

March 27, 2024

Mr. Drew Schauffert, L.S.
Santo Associates Land Surveying and
Engineering, P.C.
1 Barney Road, Suite 109
Clifton Park, NY 12065

Re: Soil Sampling and Analysis
Heflin Subdivision
Cook Road and NY Route 67, Charlton, New York

Dear Mr. Schauffert:

This letter transmits the analytical results for the surface soil samples collected by Alpha Geological Services, D.P.C. (Alpha) and analyzed for the heavy metals soil at the former orchard located at the intersection of Cook Road and NY Route 67 in the Town of Charlton, Saratoga County, New York (Figure 1). The sampling was conducted for the benefit of your client who is proposing to develop residential housing on an approximate one-acre portion of a former orchard. The town board requested that the soil be tested for heavy metals including arsenic, barium, cadmium, chromium (hexavalent & trivalent), copper, lead, mercury, nickel, selenium, silver, and zinc that may have been used at the property during its past use as an apple orchard. Lead-arsenic based pesticides were commonly used in orchards in the United States during the early half of the 20th Century.

The site consists of an approximately 7-acre subdivision (Figure 2). The area of interest is the approximate 2-acre northern portion of the subdivision at the corner of Cook Road and NY Route 67. Robin Sevinsky, representing the Town of Charlton planning department was present to observe the sampling.

Soil Sampling and Results

Alpha collected surface soil samples on March 13, 2024 from four locations (SS-1 through SS-4). The sample locations are shown on Figure 2. Sample SS-1 is located on the upslope edge of the orchard near the proposed water supply well. Samples SS-2 and SS-3 are located within the former orchard next to existing apple trees. Sample SS-4 is located down slope of the orchard area.

Samples were collected by first removing the surface vegetation (grass) and exposing the bare soil. Soil representing the top approximate six inches were collected using a pre-clean stainless-steel trowel and placed in a clean metal bowl. Separate trowels and bowls were used for each sample location. The soil was homogenized and large pebbles and large pieces of organic matter were removed. Samples for analysis were placed in laboratory-provided sample containers and

Mr. Drew Schauffert, L.S.
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placed on ice. The samples were delivered, under chain-of-custody, on the same day to Alpha Analytical Laboratories' (AAL) Albany service station.

The soil samples were transported to AAL's Westborough, Massachusetts lab for analysis of the heavy metals by USEPA Methods 6010 and 7470, and for hexavalent chromium by Method 7196. The laboratory analytical report is included as Appendix A. Table 1 summarizes the laboratory results. Table 1 also includes the New York State Rural Background Levels contained in the New York Brownfield Cleanup Program - Development of Soil Cleanup Objectives Technical Support Document prepared by the NYSDEC & NYSDOH (September 2006). The results are compared to the NYSDEC's Soil Cleanup Objectives (SCOs) for the Protection of Public Health (Residential).

No metals were detected above the NYS Rural Background Level or the Residential Use SCO at locations SS-1, SS-2, and SS4. Only arsenic at location SS-3 (16.2 milligrams per kilogram [mg/kg]) slightly exceeded the Residential Use SCO (16 mg/kg). The four sample average concentrations for each metal are well below the NYS Rural Background Level or the Residential Use SCOs.

Conclusions

There does not appear to be significant residual heavy metal contamination associated with the past use as an orchard. Alpha bases this conclusion on the following facts:

- No metals were detected above the NYS Rural Background Level or the Residential Use SCO at three of the four locations.
- The average concentrations for each metal are well below the NYS Rural Background Level and the Residential Use SCOs.
- Arsenic was detected at only one location at a concentration that slightly exceeded the Residential Use SCO.

Please do not hesitate to contact me if you have any questions.

