

APPENDIX D

REQUESTS FOR INFORMATION

FORMER AL TECH SPECIALTY STEEL CORPORATION SITE

Request for Further Information (RFI) Log

Start date: March 30, 2021

Updated: June 13, 2023 (12:00 PM)

RFI No.	Date Received	Brief Description of RFI	Response No. / Date Responded	Response	Additional Actions
D0011842-GC-001	03/15/21	Request for the Base ACAD Files for the site			
D0011842-GC-002	03/17/21	Please provide the following for the Asbestos Variance: 2. Petitioner a. Name of Petitioner (Property Owner): b. Street Address: c. City: d. State: e. Zip: f. Telephone Number: g. Fax Number: h. Petitioner's Federal Employee Identification Number (FEIN) _ _ _ - _ _ _ _ _ _ _ _	03/18/21	2. Petitioner a. Name of Petitioner (Property Owner): Ben Rung, New York State Department of Environmental Conservation, Division of Environmental Remediation b. Street Address: 625 Broadway c. City: Albany d. State: New York e. Zip: 12233-7012 f. Telephone Number: (518) 402-9826 g. Fax Number: (518) 402-9819 h. Petitioner's Federal Employee Identification Number (FEIN): 14 - 6013200	E
D0011842-GC-003	04/23/21	ESG is proposing to Cap/Seal 12" pipe from Sewer within the Lincoln Ave Street manhole on the Town of Colonie property for abandonment of utilities to satisfy requirements for Demolition permit. ESG would seal and plug the 12" entrance pipe from the Lincoln Ave manhole and fill the remaining pipe with flowable fill material to seal remaining pipe as well as filling the remaining manholes and lines as previously planned for the project. **ESG was informed that any deviation from the agreed plan	04/27/21	The Engineer (AECOM USA, Inc.) and the NYSDEC approve of the proposed approach. The components of the work shall be completed in accordance with the Contract Documents.	E

		of closure for AL Tech Site would need to be approved by the NYSDEC and submitted to the "Town of Colonie" Sewer Department and approved			
D0011842-GC-004	4-26-21	ESG is proposing to exclude the use of imported sand to install as a bedding under the liners in the API separators. They propose to substitute the sand with additional layers of geofabric to protect the integrity of the liner. ESG cannot import this sand prior to demonstrating that it is chemically clean including PFAS analysis.	04/29/21	The proposal described above is disapproved. ESG shall collect a sample of imported sand (plus any other imported backfill materials that will be used) and analyze for the chemicals listed in Appendix 5 of DER-10 plus PFAS analyses as soon as possible. The PFAS sampling and analyses shall be completed in accordance with the attached document.	E
D0011842-GC-005	8-4-21	ESG is proposing to not remove loose/flakey Lead-based paint (LBP) chips from walls, ceiling, beams, trusses, etc. prior to demolition. Stated that this is not a requirement for a total demolition.	8-17-21	AECOM response is that it's up to the discretion of the owner on whether loose paint is to be manually removed. AECOM relaxed some of the preparatory requirements (on apply poly sheeting to window and door openings only) but directed that loos/flakey paint must be removed prior to demolition.	
D0011842-GC-006	8-13-21	ESG is requesting a modified work schedule. ESG is proposing to work 4 days/week (Mon.-Thurs.), 10 hours per day instead of working the current schedule of 5 days/week, 8 hours per day. ESG will add one day per week for their site security watchman. Security watchman will now be onsite on Thursday evening, Friday (noon to midnight), and Sat. & Sun. (noon to midnight).	8-25-21	AECOM/NYSDEC response is that ESG is approved to work a 4/10 schedule for a trial period of one month in order to evaluate the benefits to the project. The NYSDEC will pay for 50 percent of Bid Item UC-1 and UC-2 for non-working Fridays. AECOM/NYSDEC requests that ESG provide a build by building schedule for abatement/demolition ESG will need to provide security watchman for Thursday nights.	E
D0011842-GC-007	8-20-21	ESG is seeking clarification on the disposal of galbestos siding and roofing materials. ESG is seeking clarification on whether they should try and pursue a non-haz determination by sampling and analysis.	8-31-21	AECOM/NYSDEC response is that ESG shall collect and submit additional samples as specified in Specification Section 02 24 23 with the intention of disposal at a more economical option. Sample frequency must be approved by AECOM. ESG to submit a SAP to AECOM AECOM has provided ESG with a list of alternative disposal facilities.	

RFI No	Date Received	Brief Description of RFI	Date Responded	Response	Additional Actions
D0011842-GC-008	12-9-21	ESG requested a letter from the project monitor (D.Cofield) stating that all friable ACM has been abated from buildings 10, 11, 12, 14, 21, 22, 23, and 36. This was a request from Seneca Meadows Landfill.	12-9-21	D. Cofield provided a letter to ESG as requested.	NONE
D0011842-GC-009	4-27-22	There are 2 large furnace units in building 27 that contain a white fibrous material. ESG is unable to locate sampling data in the Contract Documents or supplemental data. How should these units be handled?	5-6-22	Laterio Humphrey, David Cofield, and Michael Gutmann investigated on April 27, 2022. Material appeared to be a residue near the boiler inspection cover(s). Laterio Humphrey collected samples for ACM Testing.	
D0011842-GC-010	5-25-22	ESG would like the NYSDEC and AECOM to review the the daily maximum limits of the SPDES permit specifically Benzo(a)pyrene. ESG has contacted numerous labs with all of them unable to meet the Benzo(a)pyrene reporting limit of 0.0012 ug/l. The lowest possible reporting limit ESG was able to find was 0.02 ug/l but with a turn around time of 5 days. ESG's preferred lab would be Chemtech with a Benzo(a)pyrene detection limit of 0.73 ug/l but with a turn around time of 3 days.	6-3-22	Please procure a laboratory that can analyze the sample for Benzo(a)pyrene using the most sensitive method, Method 625.1 with selected ion monitoring (SIM). Direct the laboratory to use Method 610 if the MDL is lower than can be achieved by 625.1 SIM. Re-vise and resubmit the most current laboratory information.	
D0011842-GC-011	7-20-22	ESG would like to raise the method detection limit for Benzo(a)pyrene from 0.02 ug/l to 0.073 ug/l. AECOM and the NYSDEC is aware of the ongoing issues with Pace Labs with this project and others over the last few months. Increasing the MDL for Benzo(a)pyrene to 0.073 would allow ESG to contract Chemtech. Chemtech is able to meet the method detection limits for all of the other SPDES analytes.			

D0011842-GC-012	7-20-22	<p>ESG would like the NYSDEC and AECOM to allow the remaining oversized concrete to be used as pit backfill. All material will be placed under the direct supervision of AECOM. Concrete pieces will not exceed 2'x2'x6' and all protruding rebar will be cut off. A base layer of processed material or gravel will be placed prior to placement of oversized concrete. Processed material will be layered in with the oversized to eliminate voids. A minimum of 4' o cover will be placed over the oversized concrete.</p> <p>The remaining concrete has an excessive amount of large rebar. The onsite crusher is not able to process the remaining concrete.</p>	7-25-22	Oversized concrete pieces are acceptable for use as backfill as described above. Sufficient space needs to be left between the pieces so that there is enough room for the processed brick/imported fill to be placed and compacted in accordance with Section 31 23 23 of the Contract Documents.	
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D0011842-GC-013	8-15-22	ESG would like to decrease the treated water sampling frequency from one sample every 10,000 gallons to one sample every 20,000 gallons. Based on the eight treated samples submitted to date ESG has not had any exceedences above the SPDES maximum requirements.	8-17-22	ESG's proposal is rejected until analytical results demonstrate that treatment meets SPDES daily average requirements.	
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D0011842-GC-014	9-8-22	<p>ESG would like to pre-sample the individual unknown pit debris/material piles for the main contaminants of concern, RCRA Metals and PCB's. Once analytical is received and approved by AECOM, ESG will consolidate the Haz and Non-Haz materials into their respective piles. The piles will be then tested for disposal characterization.</p>	9-21-22	AECOM deemed approach acceptable.	
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D0011842-GC-015	9-13-22	ESG would like to blend processed water tanks # 265751, 252672, 265393 & 257155 for discharge. ESG noted elevated readings for TSS and Zinc	9-21-22	Resubit with Revisions. Elevated TSS Readings were not noted by AECOM.	
D0011842-GC-016	4-11-23	<p>There is a manhole (MH) percolating water out of it at building 9 area.</p> <p>ESG needs direction on whether this needs to be investigated further, cleaned, and repaired. The water keeps flooding the area that needs to be restored. If ESG is to investigate, clean, and repair, do they need to collect, store and sample the water for disposal.</p>	4-21-23	AECOM issued Field Order No. 13	
D0011842-GC-017	4-18-23	<p>ESG has cleaned the bldg. 28-1 pit and documentation of the cleaning efforts show the finished product. After moving on to other areas and a couple days later there is an oily material coming through the concrete back to the surface.</p> <p>ESG is looking for direction on how we should procede with the additional oil penetrating through the concrete back to the surface after initial cleaning and clearance have been performed.</p>	05-02-23	ESG shall thoroughly clean Building 28-1 pit in accordance with the Contract Documents, including, but not limited to, Contract Drawing G-08 - General Description of Work by Material and referenced Specifications, using approved surfactants. In areas that are not initially thoroughly cleaned to specifications, a second round of surfactant application and power washing will be completed under the direction of AECOM Construction Manager. AECOM will then inspect pit walls for compliance with referenced Specifications listed on Contract Drawing G-08. As of April 26, 2023 Building 28-1 Pit Cleaning was complete and approved by AECOM. Backfilling is in progress.	

D0011842- GC-018	5-12-23	ESG requested to core/cut openings in the concrete slab to approx 10-12" in dia removing concrete slab and installing the post to the 36" depth or refusal through push methods and install new concrete concrete/grout to the existing grade. An inspection of the concrete slab shows a slab thickness of 4-8" with crushed stone base this will provide a more than secure support for the fencing posts.	05-19-23	ESG shall install the posts to a 36" depth or refusal through push methods and install a minimum of 12" of concrete/grout to the existing grade.	
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REQUEST FOR INTERPRETATION

DEPARTMENT:

Project Name: Former AL Tech Specialty Steel Corporation Site , OU3 On-Site Structures

Contractor: ESG RFI No. D0011842-GC-001
Date Transmitted: 03/15/21 Date Received: 03/15/21
Date Response Requested: ASAP Date Response Transmitted: 03/31/21

Subject: AutoCAD Files
Specification Section and Paragraph: Not Applicable

Drawing References: Not Applicable

INTERPRETATION REQUESTED:

Request for Base AutoCAD Files for the project

Signature: L.T. Humphrey Date: 03/15/21

ENGINEER'S RESPONSE:

Files e-mailed on 03/31/21.

Signature: Kyle R. Jackson Date: 03/31/21

REQUEST FOR INTERPRETATION

DEPARTMENT: _____

Project Name: _____ Former AL Tech S _____ pecialty Steel Corporation Site O _____ U3 On-Site Structures _____

Contractor: _____ ESG _____

RFI No. _____ D0011842-GC-002 _____

Date Transmitted: _____ 0 _____ 3/17/21 _____

Date Received: _____ 0 _____ 3/17/21 _____

Date Response Requested: _____ A SAP _____

Date Response Transmitted: _____ 0 _____ 3/18/21 _____

Subject: Asbestos Variance _____

Section _____ and Paragraph: _____ Section 02 82 13 - _____ Asbestos Abatement _____ Specification _____

Drawing References: Not Applicable _____

INTERPRETATION REQUESTED:

Can you please get the below information to our Designer for variance:

2. Petitioner

a. Name of Petitioner (Property Owner): _____

b. Street Address: _____

c. City: _____

d. State: _____

e. Zip: _____

f. Telephone Number: _____

g. Fax Number: _____

h. Petitioner's Federal Employee Identification Number (FEIN) _____ - _____

Signature: _____ L.T. Humphrey _____

Date: _____ 03/17/21 _____

ENGINEER'S RESPONSE:

2. Petitioner

a. Name of Petitioner (Property Owner): Ben Rung, New York State Department of Environmental Conservation, Division of Environmental Remediation

b. Street Address: 625 Broadway

c. City: Albany

d. State: New York

e. Zip: 12233-7012

f. Telephone Number: (518) 402-9826

g. Fax Number: (518) 402-9819

h. Petitioner's Federal Employee Identification Number (FEIN): 14 - 6013200

Signature: _____ Kyle R. Jackson _____

Date: _____ 0 _____ 3/18/21 _____

Request For Information Form

Project: AlTech Specialty Steel

Contract No.: D011482

Laterio "LT" Humphrey

4/23/2021

Submitted To: Mike Gutman

Re: Sewer Utility Disconnect

D0011842-GC-003

Received By: Randolph West, P.E.

Date Received: 04/26/21

Question/Concern:

Excavation Limitations and Concerns for Disturbance

ESG is proposing to Cap/Seal 12" pipe from Sewer within the Lincoln Ave Street manhole on the Town of Colonie property for abandonment of utilities to satisfy requirements for Demolition permit.

Reason: Upon excavating in the limits of the property for utility cut and cap, ESG was informed that we would be required to do the cap exclusively ON THE PROPERTY LINE to be in compliance with the submitted plan agreed upon with the Town (via sewer director). This would mean a disturbance of Lincoln Ave., removal of security fence to the site, and work within limits of a gas line running directly above the pipe.

