

NORTHEAST TREATERS OF NEW YORK, LLC GREENE COUNTY, NEW YORK

Periodic Review Report

(November 14, 2016 – September 1, 2018)

NYSDEC Site Number: C420029

Prepared for: Northeast Treaters of New York, LLC 796 Schoharie Turnpike Athens, New York 10701

Prepared by: Sterling Environmental Engineering, P.C. 24 Wade Road Latham, New York 12110

August 31, 2018

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NORTHEAST TREATERS OF NEW YORK, LLC GREENE COUNTY, NEW YORK

PERIODIC REVIEW REPORT (November 14, 2016 – September 1, 2018)

NYSDEC SITE #C420029

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CERTIFICATION

For each institutional or engineering control identified for the Site, I, Mark P. Millspaugh, P.E., certify that all of the following statements are true:

- a) The inspection of the Site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- b) The institutional control and/or engineering control employed at this Site is unchanged from the date the control was put in place, or last approved by DER;
- c) Nothing has occurred that would impair the ability of such control to protect public health and the environment;
- d) Nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for this control;
- e) Access to the Site will continue to be provided to DER to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- f) Use of the Site is compliant with the environmental easement;
- g) The engineering control systems are performing as designed and are effective;
- h) To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the Site remedial program; and,
- i) The information presented in this report is accurate and complete.

Mark P. Millspaugh, P.E.

R/31/18

Periodic Review Report – BCP #C420029 Northeast Treaters of New York, LLC, Athens, NY – 8/31/18 © 2018, Sterling Environmental Engineering, P.C.

EXECUTIVE SUMMARY

The Site is located at 796 Schoharie Turnpike in the Town of Athens, Greene County, New York (see Figure 1) and is identified as a portion of Athens Tax Map Parcel 104.00-4-44. The Site is an approximate 4.0-acre area bounded by Northeast Treaters' facility stormwater basin to the north, a commercial garage to the south, undeveloped lands of Northeast Treaters to the east, and the Northeast Treaters lumber storage yard to the west (see Figure 2).

The Site consists of a wood treatment process building and a lumber storage area. The Site is zoned industrial and is currently utilized for industrial wood treatment and storage by Northeast Treaters. Properties in the immediate vicinity of the Site primarily include industrial, commercial, rural residential, and agricultural properties.

The Site has been investigated and remediated under the New York State Department of Environmental Conservation's (NYSDEC) Brownfield Cleanup Program (BCP) and is identified as BCP Site No. C420029. Remedial activities were completed in 2016 in accordance with the October 2, 2015 Remedial Work Plan and the December 7, 2015 Remedial Work Plan Addendum to address sediment and soil impacted with heavy metals arsenic and chromium. The selected remedy included excavation of impacted soil and sediment and consolidation onsite beneath a protective cover.

A Certificate of Completion (COC) issued by the NYSDEC on November 14, 2016 and a Site Management Plan (SMP) dated July 15, 2016 are in place for the Site. This Periodic Review Report (PRR) presents results of monitoring activities outlined in the SMP for the November 14, 2016 to September 1, 2018 reporting period, which includes a Site-wide inspection and post-remediation media sampling conducted August 13, 2018.

The remedial program implemented at the Site has been successful in meeting the Remedial Action Objectives set forth in the NYSDEC Decision Document. The Site-wide inspection confirmed the protective cover remains intact and functional. Post-remediation media sampling of sediment confirmed off-site migration of Site impacts is not occurring. No areas of non-compliance with the SMP were identified.

Based on results of monitoring activities through August 2018, no changes to the approved SMP are recommended. The requirements for discontinuing Site management have not been met at this time.

1.0 INTRODUCTION

Sterling Environmental Engineering, P.C. (STERLING) prepared this Periodic Review Report (PRR) on behalf of Northeast Treaters of New York, LLC (Northeast Treaters) for Brownfield Cleanup Program (BCP) Site No. C420029 ("Site"). The Site is located at 796 Schoharie Turnpike in the Town of Athens, Greene County, New York (see Figure 1). The Site is an approximate 4.0-acre area, identified as a portion of Athens Tax Map Parcel 104.00-4-44, bounded by Northeast Treaters' facility stormwater basin to the north, a commercial garage to the south, undeveloped lands of Northeast Treaters to the east, and the Northeast Treaters lumber storage yard to the west (see Figure 2). The Site has been investigated and remediated under the New York State Department of Environmental Conservation's (NYSDEC) BCP. Remedial activities were completed in 2016 in accordance with the October 2, 2015 Remedial Work Plan and the December 7, 2015 Remedial Work Plan Addendum. A Certificate of Completion (COC) was issued by the NYSDEC on November 14, 2016.

A Site Management Plan (SMP) dated July 15, 2016 is in place for the Site. A request for extension of the first inspection, monitoring, and PRR was submitted to the NYSDEC on March 12, 2018. The NYSDEC approved the extension by letter dated March 16, 2018. Copies of the extension request and approval letters are provided in Appendix A. This PRR presents results of monitoring activities outlined in the SMP for the November 14, 2016 to September 1, 2018 reporting period, which includes a Site-wide inspection and post-remediation media sampling conducted August 13, 2018.

1.1 Summary of Site Contamination

The Site consists of a wood treatment process building and a lumber storage area. The Site is zoned industrial and is currently utilized for industrial wood treatment and storage by Northeast Treaters. Properties in the immediate vicinity of the Site primarily include industrial, commercial, rural residential, and agricultural properties. The Site began operation as a pressure treating wood manufacturing facility in 1979. For a period of time, the facility utilized chromated copper arsenate (CCA) to pressure treat wood products. In 2003, the facility switched to Micronized Copper Azole, a non-hazardous preservative.

The nature and extent of contamination at the Site are documented in the August 3, 2015 Remedial Investigation Report. Heavy metals chromium and arsenic were detected during the Remedial Investigation in surficial soils within the boundaries of the Site and in the settling basin located beyond the boundaries of the Site at the westernmost portion of the Northeast Treaters property (hereafter "western settling basin").

Soil and Sediment

Several soil and sediment samples collected at the Site, in offsite facility catch basins, and the facility's western settling basin reported parameter concentrations that exceed Part 375-6.8(a) Unrestricted Soil Cleanup Objectives (SCO) for chromium and arsenic.