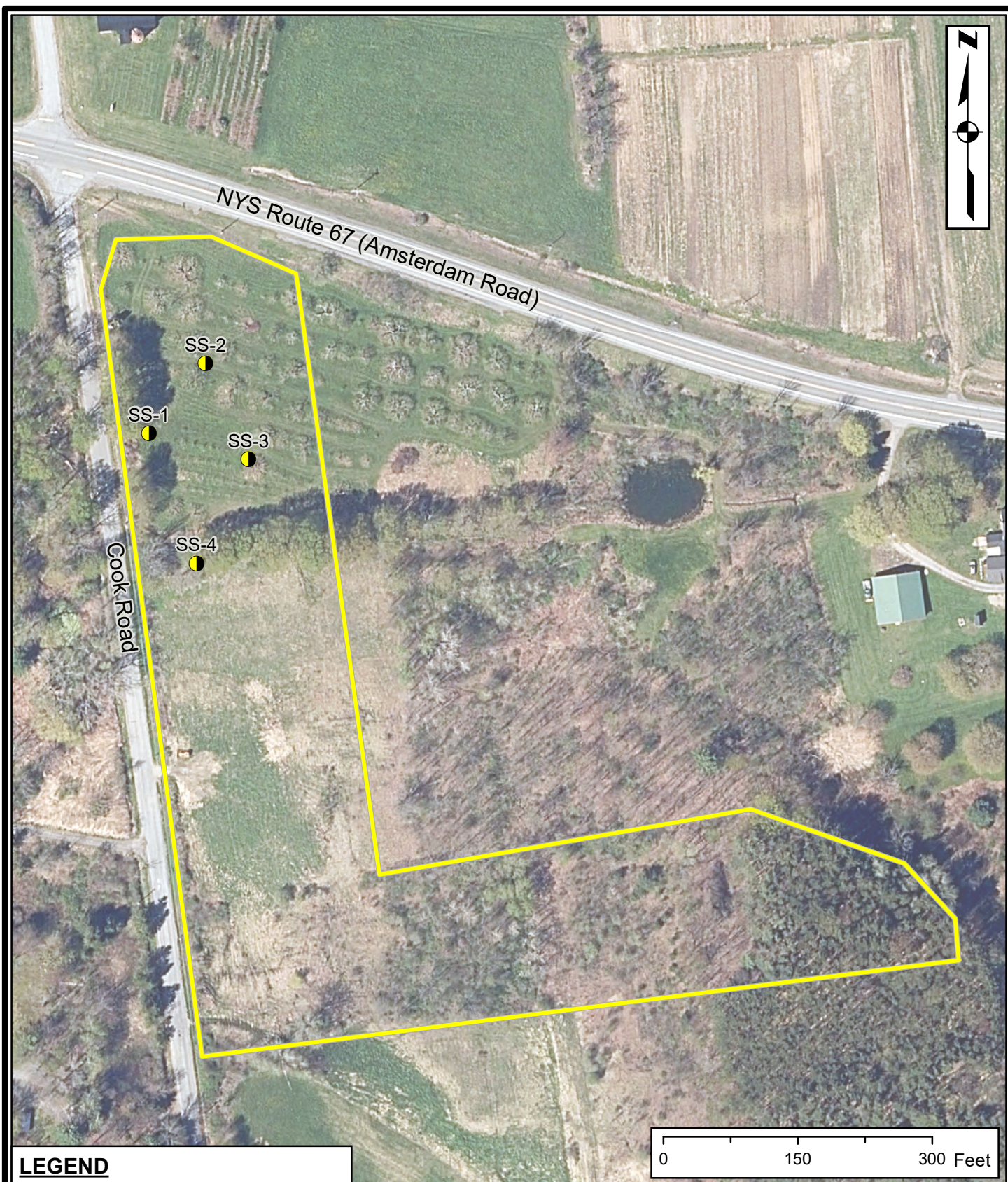
Sincerely,
Alpha Geoscience



Scott M. Hulseapple, PG, CPG
Hydrogeologist

Attachments

Z:\projects\2024\24100 - 24120\24104 - Heflin Subdivision\5_0 Reports\2024-03 Heflin Subdivision Sampling Results.docx



LEGEND

- Proposed Sample Location
- Site Boundary (approx.)