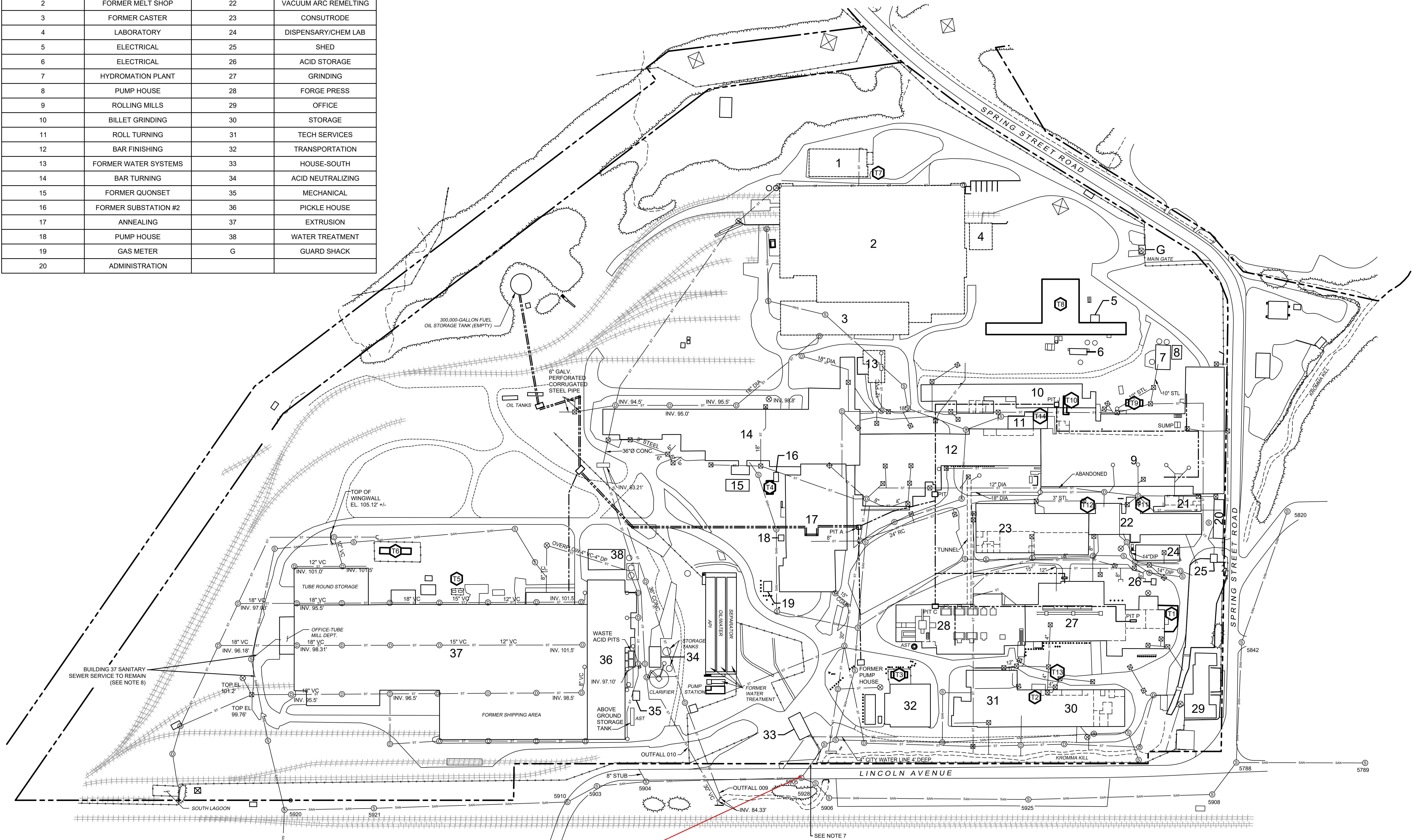
Plan: ESG would seal and plug the 12" entrance pipe from the Lincoln Ave manhole and fill the remaining pipe with flowable fill material to seal remaining pipe as well as filling the remaining manholes and lines as previously planned for the project. **ESG was informed that any deviation from the agreed plan of closure for AL Tech Site would need to be approved by the NYSDEC and submitted to the "Town of Colonie" Sewer Department and approved.

Action/Response:

The Engineer (AE SA nc.) and the SDE approve of the proposed approach. The components of the work shall be completed in accordance with the Contract Documents.

Attachments: (1) Proposed Pipe Cap/fill

BUILDING #	BUILDING NAME	BUILDING #	BUILDING NAME
1	FORMER EAF BAGHOUSE	21	VACUUM ARC REMELTING ANNEX
2	FORMER MELT SHOP	22	VACUUM ARC REMELTING
3	FORMER CASTER	23	CONSUTRODE
4	LABORATORY	24	DISPENSARY/CHEM LAB
5	ELECTRICAL	25	SHED
6	ELECTRICAL	26	ACID STORAGE
7	HYDROMATION PLANT	27	GRINDING
8	PUMP HOUSE	28	FORGE PRESS
9	ROLLING MILLS	29	OFFICE
10	BILLET GRINDING	30	STORAGE
11	ROLL TURNING	31	TECH SERVICES
12	BAR FINISHING	32	TRANSPORTATION
13	FORMER WATER SYSTEMS	33	HOUSE-SOUTH
14	BAR TURNING	34	ACID NEUTRALIZING
15	FORMER QUONSET	35	MECHANICAL
16	FORMER SUBSTATION #2	36	PICKLE HOUSE
17	ANNEALING	37	EXTRUSION
18	PUMP HOUSE	38	WATER TREATMENT
19	GAS METER	G	GUARD SHACK
20	ADMINISTRATION		



Plug and seal line
from street manhole

- NOTES:
- SEE SHEET G-01 FOR TYPICAL LEGEND.
 - SEE SHEET G-04 FOR EXISTING SITE CONDITIONS INFORMATION.
 - SEE SHEET G-05 FOR SITE TOPOGRAPHY INFORMATION.
 - SEE SHEET G-07 FOR SITE OVERVIEW DEMOLITION INFORMATION.
 - SEE SHEET G-09 FOR SITE KEY MAP.
 - UTILITY INFORMATION SHOWN ALIGNED ONTO CURRENT SURVEY BASE MAPPING FROM VARIOUS SOURCES AND SHALL BE CONSIDERED APPROXIMATE.
 - CONTRACTOR SHALL CUT AND CAP SANITARY SEWER LINE NEAR PROPERTY LINE TO ABANDON SANITARY SEWER IN RIGHT-OF-WAY AS SHOWN ON DRAWING G-06. ABANDONMENT SHALL IN ACCORDANCE WITH TOWN OF COLONIE SANITARY SEWER TERMINATION STANDARDS AND / OR AS DIRECTED BY THE ENGINEER.
 - THE CONTRACTOR SHALL BACKFILL ALL ONSITE SANITARY SEWER MANHOLES AND SANITARY SEWER PIPING, WITH EXCEPTION TO EXISTING BUILDING 37 SERVICE CONNECTION, WITH CONTROLLED LOW STRENGTH MATERIAL AND / OR AS DIRECTED BY THE ENGINEER. MANHOLE FRAMES AND COVERS SHALL BE REMOVED AND RECYCLED. SEE G-08 FOR ADDITIONAL INFORMATION.

- LEGEND
- FORMER SUBSTATION TRANSFORMER/CAPACITOR AREA LOCATION
 - TRANSMISSION TOWER
 - FORMER FUEL OIL DISTRIBUTION SYSTEM
 - FUEL OIL ICM INTERCEPTOR TRENCH
 - SANITARY SEWER MANHOLE
 - STORM SEWER MANHOLE
 - CATCH BASIN
 - FORMER SEPTIC TANK
 - SANITARY SEWER
 - STORM SEWER
 - WATER LINE

PROJECT NAME:
**FORMER AL TECH
SPECIALTY STEEL, OU3
ON-SITE STRUCTURES**

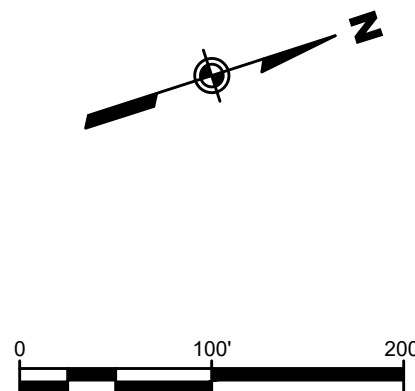
SITE NO. 401003
CONTRACT NO. D011482
TOWN OF COLONIE,
ALBANY COUNTY, NEW YORK

Engineer:
AECOM USA, INC.
257 WEST GENESEE STREET
BUFFALO, NY 14202
T: 716.856.5636

Seal and Signature:

100% DESIGN
(NOT FOR CONSTRUCTION)

REV. NO.	DATE:	REVISION:



Owner's Information:
NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
625 Broadway, Albany, New York 12233

Sheet title:
**EXISTING SITE
UTILITY PLAN**

Scale: N.T.S.

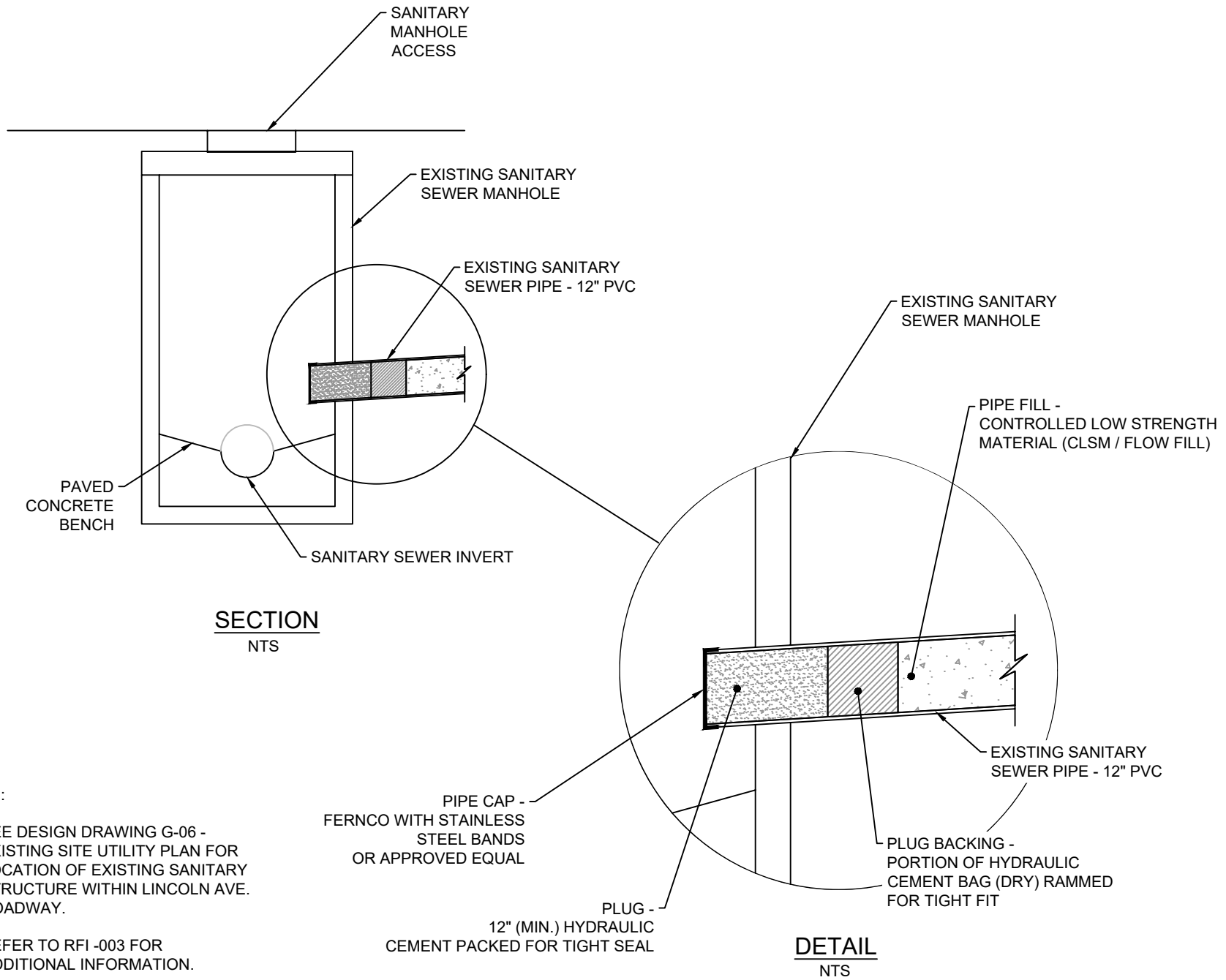
Date:	JULY 2020
Project No.:	60594845
Design By:	Mike Gutmann
Dwg By:	Keith Meister
Chk By:	Chuck Dusel

Dwg No:
G-06

Pg No: **7**

**SANITARY PIPING
PLUG AND SEAL**

**FORMER AL TECH SPECIALTY STEEL, OU3
NYS DEPT. OF ENVIRONMENTAL CONSERVATION
SITE NO. 401003, CONTRACT NO. D011482
TOWN OF COLONIE, ALBANY COUNTY, NEW YORK**
Date: MAY 2021



NOTES:

1. SEE DESIGN DRAWING G-06 - EXISTING SITE UTILITY PLAN FOR LOCATION OF EXISTING SANITARY STRUCTURE WITHIN LINCOLN AVE. ROADWAY.
2. REFER TO RFI -003 FOR ADDITIONAL INFORMATION.

Request For Information Form

Project: AITech Specialty Steel

Contract No.: D011482

Laterio "LT" Humphrey

4/26/2021

Submitted To: Mike Gutman

Re: Replace Sand Bedding material with additional Geotextile

D0011842-GC-004

Received By: Kyle Jackson

Date Received: 04/26/21

Question/Concern:

Substitution

ESG is proposing to use two additional layers of 6 oz. non woven geotextile fabric beneath the 30 mil. PVC liner for the temporary water treatment system liquid storage.

Reason: Utilizing the fabric will eliminate the need to import sand and dispose of it later. Also will eliminate the time needed to wait on sampling and analytical for import of materials.

Plan: ESG would increase the layers of fabric by 2x to prevent penetration and damage to the 30 ml liner being used to contain the water within the cell. This will also work with scheduling as fabric material has been approved and is onsite for immediate use.

Action/Response:

The proposal described above is disapproved. ESG shall collect a sample of imported sand (plus any other imported backfill materials that will be used) and analyze for the chemicals listed in Appendix 5 of DER-10 plus PFAS analyses as soon as possible. The PFAS sampling and analyses shall be completed in accordance with the attached document.