Site-Related Groundwater

Groundwater analytical data determined that perched water and bedrock groundwater were not impacted by Site contaminants of concern.

Site-Related Soil Vapor Intrusion

Based upon the documented Site history, previous investigations, and analytical results obtained during the RI, no risk of soil vapor intrusion is associated with the Site because no volatile organic compounds (VOC) were detected in onsite soils. Furthermore, the Site does not have a documented history of storing or using chlorinated VOCs.

1.2 Remedial Elements

The physical elements of the selected remedy are as follows:

- Cover System A Site protective cover to allow for commercial use of the Site. The cover consists of a combination of structures comprising the Site development (i.e. new Process Building, pavement, etc.) or one (1) foot of soil cover over a geotextile demarcation layer. The one (1) foot of soil cover meets the requirements of 6 NYCRR Part 375-6.7(d).
- Limited Excavation Excavation of impacted soil/sediment in the vicinity of the facility's basin exit swale, located downgradient of the facility's western settling basin. Excavated soil was consolidated onsite under the cover system.
- Removal of all Sediment from Impacted Catch Basins Removal of impacted stormwater sediment from facility catch basins located hydraulically downgradient from the Site. Sediment removed from impacted catch basins was consolidated onsite under the cover system.
- Offsite Settling Basin Closure Plan In accordance with the NYSDEC Decision Document, a Closure Plan for the western setting basin was prepared and will be implemented when the facility permanently ceases use of the basin. The Closure Plan is included in the SMP.

1.3 Remedial Action Objectives

The Remedial Action Objectives (RAO) for the Site as listed in the Decision Document dated December 31, 2015 are as follows:

<u>Soil</u>

RAOs for Public Health Protection

• Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that could result in groundwater or surface water impacts.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

Sediment

RAOs for Public Health Protection

• Prevent direct contact with contaminated sediments.

RAOs for Environmental Protection

• Restore sediments to pre-release/background conditions to the extent feasible.

2.0 EVALUATION OF REMEDY PERFORMANCE, EFFECTIVENESS AND PROTECTIVENESS

This section provides an evaluation of the extent to which the implemented remedy meets the remedial objective to minimize or eliminate exposure pathways or significant risks to the public or the environment under the conditions of the contemplated use of the Site (i.e., Restricted Commercial and Industrial).

2.1 Performance

The potential migration of and exposure to remaining impacted media are prevented by the Site protective cover. Concentrations of chromium and arsenic detected in sediment samples obtained on August 13, 2018 at the western settling basin exit swale meet the applicable Standards, Criteria and Guidance (SCG).

2.2 Effectiveness

The selected remedy is an effective short-term and long-term remedial measure. The selected remedy immediately eliminated the potential for human and environmental exposure to impacted Site media. Sediment sampling at the western settling basin exit swale monitors the effectiveness of the remedy and for impacts from residual contaminants. Post-remediation media sampling is an accepted method of monitoring the long-term effectiveness of remediation. There are no known risks to workers, the community, or the environment from the selected remedy. No areas of non-compliance with the SMP were identified.

2.3 Protectiveness

Results of the August 13, 2018 monitoring and sampling indicate the area of contamination remains localized to the Site, beneath the protective cover. The potential migration of and exposure to remaining onsite impacted media are prevented by the Site protective cover. Offsite migration from the western settling basin is not occurring, as documented by exit swale sediment samples. Therefore, the implemented remedy achieves the Site RAOs.

3.0 IC/EC COMPLIANCE REPORT

3.1 Institutional Controls

The Institutional Control (IC) for the Site consists of an Environmental Easement (EE) that includes land use restrictions, an SMP, and certification reporting. The EE prohibits the use of the property for any means other than the contemplated Restricted Commercial and Industrial Use. The EE requires compliance with the SMP, including the periodic reporting covered by this report. The EE for the property that outlines the use restrictions was filed in Greene County on September 20, 2016 (Receipt No. 20160020459).

3.2 Engineering Controls

Exposure to remaining impacted media is prevented by the Site protective cover. The type of cover varies across the Site and comprises a demarcation geotextile fabric covered by an asphalt pavement profile, concrete structural components, or a minimum of 12 inches of clean fill. The Excavation Work Plan (EWP) provided in the SMP outlines required procedures if the cover system is breached, penetrated, or temporarily removed exposing the underlying impacted media. Procedures for the inspection and

maintenance of this cover system are provided in the Monitoring Plan included in the SMP.

3.3 Corrective Measures

The Site ICs/ECs are fully in place and effective. Therefore, no corrective measures are proposed at this time.

3.4 IC/EC Certification

The NYSDEC IC/EC Certification Form is provided as Appendix B.

4.0 MONITORING PLAN COMPLIANCE REPORT

4.1 Components of the Monitoring Plan

Components of the monitoring plan are summarized below.

Monitoring Plan Components		
Inspections:	Frequency	
1. Cover Inspection	Annually	
Monitoring:		
1. Sediment Sampling at Drainage Swale Downgradient of SPDES Outfall #001* for total chromium and arsenic	Annually	
Maintenance:		
1. Cover Maintenance	As needed	
2. Swale Maintenance	As needed	
Reporting:		
1. Periodic Review Report	Biennially	

*SPDES Outfall #001 is monitored pursuant to Multi-Sector General Permit (MSGP) No. NYR00B991 independent of this SMP.

4.1.1 Site-Wide Inspection

The Site protective cover was visually inspected for potholes and cracks wider than 1/4 inch. Soil cover was visually inspected for signs of erosion and areas of bare soil. The condition of the building slab at the wood treatment process building was visually inspected for cracks and penetrations.

Maintenance of the Site protective cover will be conducted by the property owner on an as-needed basis.

4.1.2 Post-Remediation Media Monitoring and Sampling

Sediment samples were collected from the outflow of the western settling basin as follows:

Sediment Sampling Locations	Analytical Parameters	Schedule
MP-U MP-M MP-D	TAL Metals – USEPA Method 6010B (Total Arsenic and Total Chromium Only)	Annually

Post Remediation Sediment Sampling Requirements and Schedule

Sampling of sediment that accumulates in the western settling basin exit swale were performed to assess the quality of the sediment following completion of the remedial actions. Modification to the sampling frequency or sampling requirements may only be modified with the approval of the NYSDEC.

