	J	mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 09:55	EPA 3015	1,6010C	LC
Barium, TCLP	0.348	J	mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 09:55	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 09:55	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 09:55	EPA 3015	1,6010C	LC
Lead, TCLP	0.036	J	mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 09:55	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	05/14/18 19:40	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	05/12/18 11:00	05/14/18 09:55	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 09:55	EPA 3015	1,6010C	LC



05/09/18 13:35

Date Collected:

**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number: Report Date:** 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-12

Client ID: HASTP16-180509-1335 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by E	PA 1311 -	Mansfield I	_ab								
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 09:59	EPA 3015	1,6010C	LC
Barium, TCLP	0.727		mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 09:59	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 09:59	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 09:59	EPA 3015	1,6010C	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 09:59	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	3 05/14/18 19:42	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	05/12/18 11:00	05/14/18 09:59	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 09:59	EPA 3015	1,6010C	LC



05/09/18 14:20

Date Collected:

**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number: Report Date:** 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-13

Client ID: HASTP19-180509-1420 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by El	PA 1311 -	Mansfield I	_ab								
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 10:04	EPA 3015	1,6010C	LC
Barium, TCLP	0.109	J	mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 10:04	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 10:04	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 10:04	EPA 3015	1,6010C	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 10:04	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	3 05/14/18 19:44	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	05/12/18 11:00	) 05/14/18 10:04	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 10:04	EPA 3015	1,6010C	LC



05/09/18 14:45

Date Collected:

**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number: Report Date:** 127887-004 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-14

Client ID: HASTP20-180509-1445 Date Received: 05/09/18 Field Prep: Not Specified

Sample Location: ROME, NY

Sample Depth: TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by E	PA 1311 -	Mansfield I	_ab								
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 10:09	EPA 3015	1,6010C	LC
Barium, TCLP	0.219	J	mg/l	0.500	0.021	1		05/14/18 10:09		1,6010C	LC
Cadmium, TCLP	ND	<u> </u>	mg/l	0.100	0.010	1		05/14/18 10:09		1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.010	1		05/14/18 10:09		1,6010C	LC
Lead, TCLP	ND		mg/l	0.500	0.027	' 1		05/14/18 10:09		1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1		3 05/14/18 19:46		1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.0003	1		05/14/18 10:09		1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1		05/14/18 10:09		1,6010C	LC
O.1. TO E.1	.,,,,		1119/1	0.100	0.020		00/12/10 11.00	, 55, 1 1, 10 10.00	,.0010	.,	



**Project Name:** Lab Number: **ROME-CINDER ASH** L1816866 **Project Number:** Report Date: 127887-004

05/15/18

**SAMPLE RESULTS** 

L1816866-15

Date Collected: 05/09/18 00:00

Client ID: 3188-180509-0001 Sample Location: ROME, NY

Date Received: 05/09/18 Field Prep: Not Specified

Sample Depth:

Lab ID:

TCLP/SPLP Ext. Date: 05/10/18 20:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EF	PA 1311 -	Mansfield L	₋ab								
rozi motalo sy zi	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	manonora 2	-00								
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 10:22	EPA 3015	1,6010C	LC
Barium, TCLP	0.184	J	mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 10:22	EPA 3015	1,6010C	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 10:22	EPA 3015	1,6010C	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 10:22	EPA 3015	1,6010C	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 10:22	EPA 3015	1,6010C	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0003	1	05/14/18 11:03	3 05/14/18 19:48	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	05/12/18 11:00	05/14/18 10:22	EPA 3015	1,6010C	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 10:22	EPA 3015	1,6010C	LC



L1816866

Lab Number:

Project Name: ROME-CINDER ASH

**Project Number:** 127887-004 **Report Date:** 05/15/18

## Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	l Analyst
TCLP Metals by EPA	A 1311 - Mansfield Lab	for sample	e(s): 01-	15 Bat	ch: WG11	15228-1			
Arsenic, TCLP	ND	mg/l	1.00	0.019	1	05/12/18 11:00	05/14/18 08:12	1,6010C	LC
Barium, TCLP	ND	mg/l	0.500	0.021	1	05/12/18 11:00	05/14/18 08:12	1,6010C	LC
Cadmium, TCLP	ND	mg/l	0.100	0.010	1	05/12/18 11:00	05/14/18 08:12	1,6010C	LC
Chromium, TCLP	ND	mg/l	0.200	0.021	1	05/12/18 11:00	05/14/18 08:12	1,6010C	LC
Lead, TCLP	ND	mg/l	0.500	0.027	1	05/12/18 11:00	05/14/18 08:12	1,6010C	LC
Selenium, TCLP	ND	mg/l	0.500	0.035	1	05/12/18 11:00	05/14/18 08:12	1,6010C	LC
Silver, TCLP	ND	mg/l	0.100	0.028	1	05/12/18 11:00	05/14/18 08:12	1,6010C	LC

## **Prep Information**

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 05/10/18 20:43

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	
TCLP Metals by EPA	A 1311 - Mansfield Lab	for sample	e(s): 01-	15 Bate	ch: WG11	15499-1			
Mercury, TCLP	ND	mg/l	0.0010	0.0003	1	05/14/18 11:03	05/14/18 19:11	1,7470A	EA

## **Prep Information**

Digestion Method: EPA 7470A

TCLP/SPLP Extraction Date: 05/10/18 20:43



## Lab Control Sample Analysis Batch Quality Control

Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

Report Date:

05/15/18

arameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
CLP Metals by EPA 1311 - Mansfield Lab Asso	ociated sample(s	s): 01-15	Batch: WG11152	28-2				
Arsenic, TCLP	108		-		75-125	-		20
Barium, TCLP	100		-		75-125	-		20
Cadmium, TCLP	109		-		75-125	-		20
Chromium, TCLP	100		-		75-125	-		20
Lead, TCLP	103		-		75-125	-		20
Selenium, TCLP	108		-		75-125	-		20
Silver, TCLP	99		-		75-125	-		20
CLP Metals by EPA 1311 - Mansfield Lab Asso	ociated sample(s	s): 01-15	Batch: WG11154	99-2				
Mercury, TCLP	100		-		80-120	-		



## Matrix Spike Analysis Batch Quality Control

Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

Report Date:

05/15/18

arameter	Native Sample	MS Added	MS Found %	MS 6Recovery	Qual	MSD Found	MSD %Recovery C		ecovery Limits	RPD	RPD Qual Limits
TCLP Metals by EPA 1311 - 180509-1000	Mansfield Lab	Associated	sample(s): 01-	·15 QC Bat	ch ID: V	/G1115228	-3 QC Sampl	e: L1816	6866-01	Client	ID: HASTP01-
Arsenic, TCLP	ND	1.2	1.19	99		-	-		75-125	-	20
Barium, TCLP	0.201J	20	18.5	92		-	-		75-125	-	20
Cadmium, TCLP	ND	0.51	0.512	100		-	-		75-125	-	20
Chromium, TCLP	ND	2	1.83	92		-	-		75-125	-	20
Lead, TCLP	ND	5.1	4.90	96		-	-		75-125	-	20
Selenium, TCLP	0.036J	1.2	1.19	99		-	-		75-125	-	20
Silver, TCLP	ND	0.5	0.466	93		-	-		75-125	-	20
CLP Metals by EPA 1311 - 80509-1000	Mansfield Lab	Associated	sample(s): 01-	-15 QC Bat	ch ID: W	/G1115499	-3 QC Sampl	e: L1816	6866-01	Client	ID: HASTP01-
Mercury, TCLP	ND	0.025	0.0256	102		-	-		80-120	-	20



## Lab Duplicate Analysis Batch Quality Control

Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

**Report Date:** 05/15/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual R	PD Limits
TCLP Metals by EPA 1311 - Mansfield Lab 180509-1000	Associated sample(s): 01-15	QC Batch ID: WG1115228-4	QC Sample:	L1816866	6-01 Client ID	: HASTP01-
Arsenic, TCLP	ND	ND	mg/l	NC		20
Barium, TCLP	0.201J	0.207J	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	0.036J	ND	mg/l	NC		20
Silver, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab 180509-1000	Associated sample(s): 01-15	QC Batch ID: WG1115499-4	QC Sample:	L1816866	6-01 Client ID	: HASTP01-
Mercury, TCLP	ND	ND	mg/l	NC		20