Attachments:



Department of
Environmental
Conservation

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Under NYSDEC's Part 375 Remedial Programs

January 2021



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ERRATA SHEET for

**SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES
(PFAS) Under NYSDEC's Part 375 Remedial Programs Issued January 17, 2020**

Citation and Page Number	Current Text	Corrected Text	Date
Title of Appendix I, page 32	Appendix H	Appendix I	2/25/2020
Document Cover, page 1	Guidelines for Sampling and Analysis of PFAS	Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs	9/15/2020
Routine Analysis, page 9	"However, laboratories analyzing environmental samples...PFOA and PFOS in drinking water by EPA Method 537, 537.1 or ISO 25101."	"However, laboratories analyzing environmental samples...PFOA and PFOS in drinking water by EPA Method 537, 537.1, ISO 25101, or Method 533."	9/15/2020
Additional Analysis, page 9, new paragraph regarding soil parameters	None	"In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (EPA Method 9060), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils."	9/15/2020
Data Assessment and Application to Site Cleanup Page 10	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFAS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Target levels for cleanup of PFAS in other media, including biota and sediment, have not yet been established by the DEC.	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Water Sample Results Page 10	<p>PFAS should be further assessed and considered as a potential contaminant of concern in groundwater or surface water (...)</p> <p>If PFAS are identified as a contaminant of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.</p>	<p>PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water (...)</p> <p>If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.</p>	9/15/2020
Soil Sample Results, page 10	<p>“The extent of soil contamination for purposes of delineation and remedy selection should be determined by having certain soil samples tested by Synthetic Precipitation Leaching Procedure (SPLP) and the leachate analyzed for PFAS. Soil exhibiting SPLP results above 70 ppt for either PFOA or PFOS (individually or combined) are to be evaluated during the cleanup phase.”</p>	<p>“Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values. “</p> <p>[Interim SCO Table]</p> <p>“PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP.</p> <p>As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference:</p> <p>https://www.nj.gov/dep/srp/guidance/rs/daf.pdf. ”</p>	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Testing for Imported Soil Page 11	<p>Soil imported to a site for use in a soil cap, soil cover, or as backfill is to be tested for PFAS in general conformance with DER-10, Section 5.4(e) for the PFAS Analyte List (Appendix F) using the analytical procedures discussed below and the criteria in DER-10 associated with SVOCs.</p> <p>If PFOA or PFOS is detected in any sample at or above 1 µg/kg, then soil should be tested by SPLP and the leachate analyzed for PFAS. If the SPLP results exceed 10 ppt for either PFOA or PFOS (individually) then the source of backfill should be rejected, unless a site-specific exemption is provided by DER. SPLP leachate criteria is based on the Maximum Contaminant Levels proposed for drinking water by New York State's Department of Health, this value may be updated based on future Federal or State promulgated regulatory standards. Remedial parties have the option of analyzing samples concurrently for both PFAS in soil and in the SPLP leachate to minimize project delays. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.</p>	<p>Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable.</p> <p>PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.</p>	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Footnotes	None	¹ TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances. ² The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the soil cleanup objective for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	9/15/2020
Additional Analysis, page 9	In cases... soil parameters, such as Total Organic Carbon (EPA Method 9060), soil...	In cases... soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil...	1/8/2021
Appendix A, General Guidelines, fourth bullet	List the ELAP-approved lab(s) to be used for analysis of samples	List the ELAP- certified lab(s) to be used for analysis of samples	1/8/2021
Appendix E, Laboratory Analysis and Containers	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by ISO Method 25101.	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101	1/8/2021

Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs

Objective

New York State Department of Environmental Conservation's Division of Environmental Remediation (DER) performs or oversees sampling of environmental media and subsequent analysis of PFAS as part of remedial programs implemented under 6 NYCRR Part 375. To ensure consistency in sampling, analysis, reporting, and assessment of PFAS, DER has developed this document which summarizes currently accepted procedures and updates previous DER technical guidance pertaining to PFAS.

Applicability

All work plans submitted to DEC pursuant to one of the remedial programs under Part 375 shall include PFAS sampling and analysis procedures that conform to the guidelines provided herein.

As part of a site investigation or remedial action compliance program, whenever samples of potentially affected media are collected and analyzed for the standard Target Analyte List/Target Compound List (TAL/TCL), PFAS analysis should also be performed. Potentially affected media can include soil, groundwater, surface water, and sediment. Based upon the potential for biota to be affected, biota sampling and analysis for PFAS may also be warranted as determined pursuant to a Fish and Wildlife Impact Analysis. Soil vapor sampling for PFAS is not required.

Field Sampling Procedures

DER-10 specifies technical guidance applicable to DER's remedial programs. Given the prevalence and use of PFAS, DER has developed "best management practices" specific to sampling for PFAS. As specified in DER-10 Chapter 2, quality assurance procedures are to be submitted with investigation work plans. Typically, these procedures are incorporated into a work plan, or submitted as a stand-alone document (e.g., a Quality Assurance Project Plan). Quality assurance guidelines for PFAS are listed in Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS.

Field sampling for PFAS performed under DER remedial programs should follow the appropriate procedures outlined for soils, sediments or other solids (Appendix B), non-potable groundwater (Appendix C), surface water (Appendix D), public or private water supply wells (Appendix E), and fish tissue (Appendix F).

QA/QC samples (e.g. duplicates, MS/MSD) should be collected as specified in DER-10, Section 2.3(c). For sampling equipment coming in contact with aqueous samples only, rinsate or equipment blanks should be collected. Equipment blanks should be collected at a minimum frequency of one per day per site or one per twenty samples, whichever is more frequent.

Analysis and Reporting

As of October 2020, the United States Environmental Protection Agency (EPA) does not have a validated method for analysis of PFAS for media commonly analyzed under DER remedial programs (non-potable waters, solids). DER has developed the following guidelines to ensure consistency in analysis and reporting of PFAS.

The investigation work plan should describe analysis and reporting procedures, including laboratory analytical procedures for the methods discussed below. As specified in DER-10 Section 2.2, laboratories should provide a full Category B deliverable. In addition, a Data Usability Summary Report (DUSR) should be prepared by an independent, third party data validator. Electronic data submissions should meet the requirements provided at: <https://www.dec.ny.gov/chemical/62440.html>.

DER has developed a *PFAS Analyte List* (Appendix F) for remedial programs to understand the nature of contamination at sites. It is expected that reported results for PFAS will include, at a minimum, all the compounds listed. If lab and/or matrix specific issues are encountered for any analytes, the DER project manager, in consultation with the DER chemist, will make case-by-case decisions as to whether certain analytes may be temporarily or permanently discontinued from analysis at each site. As with other contaminants that are analyzed for at a site, the *PFAS Analyte List* may be refined for future sampling events based on investigative findings.

Routine Analysis

Currently, New York State Department of Health's Environmental Laboratory Approval Program (ELAP) does not offer certification for PFAS in matrices other than finished drinking water. However, laboratories analyzing environmental samples for PFAS (e.g., soil, sediments, and groundwater) under DER's Part 375 remedial programs need to hold ELAP certification for PFOA and PFOS in drinking water by EPA Method 537, 537.1, ISO 25101, or Method 533. Laboratories should adhere to the guidelines and criteria set forth in the DER's laboratory guidelines for PFAS in non-potable water and solids (Appendix H - Laboratory Guidelines for Analysis of PFAS in Non-Potable Water and Solids). Data review guidelines were developed by DER to ensure data comparability and usability (Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids).

LC-MS/MS analysis for PFAS using methodologies based on EPA Method 537.1 is the procedure to use for environmental samples. Isotope dilution techniques should be utilized for the analysis of PFAS in all media. Reporting limits for PFOA and PFOS in aqueous samples should not exceed 2 ng/L. Reporting limits for PFOA and PFOS in solid samples should not exceed 0.5 µg/kg. Reporting limits for all other PFAS in aqueous and solid media should be as close to these limits as possible. If laboratories indicate that they are not able to achieve these reporting limits for the entire *PFAS Analyte List*, site-specific decisions regarding acceptance of elevated reporting limits for specific PFAS can be made by the DER project manager in consultation with the DER chemist.

Additional Analysis

Additional laboratory methods for analysis of PFAS may be warranted at a site, such as the Synthetic Precipitation Leaching Procedure (SPLP) and Total Oxidizable Precursor Assay (TOP Assay).

In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils.

SPLP is a technique used to determine the mobility of chemicals in liquids, soils and wastes, and may be useful in determining the need for addressing PFAS-containing material as part of the remedy. SPLP by EPA Method 1312 should be used unless otherwise specified by the DER project manager in consultation with the DER chemist.

Impacted materials can be made up of PFAS that are not analyzable by routine analytical methodology. A TOP Assay can be utilized to conceptualize the amount and type of oxidizable PFAS which could be liberated in the environment, which approximates the maximum concentration of perfluoroalkyl substances that could be generated

if all polyfluoroalkyl substances were oxidized. For example, some polyfluoroalkyl substances may degrade or transform to form perfluoroalkyl substances (such as PFOA or PFOS), resulting in an increase in perfluoroalkyl substance concentrations as contaminated groundwater moves away from a source. The TOP Assay converts, through oxidation, polyfluoroalkyl substances (precursors) into perfluoroalkyl substances that can be detected by routine analytical methodology.¹

Commercial laboratories have adopted methods which allow for the quantification of targeted PFAS in air and biota. The EPA's Office of Research and Development (ORD) is currently developing methods which allow for air emissions characterization of PFAS, including both targeted and non-targeted analysis of PFAS. Consult with the DER project manager and the DER chemist for assistance on analyzing biota/tissue and air samples.

Data Assessment and Application to Site Cleanup

Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.

Water Sample Results

PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water if PFOA or PFOS is detected in any water sample at or above 10 ng/L (ppt) and is determined to be attributable to the site, either by a comparison of upgradient and downgradient levels, or the presence of soil source areas, as defined below. In addition, further assessment of water may be warranted if either of the following screening levels are met:

- a. any other individual PFAS (not PFOA or PFOS) is detected in water at or above 100 ng/L; or
- b. total concentration of PFAS (including PFOA and PFOS) is detected in water at or above 500 ng/L

If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.

Soil Sample Results

Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values.

Guidance Values for Anticipated Site Use	PFOA (ppb)	PFOS (ppb)
Unrestricted	0.66	0.88
Residential	6.6	8.8
Restricted Residential	33	44
Commercial	500	440
Industrial	600	440
Protection of Groundwater ²	1.1	3.7

¹ TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances.

² The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).

PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP.

As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference:

<https://www.nj.gov/dep/srp/guidance/rs/daf.pdf>.

Testing for Imported Soil

Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable.

PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.

Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS

The following guidelines (general and PFAS-specific) can be used to assist with the development of a QAPP for projects within DER involving sampling and analysis of PFAS.

General Guidelines in Accordance with DER-10

- Document/work plan section title – Quality Assurance Project Plan
- Summarize project scope, goals, and objectives
- Provide project organization including names and resumes of the project manager, Quality Assurance Officer (QAO), field staff, and Data Validator
 - The QAO should not have another position on the project, such as project or task manager, that involves project productivity or profitability as a job performance criterion
- List the ELAP certified lab(s) to be used for analysis of samples
- Include a site map showing sample locations
- Provide detailed sampling procedures for each matrix
- Include Data Quality Usability Objectives
- List equipment decontamination procedures
- Include an “Analytical Methods/Quality Assurance Summary Table” specifying:
 - Matrix type
 - Number or frequency of samples to be collected per matrix
 - Number of field and trip blanks per matrix
 - Analytical parameters to be measured per matrix
 - Analytical methods to be used per matrix with minimum reporting limits
 - Number and type of matrix spike and matrix spike duplicate samples to be collected
 - Number and type of duplicate samples to be collected
 - Sample preservation to be used per analytical method and sample matrix
 - Sample container volume and type to be used per analytical method and sample matrix
 - Sample holding time to be used per analytical method and sample matrix
- Specify Category B laboratory data deliverables and preparation of a DUSR

Specific Guidelines for PFAS

- Include in the text that sampling for PFAS will take place
- Include in the text that PFAS will be analyzed by LC-MS/MS for PFAS using methodologies based on EPA Method 537.1
- Include the list of PFAS compounds to be analyzed (*PFAS Analyte List*)
- Include the laboratory SOP for PFAS analysis
- List the minimum method-achievable Reporting Limits for PFAS
 - Reporting Limits should be less than or equal to:
 - Aqueous – 2 ng/L (ppt)
 - Solids – 0.5 µg/kg (ppb)
- Include the laboratory Method Detection Limits for the PFAS compounds to be analyzed
- Laboratory should have ELAP certification for PFOA and PFOS in drinking water by EPA Method 537, 537.1, EPA Method 533, or ISO 25101
- Include detailed sampling procedures
 - Precautions to be taken
 - Pump and equipment types
 - Decontamination procedures
 - Approved materials only to be used
- Specify that regular ice only will be used for sample shipment
- Specify that equipment blanks should be collected at a minimum frequency of 1 per day per site for each matrix

Appendix B - Sampling Protocols for PFAS in Soils, Sediments and Solids

General

The objective of this protocol is to give general guidelines for the collection of soil, sediment and other solid samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Containers

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in to contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel spoon
- stainless steel bowl
- steel hand auger or shovel without any coatings

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Sampling is often conducted in areas where a vegetative turf has been established. In these cases, a pre-cleaned trowel or shovel should be used to carefully remove the turf so that it may be replaced at the conclusion of sampling. Surface soil samples (e.g. 0 to 6 inches below surface) should then be collected using a pre-cleaned, stainless steel spoon. Shallow subsurface soil samples (e.g. 6 to ~36 inches below surface) may be collected by digging a hole using a pre-cleaned hand auger or shovel. When the desired subsurface depth is reached, a pre-cleaned hand auger or spoon shall be used to obtain the sample.

When the sample is obtained, it should be deposited into a stainless steel bowl for mixing prior to filling the sample containers. The soil should be placed directly into the bowl and mixed thoroughly by rolling the material into the middle until the material is homogenized. At this point the material within the bowl can be placed into the laboratory provided container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at $4 \pm 2^{\circ}$ Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A soil log or sample log shall document the location of the sample/borehole, depth of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix C - Sampling Protocols for PFAS in Monitoring Wells

General

The objective of this protocol is to give general guidelines for the collection of groundwater samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including plumbers tape and sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel inertia pump with HDPE tubing
- peristaltic pump equipped with HDPE tubing and silicone tubing
- stainless steel bailer with stainless steel ball
- bladder pump (identified as PFAS-free) with HDPE tubing

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Monitoring wells should be purged in accordance with the sampling procedure (standard/volume purge or low flow purge) identified in the site work plan, which will determine the appropriate time to collect the sample. If sampling using standard purge techniques, additional purging may be needed to reduce turbidity levels, so samples contain a limited amount of sediment within the sample containers. Sample containers that contain sediment may cause issues at the laboratory, which may result in elevated reporting limits and other issues during the sample preparation that can compromise data usability. Sampling personnel should don new nitrile gloves prior to sample collection due to the potential to contact PFAS containing items (not related to the sampling equipment) during the purging activities.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at $4 \pm 2^\circ$ Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Additional equipment blank samples may be collected to assess other equipment that is utilized at the monitoring well
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A purge log shall document the location of the sample, sampling equipment, groundwater parameters, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix D - Sampling Protocols for PFAS in Surface Water

General

The objective of this protocol is to give general guidelines for the collection of surface water samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel cup

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Where conditions permit, (e.g. creek or pond) sampling devices (e.g. stainless steel cup) should be rinsed with site medium to be sampled prior to collection of the sample. At this point the sample can be collected and poured into the sample container.

If site conditions permit, samples can be collected directly into the laboratory container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at $4 \pm 2^\circ$ Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A sample log shall document the location of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix E - Sampling Protocols for PFAS in Private Water Supply Wells

General

The objective of this protocol is to give general guidelines for the collection of water samples from private water supply wells (with a functioning pump) for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101. The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials (e.g. plumbers tape), including sample bottle cap liners with a PTFE layer.

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Locate and assess the pressure tank and determine if any filter units are present within the building. Establish the sample location as close to the well pump as possible, which is typically the spigot at the pressure tank. Ensure sampling equipment is kept clean during sampling as access to the pressure tank spigot, which is likely located close to the ground, may be obstructed and may hinder sample collection.