The sediment sample locations were designed based on existing and anticipated drainage of the Site. The three (3) sediment sample locations are located along the western settling basin exit swale at upstream, mid-stream, and downstream sections of the swale as shown in Figure 3. Surface sediment samples were collected at each location between grade surface and approximately two (2) inches below grade. Samples were analyzed for total arsenic and total chromium via USEPA Method 6010B.

In the event that average concentrations of arsenic and/or chromium (and/or individual hot spot areas) are detected in the western settling basin exit swale above restricted commercial use SCOs, the facility owner will prepare a Response Plan to address impacted sediment to be submitted to, and approved by, the NYSDEC.

4.2 Summary of Monitoring Data

4.2.1 Results of Site-Wide Inspection

A comprehensive Site-wide inspection was conducted on August 13, 2018 in accordance with the SMP. The Site-Wide Inspection Form and photographs are provided as Appendix C.

The Site-wide inspection determined the asphalt pavement, concrete structural components, and soil cover are in good condition. The Site protective cover was not found to be breached or penetrated at the time of the Site-wide inspection.

One asphalt depression approximately one (1) foot in diameter was observed at the southwestern portion of the Site during the Site-wide inspection. Northeast Treaters staff subsequently repaired the depression on August 29, 2018 to prevent further deterioration (see Photographs 1, 2, and 10 provided in Appendix C).

4.2.2 Results of Post-Remediation Media Monitoring and Sampling

Post-remediation media monitoring and sampling were conducted on August 13, 2018 in accordance with the SMP. Sediment sample locations are provided in Figure 3, and sample analytical results are summarized in the table below. The laboratory analytical report for the samples is provided in Appendix D.

Sediment sampling locations deviated slightly from the monitoring plan as sediment samples were obtained from the eastern floor of the western basin exit swale, approximately 3 feet from the swale

centerline, rather than on the centerline as anticipated by the SMP. The centerline of the swale was inaccessible because approximately one (1) foot of water was present within the western basin exit swale during sampling making access to the centerline of the swale treacherous and unsafe at the time of sampling. Sediment exiting the western settling basin, if any, would be expected to settle equally across the swale based on the relatively flat base of the swale and the very low gradient that results in inundation of the entire swale. The sediment samples collected from the eastern floor are anticipated to be representative and of similar quality to sediment along the centerline of the swale.

Summary of Post-Remediation Media Sampling Results August 13, 2018			
	Arsenic, Total	Chromium, Total	
	mg/kg	mg/kg	
CU-SCO	16	1,500	
UU-SCO	13	30	
LOCATION			
MP-U	13.0	23.5	
MP-M	14.4	34.8	
MP-D	9.15	20.1	

A summary of post-remediation media sampling results is provided on the following table.

Notes:

CU-SCO: NYSDEC Restricted Commercial Use Soil Cleanup Objectives per 6 NYCRR Part 375-6.8. UU-SCO: NYSDEC Unrestricted Use Soil Cleanup Objectives per 6 NYCRR Part 375-6.8.

Detections of total chromium were compared to trivalent chromium SCOs because previous Site sampling indicated that chromium speciation is predominantly trivalent.

Average concentrations of arsenic and chromium in the western settling basin exit swale are below unrestricted use SCOs. Individual concentrations of arsenic and chromium were not detected above respective restricted commercial use SCOs. These data are similar to December 7, 2015 post excavation sampling conducted following the installation of the drainage swale and documented in the July 15, 2016 Final Engineering Report. A summary of these data is as follows:

Summary of Post Excavation Sampling Results December 7, 2015			
	Arsenic, Total	Chromium, Total	
	mg/kg	mg/kg	
CU-SCO	16	1,500	
UU-SCO	13	30	
LOCATION			
B-1	13	22	
B-2	12	17	
B-3	11	17	
B-4	19	26	

Notes:

CU-SCO: NYSDEC Restricted Commercial Use Soil Cleanup Objectives per 6 NYCRR Part 375-6.8. UU-SCO: NYSDEC Unrestricted Use Soil Cleanup Objectives per 6 NYCRR Part 375-6.8.

A comparison of the post-remediation sampling data and post excavation sample data indicate impacted sediment detected in the western settling basin during the Remedial Investigation are not migrating offsite and that Site engineering controls are effectively achieving RAOs.

5.0 OVERALL PRR CONCLUSIONS AND RECOMMENDATIONS

5.1 Compliance with SMP

All requirements of the SMP (i.e., site inspection, monitoring, and IC/EC certification) have been complied with for the reporting period.

5.2 **Performance and Effectiveness of the Remedy**

The results of the Site-wide inspection and post-remediation media monitoring and sampling suggest that Site engineering controls are effectively achieving RAOs.

5.3 Future PRR Submittals

The submittal frequency of future PRRs will remain on a biennial basis.

5.4 **Recommendations**

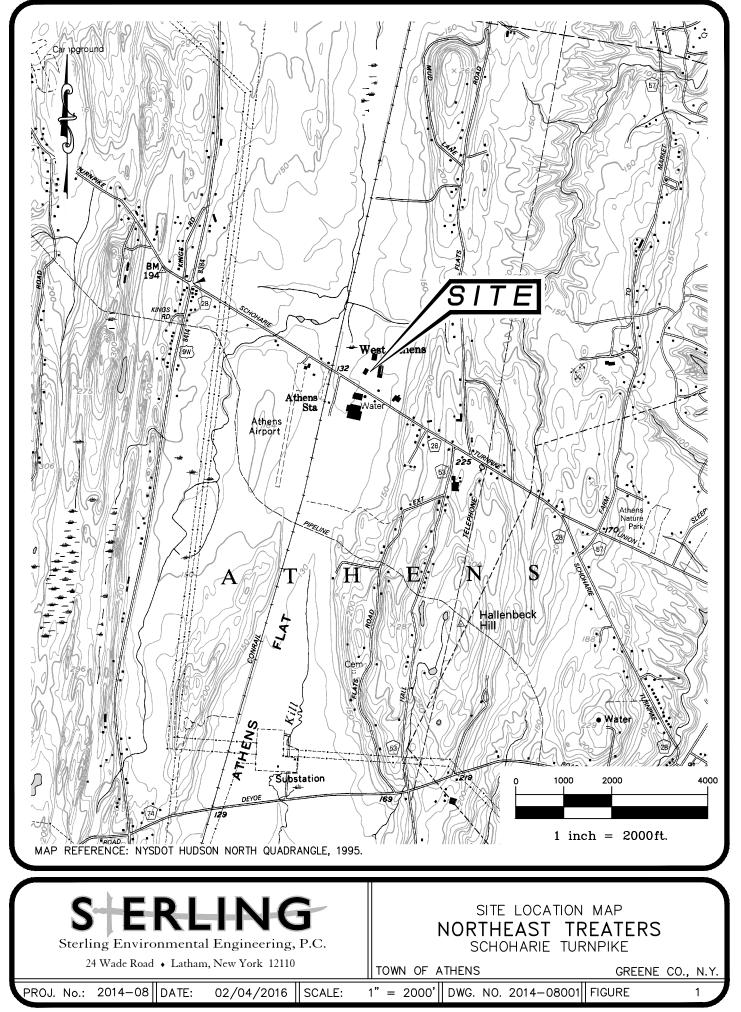
No changes to the SMP or the PRR reporting frequency are recommended at this time. The requirements for discontinuing site management have not been met.