# INORGANICS & MISCELLANEOUS



Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

**Report Date:** 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-01

Client ID: HASTP01-180509-1000

Sample Location: ROME, NY

Date Collected:

05/09/18 10:00

Date Received:

05/09/18

Field Prep:

Not Specified

Sample Depth:

Matrix:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - W	estborough Lab	)								
pH (H)	7.5		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

Report Date:

05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-02

Client ID: HASTP02-180509-1030

Sample Location: ROME, NY

Date Collected:

05/09/18 10:30

Date Received:

05/09/18

Field Prep:

Not Specified

Sample Depth:

Matrix:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	estborough Lab									
pH (H)	7.8		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

**Report Date:** 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-03

Client ID: HASTP03-180509-1050

Sample Location: ROME, NY

Date Collected:

05/09/18 10:50

Date Received:

05/09/18

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 - W	estborough Lab	)								
рН (Н)	6.9		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

Report Date:

05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-04

Client ID: HASTP04-180509-1120

Sample Location: ROME, NY

Date Collected:

05/09/18 11:20

Date Received:

05/09/18

Field Prep:

Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry	- Westborough Lab	)								
pH (H)	4.9		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

Report Date:

05/15/18

**SAMPLE RESULTS** 

Lab ID: L18

L1816866-05

HASTP05-180509-1140

Sample Location: ROME, NY

Date Collected:

05/09/18 11:40

Date Received:

05/09/18

Field Prep:

Not Specified

Sample Depth:

Matrix:

Client ID:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - W	estborough Lab	)								
pH (H)	7.2		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

**Report Date:** 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-06

Client ID: HASTP07-180509-1155

Sample Location: ROME, NY

Date Collected:

05/09/18 11:55

Date Received:

05/09/18

Field Prep:

Not Specified

Sample Depth:

Matrix:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - W	estborough Lab									
pH (H)	6.0		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

Report Date:

05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-07

Client ID: HASTP08-180509-1215

Sample Location: ROME, NY

Date Collected:

05/09/18 12:15

Date Received:

05/09/18

Field Prep:

Not Specified

Sample Depth:

Matrix:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - V	Vestborough Lab	)								
pH (H)	5.6		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

**Report Date:** 05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-08

Client ID: HASTP09-180509-1230

Sample Location: ROME, NY

Date Collected:

05/09/18 12:30

Date Received:

Field Prep:

05/09/18 Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - \	Westborough Lab									
pH (H)	7.3		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

Report Date:

05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-09

Client ID: HASTP10-180509-1245

Sample Location: ROME, NY

Date Collected:

05/09/18 12:45

Date Received:

05/09/18

Field Prep:

Not Specified

Sample Depth:

Matrix:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry -	Westborough Lab	)								
pH (H)	7.0		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

Report Date:

05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-10

Client ID: HASTP12-180509-1255

Sample Location: ROME, NY

Date Collected:

05/09/18 12:55

Date Received:

05/09/18

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 - W	Vestborough Lab	)								
pH (H)	7.6		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



**Project Name: ROME-CINDER ASH** 

**Project Number:** 127887-004 Lab Number:

L1816866

Report Date:

05/15/18

**SAMPLE RESULTS** 

Lab ID:

L1816866-11

HASTP15-180509-1350

Sample Location: ROME, NY

Date Collected:

05/09/18 13:50

Date Received:

05/09/18

Field Prep:

Not Specified

Sample Depth:

Matrix:

Client ID:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	estborough Lab	)								
pH (H)	6.6		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



**Project Name: ROME-CINDER ASH** 

**Project Number:** 127887-004 Lab Number:

L1816866

**Report Date:** 

05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-12

HASTP16-180509-1335

Sample Location: ROME, NY

Date Collected:

05/09/18 13:35

Field Prep:

Date Received:

05/09/18

Not Specified

Sample Depth:

Client ID:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - W	estborough Lab	)								
pH (H)	7.3		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

Report Date:

05/15/18

**SAMPLE RESULTS** 

Lab ID: L1

L1816866-13

HASTP19-180509-1420

Sample Location: ROME, NY

Date Collected:

05/09/18 14:20

Date Received:

05/09/18

Field Prep:

Not Specified

Sample Depth:

Matrix:

Client ID:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - W	estborough Lab	)								
pH (H)	6.6		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



Project Name: ROME-CINDER ASH

Project Number: 127887-004

Lab Number:

L1816866

Report Date:

05/15/18

**SAMPLE RESULTS** 

Lab ID: L1816866-14

Client ID: HASTP20-180509-1445

Sample Location: ROME, NY

Date Collected:

05/09/18 14:45

Date Received:

05/09/18

Field Prep:

Not Specified

Sample Depth:

Matrix:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry -	Westborough Lab	)								
pH (H)	7.3		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



**Project Name: ROME-CINDER ASH** 

**Project Number:** 127887-004 Lab Number:

L1816866

Report Date:

05/15/18

## **SAMPLE RESULTS**

Lab ID: L1816866-15

Client ID: 3188-180509-0001 Date Collected:

05/09/18 00:00

Sample Location: ROME, NY

Date Received:

05/09/18

Field Prep:

Not Specified

Sample Depth:

Matrix:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - W	estborough Lab	)								
pH (H)	7.3		SU	-	NA	1	-	05/10/18 18:22	1,9045D	AS



## Lab Control Sample Analysis Batch Quality Control

Project Name: ROME-CINDER ASH

Lab Number:

L1816866

Project Number: 127887-004

Report Date:

05/15/18

Parameter	LCS %Recovery Qu	LCSD al %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 01-	15 Batch: WG11	14670-1				
рН	100	-		99-101	-		



L1816866

Lab Duplicate Analysis
Batch Quality Control

Lab Number:

05/15/18 Project Number: 127887-004 Report Date:

Parameter	Native Samp	ole Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 01-15	QC Batch ID: WG1114670-2	QC Sample:	L1816680-02	Client ID:	DUP Sample
рН	9.8	9.7	SU	1		5



**Project Name:** 

**ROME-CINDER ASH** 

Project Name: **ROME-CINDER ASH** 

**Project Number:** 127887-004

Lab Number: L1816866 Report Date: 05/15/18

## Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

**Cooler Information** 

Custody Seal Cooler

Α Absent

Container Info	ormation		Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler		рН		Pres	Seal	Date/Time	Analysis(*)
L1816866-01A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-01B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-01X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG- C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG- CI(180)
L1816866-01X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-02A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-02B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-02X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG- C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG- CI(180)
L1816866-02X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-03A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-03B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-03X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG- C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG- CI(180)
L1816866-03X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-04A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-04B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-04X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Υ	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG- C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG- CI(180)
L1816866-04X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-05A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-05B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-05X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Υ	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)



**Lab Number:** L1816866

Report Date: 05/15/18

Project Name: ROME-CINDER ASH

Project Number: 127887-004

Container Info	ormation		Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	рН	pН		Pres	Seal	Date/Time	Analysis(*)
L1816866-05X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-06A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-06B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-06X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG- C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG- CI(180)
L1816866-06X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-07A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-07B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-07X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG- C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG- CI(180)
L1816866-07X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-08A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-08B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-08X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG- C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG- CI(180)
L1816866-08X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-09A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-09B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-09X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG- C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG- CI(180)
L1816866-09X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-10A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-10B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-10X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG- C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG- CI(180)
L1816866-10X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-11A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-11B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()



**Lab Number:** L1816866

Report Date: 05/15/18

**Project Name:** ROME-CINDER ASH

Project Number: 127887-004

Container Info	ormation		Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	рН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L1816866-11X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1816866-11X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-12A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-12B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-12X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG- C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG- CI(180)
L1816866-12X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-13A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-13B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-13X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Υ	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG- C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG- CI(180)
L1816866-13X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-14A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-14B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-14X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Υ	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG- C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG- CI(180)
L1816866-14X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-
L1816866-15A	Glass 250ml/8oz unpreserved	Α	NA		4.6	Υ	Absent		PH-9045(1)
L1816866-15B	Plastic 2oz unpreserved for TS	Α	NA		4.6	Υ	Absent		ARCHIVE()
L1816866-15X	Plastic 120ml HNO3 preserved Extracts	Α	NA		4.6	Υ	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG- C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG- CI(180)
L1816866-15X9	Tumble Vessel	Α	NA		4.6	Υ	Absent		-



Project Name:ROME-CINDER ASHLab Number:L1816866Project Number:127887-004Report Date:05/15/18

### **GLOSSARY**

### **Acronyms**

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).