Source:

- Saratoga County 2021 twelve-inch resolution natural color orthoimagery, NYS Office of Information Technology Services (ITS). Image date: March 2021.
- Site boundary provided by Santos Associates, PC.
- Locations are approximate. Not a surveyed map.



FIGURE 2
Sample Locations

Heflin Subdivision
Town of Charlton
Saratoga County, New York

TABLE 1
Summary of Heavy Metal Analytical Results
March 13, 2024
Heflin Subdivision, Town of Charlton, New York

Analyte	Units	NYS Rural Background Level	Guidance Value Protective of Public Health	SS-1	SS-2	SS-3	SS-4	Calculated Average
Arsenic	mg/kg	<0.2-12	16	5.69	4.95	16.2	4.56	7.9
Barium	mg/kg	4-170	350	68.1	60.7	55.8	44.1	57.2
Cadmium	mg/kg	<0.05-2.4	2.5	ND<0.275	ND<0.269	ND<0.27	ND<0.233	ND
Chromium (Total)	mg/kg	1-20	30	11.8	11.3	12.0	11.1	11.6
Chromium (Hexavalent)	mg/kg	ND	22	ND<0.237	ND<0.228	ND<0.222	ND<0.196	ND
Copper	mg/kg	2-32	270	13.3	21.8	24.8	15.6	18.9
Lead	mg/kg	3-72	400	19.8	15.4	51.5	16.4	25.8
Mercury	mg/kg	0.01-0.20	0.81	0.146	0.117	0.203	0.069	0.13
Nickel	mg/kg	0-25	140	9.66	9.91	10.4	12.8	10.7
Selenium	mg/kg	0.1-3.9	36	ND<0.724	ND<0.708	ND<0.710	ND<0.613	ND
Silver	mg/kg	--	36	ND<0.776	ND<0.776	ND<0.779	ND<0.673	ND
Zinc	mg/kg	10-140	2200	57.4	60.2	79.4	57.5	63.6

Notes:

- Surface soil samples collected from the top six inches.
- All concentrations reported in milligrams per kilograms (mg/kg), which is equivalent to parts per million (ppm).
- NYS Rural Background Level from New York State Brownfield Cleanup Program - Development of Soil Cleanup Objectives Technical Support Document (NYSDEC & NYSDOH, September 2006)
- Guidance value is Soil Cleanup Objective for the Protection of Public Health (Residential) (6 NYCRR 375-6.8[b])
- "NS" indicates no standard or guidance value has been established.
- "ND" indicates not detected at the indicated method detection limit (RL).

APPENDIX A

Laboratory Report



ANALYTICAL REPORT

Lab Number:	L2413599
Client:	Alpha Geoscience 679 Plank Road Clifton Park, NY 12065
ATTN:	Scott Hulseapple
Phone:	(518) 348-6995
Project Name:	HEFLIN SUBDIVISION
Project Number:	24104
Report Date:	03/20/24

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: HEFLIN SUBDIVISION
Project Number: 24104

Lab Number: L2413599
Report Date: 03/20/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2413599-01	SS-1	SOIL	CHARLTON, NY	03/13/24 09:50	03/13/24
L2413599-02	SS-2	SOIL	CHARLTON, NY	03/13/24 09:15	03/13/24
L2413599-03	SS-3	SOIL	CHARLTON, NY	03/13/24 09:30	03/13/24
L2413599-04	SS-4	SOIL	CHARLTON, NY	03/13/24 09:40	03/13/24

Project Name: HEFLIN SUBDIVISION
Project Number: 24104

Lab Number: L2413599
Report Date: 03/20/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: HEFLIN SUBDIVISION
Project Number: 24104

Lab Number: L2413599
Report Date: 03/20/24

Case Narrative (continued)

Report Submission

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

Sample Receipt

The analyses performed were specified by the client.

Total Metals

L2413599-01 through -04: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by the sample matrix.