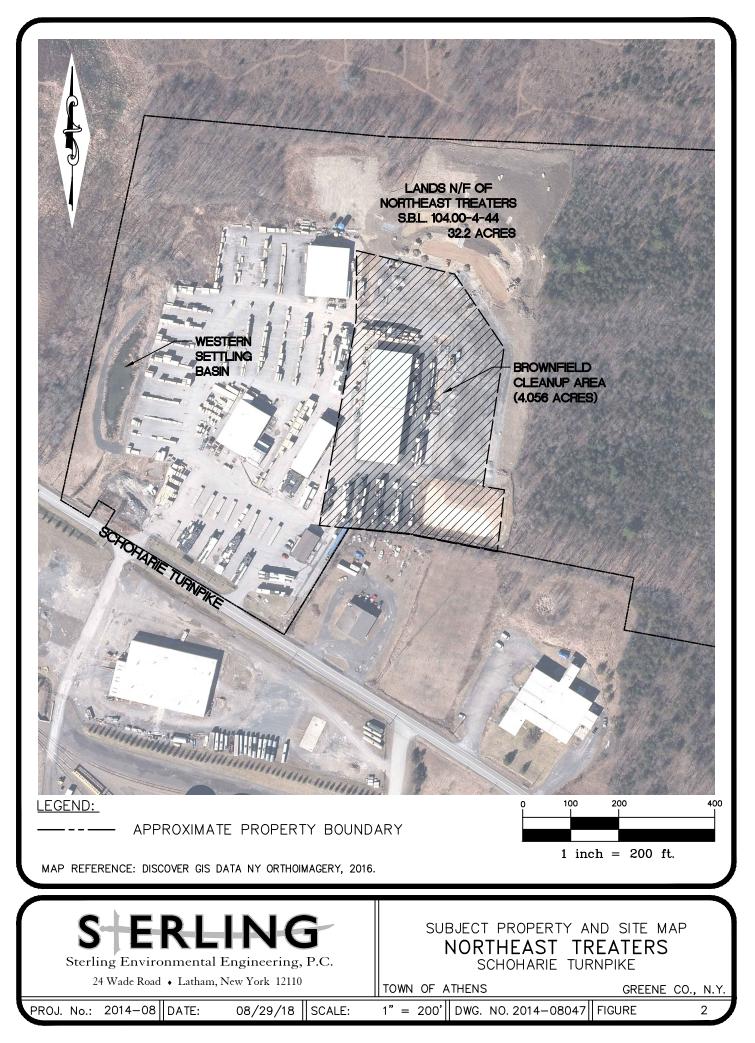
6.0 IC AND EC CERTIFICATION FORM

The NYSDEC Institutional and Engineering Control Certification Form for the Site is presented in Appendix B.

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FIGURES







APPENDIX A

PRR Extension Request Letter and NYSDEC Approval Letter



March 12, 2018

Mr. Joshua Haugh New York State Department of Environmental Conservation Region 4 1130 North Westcott Road Schenectady, New York 12306

Subject: Periodic Review Report Extension Request Northeast Treaters of New York, LLC; BCP #C420029 STERLING File #2014-08

Dear Mr. Haugh,

Per our discussions, Sterling Environmental Engineering, P.C. (STERLING) requests, on behalf of Northeast Treaters of New York, LLC (NET) that the New York State Department of Environmental Conservation (NYSDEC) extend the due date for the Periodic Review Report (PRR) for the above-referenced Brownfield site to a date in early August 2018. The purpose of this request is to allow collection of sediment samples downgradient of SPDES Outfall #001 in May 2018, inspection of the protective cover in July 2018, followed by preparation of the PRR.

Collection of sediment samples and site-wide inspection of the remedial components were inadvertently not completed within one year of issuance of the Certificate of Completion (November 2016), as specified in the Site Management Plan (SMP). The oversight was recognized after the onset of severe winter weather conditions, preventing sample collection due to frozen water and soil and severely limiting visual inspection because of snow cover. NET advises that treated lumber inventory increases dramatically from mid-February through July in anticipation of, and in preparation for the summer construction season. As a result, the asphalt surface of the storage yard that comprises much of the protective cover is not visible during this period. These conditions are the basis for the request to extend the PRR due date to early August 2018.

Hereafter, we recommend that the annual sampling and inspection required by the SMP be performed in July each year when weather and site conditions are favorable for these tasks. We appreciate your consideration of this request. Please contact me if you have any questions.

Best Regards. STERLING ENVIRONMENTAL ENGINEERING, P.C. 10mis 1

Thomas M. Johnson, P.G., CPG Senior Hydrogeologist Thomas.Johnson@SterlingEnvironmental.com

TMJ/bc Email Only

cc: R. Collette, Northeast Treaters, Athens, NY (Email Only) K. Young, Young Sommer, LLC (Email Only)

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 4 1130 North Westcott Road, Schenectady, NY 12306-2014 P: (518) 357-2045 | F: (518) 357-2460 www.dec.ny.gov

Sent via email only

March 16, 2018

Thomas M. Johnson, P.G., CPG Sterling Environmental Engineering, P.C. 24 Wade Road Latham, NY 12110

RE: Northeast Treaters of New York, LLC (C420029 Periodic Review Report

Dear Mr. Johnson;

The New York State Department of Environmental Conservation has received your March 12, 2018 letter requesting, on the behalf of Northeaster Treaters of New York, LLC (NET), to extend the PRR due date for the subject site to August 2018.