Prior to sampling, a faucet downstream of the pressure tank (e.g., washroom sink) should be run until the well pump comes on and a decrease in water temperature is noted which indicates that the water is coming from the well. If the homeowner is amenable, staff should run the water longer to purge the well (15+ minutes) to provide a sample representative of the water in the formation rather than standing water in the well and piping system including the pressure tank. At this point a new pair of nitrile gloves should be donned and the sample can be collected from the sample point at the pressure tank.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at $4 \pm 2^{\circ}$ Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- If equipment was used, collect one equipment blank per day per site and a minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers.
- A field reagent blank (FRB) should be collected at a rate of one per 20 samples. The lab will provide a FRB bottle containing PFAS free water and one empty FRB bottle. In the field, pour the water from the one bottle into the empty FRB bottle and label appropriately.
- Request appropriate data deliverable (Category B) and an electronic data deliverable
- For sampling events where multiple private wells (homes or sites) are to be sampled per day, it is acceptable to collect QC samples at a rate of one per 20 across multiple sites or days.

Documentation

A sample log shall document the location of the private well, sample point location, owner contact information, sampling equipment, purge duration, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate and available (e.g. well construction, pump type and location, yield, installation date). Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appendix F - Sampling Protocols for PFAS in Fish

This appendix contains a copy of the latest guidelines developed by the Division of Fish and Wildlife (DFW) entitled “General Fish Handling Procedures for Contaminant Analysis” (Ver. 8).

Procedure Name: General Fish Handling Procedures for Contaminant Analysis

Number: FW-005

Purpose: This procedure describes data collection, fish processing and delivery of fish collected for contaminant monitoring. It contains the chain of custody and collection record forms that should be used for the collections.

Organization: Environmental Monitoring Section
Bureau of Ecosystem Health
Division of Fish and Wildlife (DFW)
New York State Department of Environmental Conservation (NYSDEC)
625 Broadway
Albany, New York 12233-4756

Version: 8

Previous Version Date: 21 March 2018

Summary of Changes to this Version: Updated bureau name to Bureau of Ecosystem Health. Added direction to list the names of all field crew on the collection record. Minor formatting changes on chain of custody and collection records.

Originator or Revised by: Wayne Richter, Jesse Becker

Date: 26 April 2019

Quality Assurance Officer and Approval Date: Jesse Becker, 26 April 2019

**NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

GENERAL FISH HANDLING PROCEDURES FOR CONTAMINANT ANALYSES

- A. Original copies of all continuity of evidence (i.e., Chain of Custody) and collection record forms must accompany delivery of fish to the lab. A copy shall be directed to the Project Leader or as appropriate, Wayne Richter. All necessary forms will be supplied by the Bureau of Ecosystem Health. Because some samples may be used in legal cases, it is critical that each section is filled out completely. Each Chain of Custody form has three main sections:
1. The top box is to be filled out **and signed** by the person responsible for the fish collection (e.g., crew leader, field biologist, researcher). This person is responsible for delivery of the samples to DEC facilities or personnel (e.g., regional office or biologist).
 2. The second section is to be filled out **and signed** by the person responsible for the collections while being stored at DEC, before delivery to the analytical lab. This may be the same person as in (1), but it is still required that they complete the section. Also important is the **range of identification numbers** (i.e., tag numbers) included in the sample batch.
 3. Finally, the bottom box is to record any transfers between DEC personnel and facilities. Each subsequent transfer should be **identified, signed, and dated**, until laboratory personnel take possession of the fish.
- B. The following data are required on each **Fish Collection Record** form:
1. Project and Site Name.
 2. DEC Region.
 3. All personnel (and affiliation) involved in the collection.
 4. Method of collection (gill net, hook and line, etc.)
 5. Preservation Method.
- C. The following data are to be taken on each fish collected and recorded on the **Fish Collection Record** form:
1. Tag number - Each specimen is to be individually jaw tagged at time of collection with a unique number. Make sure the tag is turned out so that the number can be read without opening the bag. Use tags in sequential order. For small fish or composite samples place the tag inside the bag with the samples. The Bureau of Ecosystem Health can supply the tags.
 2. Species identification (please be explicit enough to enable assigning genus and species). Group fish by species when processing.
 3. Date collected.
 4. Sample location (waterway and nearest prominent identifiable landmark).
 5. Total length (nearest mm or smallest sub-unit on measuring instrument) and weight (nearest g or

smallest sub-unit of weight on weighing instrument). Take all measures as soon as possible with calibrated, protected instruments (e.g. from wind and upsets) and prior to freezing.

6. Sex - fish may be cut enough to allow sexing or other internal investigation, but do not eviscerate. Make any incision on the right side of the belly flap or exactly down the midline so that a left-side fillet can be removed.

D. General data collection recommendations:

1. It is helpful to use an ID or tag number that will be unique. It is best to use metal striped bass or other uniquely numbered metal tags. If uniquely numbered tags are unavailable, values based on the region, water body and year are likely to be unique: for example, R7CAY11001 for Region 7, Cayuga Lake, 2011, fish 1. If the fish are just numbered 1 through 20, we have to give them new numbers for our database, making it more difficult to trace your fish to their analytical results and creating an additional possibility for errors.
 2. Process and record fish of the same species sequentially. Recording mistakes are less likely when all fish from a species are processed together. Starting with the bigger fish species helps avoid missing an individual.
 3. If using Bureau of Ecosystem Health supplied tags or other numbered tags, use tags in sequence so that fish are recorded with sequential Tag Numbers. This makes data entry and login at the lab and use of the data in the future easier and reduces keypunch errors.
 4. Record length and weight as soon as possible after collection and before freezing. Other data are recorded in the field upon collection. An age determination of each fish is optional, but if done, it is recorded in the appropriate "Age" column.
 5. For composite samples of small fish, record the number of fish in the composite in the Remarks column. Record the length and weight of each individual in a composite. All fish in a composite sample should be of the same species and members of a composite should be visually matched for size.
 6. Please submit photocopies of topographic maps or good quality navigation charts indicating sampling locations. GPS coordinates can be entered in the Location column of the collection record form in addition to or instead for providing a map. These records are of immense help to us (and hopefully you) in providing documented location records which are not dependent on memory and/or the same collection crew. In addition, they may be helpful for contaminant source trackdown and remediation/control efforts of the Department.
 7. When recording data on fish measurements, it will help to ensure correct data recording for the data recorder to call back the numbers to the person making the measurements.
- E. Each fish is to be placed in its own individual plastic bag. For small fish to be analyzed as a composite, put all of the fish for one composite in the same bag but use a separate bag for each composite. It is important to individually bag the fish to avoid difficulties or cross contamination when processing the fish for chemical analysis. Be sure to include the fish's tag number inside the bag, preferably attached to the fish with the tag number turned out so it can be read. Tie or otherwise secure the bag closed. **The Bureau of Ecosystem Health will supply the bags.** If necessary, food grade bags may be procured from a suitable vendor (e.g., grocery store). It is preferable to redundantly label each bag with a manila tag tied between the knot and the body of the bag. This tag should be labeled with the project name, collection location, tag number, collection date, and fish species. If scales are collected, the scale envelope should be labeled with

the same information.

- F. Groups of fish, by species, are to be placed in one large plastic bag per sampling location. **The Bureau of Ecosystem Health will supply the larger bags.** Tie or otherwise secure the bag closed. Label the site bag with a manila tag tied between the knot and the body of the bag. The tag should contain: project, collection location, collection date, species and **tag number ranges**. Having this information on the manila tag enables lab staff to know what is in the bag without opening it.
- G. Do not eviscerate, fillet or otherwise dissect the fish unless specifically asked to. If evisceration or dissection is specified, the fish must be cut along the exact midline or on the right side so that the left side fillet can be removed intact at the laboratory. If filleting is specified, the procedure for taking a standard fillet (SOP PREPLAB 4) must be followed, including removing scales.
- H. Special procedures for PFAS: Unlike legacy contaminants such as PCBs, which are rarely found in day to day life, PFAS are widely used and frequently encountered. Practices that avoid sample contamination are therefore necessary. While no standard practices have been established for fish, procedures for water quality sampling can provide guidance. The following practices should be used for collections when fish are to be analyzed for PFAS:
 - No materials containing Teflon.
 - No Post-it notes.
 - No ice packs; only water ice or dry ice.
 - Any gloves worn must be powder free nitrile.
 - No Gore-Tex or similar materials (Gore-Tex is a PFC with PFOA used in its manufacture).
 - No stain repellent or waterproof treated clothing; these are likely to contain PFCs.
 - Avoid plastic materials, other than HDPE, including clipboards and waterproof notebooks.
 - Wash hands after handling any food containers or packages as these may contain PFCs.
 - Keep pre-wrapped food containers and wrappers isolated from fish handling.
 - Wear clothing washed at least six times since purchase.
 - Wear clothing washed without fabric softener.
 - Staff should avoid cosmetics, moisturizers, hand creams and similar products on the day of sampling as many of these products contain PFCs (Fujii et al. 2013). Sunscreen or insect repellent should not contain ingredients with “fluor” in their name. Apply any sunscreen or insect repellent well downwind from all materials. Hands must be washed after touching any of these products.
- I. All fish must be kept at a temperature $<45^{\circ}\text{F}$ ($<8^{\circ}\text{C}$) immediately following data processing. As soon as possible, freeze at $-20^{\circ}\text{C} \pm 5^{\circ}\text{C}$. Due to occasional freezer failures, daily freezer temperature logs are required. The freezer should be locked or otherwise secured to maintain chain of custody.
- J. In most cases, samples should be delivered to the Analytical Services Unit at the Hale Creek field station. Coordinate delivery with field station staff and send copies of the collection records, continuity of evidence forms and freezer temperature logs to the field station. For samples to be analyzed elsewhere, non-routine collections or other questions, contact Wayne Richter, Bureau of Ecosystem Health, NYSDEC, 625 Broadway, Albany, New York 12233-4756, 518-402-8974, or the project leader about sample transfer. Samples will then be directed to the analytical facility and personnel noted on specific project descriptions.
- K. A recommended equipment list is at the end of this document.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF FISH AND WILDLIFE
FISH COLLECTION RECORD

page _____ of _____

Project and Site Name _____ DEC Region _____

Collections made by (include all crew) _____

Sampling Method: ☐Electrofishing ☐Gill netting ☐Trap netting ☐Trawling ☐Seining ☐Angling ☐Other _____

Preservation Method: ☐Freezing ☐Other _____ Notes (SWFDB survey number): _____

FOR LAB USE ONLY- LAB ENTRY NO.	COLLECTION OR TAG NO.	SPECIES	DATE TAKEN	LOCATION	AGE	SEX &/OR REPROD. CONDIT	LENGTH ()	WEIGHT ()	REMARKS

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION CHAIN OF CUSTODY

I, _____, of _____ collected the
(Print Name) (Print Business Address)

following on _____, 20____ from _____
(Date) (Water Body)

in the vicinity of _____
(Landmark, Village, Road, etc.)

Town of _____, in _____ County.

Item(s) _____

Said sample(s) were in my possession and handled according to standard procedures provided to me prior to collection. The sample(s) were placed in the custody of a representative of the New York State Department of Environmental Conservation on _____, 20____.

Signature Date

I, _____, received the above mentioned sample(s) on the date specified and assigned identification number(s) _____ to the sample(s). I have recorded pertinent data for the sample(s) on the attached collection records. The sample(s) remained in my custody until subsequently transferred, prepared or shipped at times and on dates as attested to below.

Signature Date

SECOND RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
THIRD RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
FOURTH RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
RECEIVED IN LABORATORY BY (Print Name)	TIME & DATE	REMARKS
SIGNATURE	UNIT	
LOGGED IN BY (Print Name)	TIME & DATE	ACCESSION NUMBERS
SIGNATURE	UNIT	

NOTICE OF WARRANTY

By signature to the chain of custody (reverse), the signatory warrants that the information provided is truthful and accurate to the best of his/her ability. The signatory affirms that he/she is willing to testify to those facts provided and the circumstances surrounding the same. Nothing in this warranty or chain of custody negates responsibility nor liability of the signatories for the truthfulness and accuracy of the statements provided.

HANDLING INSTRUCTIONS

On day of collection, collector(s) name(s), address(es), date, geographic location of capture (attach a copy of topographic map or navigation chart), species, number kept of each species, and description of capture vicinity (proper noun, if possible) along with name of Town and County must be indicated on reverse.

Retain organisms in manila tagged plastic bags to avoid mixing capture locations. Note appropriate information on each bag tag.

Keep samples as cool as possible. Put on ice if fish cannot be frozen within 12 hours. If fish are held more than 24 hours without freezing, they will not be retained or analyzed.

Initial recipient (either DEC or designated agent) of samples from collector(s) is responsible for obtaining and recording information on the collection record forms which will accompany the chain of custody. This person will seal the container using packing tape and writing his signature, the time and the date across the tape onto the container with indelible marker. Any time a seal is broken, for whatever purpose, the incident must be recorded on the Chain of Custody (reason, time, and date) in the purpose of transfer block. Container then is resealed using new tape and rewriting signature, with time and date.

EQUIPMENT LIST

Scale or balance of appropriate capacity for the fish to be collected.

Fish measuring board.

Plastic bags of an appropriate size for the fish to be collected and for site bags.

Individually numbered metal tags for fish.

Manila tags to label bags.

Small envelopes, approximately 2" x 3.5", if fish scales are to be collected.

Knife for removing scales.

Chain of custody and fish collection forms.

Clipboard.

Pens or markers.

Paper towels.

Dish soap and brush.

Bucket.

Cooler.

Ice.

Duct tape.

Appendix G – PFAS Analyte List

Group	Chemical Name	Abbreviation	CAS Number
Perfluoroalkyl sulfonates	Perfluorobutanesulfonic acid	PFBS	375-73-5
	Perfluorohexanesulfonic acid	PFHxS	355-46-4
	Perfluoroheptanesulfonic acid	PFHpS	375-92-8
	Perfluorooctanesulfonic acid	PFOS	1763-23-1
	Perfluorodecanesulfonic acid	PFDS	335-77-3
Perfluoroalkyl carboxylates	Perfluorobutanoic acid	PFBA	375-22-4
	Perfluoropentanoic acid	PFPeA	2706-90-3
	Perfluorohexanoic acid	PFHxA	307-24-4
	Perfluoroheptanoic acid	PFHpA	375-85-9
	Perfluorooctanoic acid	PFOA	335-67-1
	Perfluorononanoic acid	PFNA	375-95-1
	Perfluorodecanoic acid	PFDA	335-76-2
	Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8
	Perfluorododecanoic acid	PFDoA	307-55-1
	Perfluorotridecanoic acid	PFTriA/PFTTrDA	72629-94-8
	Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7
Fluorinated Telomer Sulfonates	6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2
	8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4
Perfluorooctane-sulfonamides	Perfluorooctanesulfonamide	FOSA	754-91-6
Perfluorooctane-sulfonamidoacetic acids	N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSAA	2991-50-6

Appendix H - Laboratory Guidelines for Analysis of PFAS in Non-Potable Water and Solids

General

New York State Department of Environmental Conservation's Division of Environmental Remediation (DER) developed the following guidelines for laboratories analyzing environmental samples for PFAS under DER programs. If laboratories cannot adhere to the following guidelines, they should contact DER's Quality Assurance Officer, Dana Barbarossa, at dana.barbarossa@dec.ny.gov prior to analysis of samples.