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.

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.

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.

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

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.

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.

### **Footnotes**

- 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.

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'.

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.

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 Condensation Product".

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

Report Format: DU Report with 'J' Qualifiers



Project Name:ROME-CINDER ASHLab Number:L1816866Project Number:127887-004Report Date:05/15/18

#### **Data Qualifiers**

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).

- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- 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.
- 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.
- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- 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.
- 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 Identified Compounds (TICs).
- ND Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



Project Name:ROME-CINDER ASHLab Number:L1816866Project Number:127887-004Report Date:05/15/18

## REFERENCES

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

## 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

Serial\_No:05151816:55

ID No.:17873 Revision 11

Published Date: 1/8/2018 4:15:49 PM

Page 1 of 1

## Certification Information

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

## Westborough Facility

EPA 624: m/p-xylene, o-xylene

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: lodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 300: DW: Bromide EPA 6860: SCM: Perchlorate

EPA 9010: NPW and SCM: Amenable Cyanide Distillation

SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; 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

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, EPA 351.1, SM4500P-B, E, E, EPA 351.1, SM4500P-B, E, EPA 351.1, SM4500P-B, E, EPA 351.1, SM4500P-B, E, EPA 351.1, SM4500P-B, EPA 351.1, SM450P-B, EPA 351.1, SM4 SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D. EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan II, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs EPA 625: SVOC (Acid/Base/Neutral Extractables), EPA 600/4-81-045: PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, SM9222D.

## **Mansfield Facility:**

## **Drinking Water**

EPA 200.7: Al, Ba, Be, Cd, Cr, Cu, 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.

## 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, Pb, Mn, Ni, Se, Ag, TL, Zn.

EPA 245.1 Hg.

SM2340B

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

Pre-Qualtrax Document ID: 08-113 Document Type: Form

Address: 200 Town Stc 2, Rockst Phone: 585-321-6	n Contre Dr ler, NY 14623		- C	inder	- Ash			Deliv	in Laterables ASP-A	5	☐ AS	P-B	Billing Information  Same as Client Info
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Page 51 of 53

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(Lab Use Ciny)		mple ID Col		lection	Sample	Sampler	Depth	1	1 1 1		- 1			
		inque its	Dete	Time	Matrix	Initials	Liebiu						Sample Specific Comments	
168 66 - 01	HASTP01-180509-10	00	5/9/2018	1000	so	S88		X	х					
-02	HASTP02-180509-1030		5/9/2018	1030	so	588		X	x					
-03	HASTP03-180509-1050		5/9/2018	1050	so	\$88		×	X					
-04	HASTP04-180509-1120		5/9/2018	1120	so	SBB		X	X					
-05	HASTP05-180509-1140		5/9/2018	1140	so	SBB		X	x					
-06	HASTP07-180509-1155		5/9/2018	1155	so	SBB		X	x					
-07	HASTP08-180509-1215		5/9/2018	1215	so	\$88		x	x					
-08	HASTP09-180509-1230		5/9/2018	1230	so	588		x	x					
~09	HASTP10-180509-1245		5/9/2018	1245	so	SBB		x	x					
-(0	HASTP12-180509-12	55	5/9/2018	1255	so	SBB		X.	x					
Preservative Code: A = None 1 = HCI C = HNO <sub>3</sub>	Container Code P = Plastic A = Amber Glass V = Vial	Westboro: Certification No: MA935 Manafield: Certification No: MA015			-	Container Type			Р		1		Picase print charty, tegloly and completely. Samples can not be logg in and turnaround time clock will not start until any ambiguities are resolve.	
,02;H ≈ 0 HOest ≈ 1	G = Glasu 6 = Bacteria Cup			F			reservativo						Alpha Analytical's services under this Chain of Gustady shall be performed in	
= MeOH		Relinquished By: Date			Time Red			reived By:			Date/Time		accordance with learns and ponoitions within Blanket Service Agreementa 2015- 18-Alpha Acceptical by and between Hele & Aldrich, Inc., its substituties and	
GE = Zn Ac/NsOH D = Other Document ID: 20455 Rev 2 (	D = 800 Bottle							_					affiliates and Alpha Analytical.	