In response to your request, and based on the schedule presented in your letter, the PRR certification period has been extended until September 1, 2018. Subsequent annual periodic review certification periods will follow this schedule.

Please contact me if you have any questions on this matter.

Sincerely

Josh Haugh Engineering Geologist 2

ec: R. Mustico, RHWRE K. Lewandowski, SCS D. Touhy, OGC J. Deming, NYSDOH R. Collette, NET K. Young, Young Sommer, LLC



Department of Environmental Conservation

APPENDIX B

NYSDEC INSTITUTIONAL AND ENGINEERING CONTROLS CERTIFICATION FORM



Enclosure 2 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION Site Management Periodic Review Report Notice Institutional and Engineering Controls Certification Form



		3		
Site No.	C420029	Site Details	Box 1	
Site Name No	ortheast Treaters of New `	York, LLC	x = 0	
Site Address: City/Town: Ath	796 Schoharie Turnpike nens	Zip Code: 12015		
County: Greene Site Acreage:				
Reporting Perio	od: November 14, 2016 to	September 01, 2018		
			YES	NO
1. Is the inform	nation above correct?	× ,	×	
lf NO, inclu	de handwritten above or o	n a separate sheet.		
2. Has some tax map an	or all of the site property be nendment during this Repo	een sold, subdivided, merged, or undergone a orting Period?		×
	been any change of use at RR 375-1.11(d))?	the site during this Reporting Period		×
	ederal, state, and/or local p property during this Repo	permits (e.g., building, discharge) been issued orting Period?		×
If you answ that docur	wered YES to questions nentation has been previ	2 thru 4, include documentation or evidence iously submitted with this certification form.		
5. Is the site of	currently undergoing develo	opment?		×
		2	2	
70 H	×		Box 2	
.			YES	NO
	ent site use consistent with al and Industrial	the use(s) listed below?	X	
7. Are all ICs/	ECs in place and functioni	ing as designed?	×	
IF TI		QUESTION 6 OR 7 IS NO, sign and date below a REST OF THIS FORM. Otherwise continue.	nd	
A Corrective M	easures Work Plan must b	be submitted along with this form to address th	iese iss	ues.
Signature of Ow	ner, Remedial Party or Des	ignated Representative Date		

		Box 2	
2	34	YES	NO
8. Has any new information revealed that assumptions made in the Qu Assessment regarding offsite contamination are no longer valid?	alitative Exposure		X
If you answered YES to question 8, include documentation or e that documentation has been previously submitted with this ce	evidence ertification form.		
 Are the assumptions in the Qualitative Exposure Assessment still va (The Qualitative Exposure Assessment must be certified every five 	alid? years)	X	
If you answered NO to question 9, the Periodic Review Report updated Qualitative Exposure Assessment based on the new a	must include an assumptions.		
SITE NO. C420029		В	ox 3
Description of Institutional Controls	*		
Parcel Owner	Institutional Cont	rol	
104.00-4-30 Northeast Treaters of New Tork, LLO 04.00-4-44	Soil Managemen Site Managemen	t Plan it Plan	
	Landuse Restrict		Υ.
Imposition of an institutional control in the form of an environmental ease property which will require the remedial party or site owner to complete a	and submit to the De	epartmer	nt a llow the
property which will require the remedial party of site owner to complete a periodic certification of institutional and engineering controls in accordance use and development of the controlled property for commercial use as de land use is subject to local zoning laws; require compliance with the Dep Management Plan. Note controlled property includes the entire BCP site as well as "off-site" Treaters facility which have been impacted by site-related contamination	ce with Part 375-1.8 efined by Part 375-1 artment approved S	(h)(3); a .8(g), alt ite er Northe ng basin	though east and
property which will require the remedial party of site owner to complete a periodic certification of institutional and engineering controls in accordance use and development of the controlled property for commercial use as de land use is subject to local zoning laws; require compliance with the Dep	ce with Part 375-1.8 efined by Part 375-1 artment approved S	(h)(3); a .8(g), alt ite er Northe ng basin	though east
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property which will require the remedial party of site owner to complete experiodic certification of institutional and engineering controls in accordance use and development of the controlled property for commercial use as deland use is subject to local zoning laws; require compliance with the Dep Management Plan. Note controlled property includes the entire BCP site as well as "off-site" Treaters facility which have been impacted by site-related contamination the basin exit swale. Description of Engineering Controls Parcel Engineering Control 104.00-4-30 Cover System Cover System: A site cover will be required to allow for commercial use consist either of the structures such as buildings, pavement, sidewalks of development or a soil cover in areas where the upper one foot of expose applicable soil cleanup objectives (SCOs). Where the soil cover is required for the upper six in the up	of the site. The cover comprising the site including the settling of the site site settling comprising the site ed surface soil will e includ in the settling comprising the site ed surface soil will e inches of soil of suffice erial brought to the site	(h)(3); a .8(g), alt ite er Northe ng basin E er will exceed the num tient qua	though east and Box 4
property which will require the remedial party of site owner to complete experiodic certification of institutional and engineering controls in accordance use and development of the controlled property for commercial use as deland use is subject to local zoning laws; require compliance with the Dep Management Plan. Note controlled property includes the entire BCP site as well as "off-site" Treaters facility which have been impacted by site-related contamination the basin exit swale. Description of Engineering Controls Parcel Engineering Control 104.00-4-30 Cover System Cover System: A site cover will be required to allow for commercial use consist either of the structures such as buildings, pavement, sidewalks of development or a soil cover in areas where the upper one foot of expose applicable soil cleanup objectives (SCOs). Where the soil cover is required for the upper six in the up	of the site. The cover comprising the site including the settling of the site site settling comprising the site ed surface soil will e includ in the settling comprising the site ed surface soil will e inches of soil of suffice erial brought to the site	(h)(3); a .8(g), alt ite er Northe ng basin E er will exceed the num tient qua	though east and Box 4
property which will require the remedial party of site owner to complete experiodic certification of institutional and engineering controls in accordance use and development of the controlled property for commercial use as deland use is subject to local zoning laws; require compliance with the Dep Management Plan. Note controlled property includes the entire BCP site as well as "off-site" Treaters facility which have been impacted by site-related contamination the basin exit swale. Description of Engineering Controls Parcel Engineering Control 104.00-4-30 Cover System Cover System: A site cover will be required to allow for commercial use consist either of the structures such as buildings, pavement, sidewalks of development or a soil cover in areas where the upper one foot of expose applicable soil cleanup objectives (SCOs). Where the soil cover is required for the upper six in the up	of the site. The cover comprising the site including the settling of the site site settling comprising the site ed surface soil will e includ in the settling comprising the site ed surface soil will e inches of soil of suffice erial brought to the site	(h)(3); a .8(g), alt ite er Northe ng basin E er will exceed the num tient qua	though east and Box 4
property which will require the remedial party of site owner to complete experiodic certification of institutional and engineering controls in accordance use and development of the controlled property for commercial use as deland use is subject to local zoning laws; require compliance with the Dep Management Plan. Note controlled property includes the entire BCP site as well as "off-site" Treaters facility which have been impacted by site-related contamination the basin exit swale. Description of Engineering Controls Parcel Engineering Control 104.00-4-30 Cover System Cover System: A site cover will be required to allow for commercial use consist either of the structures such as buildings, pavement, sidewalks of development or a soil cover in areas where the upper one foot of expose applicable soil cleanup objectives (SCOs). Where the soil cover is required for the upper six in the up	of the site. The cover comprising the site including the settling of the site site settling comprising the site ed surface soil will e includ in the settling comprising the site ed surface soil will e inches of soil of suffic erial brought to the site	(h)(3); a .8(g), alt ite er Northe ng basin E er will exceed the num tient qua	though east and Box 4