Isotope Dilution

Isotope dilution techniques should be utilized for the analysis of PFAS in all media.

Extraction

For water samples, the entire sample bottle should be extracted, and the sample bottle rinsed with appropriate solvent to remove any residual PFAS.

For samples with high particulates, the samples should be handled in one of the following ways:

1. Spike the entire sample bottle with isotope dilution analytes (IDAs) prior to any sample manipulation. The sample can be passed through the SPE and if it clogs, record the volume that passed through.
2. If the sample contains too much sediment to attempt passing it through the SPE cartridge, the sample should be spiked with isotope dilution analytes, centrifuged and decanted.
3. If higher reporting limits are acceptable for the project, the sample can be diluted by taking a representative aliquot of the sample. If isotope dilution analytes will be diluted out of the sample, they can be added after the dilution. The sample should be homogenized prior to taking an aliquot.

If alternate sample extraction procedures are used, please contact the DER remedial program chemist prior to employing. Any deviations in sample preparation procedures should be clearly noted in the case narrative.

Signal to Noise Ratio

For all target analyte ions used for quantification, signal to noise ratio should be 3:1 or greater.

Blanks

There should be no detections in the method blanks above the reporting limits.

Ion Transitions

The ion transitions listed below should be used for the following PFAS:

PFOA	413 > 369
PFOS	499 > 80
PFHxS	399 > 80
PFBS	299 > 80
6:2 FTS	427 > 407
8:2 FTS	527 > 507
N-EtFOSAA	584 > 419
N-MeFOSAA	570 > 419

Branched and Linear Isomers

Standards containing both branched and linear isomers should be used when standards are commercially available. Currently, quantitative standards are available for PFHxS, PFOS, NMeFOSAA, and NEtFOSAA. As more standards become available, they should be incorporated in to the method. All isomer peaks present in the standard should be integrated and the areas summed. Samples should be integrated in the same manner as the standards.

Since a quantitative standard does not exist for branched isomers of PFOA, the instrument should be calibrated using just the linear isomer and a technical (qualitative) PFOA standard should be used to identify the retention time of the branched PFOA isomers in the sample. The total response of PFOA branched and linear isomers should be integrated in the samples and quantitated using the calibration curve of the linear standard.

Secondary Ion Transition Monitoring

Quantifier and qualifier ions should be monitored for all target analytes (PFBA and PFPeA are exceptions). The ratio of quantifier ion response to qualifier ion response should be calculated for each target analyte and the ratio compared to standards. Lab derived criteria should be used to determine if the ratios are acceptable.

Reporting

Detections below the reporting limit should be reported and qualified with a J qualifier.

The acid form of PFAS analytes should be reported. If the salt form of the PFAS was used as a stock standard, the measured mass should be corrected to report the acid form of the analyte.

Appendix I - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids

General

These guidelines are intended to be used for the validation of PFAS analytical results for projects within the Division of Environmental Remediation (DER) as well as aid in the preparation of a data usability summary report. Data reviewers should understand the methodology and techniques utilized in the analysis. Consultation with the end user of the data may be necessary to assist in determining data usability based on the data quality objectives in the Quality Assurance Project Plan. A familiarity with the laboratory's Standard Operating Procedure may also be needed to fully evaluate the data. If you have any questions, please contact DER's Quality Assurance Officer, Dana Barbarossa, at dana.barbarossa@dec.ny.gov.

Preservation and Holding Time

Samples should be preserved with ice to a temperature of less than 6°C upon arrival at the lab. The holding time is 14 days to extraction for aqueous and solid samples. The time from extraction to analysis for aqueous samples is 28 days and 40 days for solids.

Temperature greatly exceeds 6°C upon arrival at the lab*	Use professional judgement to qualify detects and non-detects as estimated or rejected
Holding time exceeding 28 days to extraction	Use professional judgement to qualify detects and non-detects as estimated or rejected if holding time is grossly exceeded

*Samples that are delivered to the lab immediately after sampling may not meet the thermal preservation guidelines. Samples are considered acceptable if they arrive on ice or an attempt to chill the samples is observed.

Initial Calibration

The initial calibration should contain a minimum of five standards for linear fit and six standards for a quadratic fit. The relative standard deviation (RSD) for a quadratic fit calibration should be less than 20%. Linear fit calibration curves should have an R^2 value greater than 0.990.

The low-level calibration standard should be within 50% - 150% of the true value, and the mid-level calibration standard within 70% - 130% of the true value.

%RSD >20%	J flag detects and UJ non detects
R^2 >0.990	J flag detects and UJ non detects
Low-level calibration check <50% or >150%	J flag detects and UJ non detects
Mid-level calibration check <70% or >130%	J flag detects and UJ non detects

Initial Calibration Verification

An initial calibration verification (ICV) standard should be from a second source (if available). The ICV should be at the same concentration as the mid-level standard of the calibration curve.

ICV recovery <70% or >130%	J flag detects and non-detects
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Continuing Calibration Verification

Continuing calibration verification (CCV) checks should be analyzed at a frequency of one per ten field samples. If CCV recovery is very low, where detection of the analyte could be in question, ensure a low level CCV was analyzed and use to determine data quality.

CCV recovery <70 or >130%	J flag results
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Blanks

There should be no detections in the method blanks above the reporting limits. Equipment blanks, field blanks, rinse blanks etc. should be evaluated in the same manner as method blanks. Use the most contaminated blank to evaluate the sample results.

Blank Result	Sample Result	Qualification
Any detection	<Reporting limit	Qualify as ND at reporting limit
Any detection	>Reporting Limit and >10x the blank result	No qualification
>Reporting limit	>Reporting limit and <10x blank result	J+ biased high

Field Duplicates

A blind field duplicate should be collected at rate of one per twenty samples. The relative percent difference (RPD) should be less than 30% for analyte concentrations greater than two times the reporting limit. Use the higher result for final reporting.

RPD >30%	Apply J qualifier to parent sample
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Lab Control Spike

Lab control spikes should be analyzed with each extraction batch or one for every twenty samples. In the absence of lab derived criteria, use 70% - 130% recovery criteria to evaluate the data.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects
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Matrix Spike/Matrix Spike Duplicate

One matrix spike and matrix spike duplicate should be collected at a rate of one per twenty samples. Use professional judgement to reject results based on out of control MS/MSD recoveries.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only
RPD >30%	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only

Extracted Internal Standards (Isotope Dilution Analytes)

Problematic analytes (e.g. PFBA, PFPeA, fluorotelomer sulfonates) can have wider recoveries without qualification. Qualify corresponding native compounds with a J flag if outside of the range.

Recovery <50% or >150%	Apply J qualifier
Recovery <25% or >150% for poor responding analytes	Apply J qualifier
Isotope Dilution Analyte (IDA) Recovery <10%	Reject results

Secondary Ion Transition Monitoring

Quantifier and qualifier ions should be monitored for all target analytes (PFBA and PFPeA are exceptions). The ratio of quantifier ion response to qualifier ion response should be calculated from the standards for each target analyte. Lab derived criteria should be used to determine if the ratios are acceptable. If the ratios fall outside of the laboratory criteria, qualify results as an estimated maximum concentration.

Signal to Noise Ratio

The signal to noise ratio for the quantifier ion should be at least 3:1. If the ratio is less than 3:1, the peak is discernable from the baseline noise and symmetrical, the result can be reported. If the peak appears to be baseline noise and/or the shape is irregular, qualify the result as tentatively identified.

Branched and Linear Isomers

Observed branched isomers in the sample that do not have a qualitative or quantitative standard should be noted and the analyte should be qualified as biased low in the final data review summary report. Note: The branched isomer peak should also be present in the secondary ion transition.

Reporting Limits

If project-specific reporting limits were not met, please indicate that in the report along with the reason (e.g. over dilution, dilution for non-target analytes, high sediment in aqueous samples).

Peak Integrations

Target analyte peaks should be integrated properly and consistently when compared to standards. Ensure branched isomer peaks are included for PFAS where standards are available. Inconsistencies should be brought to the attention of the laboratory or identified in the data review summary report.

Request For Information Form

Project: AlTech Specialty Steel

Contract No.: D011482

Brian Harris

8/4/2021

Submitted To: Mike Gutman

Re: Lead Based Paint Removal

D0011842-GC-005

Received By: AE

Date Received: - - 0 1

Question/Concern:

Clarification

ESG will not be performing lead based paint abatement prior to demolition.

Reason: Lead based paint abatement is not required on buildings being completely demolished. EPA regulations and HUD state that the lead abatement rules do not apply to complete demolition of structures.

Plan: ESG plans to handle the lead based paint as stated in our approved work plan. ESG will demolish the structures, segregate the material, sample it for offsite disposal approval.

Action/Response:

AE and the DE discussed this internally and concluded that poly sheeting needs to be installed on critical openings in all rooms and enclosures where loose and flaky lead based paint (P) chips exists. However the floors of these rooms will not need to be covered with poly sheeting. In large areas corridors of the buildings where loose flaky P exists and where the installation of poly sheeting is not practical and or will create an unsafe work condition the contractor shall mitigate airborne P by wetting followed by thorough cleanup of all P waste after the structure (e.g. walls beams trusses purlins) are brought to ground level. The P chips and associated waste generated during this abatement must be containerized and characterized appropriately for offsite disposal.

Workers performing removal of P must don the appropriate PPE and perform air monitoring as required by S A Standard FR 1 . . .

Attachments:

Request For Information Form

Project: AlTech Specialty Steel

Contract No.: D011482

Brian Harris

8/13/2021

Submitted To: Mike Gutman

Re: Work Hours/Days

D0011842-GC-006

Received By: M. Gutmann, R. Stepinsky

Date Received: 8-13-21

Date Responded : 8-24-21

Question/Concern:

Clarification

ESG is seeking to work (4) 10 hour work days per week in lieu of the (5) 8 hour work days. Performing (4) 10 hour days per week ESG's cost will remain the same.

Question: If working (4) 10 hour work days will ESG be able to submit for (5) days per week under UC-1 Site Services and UC-2 Health and Safety for payment?

Explanation: ESG will add additional hours for site security to start on Thursday evening and start at 12:00 noon on Friday. ESG is seeking to aid in production for the longer day and be more accomodating for its employees whilst traveling.

Action/Response:

The Department, in consultation with the Engineer, approves the modified work hours of four (4), 10-hour workdays per week. The approval is for a trial period of one (1) month, at which time the Department, Engineer and Contractor will evaluate the effect upon production and the overall project schedule. If all parties agree that production and project schedule have benefited from the alternative work hours, the alternative work hours may continue thereafter. ESG shall provide a building-by-building schedule for the trial period so that goals can be identified, and progress can be tracked. This can be an addition to the current Gantt schedule under the abatement and demolition Phase 1 line items.

ESG personnel are expected to be onsite from 07:00 to 17:30 from Monday through Thursday with a one-hour mid-day break, as currently established.

The Department agrees to pay fifty percent (50%) of bid items UC-1 (Site Services) and UC-2 (Health and Safety) for the non-working fifth day (Friday) of each work week. Weeks interrupted by holidays, or otherwise shortened, will be paid based on workdays complete.

Site security shall start at 6:00 PM on Thursday and end at midnight. Site security shall start at noon on Fridays and end at midnight. Site security shall be implemented as previously established for the remainder of the weekend.

Attachments:

REQUEST FOR INTERPRETATION

DEPARTMENT: AECOM – One John James Parkway, Suite 210, Amherst, NY 14228
Project Name: Former AL Tech Specialty Steel Corporation Site, OU3, Colonie, Albany County, New York, NYSDEC Site No. 401003

Contractor: Environmental Services Group, Inc.

RFI No. D0011842-GC-007 (RFI-07)

(ESG) Date Transmitted: 8-20-21

Date Received: 8-13-21 R.Stepinsky,
M. Gutmann, K. Jackson, NYSDEC.

Date Response Requested: none

Date Response Transmitted:

8-31-21 Subject: Profiling and disposal of galbestos paneling and delaminated galbestos

coating Specification Section and Paragraph: Specification 02 24 23 - Sampling and Analysis

INTERPRETATION REQUESTED:

ESG is seeking clarification on the disposal of the Galbestos Roofing/Siding materials. Based on the data provided in the contract documents the Galbestos materials are considered Hazardous materials containing asbestos. At the time of bidding ESG could not determine the volume difference between Haz and Non Haz. ESG determined this to be paid for under UC-9 Handling, Transportation, and disposal of ACM - Hazardous.

ESG has been instructed to seek further disposal options in the efforts to reduce cost on the project. ESG has received a list from AECOM for other disposal outlets for this material. The facilities require the PCB content to be Less than 50 ppm PCB's. The analytical in the waste characterization report has the highest reading of 89,000 ppm for PCB's in the Galbestos.

ESG is seeking clarification on whether we should try to pursue a non-hazardous determination of this material by sampling and analytical efforts? Upon receiving analytical results ESG can then provide updated costs for sampling, handling, transportation, and disposal. Our current pricing for UC-8 handling, transportation, and disposal of ACM non-hazardous does not account for Galbestos materials.

Signature: Brian Harris

Date: 8-20-2021

ENGINEER'S RESPONSE:

The Contract Documents indicate the galbestos materials could be characterized as non-hazardous ACM, hazardous ACM, or TSCA ACM based upon analytical results collected during previous investigations. Specification Section 02 24 23 requires the Contractor to collect additional samples of the galbestos to characterize the materials as required by the disposal facility. Existing sampling data from the galbestos indicated a range of concentrations with only one elevated result of 89,000 ppm PCBs from the west wall of Bldg. 14. Many of the samples reported PCB concentrations below 50 ppm.

ESG shall collect and submit additional samples of galbestos materials to supplement existing data and as specified in Specification Section 02 24 23 at a frequency approved by AECOM to determine additional and more economical disposal options. ESG shall collect representative samples from galbestos materials that has been removed and staged in stockpiles as well as from galbestos siding panels that are still attached to the buildings.

Additionally, AECOM supplied ESG with a list of other disposal facilities that may accept this waste stream on 8-19-21. AECOM understands that the facility in Rochester, New Hampshire will not accept this waste. The list is provided again below:

Minerva Enterprises
8955 Minerva Road
Waynesburg, OH
330.866.3435

Waste Management Turnkey
Landfill 200 Rochester Neck
Road Rochester, NH
800.963.4776

Keystone Sanitary Landfill
249 Dunham Dr.
Dunmore, PA 18512-2827
570-562-1600

Casella Waste Systems
19 Ness Lane
Kane, PA 16735
814-474-8005

Coventry Landfill (Casella)
21 Landfill Lane
Coventry, VT 05855
888-688-9766

NCES Landfill (Casella)
581 Trudeau Road
Bethlehem, NH 03574
888-816-0210

Signature: R. Stepinsky/M. Gutmann/K. Jackson

Date : 8-31-21

Request For Information Form

Project: AlTech Specialty Steel

Contract No.: D011482

Brian Harris

12/9/2021

Submitted To: Mike Gutman

Re: Friable ACM Abatement

D0011842-GC-006

Received By: D. Cofield/R. Stepinsky/M. Gutmann

Date Received: 12-9-21

Question/Concern:

Request:

ESG's disposal facility Seneca Meadows Landfill (SMI) is requesting a letter from the onsite project monitor stating all friable asbestos materials were abated from buildings 14, 12, 11, 10, 21, 22, 23, and 36. As additional buildings are completed the letter will need to be updated.