Hexavalent Chromium

The WG1897522-4 Insoluble MS recovery for chromium, hexavalent (28%), performed on L2413599-01, is outside the acceptance criteria. The Soluble MS recovery for chromium, hexavalent (8%) was also outside criteria. This has been attributed to matrix interference. A post-spike was performed with a recovery of 96%.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Caitlin Walukevich

Title: Technical Director/Representative

Date: 03/20/24

METALS

Project Name: HEFLIN SUBDIVISION**Lab Number:** L2413599**Project Number:** 24104**Report Date:** 03/20/24**SAMPLE RESULTS**

Lab ID: L2413599-01

Date Collected: 03/13/24 09:50

Client ID: SS-1

Date Received: 03/13/24

Sample Location: CHARLTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 68%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.69		mg/kg	2.81	0.584	5	03/16/24 09:25	03/20/24 09:18	EPA 3050B	1,6010D	DMC
Barium, Total	68.1		mg/kg	2.81	0.489	5	03/16/24 09:25	03/20/24 09:18	EPA 3050B	1,6010D	DMC
Cadmium, Total	ND		mg/kg	2.81	0.275	5	03/16/24 09:25	03/20/24 09:18	EPA 3050B	1,6010D	DMC
Chromium, Total	11.8		mg/kg	2.81	0.270	5	03/16/24 09:25	03/20/24 09:18	EPA 3050B	1,6010D	DMC
Copper, Total	13.3		mg/kg	2.81	0.724	5	03/16/24 09:25	03/20/24 09:18	EPA 3050B	1,6010D	DMC
Lead, Total	19.8		mg/kg	14.0	0.752	5	03/16/24 09:25	03/20/24 09:18	EPA 3050B	1,6010D	DMC
Mercury, Total	0.146		mg/kg	0.095	0.062	1	03/16/24 10:10	03/19/24 15:31	EPA 7471B	1,7471B	GMG
Nickel, Total	9.66		mg/kg	7.02	0.680	5	03/16/24 09:25	03/20/24 09:18	EPA 3050B	1,6010D	DMC
Selenium, Total	ND		mg/kg	5.62	0.724	5	03/16/24 09:25	03/20/24 09:18	EPA 3050B	1,6010D	DMC
Silver, Total	ND		mg/kg	1.40	0.795	5	03/16/24 09:25	03/20/24 09:18	EPA 3050B	1,6010D	DMC
Zinc, Total	57.4		mg/kg	14.0	0.823	5	03/16/24 09:25	03/20/24 09:18	EPA 3050B	1,6010D	DMC



Project Name: HEFLIN SUBDIVISION**Lab Number:** L2413599**Project Number:** 24104**Report Date:** 03/20/24**SAMPLE RESULTS**

Lab ID: L2413599-02

Date Collected: 03/13/24 09:15

Client ID: SS-2

Date Received: 03/13/24

Sample Location: CHARLTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 70%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.95		mg/kg	2.74	0.571	5	03/16/24 09:25	03/20/24 09:24	EPA 3050B	1,6010D	DMC
Barium, Total	60.7		mg/kg	2.74	0.477	5	03/16/24 09:25	03/20/24 09:24	EPA 3050B	1,6010D	DMC
Cadmium, Total	ND		mg/kg	2.74	0.269	5	03/16/24 09:25	03/20/24 09:24	EPA 3050B	1,6010D	DMC
Chromium, Total	11.3		mg/kg	2.74	0.263	5	03/16/24 09:25	03/20/24 09:24	EPA 3050B	1,6010D	DMC
Copper, Total	21.8		mg/kg	2.74	0.708	5	03/16/24 09:25	03/20/24 09:24	EPA 3050B	1,6010D	DMC
Lead, Total	15.4		mg/kg	13.7	0.735	5	03/16/24 09:25	03/20/24 09:24	EPA 3050B	1,6010D	DMC
Mercury, Total	0.117		mg/kg	0.089	0.058	1	03/16/24 10:10	03/19/24 15:35	EPA 7471B	1,7471B	GMG
Nickel, Total	9.91		mg/kg	6.86	0.664	5	03/16/24 09:25	03/20/24 09:24	EPA 3050B	1,6010D	DMC
Selenium, Total	ND		mg/kg	5.49	0.708	5	03/16/24 09:25	03/20/24 09:24	EPA 3050B	1,6010D	DMC
Silver, Total	ND		mg/kg	1.37	0.776	5	03/16/24 09:25	03/20/24 09:24	EPA 3050B	1,6010D	DMC
Zinc, Total	60.2		mg/kg	13.7	0.804	5	03/16/24 09:25	03/20/24 09:24	EPA 3050B	1,6010D	DMC