×

		Box	5
Periodic Review Report (PRR) Certification Statements			5
I certify by checking "YES" below that:			
a) the Periodic Review report and all attachments were prepared under the din reviewed by, the party making the certification;	ection of	, and	
b) to the best of my knowledge and belief, the work and conclusions described are in accordance with the requirements of the site remedial program, and gene engineering practices; and the information presented is accurate and compete.	in this c erally acc	ertificat	tion
	YES	NO	
	×		
If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below the following statements are true: (a) the Institutional Control and/or Engineering Control(s) employed at this site since the date that the Control was put in-place, or was last approved by the Dec (b) nothing has occurred that would impair the ability of such Control, to protec the environment; (c) access to the site will continue to be provided to the Department, to evaluat remedy, including access to evaluate the continued maintenance of this Contro (d) nothing has occurred that would constitute a violation or failure to comply w	at all of t is uncha partmer t public h e the l;	he inged it;	
Site Management Plan for this Control; and			
(e) if a financial assurance mechanism is required by the oversight document for mechanism remains valid and sufficient for its intended purpose established in t	or the sit	e, the ment.	
	YES	NO	
i i i i i i i i i i i i i i i i i i i	×		÷
IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.			
A Corrective Measures Work Plan must be submitted along with this form to address	these iss	sues.	

Signature of Owner, Remedial Party or Designated Representative

1.

2.

Date

IC CERTIFICATIONS SITE NO. C420029	Box 6
SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210 Penal Law.	a false).45 of the
Robert Colletteat796 Schoharie Turnpike Athens, New Yor	<u>k 12015</u>
print name print business address	
am certifying as Northeast Treaters of New York, LLC(Owner or Re	medial Party)
for the Site named in the Site Details Section of this form.	
Signature of Owner, Remedial Party, or Designated Representative Date	<u>8</u>
Rendering Certification	

. .

Ę		
	IC/EC CERTIFICATIONS	
	Professional Engineer Signature	Box 7
I certify that all information in Boxes punishable as a Class "A" misdeme	s 4 and 5 are true. I understand that a false st eanor, pursuant to Section 210.45 of the Penal	atement made herein is I Law.
IMark P. Millspaugh, P.E. print name	at <u>24 Wade Road, Latham, New</u> print business address	York 12110,
am certifying as a Professional Eng	pineer for the Northeast Treaters of New Yo	
Signature of Professional Engineer	of for the Owner or Stamp	8/3//18

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APPENDIX C

SITE-WIDE INSPECTION FORM AND PHOTOGRAPHS

NORTHEAST TREATERS OF NEW YORK, LLC. 796 SCHOHARIE TURNPIKE, ATHENS, NY SITE #C420029

SITE-WIDE INSPECTION FORM

Date: <u>8/13/2018</u> Inspected By: <u>Vedran</u> Cishovic (VC)

Site Property Item	Condition		Remarks
	Acceptable	Not Acceptable	
 Compliance with SMP/Environmental Easements 	\checkmark		
2. Condition of Protective Cover	\checkmark		a. "I' Depression @ southwest portion of Site
a. Asphalt b. Soil c. Concrete	\checkmark		b.
	\checkmark		с.
 General Site Conditions at Time of Inspection 	\checkmark		
I. Site Records Up-To-Date	\checkmark		
5. Additional Comments/Notes: Sediment sampling conducted	l at drainage	suche following	site-mide inspection.

S:\Sterling\Projects\2014 Projects\Northeast Treaters of New York - Athens NY - 2014-08\Reports\Site Management Plan\Appendices\Appendix K - Site Inspection Forms\Appendix K_Site Inspection and Sampling Forms.docx



Photograph 1: Depression in asphalt pavement at southwestern portion of Site.



Photograph 2: No penetration observed within the depression of the asphalt pavement.



Photograph 3: Asphalt pavement at eastern lumber storage area in acceptable condition.



Photograph 4: Drainage areas between treatment process building and storage area in acceptable conditions.



Photograph 5: Abatement berm, facing southwest. Soil cover in acceptable condition.



Photograph 6: Abatement berm, facing northeast. Soil cover in acceptable condition.



Photograph 7: Concrete within treatment process building in acceptable condition.



Photograph 8: Basin exit swale, facing southwest.



Photograph 9: Basin exit swale on July 1, 2016.



Photograph 10: Asphalt depression shown in Photographs 1 and 2 was repaired on August 29, 2018.