Reason:

This request from SMI was given to ESG when the asbestos material is being profiled as non friable asbestos.

Action/Response:

Acknowledged. AECOMs letter is attached to this RFI form.

Note: This RFI should be numbered D0011842-GC-008, not 006

Attachments:

AECOM-USA, Inc.
One John James Audubon Parkway
Amherst, New York 14228

NYSDEC SITE NO. 401003
AL TECH SPECIALTY STEEL SITE
NYSDEC CONTRACT NO. D011842
RFI No. 008

TO:

Mr. Brian Harris
Vice President
The Environmental Services Group
bharris@esgenv.com

Request for Information:

As per your request AECOM asbestos project monitor has acknowledged and verified that ESG has abated all friable asbestos containing materials (ACM) in the following buildings prior to demolitions. They are as follows: buildings 14,12,11,10, 21, 22, 23, and 36.

David D. Cofield Jr.
Asbestos Designer /
Project Monitor
AECOM

December 9, 2021

Request For Information Form

Project: Al-Tech Specialty Steel

Contract No.: D011482

Todd Harris

4/27/2022

Submitted To: Mike Gutman

Re: Building 27 Boiler Units

RFI-09

Received By:

Date Received:

Question/Concern:

Request:

There are 2 large furnace units in building 27 that contain a white fibrous material. ESG is unable to locate sampling data in the contract documents or supplemental data. How would you like ESG to handle these units.

Reason:

No acm data has been provided for these units.

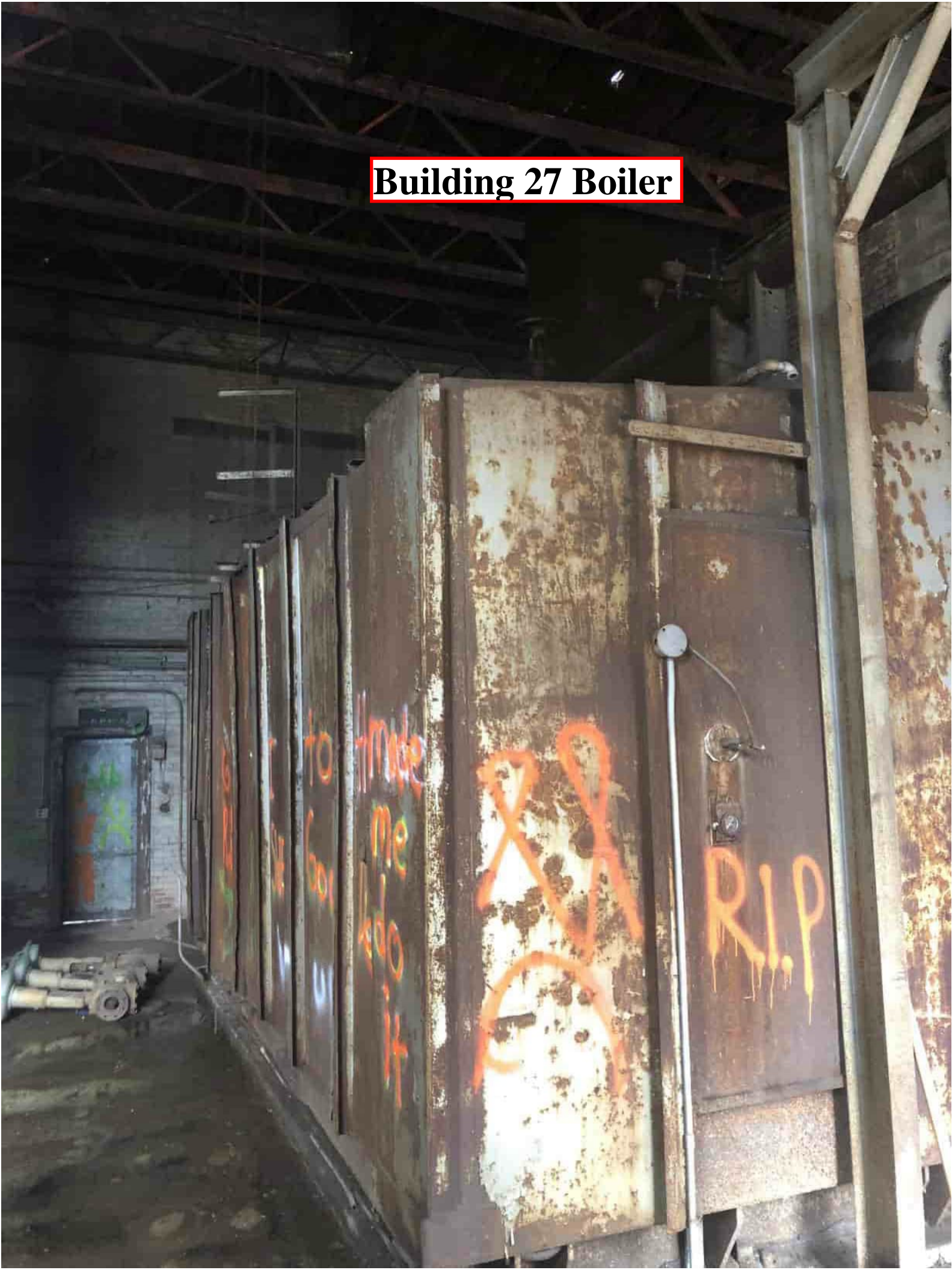
Action/Response:

aterio umphrey David ofield and ichael Gutmann investigated on April 0 . aterial appeared to be a residue near the boiler inspection cover(s). aterio umphrey collected samples for A Testing.

Attachments:

Photographs of the boilers

Building 27 Boiler



Building 27 Boiler



Fibrous Material



Internal Boiler



Request For Information Form

Project: Al-Tech Specialty Steel

Contract No.: D011482

Submitted By: Todd Harris

5/25/2022

Submitted To: Mike Gutman

Re: SPDES Permit Sampling

RFI-10

Received By: Mike Gutmann

Date Received: 5/25/2022

Question/Concern:

Request:

ESG would like the NYSDEC and AECOM to review the the daily maximum limits of the SPDES permit specifically Benzo(a)pyrene.

Reason:

ESG has contacted numerous labs with all of them unable to meet the Benzo(a)pyrene reporting limit of 0.0012 ug/l. The lowest possible reporting limit ESG was able to find was 0.02 ug/l but with a turn around time of 5 days. ESG's preferred lab would be Chemtech with a Benzo(a)pyrene detection limit of 0.73 ug/l but with a turn around time of 3 days.

Action/Response:

Please procure a laboratory that can analyze the sample for benzo(a)pyrene using the most sensitive method method 5.1 with selected ion monitoring (SIM). Direct the laboratory to use method 10 if the LOD is lower than can be achieved by method 5.1 SIM. Revise and resubmit the most current laboratory information.

Attachments:

Email Responses From Contacted Labs

Todd Harris

From: Dave Wickliffe <dwickliffe@hcvlab.com>
Sent: Wednesday, May 18, 2022 6:13 PM
To: Todd Harris
Cc: aharris@esgenvironment.com
Subject: RE: Sampling Quote

We will pass on this RFP, a few things why.

Hg needs to be run by Low Level EPA 1631 that we do not do so we cannot control the TAT. In the Past when we did take on this project it would take 3 to 4 weeks sometimes due to instrument issues from Sub lab. Only a few Labs run this method so the Cost is very high.

Can not meet Benzo(a) pyrene 0.0012 ug/L, lowest we can see is 0.02 ug/L by SIMs

You need a Lab that can meet these limits day in and day out.

Sorry

David T. Wickliffe
VP of Customer Services Cell 973-362-8710
Hampton-Clarke Celebrates 35 Years in Business: 1986 – 2022

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From: Todd Harris [<mailto:tharris@esgenvironment.com>]
Sent: Wednesday, May 18, 2022 5:30 PM
To: Dave Wickliffe
Cc: aharris@esgenvironment.com
Subject: Sampling Quote

Dave,

Could I get a quote for the attached analytical requirements.

The reporting limits are very important we must meet all parameters.

Also turn around time is high priority.

We would be looking at sending 100+ samples over the next 4-6 months.

Thank You,

Todd Harris
Project Manager

The Environmental Service Group (NY) Inc.
177 Wales Avenue
Tonawanda NY 14150

Office (716)-695-6720

Fax (716)-695-0161
Cell (716)-425-6985

Todd Harris

From: Jordan Hedvat <jordan@chemtech.net>
Sent: Thursday, May 19, 2022 2:22 AM
To: 'Todd Harris'
Cc: aharris@esgenv.com
Subject: RE: Water Sampling
Attachments: Q2205038.pdf

Importance: High

Todd,

Based on sampling requirements you sent, please see few comments:

- pH range requested is not a limit, range will be tested in lab (15 min Holding Time exceedance qualifier will be added since this is a field test).
- Flow – We do not perform (field test). We can analyze 'Conductance' test via SM2510B method if requested.
- Benzo(a)pyrene (SVOC) – we cannot meet limit of 0.0012 ug/L (Chemtech lowest detection limits for this compound: MDL = 0.73 ug/L ; CRQL = 0.1 ug/L)
- Please confirm compound list for "Total Chlorinated & Unchlorinated Phenols" ? (Chemtech can analyze 'Phenolics via method 420.1 or 9065).
- We can meet all other detection limits for all listed compounds

Project quote is attached. Expedited TAT %s listed on Pg. 2. We can get you fastest TAT of 3 Business Days. However, please inquire each time we may get you even shorter when possible. TAT start date begins next following day from sample receipt, and results are due after 5:30pm EOB on the due date. Data package provided in PDF and Excel with requested comparison criteria. We can provide any data package type required.

If you need Chemtech Field Sampling services, this is an extra cost that was not quoted. Please let me know if you would like us to add.

Please let me know if you have any other questions. Please get to me regarding outlook or any comments/concerns we can help with to win the job, including pricing.

Thanks,

Jordan Hedvat

CHEMTECH

284 Sheffield St. | Mountainside, NJ 07092
Direct: (908) 728-3144
jordan@chemtech.net | www.chemtech.net



Your Opinion Matters! Please Give Us Your [Feedback](#)

From: Todd Harris <tharris@esgenv.com>
Sent: Tuesday, May 17, 2022 4:54 PM

To: jordan@chemtech.net

Cc: aharris@esgen.com

Subject: Water Sampling

Jordan,

Could I get a quote to perform the attached sampling?

There will be numerous samples 50+ over the next few weeks.

Attention to the required reporting limits is a must.

As always quick turn around times is very important.

Thank You,

Todd Harris

Project Manager

The Environmental Service Group (NY) Inc.

177 Wales Avenue

Tonawanda NY 14150

Office (716)-695-6720

Fax (716)-695-0161

Cell (716)-425-6985

Todd Harris

From: Beninati, John <John.Beninati@et.eurofinsus.com>
Sent: Wednesday, May 18, 2022 2:07 PM
To: Todd Harris; Massa, Anthony
Cc: Movinski, Michael W.; aharris@esgenv.com; Fischer, Brian
Subject: RE: Eurofins Buffalo - Quote #48025146 - Environmental Services Group (NY) Inc Th - Altech Specialty Steel - Town of Colonie

Good afternoon Todd,

We re-calculated your results using another data formatter than previously issued. This formatter reports both the analyte's Method Detection Limit (MDL) and the Reporting Limit (RL). By doing so, this allowed for Tetrachloroethene, Chrysene, and Fluorine to be reported within the required test limits. However, the MDL/RL for Benzo(a)anthracene, Benzo(s)pyrene, and Pyrene still exceed their respective required test limit. Unfortunately, the Eurofins lab network does not have the capability to meet the MDL/RL requirements for those analytes. I apologize this information was not provided to you earlier. As for your BOD result, the necessary dilution was not performed on your sample to achieve the required MDL/RL. We would need additional volume to re-analyze to obtain a MDL/RL down to 2 mg/L. I will submit a revised report and associated deliverables upon my final review. Again, I apologize for any inconvenience this has caused.

Regards,

John Beninati, P.G.
Project Manager



Eurofins Environment Testing US
10 Hazelwood Drive
Amherst, New York 14228

Direct: 716-504-9874

COMMUNICATION ALERT: Change of e-mail addresses for all Eurofins Environment Testing businesses in the US effective April 4, 2022

Please update my e-mail address in your e-mail directory: John.Beninati@ET.EurofinsUS.com

John.Beninati@ET.EurofinsUS.com
www.EurofinsUS.com/Env

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From: Todd Harris <tharris@esgenv.com>
Sent: Tuesday, May 17, 2022 4:45 PM
To: Massa, Anthony <Anthony.Massa@et.eurofinsus.com>
Cc: Beninati, John <John.Beninati@et.eurofinsus.com>; Movinski, Michael W. <Michael.Movinski@et.eurofinsus.com>; aharris@esgenv.com
Subject: RE: Eurofins Buffalo - Quote #48025146 - Environmental Services Group (NY) Inc Th - Altech Specialty Steel - Town of Colonie

Anthony,

The engineers disapproved my submittal of the API-3 Water samples because some of the results had a reporting limit higher than the acceptable test parameters for discharge. I have highlighted the compounds that fall into that category, what can we do to get these tested within the required limits?

From: Anthony Massa [<mailto:Anthony.Massa@et.eurofinsus.com>]

Sent: Friday, April 29, 2022 11:46 AM

To: Todd Harris

Cc: Beninati John; Movinski Mike

Subject: Eurofins Buffalo - Quote #48025146 - Environmental Services Group (NY) Inc Th - Altech Specialty Steel - Town of Colonie

Todd,

I had mistakenly added a 5 day tat surcharge to the quote - I have removed the surcharge - I apologize for any confusion with the quote - any questions in regards to this quotation please give us a call.

Tony Massa

Anthony J Massa
Client Relations Manager

Eurofins Buffalo
Phone: 315-431-0171

E-mail: Anthony.Massa@et.eurofinsus.com
www.eurofinsus.com/env



Reference: [480-595405]
Attachments: 1

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Todd Harris

From: Gregg LaForce <Gregg.LaForce@alsglobal.com>
Sent: Tuesday, May 24, 2022 2:17 PM
To: Todd Harris
Subject: RE: [EXTERNAL] - AI-Tech SPDES

Todd,

Thank you for the interest, but I just confirmed with our QA/QC manager and we do not go that low. Our lowest MRL is 0.062 ug/L.

I am assuming your current lab is using SIM method to get that low, and we don't perform that.