Project Name: HEFLIN SUBDIVISION**Lab Number:** L2413599**Project Number:** 24104**Report Date:** 03/20/24**SAMPLE RESULTS**

Lab ID: L2413599-03

Date Collected: 03/13/24 09:30

Client ID: SS-3

Date Received: 03/13/24

Sample Location: CHARLTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 72%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	16.2		mg/kg	2.75	0.572	5	03/16/24 09:25	03/20/24 09:31	EPA 3050B	1,6010D	DMC
Barium, Total	55.8		mg/kg	2.75	0.479	5	03/16/24 09:25	03/20/24 09:31	EPA 3050B	1,6010D	DMC
Cadmium, Total	ND		mg/kg	2.75	0.270	5	03/16/24 09:25	03/20/24 09:31	EPA 3050B	1,6010D	DMC
Chromium, Total	12.0		mg/kg	2.75	0.264	5	03/16/24 09:25	03/20/24 09:31	EPA 3050B	1,6010D	DMC
Copper, Total	24.8		mg/kg	2.75	0.710	5	03/16/24 09:25	03/20/24 09:31	EPA 3050B	1,6010D	DMC
Lead, Total	51.5		mg/kg	13.8	0.738	5	03/16/24 09:25	03/20/24 09:31	EPA 3050B	1,6010D	DMC
Mercury, Total	0.203		mg/kg	0.088	0.058	1	03/16/24 10:10	03/19/24 15:38	EPA 7471B	1,7471B	GMG
Nickel, Total	10.4		mg/kg	6.88	0.666	5	03/16/24 09:25	03/20/24 09:31	EPA 3050B	1,6010D	DMC
Selenium, Total	ND		mg/kg	5.50	0.710	5	03/16/24 09:25	03/20/24 09:31	EPA 3050B	1,6010D	DMC
Silver, Total	ND		mg/kg	1.38	0.779	5	03/16/24 09:25	03/20/24 09:31	EPA 3050B	1,6010D	DMC
Zinc, Total	79.4		mg/kg	13.8	0.806	5	03/16/24 09:25	03/20/24 09:31	EPA 3050B	1,6010D	DMC



Project Name: HEFLIN SUBDIVISION**Lab Number:** L2413599**Project Number:** 24104**Report Date:** 03/20/24**SAMPLE RESULTS**

Lab ID: L2413599-04

Date Collected: 03/13/24 09:40

Client ID: SS-4

Date Received: 03/13/24

Sample Location: CHARLTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.56		mg/kg	2.38	0.494	5	03/16/24 09:25	03/20/24 09:37	EPA 3050B	1,6010D	DMC
Barium, Total	44.1		mg/kg	2.38	0.414	5	03/16/24 09:25	03/20/24 09:37	EPA 3050B	1,6010D	DMC
Cadmium, Total	ND		mg/kg	2.38	0.233	5	03/16/24 09:25	03/20/24 09:37	EPA 3050B	1,6010D	DMC
Chromium, Total	11.1		mg/kg	2.38	0.228	5	03/16/24 09:25	03/20/24 09:37	EPA 3050B	1,6010D	DMC
Copper, Total	15.6		mg/kg	2.38	0.613	5	03/16/24 09:25	03/20/24 09:37	EPA 3050B	1,6010D	DMC
Lead, Total	16.4		mg/kg	11.9	0.637	5	03/16/24 09:25	03/20/24 09:37	EPA 3050B	1,6010D	DMC
Mercury, Total	0.069	J	mg/kg	0.077	0.050	1	03/16/24 10:10	03/19/24 15:41	EPA 7471B	1,7471B	GMG
Nickel, Total	12.8		mg/kg	5.94	0.575	5	03/16/24 09:25	03/20/24 09:37	EPA 3050B	1,6010D	DMC
Selenium, Total	ND		mg/kg	4.75	0.613	5	03/16/24 09:25	03/20/24 09:37	EPA 3050B	1,6010D	DMC
Silver, Total	ND		mg/kg	1.19	0.673	5	03/16/24 09:25	03/20/24 09:37	EPA 3050B	1,6010D	DMC
Zinc, Total	57.5		mg/kg	11.9	0.696	5	03/16/24 09:25	03/20/24 09:37	EPA 3050B	1,6010D	DMC



Project Name: HEFLIN SUBDIVISION

Lab Number: L2413599

Project Number: 24104

Report Date: 03/20/24

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1897028-1										
Arsenic, Total	0.088	J	mg/kg	0.400	0.083	1	03/16/24 09:25	03/17/24 13:05	1,6010D	DHL
Barium, Total	ND		mg/kg	0.400	0.070	1	03/16/24 09:25	03/17/24 13:05	1,6010D	DHL
Cadmium, Total	ND		mg/kg	0.400	0.039	1	03/16/24 09:25	03/17/24 13:05	1,6010D	DHL
Chromium, Total	0.162	J	mg/kg	0.400	0.038	1	03/16/24 09:25	03/17/24 13:05	1,6010D	DHL
Copper, Total	ND		mg/kg	0.400	0.103	1	03/16/24 09:25	03/17/24 13:05	1,6010D	DHL
Lead, Total	ND		mg/kg	2.00	0.107	1	03/16/24 09:25	03/17/24 13:05	1,6010D	DHL
Nickel, Total	ND		mg/kg	1.00	0.097	1	03/16/24 09:25	03/17/24 13:05	1,6010D	DHL
Selenium, Total	ND		mg/kg	0.800	0.103	1	03/16/24 09:25	03/17/24 13:05	1,6010D	DHL
Silver, Total	ND		mg/kg	0.200	0.113	1	03/16/24 09:25	03/17/24 13:05	1,6010D	DHL
Zinc, Total	ND		mg/kg	2.00	0.117	1	03/16/24 09:25	03/17/24 13:05	1,6010D	DHL

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1897033-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	03/16/24 10:10	03/18/24 10:04	1,7471B	GMG

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: HEFLIN SUBDIVISION

Project Number: 24104

Lab Number: L2413599

Report Date: 03/20/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1897028-2 SRM Lot Number: D123-540								
Arsenic, Total	94		-		82-118	-		
Barium, Total	96		-		82-118	-		
Cadmium, Total	96		-		83-118	-		
Chromium, Total	100		-		81-118	-		
Copper, Total	91		-		83-117	-		
Lead, Total	96		-		82-119	-		
Nickel, Total	100		-		82-118	-		
Selenium, Total	96		-		81-119	-		
Silver, Total	99		-		79-120	-		
Zinc, Total	105		-		80-120	-		
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1897033-2 SRM Lot Number: D123-540								
Mercury, Total	97		-		67-132	-		

Matrix Spike Analysis

Batch Quality Control

Project Name: HEFLIN SUBDIVISION

Project Number: 24104

Lab Number: L2413599

Report Date: 03/20/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1897028-3 QC Sample: L2414337-01 Client ID: MS Sample												
Arsenic, Total	14.5	11.5	26.0	100		-	-		75-125	-		20
Barium, Total	230	192	417	98		-	-		75-125	-		20
Cadmium, Total	1.68J	5.08	5.78	114		-	-		75-125	-		20
Chromium, Total	10.8	19.2	28.7	93		-	-		75-125	-		20
Copper, Total	259	23.9	303	184	Q	-	-		75-125	-		20
Lead, Total	558	50.8	648	177	Q	-	-		75-125	-		20
Nickel, Total	46.5	47.9	84.6	80		-	-		75-125	-		20
Selenium, Total	1.92J	11.5	13.3	116		-	-		75-125	-		20
Silver, Total	ND	4.79	5.26	110		-	-		75-125	-		20
Zinc, Total	611	47.9	624	27	Q	-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1897033-3 QC Sample: L2414337-01 Client ID: MS Sample												
Mercury, Total	0.503	1.58	3.15	168	Q	-	-		80-120	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: HEFLIN SUBDIVISION
Project Number: 24104

Lab Number: L2413599
Report Date: 03/20/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1897028-4 QC Sample: L2414337-01 Client ID: DUP Sample						
Arsenic, Total	14.5	14.5	mg/kg	0		20
Barium, Total	230	244	mg/kg	6		20
Cadmium, Total	1.68J	1.27J	mg/kg	NC		20
Chromium, Total	10.8	11.2	mg/kg	4		20
Copper, Total	259	320	mg/kg	21	Q	20
Lead, Total	558	518	mg/kg	7		20
Nickel, Total	46.5	44.3	mg/kg	5		20
Selenium, Total	1.92J	1.41J	mg/kg	NC		20
Silver, Total	ND	ND	mg/kg	NC		20
Zinc, Total	611	581	mg/kg	5		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1897033-4 QC Sample: L2414337-01 Client ID: DUP Sample						
Mercury, Total	0.503	0.487	mg/kg	3		20

Project Name: HEFLIN SUBDIVISION
Project Number: 24104

Lab Serial Dilution
Analysis
Batch Quality Control

Lab Number: L2413599
Report Date: 03/20/24

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1897028-6 QC Sample: L2414337-01 Client ID: DUP Sample						
Barium, Total	230	235	mg/kg	2		20
Copper, Total	259	262	mg/kg	1		20
Lead, Total	558	557	mg/kg	0		20
Zinc, Total	611	642	mg/kg	5		20



INORGANICS & MISCELLANEOUS

Project Name: HEFLIN SUBDIVISION

Project Number: 24104

Lab Number: L2413599

Report Date: 03/20/24

SAMPLE RESULTS

Lab ID: L2413599-01

Client ID: SS-1

Sample Location: CHARLTON, NY

Date Collected: 03/13/24 09:50

Date Received: 03/13/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	67.6		%	0.100	NA	1	-	03/14/24 21:46	121,2540G	WJM
Chromium, Hexavalent	ND		mg/kg	1.18	0.237	1	03/18/24 11:47	03/20/24 11:31	1,7196A	RDS



Project Name: HEFLIN SUBDIVISION

Project Number: 24104

Lab Number: L2413599

Report Date: 03/20/24

SAMPLE RESULTS

Lab ID: L2413599-02

Client ID: SS-2

Sample Location: CHARLTON, NY

Date Collected: 03/13/24 09:15

Date Received: 03/13/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	70.1		%	0.100	NA	1	-	03/14/24 21:46	121,2540G	WJM
Chromium, Hexavalent	ND		mg/kg	1.14	0.228	1	03/18/24 11:47	03/20/24 11:31	1,7196A	RDS



Project Name: HEFLIN SUBDIVISION

Project Number: 24104

Lab Number: L2413599

Report Date: 03/20/24

SAMPLE RESULTS

Lab ID: L2413599-03

Client ID: SS-3

Sample Location: CHARLTON, NY

Date Collected: 03/13/24 09:30

Date Received: 03/13/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	72.1		%	0.100	NA	1	-	03/14/24 21:46	121,2540G	WJM
Chromium, Hexavalent	ND		mg/kg	1.11	0.222	1	03/18/24 11:47	03/20/24 11:31	1,7196A	RDS



Project Name: HEFLIN SUBDIVISION**Project Number:** 24104**Lab Number:** L2413599**Report Date:** 03/20/24**SAMPLE RESULTS****Lab ID:** L2413599-04**Client ID:** SS-4**Sample Location:** CHARLTON, NY**Date Collected:** 03/13/24 09:40**Date Received:** 03/13/24**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.4		%	0.100	NA	1	-	03/14/24 21:46	121,2540G	WJM
Chromium, Hexavalent	ND		mg/kg	0.983	0.196	1	03/18/24 11:47	03/20/24 11:31	1,7196A	RDS



Project Name: HEFLIN SUBDIVISION

Lab Number: L2413599

Project Number: 24104

Report Date: 03/20/24

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1897522-1										
Chromium, Hexavalent	ND		mg/kg	0.800	0.160	1	03/18/24 11:47	03/20/24 11:31	1,7196A	RDS

Lab Control Sample Analysis
Batch Quality Control**Project Name:** HEFLIN SUBDIVISION**Project Number:** 24104**Lab Number:** L2413599**Report Date:** 03/20/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1897522-2								
Chromium, Hexavalent	86		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: HEFLIN SUBDIVISION
Project Number: 24104

Lab Number: L2413599
Report Date: 03/20/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1897522-4 QC Sample: L2413599-01 Client ID: SS-1												
Chromium, Hexavalent	ND	1750	492	28	Q	-	-		75-125	-		20



Lab Duplicate Analysis

Batch Quality Control

Project Name: HEFLIN SUBDIVISION

Project Number: 24104

Lab Number: L2413599

Report Date: 03/20/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1896488-1 QC Sample: L2413500-01 Client ID: DUP Sample						
Solids, Total	36.3	35.2	%	3		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1897522-6 QC Sample: L2413599-01 Client ID: SS-1						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20

Project Name: HEFLIN SUBDIVISION
Project Number: 24104

Serial_No:03202413:22
Lab Number: L2413599
Report Date: 03/20/24

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2413599-01A	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2413599-01B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.2	Y	Absent		BA-TI(180),AS-TI(180),AG-TI(180),NI-TI(180),CR-TI(180),SE-TI(180),CU-TI(180),PB-TI(180),ZN-TI(180),HG-T(28),CD-TI(180)
L2413599-01C	Glass 120ml/4oz unpreserved	A	NA		4.2	Y	Absent		HEXCR-7196(30)
L2413599-02A	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2413599-02B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.2	Y	Absent		BA-TI(180),AS-TI(180),AG-TI(180),NI-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),CU-TI(180),HG-T(28),CD-TI(180)
L2413599-02C	Glass 120ml/4oz unpreserved	A	NA		4.2	Y	Absent		HEXCR-7196(30)
L2413599-03A	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2413599-03B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.2	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),SE-TI(180),ZN-TI(180),CU-TI(180),PB-TI(180),HG-T(28),CD-TI(180)
L2413599-03C	Glass 120ml/4oz unpreserved	A	NA		4.2	Y	Absent		HEXCR-7196(30)
L2413599-04A	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2413599-04B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.2	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),NI-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),CU-TI(180),HG-T(28),CD-TI(180)
L2413599-04C	Glass 120ml/4oz unpreserved	A	NA		4.2	Y	Absent		HEXCR-7196(30)

Project Name: HEFLIN SUBDIVISION
Project Number: 24104

Lab Number: L2413599
Report Date: 03/20/24

GLOSSARY

Acronyms

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

Report Format: DU Report with 'J' Qualifiers



Project Name: HEFLIN SUBDIVISION
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Footnotes

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

Terms

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

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

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

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

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

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

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

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

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

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

Data Qualifiers

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

Report Format: DU Report with 'J' Qualifiers



Project Name: HEFLIN SUBDIVISION
Project Number: 24104

Lab Number: L2413599
Report Date: 03/20/24

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

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

Project Name: HEFLIN SUBDIVISION
Project Number: 24104

Lab Number: L2413599
Report Date: 03/20/24

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



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

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Certification Information

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

Westborough Facility**EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

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

Biological Tissue Matrix: EPA 3050B

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

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

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

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

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

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