APPENDIX D

POST-REMEDIATION MEDIA SAMPLING ANALYTICAL RESULTS



ANALYTICAL REPORT

Lab Number:	L1831544
Client:	Sterling Environmental Eng 24 Wade Road Latham, NY 12110
ATTN:	Vedran Cirkovic
Phone:	(518) 456-4900
Project Name:	NORTHEAST TREATERS
Project Number:	2014-08
Report Date:	08/23/18

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-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

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



Serial_No:08231815:43

Project Name:NORTHEAST TREATERSProject Number:2014-08

 Lab Number:
 L1831544

 Report Date:
 08/23/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1831544-01	MP-U	SEDIMENT	ATHENS, NY	08/13/18 10:40	08/13/18
L1831544-02	MP-M	SEDIMENT	ATHENS, NY	08/13/18 10:30	08/13/18
L1831544-03	MP-D	SEDIMENT	ATHENS, NY	08/13/18 10:10	08/13/18
L1831544-04	DUP20180813	SEDIMENT	ATHENS, NY	08/13/18 00:00	08/13/18



Project Name: NORTHEAST TREATERS Project Number: 2014-08

Lab Number: L1831544 Report Date: 08/23/18

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 questions.



Project Name:NORTHEAST TREATERSProject Number:2014-08

 Lab Number:
 L1831544

 Report Date:
 08/23/18

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.

Amita Naik

Authorized Signature:

Title: Technical Director/Representative

Date: 08/23/18



METALS



Project Name:	NORT	HEAST TH	REATER	S			Lab Nu	mber:	L183154	44	
Project Number:	2014-0	08					Report	Date:	08/23/18	8	
				SAMPL	E RES	ULTS					
Lab ID:	L1831	544-01					Date Co	llected:	08/13/18	10:40	
Client ID:	MP-U						Date Re	ceived:	08/13/18		
Sample Location:	ATHE	NS, NY					Field Pre	ep:	Not Spec	cified	
Sample Depth:											
Matrix:	Sedim	ent									
Percent Solids:	37%					Dilution	Date	Date	Prep	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
Total Metals - Mans	field Lab										
Arsenic, Total	13.0		mg/kg	1.08	0.224	1	08/22/18 11:10	08/22/18 14:29	EPA 3050B	1,6010D	AB
Chromium, Total	23.5		mg/kg	1.08	0.104	1	08/22/18 11:10	08/22/18 14:29	EPA 3050B	1,6010D	AB



Project Name:	NORT	HEAST TH	REATER	S			Lab Nu	mber:	L18315	44	
Project Number:	2014-0	08					Report	Date:	08/23/1	8	
				SAMPL	E RESI	JLTS					
Lab ID:	L1831	544-02					Date Co	llected:	08/13/18	10:30	
Client ID:	MP-M						Date Re	ceived:	08/13/18		
Sample Location:	ATHE	NS, NY					Field Pre	ep:	Not Spec	cified	
Sample Depth:											
Matrix:	Sedim	ent									
Percent Solids:	47%					Dilution	Date	Date	Prep	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
Total Metals - Mansf	field Lab										
Arsenic, Total	14.4		mg/kg	0.809	0.168	1	08/22/18 11:10	08/22/18 14:33	EPA 3050B	1,6010D	AB
Chromium, Total	34.8		mg/kg	0.809	0.078	1	08/22/18 11:10	08/22/18 14:33	EPA 3050B	1,6010D	AB



Project Name:	NORT	HEAST TH	REATER	S			Lab Nu	mber:	L18315	44	
Project Number:	2014-0	08					Report	Date:	08/23/1	8	
				SAMPL	E RESI	ULTS					
Lab ID:	L1831	544-03					Date Co	llected:	08/13/18	10:10	
Client ID:	MP-D						Date Re	ceived:	08/13/18		
Sample Location:	ATHE	NS, NY					Field Pre	ep:	Not Spec	cified	
Sample Depth:											
Matrix:	Sedim	ent									
Percent Solids:	40%					Dilution	Date	Dete	Dron	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Date Analyzed	Prep Method	Method	Analyst
Total Metals - Mans	field Lab										
Arsenic, Total	9.15		mg/kg	0.993	0.206	1	08/22/18 11:10	08/22/18 14:09	EPA 3050B	1,6010D	AB
Chromium, Total	20.1		mg/kg	0.993	0.095	1	08/22/18 11:10	08/22/18 14:09	EPA 3050B	1,6010D	AB



Project Name:	NORT	HEAST TH	REATER	S			Lab Nu	mber:	L18315	44	
Project Number:	2014-0	08					Report	Date:	08/23/1	8	
				SAMPL	E RES	ULTS					
Lab ID:	L1831	544-04					Date Co	llected:	08/13/18	00:00	
Client ID:	DUP2	0180813					Date Re	ceived:	08/13/18		
Sample Location:	ATHE	NS, NY					Field Pr	ep:	Not Spec	cified	
Sample Depth:											
Matrix:	Sedim	ent									
Percent Solids:	33%					Dilution	Date	Date	Prep	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
Total Metals - Mans	field Lab										
Arsenic, Total	15.0		mg/kg	1.19	0.248	1	08/22/18 11:10	08/22/18 14:50	EPA 3050B	1,6010D	AB
Chromium, Total	24.5		mg/kg	1.19	0.114	1	08/22/18 11:10	08/22/18 14:50	EPA 3050B	1,6010D	AB



Project Name: NORTHEAST TREATERS Project Number: 2014-08
 Lab Number:
 L1831544

 Report Date:
 08/23/18

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 B	atch: WO	G11492	12-1				
Arsenic, Total	ND	mg/kg	0.400	0.083	1	08/22/18 11:10	08/22/18 14:00	1,6010D	AB
Chromium, Total	ND	mg/kg	0.400	0.038	1	08/22/18 11:10	08/22/18 14:00	1,6010D	AB

Prep Information

Digestion Method: EPA 3050B



Lab Control Sample Analysis Batch Quality Control

Project Name: NORTHEAST TREATERS

Project Number: 2014-08 Lab Number: L1831544 Report Date: 08/23/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated samp	le(s): 01-04 Batc	h: WG11	49212-2 SRM L	ot Number:	D102-540			
Arsenic, Total	96				83-117	-		
Chromium, Total	91		-		83-117	-		