Westborough, MA 91581 Manafield, MA 97948  B Wildhup Or. 120 Februar Blvd  TEL 508-698-920 TEL 508-698-920  FAX 508-698-9163 FAX 508-622-3268		Service Centers Sirence, MC 04412 Perturouth, NH 03801 Malrowin, NJ 07430 Albany, NY 12265 Tonovenda, NY 14186 Hotoves, PA 19042			Pag		2	100	Date Re in La	c'd 5	1011	8	LIEI 1866	
		Project Information Project Name: Rome Cinder Ash					Deliverables  Email			Fax		Samir as Client info		
		Project Location: Rome, NY						_	EQuis (	1 File)	EQuIS (4 File)		PO#	
H&A Information		Project # 127887-004							Other:		-			
H&A Client Samuel	Burke	(Use Project name as Project #)							ulatory Re	quiremo	nts (Progra	m/Criteria)	Disposal Site Information	913
H&A Address: 200 Town Centre Dr. Ste 2		Project Manager							TCLP				Please identify below location of	of
Rochester, NY 14623		ALPHAQuote #:											applicable disposal facilities.	
H&A Phone: 585-321-4263		Turn-Around Time											Disposal Facility:	
H&A Fax:		Standard Due Date:											□ NJ □ NY	
H&A Email: sburke@	H&A Email: sburke@haleyeidrich.com		Rush (only if pre approved) # of Days:						Note: Select State from menu & identify of				Other:	
These samples have been	an previously analyzed	by Albha					ANALYSIS					Sample Filtration	_	
Other project specific r This COC is to be ap Please specify Metals of	pended (and serve as submitted	the Work Authorization for for the Rome Cinder Ash			bed here	in) to the C	OC	CLP Metals	Corrosivity				Done Lab to do Preservation Lab to do  (Please Specify below)	
ALPHA Lan ID		Colle		lection	Sample	Sampler		1			1 1	1 1	The same of the sa	
(Lab Use Only)	St	imple ID	Date	Time	Matrix	Initials	Depth	1					Sample Specific Comments	189
16866 - 11	HASTP15-180509-13	150	5/9/2018	1350	so	SBB	1	x	x					1 2
-(2	HASTP16-180509-13		5/9/2018	1335	so	S38	1	x	x					1 2
-19		HASTP19-180509-1420		1420	so	SBB		x	x					1 2
-14	HASTP20-180509-1445		5/9/2018	1445	so	SBB		х	x					2
~15	1,000,000		5/9/2018	1	so	588		x	x					2
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Preservative Code: A = Norse B = HCi C = HNO <sub>3</sub>	Container Code P = Plastic A = Amber Glass V - Vial	Westbero: Certification No: MA935 Mansfield: Certification No: MA015			Container Type  Preservative			A P					Please print clearly, legibly and campletely. Samples can not be logge in and turnercend time clock will not start until any ambiguities are resolve Alpha Analytical's services under this	
D = H <sub>1</sub> SO <sub>x</sub> E = NaOH	G = Glass B = Bacteris Cup					Filoativideste			A				Chain of Custody shall be perform accordance with terms and condit	nid in
E = NaCH F = MeOH G = NaHSO <sub>4</sub> H = Ne <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K/E = Zir AbNaOH C = Other	C = Cothe O = Other E = Enotine D = SOO Bottle	Relinquished	Date/	o/Time Re				d By:		Date/Time		within Blanket Service Agreements 2215- 16-Adhia Anaryscal by and between Haley & Aldrich, Inc., its subsidiaries and affiliates and Alpha Analytical.		
Document ID: 20455 Rev 2 (	8/9/2016)				-	1	-							