Please keep us in mind for any other possibilities that may arise and reach out to me anytime.



right solutions.
right partner.

Gregg LaForce
Technical Sales Representative
ALS Limited

O: +1 585 672 7464
M: +1 585 622 2631
Gregg.LaForce@alsglobal.com
1565 Jefferson Rd. Bldg. 300 Suite 360
Rochester, NY 14623

alsglobal.com

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From: Todd Harris <tharris@esgenvironment.com>
Sent: Tuesday, May 24, 2022 1:57 PM
To: Gregg LaForce <Gregg.LaForce@alsglobal.com>
Cc: aharris@esgenvironment.com; 'Laterio Humphrey' <lhumphrey@esgenvironment.com>
Subject: [EXTERNAL] - AI-Tech SPDES

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Greg,

As discussed on the phone attached is our site SPDES permit.

Our primary lab is having difficulty meeting the requirement for Benzo(a)pyrene at 0.0012 ug/l.

Thank You,

Todd Harris
Project Manager

The Environmental Service Group (NY) Inc.
177 Wales Avenue
Tonawanda NY 14150

Office (716)-695-6720
Fax (716)-695-0161
Cell (716)-425-6985

Todd Harris

From: John Lavery <johnlavery@meritlabs.com>
Sent: Tuesday, May 24, 2022 1:46 PM
To: Todd Harris
Cc: Barbara Ball; aharris@esgeny.com
Subject: Re: Form Submission - New Form - Analytical Testing

Todd,

I reviewed the SPDES permit and took a look at the Benzo(a)pyrene daily max limit.

Unfortunately, we will be unable to meet a reporting limit that matches the daily max limit. If we were to report Benzo(a)pyrene by SIMs our reporting limit would be 0.03 ppb.

Let me know how you would like to proceed.

John

On Tue, May 24, 2022 at 11:10 AM Todd Harris <tharris@esgeny.com> wrote:

Hi John,

Attached is the SPDES Permit. We have not worked with you in the past we received your information through our onsite engineers AECOM-USA.

My company information is:

Todd Harris

The Environmental Service Group (NY) Inc.

177 Wales avenue

Tonawanda NY 14150

With the SPDES permit our primary lab is unable to test to the reporting limits of Benzo(a)pyrene which is holding us up for water discharge.

From: John Lavery [mailto:johnlavery@meritlabs.com]
Sent: Tuesday, May 24, 2022 10:56 AM
To: Tharris@esgenvironment.com
Cc: Barbara Ball
Subject: Re: Form Submission - New Form - Analytical Testing

Hello Todd,

Thank you for contacting Merit Labs. We would love the opportunity to work with you. Can you provide a copy of your SPDES permit for our review.

Once in our possession, we can proceed with putting a quote together for you. Lastly, have you worked with us in the past? If not, what company do you work for?

Thank you,

John

On Tue, May 24, 2022 at 10:03 AM Squarespace <form-submission@squarespace.info> wrote:

Sent via form submission from [Merit Laboratories, Inc.](#)

Name: Todd Harris

Email Address: Tharris@esgenvironment.com

Subject: Analytical Testing

Message: Good Morning, I am inquiring about getting analytical for my sites SPDES Permit.

Does this submission look like spam? [Report it here.](#)

--

John Lavery

MERIT LABORATORIES, INC.

2680 East Lansing Drive East Lansing, MI 48823

Direct: (517) 827-2730 Cell: (517) 763-6976

johnlavery@meritlabs.com

Memorial Day Notice From Merit Laboratories

Please note our Holiday Schedule

Memorial Day:

Lab Closed May 30, 2022 (Monday)

Samples accepted until 12:00 noon on May 27, 2022 (Friday).

Due to Memorial Day closure, no BODs can be set on Wednesday May 25th. Please do not collect any BOD samples on Monday May 23th.

All rushes or samples with short hold times need prior notification and approval. If you have any questions or concerns please call the lab at 517-332-0167.

Please tell us how we are doing. [Click here to fill out our Customer Survey](#)

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--

John Lavery

MERIT LABORATORIES, INC.

2680 East Lansing Drive East Lansing, MI 48823

Direct: (517) 827-2730 Cell: (517) 763-6976

johnlavery@meritlabs.com

Memorial Day Notice From Merit Laboratories

Please note our Holiday Schedule

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Todd Harris

From: Buddy Beames <Buddy.Beames@pacelabs.com>
Sent: Tuesday, May 24, 2022 1:11 PM
To: Todd Harris
Cc: aharris@esgenv.com
Subject: RE: SPDES Testing

Hi Todd,

Here is the initial response from Dr Miller at the lab. Let me know if this is going to be a problem. I could potentially reach out within our network and see if anyone else can go any lower on phenols and PAHS's, but really do not think so.

Can't see the Phenols at the limit requested, or the 2 PAH's that are sub 1ppb (could do BaP at 0.02ppb by SIM, can't achieve other, one analyte by SIM to not get both doesn't make sense). Mercury is possible by the Low level method we sub out, but currently we are having difficulty even getting bottles for that analysis. Being slaved to a sub lab for the Mercury and based on the variety of testing that will need to be done, I don't think "rush" is in the cards. 5 days would be possible, but any shorter than that and we will have difficulty keeping up if it is daily receipt.

Buddy Beames
Senior Account Executive
Mobile: 518.772.9451 | pacelabs.com
Environmental Spill or Rapid Response Line: 877-859-7778



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Please consider the environment before printing this email

From: Todd Harris <tharris@esgenv.com>
Sent: Tuesday, May 24, 2022 9:46 AM
To: Buddy Beames <Buddy.Beames@pacelabs.com>
Cc: aharris@esgenv.com
Subject: SPDES Testing

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Buddy,

Would I be able to get a quote for the attached SPDES permit?

Some of the analytes have a very low reporting limit so we need to make sure we can meet the minimum limits.

We would be looking at sending samples almost daily for the next 4-6 months.

Turn around times are critical the quicker the better.

Thank You,

Todd Harris
Project Manager

The Environmental Service Group (NY) Inc.
177 Wales Avenue
Tonawanda NY 14150

Office (716)-695-6720
Fax (716)-695-0161
Cell (716)-425-6985

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Request For Information Form

Project: Al-Tech Specialty Steel

Contract No.: D011482

Submitted By: Todd Harris

7/20/2022

Submitted To: Mike Gutman

Re: SPDES Sampling Requirments

RFI-11

Received By:

Date Received:

Question/Concern:

Request:

ESG would like to raise the method detection limit for Benzo(a)pyrene from 0.02 ug/l to 0.073 ug/l.

Reason:

AECOM and the NYSDEC is aware of the ongoing issues with Pace Labs with this project and others over the last few months. Increasing the MDL for Benzo(a)pyrene to 0.073 would allow ESG to contract Chemtech. Chemtech is able to meet the method detection limits for all of the other SPDES analytes.

Action/Response:

Attachments:

Request For Information Form

Project: Al-Tech Specialty Steel

Contract No.: D011482

Submitted By: Adam Harris

7/20/2022

Submitted To: Mike Gutman

Re: Oversize concrete backfill

RFI-12

Received By: Mike Gutmann, Project Manager

Date Received: July 20, 2022

Question/Concern:

Request:

ESG would like the NYSDEC and AECOM to allow the remaining oversized concrete to be used as pit backfill. All material will be placed under the direct supervision of AECOM. Concrete pieces will not exceed 2'x2'x6' and all protruding rebar will be cut off. A base layer of processed material or gravel will be placed prior to placement of oversized concrete. Processed material will be layered in with the oversized to eliminate voids. A minimum of 4' o cover will be placed over the oversized concrete.

Reason:

The remaining concrete has an excessive amount of large rebar. Our onsite crusher is not able to process the remaining concrete.

Action/Response:

Oversized concrete pieces are acceptable for use as backfill as described above. Sufficient space needs to be left between the pieces so that there is enough room for the processed brick/imported fill to be placed and compacted in accordance with Section 31 23 23 of the Contract Documents.

Daniel McDaid, Resident Engineer

Attachments:

Request For Information Form

Project: Al-Tech Specialty Steel

Contract No.: D011482

Submitted By: Todd Harris

7/20/2022

Submitted To: Mike Gutman

Re: WATER SAMPLING FREQUENCY

RFI-13

Received By: Kyle Jackson

Date Received: 8/15/2022

Question/Concern:

Request:

ESG would like to decrease the treated water sampling frequency from one sample every 10,000 gallons to one sample every 20,000 gallons.

Reason:

Based on the eight treated samples submitted to date ESG has not had any exceedences above the SPDES maximum requirements.

Action/Response:

ESG's proposal is rejected until analytical results demonstrate that treatment meets SPDES daily average requirements.

Attachments:

Request For Information Form

Project: Al-Tech Specialty Steel

Contract No.: D011482

Submitted By: Adam Harris

9/8/2022

Submitted To: Mike Gutman

Re: WATER SAMPLING FREQUENCY

RFI-14

Received By:

Date Received:

Question/Concern:

Request:

ESG would like to pre-sample the individual unknown pit debris/material piles for the main contaminants of concern, RCRA Metals and PCB's. Once analytical is received and approved by AECOM, ESG will consolidate the Haz and Non-Haz materials into their respective piles. The piles will be then tested for disposal characterization.

Reason:

There are numerous unknown / unsampled pits on site. A majority of the pits only contain a small amount of debris / material (3 CY or less). It is unnecessary and cost prohibitive to sample every pile for the entire waste disposal characterization requirements.

Action/Response:

The proposed approach is acceptable.

Attachments:

Request For Information Form

Project: Al-Tech Specialty Steel

Contract No.: D011482

Submitted By: Adam Harris

9/13/2022

Submitted To: Mike Gutman

Re: WATER DISCHARGE

RFI-15

Received By:

Date Received:

Question/Concern:

Request:

ESG would like to blend processed water tanks # 265751, 252672, 265393 & 257155 for discharge.

Reason:

The analytical results for tanks # 265751, 252672, 265393 & 257155 have elevated readings for TSS and Zinc. By blending the tanks at discharge, it will bring the elevated compound to an acceptable discharge level. Please refer to the attached AL-Tech Steel Water Sample table dated 9/13/22. ESG will manifold the (4) tanks into a single discharge.

Action/Response:

Please resubmit the RF with revisions. AE has not observed the elevated readings for TSS.

Attachments:

Request For Information Form

Project: Al-Tech Specialty Steel

Contract No.: D011482

Submitted By: Brian Harris

4/11/2023

Submitted To: Mike Gutman

Re: MH Bldg. 9 Percolating

RFI-16

Received By: _____

Date Received: _____

Question/Concern:

Request:

There is a manhole (MH) percolating water out of it at building 9 area.

Reason:

ESG needs direction on whether this needs to be investigated further, cleaned, and repaired. The water keeps flooding the area that needs restored. If ESG is to investigate clean and repair do we need to collect store and sample the water for disposal

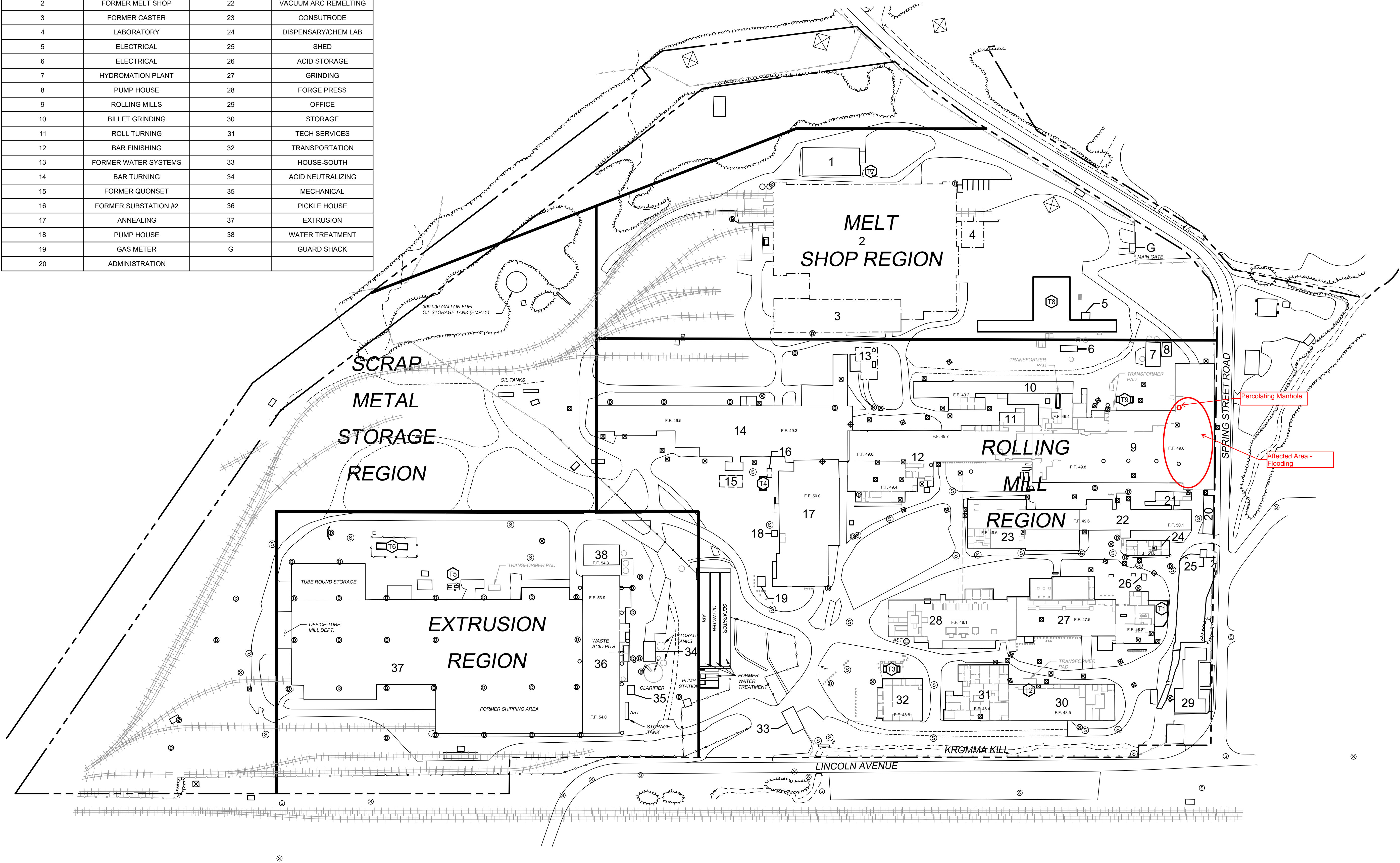
This work would subsequently need to be a P for out of scope work.