Matrix Spike Analysis

Project Name:	NORTHEAST TREATERS	Batch Quality Control	Lab Number:	L1831544
Project Number:	2014-08		Report Date:	08/23/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Recovery Qual Limits	RPD	RPD Qual Limits
Total Metals - Mansfield Lab A	Associated sam	nple(s): 01-04	QC Bate	ch ID: WG114	9212-3	WG1149212	2-4 QC Sam	ple: L1831544-03	Client	ID: MP-D
Arsenic, Total	9.15	22.8	32.3	101		30.2	90	75-125	7	20
Chromium, Total	20.1	38	52.6	85		51.2	80	75-125	3	20



INORGANICS & MISCELLANEOUS



Project Name: Project Number:	NORTHEAST TREA 2014-08	TERS						L1831544 08/23/18	
			SAMPLE	RESUL	TS				
Lab ID:	L1831544-01					Date (Collected:	08/13/18 10:40)
Client ID:	MP-U					Date I	Received:	08/13/18	
Sample Location:	ATHENS, NY					Field	Prep:	Not Specified	
Sample Depth:									
Matrix:	Sediment								
Parameter	Result Qualifie	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analys
eneral Chemistry - We	stborough Lab								
olids, Total	36.5	%	0.100	NA	1	-	08/16/18 05:5	4 121,2540G	FN



Serial No:08231815:43

Project Name: Project Number:	NORTHEAST TREA 2014-08	TERS						L1831544 08/23/18	
			SAMPLE	RESUL	rs				
Lab ID:	L1831544-02					Date (Collected:	08/13/18 10:30)
Client ID:	MP-M					Date I	Received:	08/13/18	
Sample Location:	ATHENS, NY					Field I	Prep:	Not Specified	
Sample Depth:									
Matrix:	Sediment								
Parameter	Result Qualifie	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analys
eneral Chemistry - We	stborough Lab								
olids, Total	47.0	%	0.100	NA	1	-	08/16/18 05:5	4 121,2540G	FN



Serial No:08231815:43

Project Name: Project Number:	NORTHEAST TRE	ATERS						L1831544 08/23/18	
			SAMPLE	RESUL	rs				
Lab ID:	L1831544-03					Date (Collected:	08/13/18 10:10)
Client ID:	MP-D					Date I	Received:	08/13/18	
Sample Location:	ATHENS, NY					Field I	Prep:	Not Specified	
Sample Depth:									
Matrix:	Sediment								
Parameter	Result Qualifie	er Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analys
eneral Chemistry - Wes	stborough Lab								
olids, Total	40.1	%	0.100	NA	1	-	08/16/18 05:5	4 121,2540G	FN



Project Name: Project Number:	NORTHEAST TRE 2014-08	ATERS						L1831544 08/23/18	
			SAMPLE	RESUL	тs				
Lab ID:	L1831544-04					Date	Collected:	08/13/18 00:00)
Client ID:	DUP20180813					Date I	Received:	08/13/18	
Sample Location:	ATHENS, NY					Field	Prep:	Not Specified	
Sample Depth:									
Matrix:	Sediment								
Parameter	Result Qualif	er Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lab								
Solids, Total	32.8	%	0.100	NA	1	-	08/16/18 05:5	4 121,2540G	FN



20

Project Name: Project Number:	NORTHEAST TREATERS 2014-08	La	ab Duplicate Analy Batch Quality Control		ab Number: eport Date:		
Parameter		Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - We	stborough Lab Associated sam	ple(s): 01-04 QC Bate	ch ID: WG1147098-1 Q	C Sample: L1	831544-03	Client ID:	MP-D

36.1

40.1

%

10



Solids, Total

Project Name: NORTHEAST TREATERS Project Number: 2014-08

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information			Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	рН	pН	deg C	Pres	Seal	Date/Time	Analysis(*)
L1831544-01A	Plastic 2oz unpreserved for TS	А	NA		4.1	Y	Absent		TS(7)
L1831544-01B	Metals Only-Glass 60mL/2oz unpreserved	А	NA		4.1	Y	Absent		AS-TI(180),CR-TI(180)
L1831544-02A	Plastic 2oz unpreserved for TS	А	NA		4.1	Y	Absent		TS(7)
L1831544-02B	Metals Only-Glass 60mL/2oz unpreserved	А	NA		4.1	Y	Absent		AS-TI(180),CR-TI(180)
L1831544-03A	Plastic 2oz unpreserved for TS	А	NA		4.1	Y	Absent		TS(7)
L1831544-03A1	Plastic 2oz unpreserved for TS	А	NA		4.1	Y	Absent		TS(7)
L1831544-03A2	Plastic 2oz unpreserved for TS	А	NA		4.1	Y	Absent		TS(7)
L1831544-03B	Metals Only-Glass 60mL/2oz unpreserved	А	NA		4.1	Y	Absent		AS-TI(180),CR-TI(180)
L1831544-03B1	Metals Only-Glass 60mL/2oz unpreserved	А	NA		4.1	Y	Absent		AS-TI(180),CR-TI(180)
L1831544-03B2	Metals Only-Glass 60mL/2oz unpreserved	А	NA		4.1	Y	Absent		AS-TI(180),CR-TI(180)
L1831544-04A	Plastic 2oz unpreserved for TS	А	NA		4.1	Y	Absent		TS(7)
L1831544-04B	Metals Only-Glass 60mL/2oz unpreserved	А	NA		4.1	Y	Absent		AS-TI(180),CR-TI(180)



Project Name: NORTHEAST TREATERS

Project Number: 2014-08

Lab Number: L1831544

Report Date: 08/23/18

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).
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.
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 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 is 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.
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. 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 Waterpreserved 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.

DU Report with 'J' Qualifiers Report Format:



Project Name: NORTHEAST TREATERS

Project Number: 2014-08

Lab Number: L1831544

Report Date: 08/23/18

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 projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the 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. 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. For NJ-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte 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.
- 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.
- 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 Identified Compounds (TICs).
- ND Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.





Project Name: NORTHEAST TREATERS Project Number: 2014-08
 Lab Number:
 L1831544

 Report Date:
 08/23/18

REFERENCES

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



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: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene. EPA 8270D: <u>NPW</u>: Dimethylnaphthalene, 1,4-Diphenylhydrazine; <u>SCM</u>: Dimethylnaphthalene, 1,4-Diphenylhydrazine. EPA 300: DW: Bromide EPA 6860: SCM: Perchlorate EPA 9010: <u>NPW</u> 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-E, SM4500P-B, E, 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 I, 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: AI, 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.

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