Action/Response:

Attachments:

Location map and affected area

BUILDING #	BUILDING NAME	BUILDING #	BUILDING NAME
1	FORMER EAF BAGHOUSE	21	VACUUM ARC REMELTING ANNEX
2	FORMER MELT SHOP	22	VACUUM ARC REMELTING
3	FORMER CASTER	23	CONSUTRODE
4	LABORATORY	24	DISPENSARY/CHEM LAB
5	ELECTRICAL	25	SHED
6	ELECTRICAL	26	ACID STORAGE
7	HYDROMATION PLANT	27	GRINDING
8	PUMP HOUSE	28	FORGE PRESS
9	ROLLING MILLS	29	OFFICE
10	BILLET GRINDING	30	STORAGE
11	ROLL TURNING	31	TECH SERVICES
12	BAR FINISHING	32	TRANSPORTATION
13	FORMER WATER SYSTEMS	33	HOUSE-SOUTH
14	BAR TURNING	34	ACID NEUTRALIZING
15	FORMER QUONSET	35	MECHANICAL
16	FORMER SUBSTATION #2	36	PICKLE HOUSE
17	ANNEALING	37	EXTRUSION
18	PUMP HOUSE	38	WATER TREATMENT
19	GAS METER	G	GUARD SHACK
20	ADMINISTRATION		



MAPPING NOTES:

- MAPPING SHOWN BASED ON PLANS TITLED: 1) "AL_TechSTL 2019" BY MJ ENGINEERING, DATED NOVEMBER 18, 2019, INCLUDING ALL NOTES AND REFERENCES THEREIN; 2) "SITE LAYOUT - RFI REPORT" BY ENVIRONMENTAL STRATEGIES CORPORATION, DATED NOVEMBER 6, 1997, INCLUDING ALL NOTES AND REFERENCES THEREIN.
- THE HORIZONTAL DATUM IS ON NORTH AMERICAN DATUM OF 1983, NEW YORK STATE PLANE EAST ZONE 3101
- THE VERTICAL DATUM IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
- INFORMATION SHOWN HEREON IS FROM: A LIDAR SCAN COLLECTED BETWEEN MAY 14 AND MAY 24, 2019; A MOBILE SCAN DATA COLLECTED ON MAY 24, 2019; 2008 USGS AERIAL LIDAR INFORMATION; AND 2005 SITE MAP DRAFTED BY REALCO INC. - DRAWING NUMBER: WMPA0501.
- PIT AND RUBBLE PILE EXTENTS SHOWN HEREON ARE BASED ON SURFACE EVIDENCE AND INFORMATION RECORDED DURING LIDAR SURVEY.
- THIS MAPPING DOES NOT PURPORT TO SHOW ALL UNDERGROUND FEATURES ON SITE AND IS SUBJECT TO FIELD VERIFICATION.
- UTILITY INFORMATION IS SHOWN ALIGNED ONTO CURRENT SURVEY BASE MAPPING FROM VARIOUS SOURCES AND SHALL BE CONSIDERED APPROXIMATE.

NOTES:

- SEE SHEET G-01 FOR TYPICAL LEGEND.
- SEE SHEET G-05 FOR SITE TOPOGRAPHY INFORMATION.
- SEE SHEET G-06 FOR SITE UTILITY INFORMATION.
- SEE SHEET G-07 FOR SITE OVERVIEW DEMOLITION INFORMATION.
- SEE SHEET G-09 FOR SITE KEY MAP.

LEGEND:

- FORMER SUBSTATION TRANSFORMER/CAPACITOR AREA LOCATION
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN

PROJECT NAME:
**FORMER AL TECH
SPECIALTY STEEL, OU3
ON-SITE STRUCTURES**

SITE NO. 401003
CONTRACT NO. D011482
TOWN OF COLONIE,
ALBANY COUNTY, NEW YORK

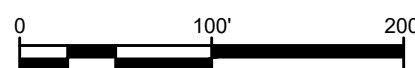
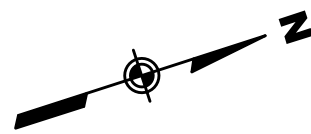
Engineer:
AECOM USA, INC.
257 WEST GENESEE STREET
BUFFALO, NY 14202
T: 716.856.5636

Seal and Signature:



100% DESIGN
(NOT FOR CONSTRUCTION)

REV. NO.	DATE:	REVISION:



Owner's Information:
NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
625 Broadway, Albany, New York 12233

Sheet title:
**EXISTING CONDITIONS
SITE PLAN**

Scale: N.T.S.

Date: JULY 2020
Project No.: 60594845
Design By: Mike Gutmann
Dwg By: Keith Meister
Chk By: Chuck Dusel

Dwg No:
G-04

Pg No: 5

Request For Information Form

Project: Al-Tech Specialty Steel

Contract No.: D011482

Submitted By: Brian Harris

4/17/2023

Submitted To: Mike Gutman

Re: Bldg. 28-1 Pit Cleaning

RFI-17

Received By: Mike Gutmann

Date Received: 4/18/2023 8:00 A.M.

Question/Concern:

ESG has cleaned the bldg. 28-1 pit and attached photo documentation of the cleaning efforts to show the finished product. After moving on to other areas and a couple days later there is an oily material coming through the concrete back to the surface.

Request:

ESG is looking for direction on how we should proceed with the additional oil penetrating through the concrete back to the surface after initial cleaning and clearance have been performed?

Action/Response:

ESG shall thoroughly clean Building 28-1 pit in accordance with the Contract Documents, including, but not limited to, Contract Drawing G-08 - General Description of Work by Material and referenced Specifications, using approved surfactants. In areas that are not initially thoroughly cleaned to specifications, a second round of surfactant application and power washing will be completed under the direction of AECOM Construction Manager. AECOM will then inspect pit walls for compliance with referenced Specifications listed on Contract Drawing G-08. As of April 26, 2023 Building 28-1 Pit Cleaning was complete and approved by AECOM. Backfilling is in progress.

Attachments:

28-1 Pit Photos



Figure 1 Wed 4/12/23 working looking - column and wall cleaned



Figure 2 Tuesday 4/11/23 second level cleared

Cleared Area

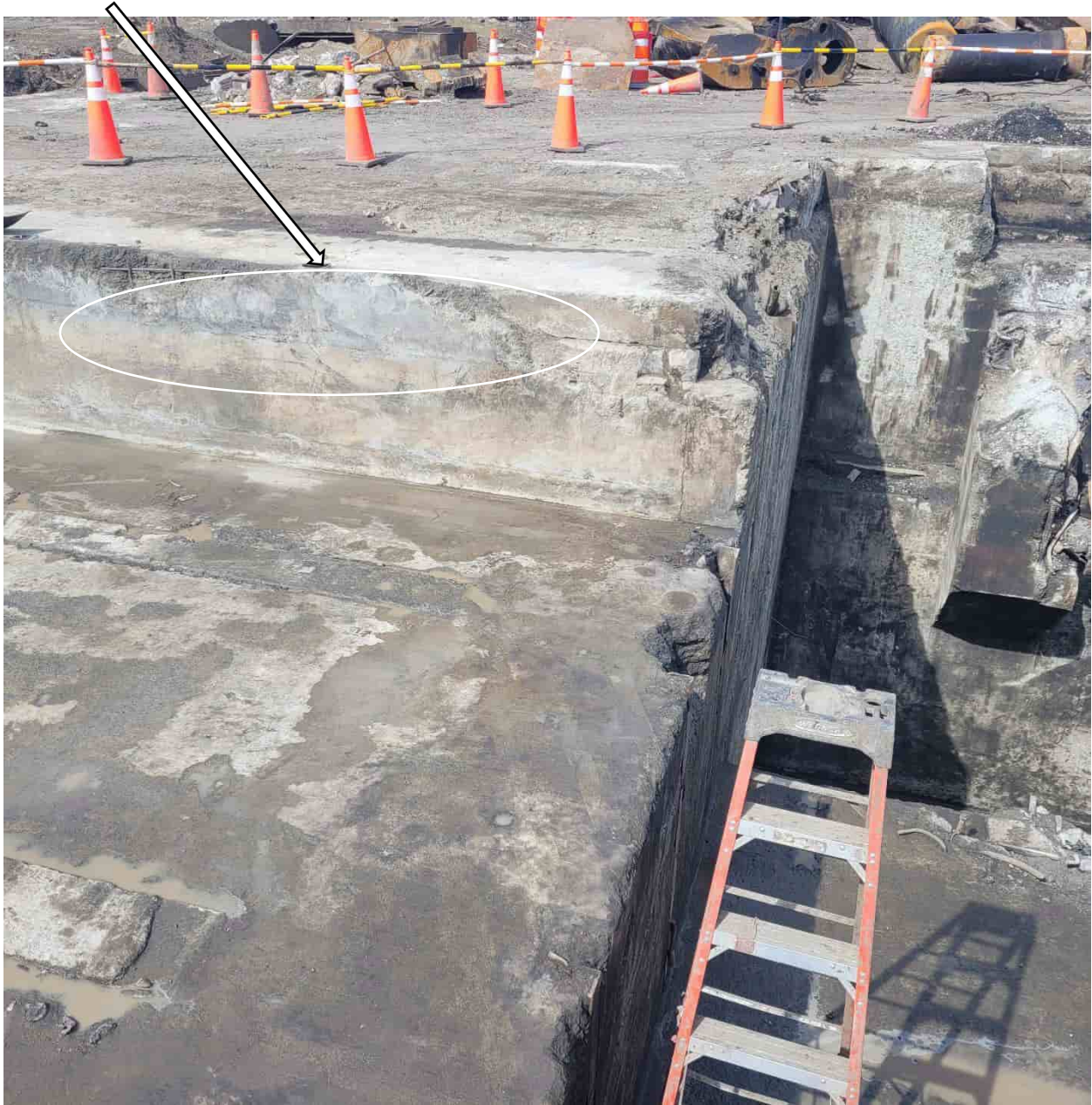


Figure 3 Monday 4/10/23 level 1 cleared - south wall



Figure 4 Monday 4/10/23 - North wall cleared



Figure 5 Monday 4/10/23 Level 1 clear - North and east wall

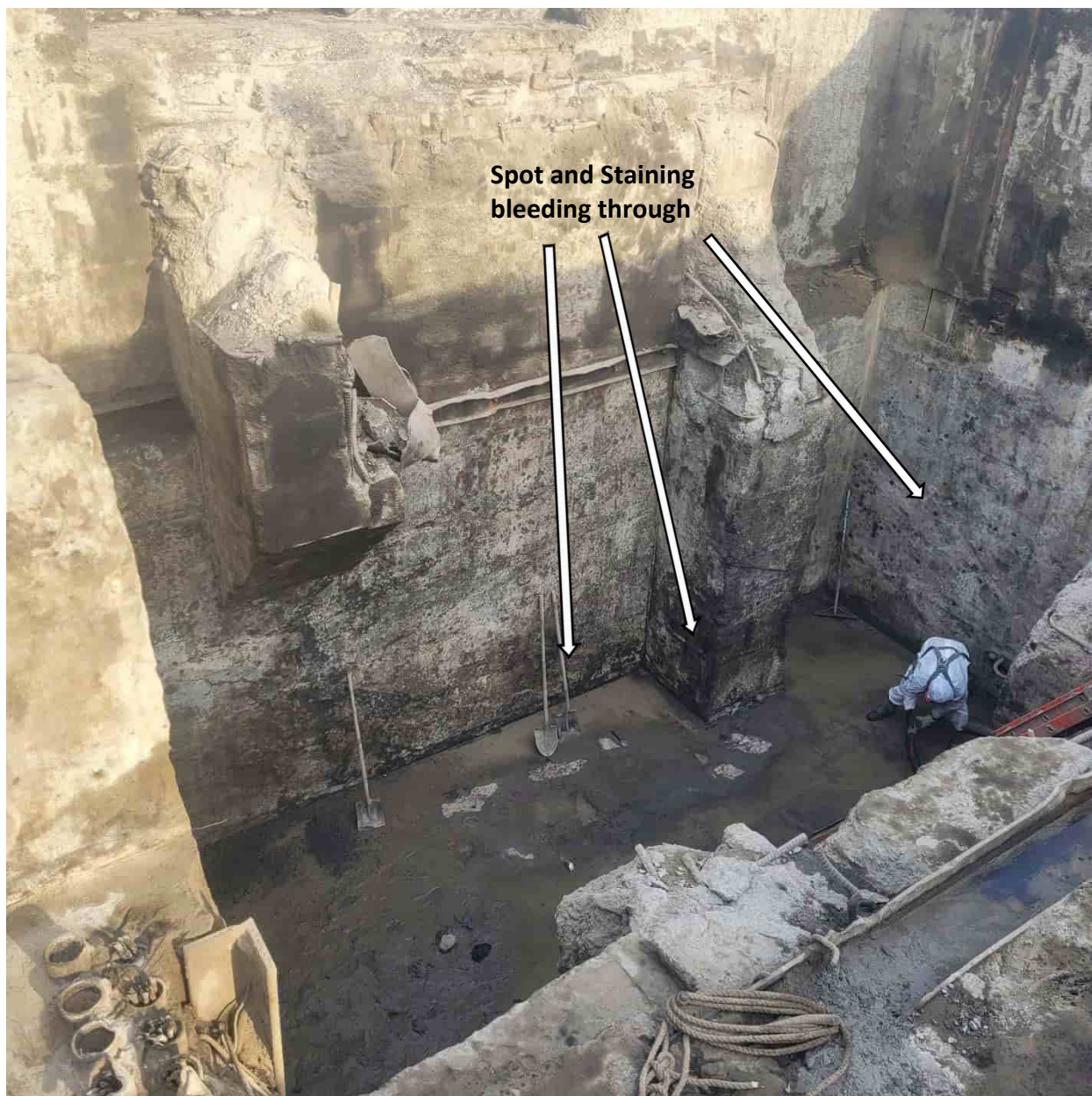


Figure 6- Friday 4/14/23 start of day - see column and spotted wall -oil bleeding through.



Figure 7 Friday 4/14/23 south wall - oil bleeding and saturation



Figure 8 Friday 4/14/23 north wall bleeding and saturation - engineer notified and documented

Request For Information Form

Project: Al-Tech Specialty Steel

Contract No.: D011482

Submitted By: Lt Humphrey

5/12/2023

Submitted To: Mike Gutman

Re: Bldg 36 Fencing installation

RFI-18

Received By: M. Gutmann/K. Jackson

Date Received: 5/12/2023

Question/Concern:

ESG's -fencing contractor submitted a design for barbed wire fencing to be installed along building 36. This design was for meant for augured dirt post to be installed. Becoming aware of the varies slab within the building where installation has to accrue. We are asking to modify the installation to adhere to the site conditions as specified below.

Request:

ESG is looking to core/cut openings in the concrete slab to approx 10-12" in dia removing concrete slab and installing the post to the 36" depth or refusal through push methods and install new concrete concrete/grout to the existing grade. An inspection of the concrete slab shows a slab thickness of 4-8" with crushed stone base this will provide a more than secure support for the fencing posts.

Action/Response:

ESG shall install the posts to a depth or refusal through push methods and install a minimum of 1 of concrete grout to the existing grade.

Attachments: