PERIODIC REVIEW REPORT

APRIL 30, 2022, TO APRIL 30, 2023
SITE # C915298
837 BAILEY AVENUE
BUFFALO, NEW YORK 14206

Prepared for:

Jack & Maritza Ruh
Quaker Development, Inc.
124 Meadow Rd
Orchard Park, NY 14127

Prepared by:

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

960 Busti Avenue
Suite B-150
Buffalo, New York 14213

August 2023
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1.0 EXECUTIVE SUMMARY

BE3 Corp (BE3) has prepared this Periodic Review Report (PRR), on behalf of Quaker Development, Inc. to summarize the post-remedial status of the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) at 837 Bailey Avenue, Buffalo, NY 14206 (Site). The BCP site number is C915298. See **Figure A** for site location and property boundary.

This PRR has been prepared in accordance with NYSDEC DER-10 *Technical Guidance for Site Investigation and Remediation* (May 2010) and the NYSDEC's Institutional and Engineering Controls (IC/EC) Certification Form has been completed up to the point applicable for the Site and provided in **Appendix A**.

This PRR has also been completed per the requirements stipulated in the approved Site Management Plan (SMP) dated December 2019 and describes any post-remedial activities conducted on-site during the April 30, 2022, through April 30, 2023 reporting period.

It is important to note that the site was sold twice during the Certifying Period. On November 9, 2022, the Certificate of Completion and property ownership was transferred from Near Dingens, LLC to Quaker Development, Inc. On December 19, 2022, property ownership was transferred from Quaker Development, Inc. to 837 Bailey Avenue, LLC. Additionally, 837 Bailey Avenue, LLC. was added to the Certificate of Completion. Currently, both Quaker Development, Inc. and 837 Bailey Avenue, LLC are on the COC. See **Appendix A** for the Notice of Transfers of Certificate of Completion.

1.1 SITE BACKGROUND

The 8.74-acre site is a vacant commercial property located at 837 Bailey Avenue (SBL: #112.80-1-12.1) in the City of Buffalo. The site is currently undeveloped, consisting primarily of greenspace with a loose stone driveway along Bailey Avenue. Residential housing is immediately adjacent to the site to the north and south-southwest. The Thruway Authority is located east of the site, and further east is the I-190. QTA Machining exists west-northwest across Bailey Avenue, and the remaining surrounding properties along Dingens Street are primarily industrial/commercial including Aim Transportation Solutions, TJI Construction, and Laub International.

Commercial development began in 1940; the site was occupied as an auto salvage/wrecking facility, auto service station, filling station and tire recapping facility. Prior to remediation the following investigations were performed to assess subsurface soil and groundwater quality:

- Phase I Environmental Site Assessment (ESA) – conducted by LCS Inc. in November 2014
- Geophysical Survey, Subsurface Soil/Fill & Groundwater Investigation Report – conducted by LCS, Inc. in February 2015
- Memorandum/Summary of Subsurface Investigation – conducted by EnSol, Inc. in April 2015
- Remedial Investigation/Alternative Analysis – conducted by EnSol in July 2019

Prior investigations revealed the following contaminants of concern (COCs):

Soil

- Semi-volatile organic compounds (SVOCs) were detected in samples at concentration above the New York State Department of Environmental Conservation (NYSDEC) Part 375 Commercial and/or Industrial Soil Cleanup Objectives (SCOs).

- Metals were detected at concentration above the New York State Department of Environmental Conservation (NYSDEC) Part 375 Commercial and/or Industrial Soil Cleanup Objectives (SCOs).

Groundwater

- Volatile organic compounds (VOCs) were detected at concentrations above the Class GA Standard
- SVOCs were detected at concentrations above the Class GA Standard

Based on these prior investigations, an Interim Remedial Measures (IRM) Report was conducted by EnSol at the site in July 2019. The following actions were completed:

- May-July 2016 – All existing on-site debris piles were removed and disposed of.
- January-March 2017 – Additional subsurface investigations were performed to delineate areas of soil impacts above specific SCOs in the vicinity of soil boring locations identified in the RI.
- August-December 2017 – IRM hot-spot excavations were completed to remove all impacted fill materials from the locations identified in the RI.
- December 2018-April 2019 – Additional subsurface investigation, hot-spot excavation and material disposal activities were completed.
- A total of 1,238 tons of contaminated fill materials were removed from the site during the IRM.
- All excavations were backfilled with clean clay obtained from the Town of Tonawanda general fill stockpile with approval from the NYSDEC.

Demolition of the former concrete block building, associated with the former site scrap yard operations, was completed in January 2019. Building demolition was completed under a permit from the City of Buffalo by Empire Building Diagnostics, Inc. of Depew, NY. In July 2019, The Environmental Service Group (NY), Inc., of Tonawanda, NY (ESG) conducted grubbing of the site, construction of the stabilized construction entrance and installation of the erosion and sedimentation controls. Installation of the relocated fence along residences located along Dingens Street and Peru Place, removal of debris and preparation of the site sub-grade activities were completed during August 2019.

Between August and November 2019, a minimum twelve-inch thick soil cover system was installed over the entire property to prevent public exposure to soil and surface soil contaminants remaining onsite. Based on the selected remedy, the cover system consists of a minimum six-inch thick general fill soil layer overlain by a minimum six-inch thick topsoil layer. Generally, the soil cover system is fifteen-inches thick over the site interior, with the bottom nine inches consisting of clayey soil and the top six-inches consisting of top soil. Final hydro-seeding to establish a vegetative cover was completed by applying a seed/fertilizer/mulch mixture sourced from Preferred Seed of Buffalo, NY. All site soils that were disturbed during installation of the soil cover system (ie. Installation of the perimeter drainage ditch, regrading of the subgrade, etc.) were regraded into other areas of the site prior to placement of the cover. No soils were removed from the site during construction of the cover. General soil cover system installation quality control was conducted by EnSol and consisted of daily engineering inspections.

1.2 COMPLIANCE/RECOMMENDATIONS

The following compliance violations were noted during the reporting period April 30, 2022, through April 30, 2023 (see **Appendix B**):

- Minor rutting was observed near the property entrance along Bailey Avenue.
- Some small holes and erosion rills were noted along the northern fence line.
- Borings and test pits were performed that were not approved by the NYSDEC. See **Appendix C** for Geotechnical Information.
- Unknown discoloration was observed along the eastern drainage ditch.

At the request of the NYSDEC, a Corrective Measures Work Plan (CMWP) was developed to describe the sampling procedures regarding the discoloration/sheen observed in the eastern drainage ditch. The CMWP was approved on June 14, 2023. Soil sampling was performed and submitted to a NYSDEC approved laboratory on July 5, 2023. Due to lack of groundwater, no water sample was obtainable. Water sampling will occur when sufficient recharge occurs. Analytical results were received on July 18, 2023. No exceedances above NYSDEC commercial SCOs listed in Table 375-6.8(a) and (b) of 6 NYCRR Part 375 were observed. **Appendix D** provides a summary table of analytical results, laboratory analytical data and photographs.

It was recommended that bare spots, ruts, minor holes and erosion rills be filled with NYSDEC approved quarried stone to prevent erosion of the cover system. A sufficient amount of stone was utilized to ensure that the cover has been restored in areas noted during the site visit. An import request form was submitted for 2" crusher run stone to the NYSDEC on July 12, 2023, and subsequently approved on July 13, 2023. Approximately 27.14 cubic yards (CY) or 40.71 tons were imported from New Enterprise Stone and Lime Co., Inc. and the repairs were completed to the extent possible on July 17, 2023. It is important to note that due to extreme vegetative overgrowth, not all bare spots, ruts, minor holes, and erosion rills were able to be field located. A dump truck was utilized to transport stone to the appropriate locations. A mini-excavator was subsequently used to level and compact the stone. The site was mowed with a brush hog on July 26 and 27, 2023. After mowing, the site was reassessed, and additional areas of cover disturbances were observed. The remaining repairs were completed on August 11, 2023, utilizing approximately 11.59 CY or 17.38 tons of the same previously approved 2" crusher run stone. See **Appendix E** for associated field reporting, photographs and import tickets.

2.0 SITE OVERVIEW AND REMEDIATION

2.1 DESCRIPTION OF SELECTED FINAL REMEDY

The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8. The site was remediated in accordance with a Track 4 cleanup as selected by the NYSDEC in the July 2019 Decision Document. The components of the selected remedy are as follows:

- Construction and maintenance of a cover system to prevent human exposure to remaining contaminated soil/fill remaining at the site. The cover system is composed of a geotextile fabric demarcation layer, a minimum of six (6) inches of barrier soil and a minimum of six (6) inches of clean topsoil of sufficient quality that ensures the maintenance of vegetation. See **Figure 10** for cover system details.
- Execution of an Environmental Easement to restrict land use and prevent future exposure to remaining contamination. This was completed by the Department in November 2019 and subsequently filed with the Erie County Clerk.
- Development and implementation of an SMP for long term management of remaining contamination as required under the Environmental Easement which includes plans for Institutional Controls (ICs) and Engineering Controls (ECs) and reporting.
- Periodic inspection and certification of the ICs and ECs

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program including site management in order to improve the sustainability of the cleanup. As the only EC implemented at the site is the soil cover system, the site with not generate additional waste, use energy, produce emissions, or encroach on any ecosystems.

2021 Supplemental Excavation Program

At the request of NYSDEC, additional fill removal activities were completed at specific locations along the shared property boundaries between the site and residential properties to the north along Dingens Street and to the south along Peru Place. This was completed to ensure that no potentially contaminated historic fill materials remained in contact with clean backfill materials placed on the residential properties during a separate off-site cleanup conducted by the NYSDEC. This additional work was completed in accordance with the DEC-approved Work Plan prepared by EnSol, Inc. in 2021. In December 2021, documentation of the completed work was provided to the Department by EnSol. In January 2022, the NYSDEC provided approval of all work conducted and concluded no changes to the December 2019 COC are necessary.

2.2 Nature and Extent of Contamination Remaining at Site

Refer to the FER/SMP for all analytical results and sampling locations.

2.2.1 Soil

The following describes remaining soil contamination after the completion of all remedial activities:

- Surface soils and shallow C&D and deeper ash and cinder backfill layers contain various SVOCs and metals at concentrations exceeding Unrestricted and Commercial Use SCOs.
- Assuming remaining fill materials at the site exhibit contamination exceeding SCOs, there is approximately 186,000 cubic yards of contaminated material remaining below the cover system.

2.2.2 Groundwater

Site groundwater contains concentrations of various SVOCs and metals above GWQS standards.

2.2.3 Soil Vapor

The levels for methyl ethyl ketone were elevated with a peak value of 1500 ug/m^3.

3.0 ENGINEERING AND INSTITUTIONAL CONTROLS

3.1 General

Since remaining contamination exists at the site, Institutional Controls (ICs) and Engineering Controls (ECs) are required to protect human health and the environment. The IC/EC Plan is one component of the SMP/EE and is subject to revision by the NYSDEC.

3.2 Institutional Controls

A series of ICs is required by the Decision Document to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the site to commercial and industrial uses only. Adherence to these ICs on the site is required by the Environmental Easement and implemented under the SMP. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The following ICs were implemented:

- The property may be used for commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv).
- All ECs must be operated and maintained as specified in the Site Management Plan (SMP).
- All ECs must be inspected at a frequency and in a manner defined in the SMP.
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Erie County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.
- Groundwater and other environmental or public health monitoring must be performed as defined in the SMP.
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP.
- All future activities that will disturb remaining contaminated material must be conducted in accordance with the SMP.
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP.
- Operation, maintenance, monitoring, inspection and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP.
- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.

3.3 Engineering Controls

3.3.1 Cover System

The cover system is the only Engineering Control required under the remedy. Exposure to remaining contamination at the site is prevented by a cover system placed over the site which consisted of geotextile fabric demarcation layer, a minimum of six (6) inches of barrier soil and a minimum of six (6) inches of clean topsoil of sufficient quality to maintain vegetation.

4.0 SITE EVALUATION

4.1 Site Wide Inspection

A Site Wide Inspection was completed by BE3 on April 25, 2023 to evaluate the integrity and performance of the site cover system installed. Compared to photographs taken on June 6, 2022, the site remains relatively unchanged apart from expected vegetation growth. Some minor, localized rutting was observed near the western property entrance along Bailey Avenue. Additionally, some small holes were noted along the northern fence line. The eastern drainage ditch contained unknown discoloration and the surrounding vegetation appeared stained. The perimeter fencing and stone entry pathway along Bailey Avenue appeared to be in good condition. Minor, scattered debris had accumulated along the southeastern and northwestern site boundary. The results of the inspection are reiterated in BE3's

Site Wide Inspection Form and site photographs are provided in **Appendix B**. The inspection concluded that the Site was not in compliance with all IC/ECs.

4.2 BORING AND TEST PITS

In April 2023, soil borings were taken at the site and subsequent test pits were completed in May, 2023. No soil was removed from the site with the exception of samples taken for geotechnical analysis. A Community Air Monitoring Plan (CAMP) was not utilized. It is important to note that the site owner is now aware that any proposed excavations need to be approved by the Department prior to completion. Geotechnical data and sampling locations can be found in **Appendix C.**

5.0 CONCLUSIONS

All components of the SMP (IC/EC) that were not in compliance will be addressed and remediated through a subsequent DEC approved Corrective Measures Work Plan.

6.0 CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS

Below is the signed certification as required by section 7.2 of the SMP.

For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment (with the exception of that which was noted in the Corrective Measures Work Plan);
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control (with the exception of that which was noted in the Corrective Measures Work Plan);
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;
- Use of the site is compliant with the environmental easement;
- The engineering control systems are performing as designed and are effective (with the exception of that which was noted in the Corrective Measures Work Plan);
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices (with the exception of that which was noted in the Corrective Measures Work Plan); and

- The information presented in this report is accurate and complete.

- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Jason M. Brydges, PE of BE3 Corp 960 Busti Avenue, Buffalo New York 14213 am certifying as Owner's Designated Site Representative for the site.

Jason M. Brydges, PE

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

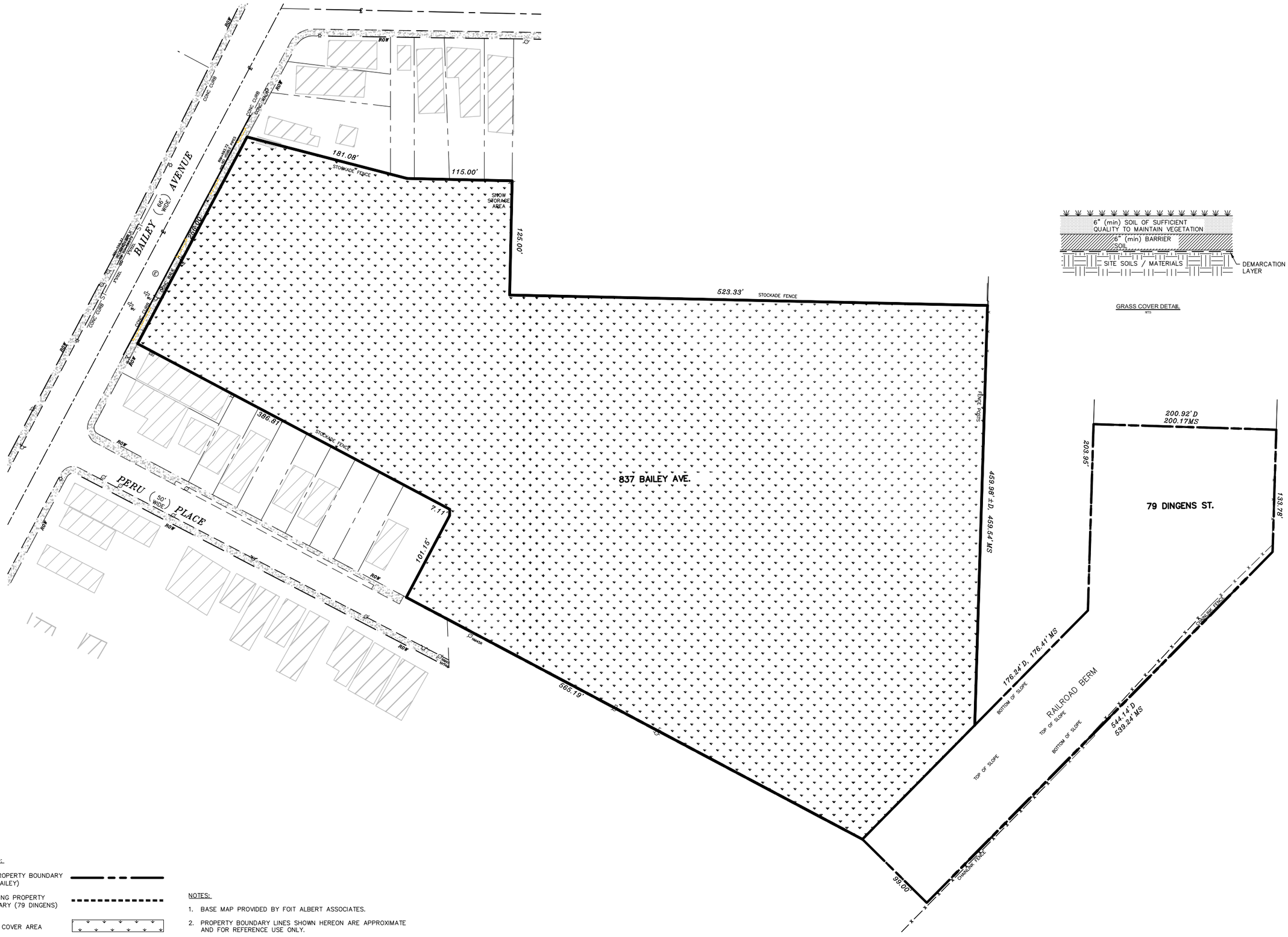
FIGURES

Figure A: Site Location Map

Site Boundary

BE3
BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

Figure A: Site Location Map	
837 Bailey Avenue	06/16/2023
Buffalo, New York	Jack Ruh



GRASS COVER DETAIL
NTS

LEGEND:

BCP PROPERTY BOUNDARY (837 BAILEY)

ADJOINING PROPERTY BOUNDARY (79 DINGENS)

GRASS COVER AREA

NOTES:

1. BASE MAP PROVIDED BY FOIT ALBERT ASSOCIATES.
2. PROPERTY BOUNDARY LINES SHOWN HEREON ARE APPROXIMATE AND FOR REFERENCE USE ONLY.

EnSol, Inc.
Environmental Solutions
661 MAIN STREET
NIAGARA FALLS, NY 14301
PHONE (716) 285-3920
FAX (716) 285-3928

CLIENT:
NEAR DINGENS, LLC

SITE:
837 BAILEY AVE

CITY OF	BUFFALO
COUNTY OF	ERIE
STATE OF	NEW YORK

PROJECT:
SITE MANAGEMENT PLAN

TITLE:
COVER SYSTEM DETAILS

ISSUED FOR:
REVIEW

DES:	DRN:	CHK:
KFP	KFP	JBB

PROJECT NO:	DATE:
15-0027-6	JULY 2019

GRAPHIC SCALE:
0' 40' 80'

FILE:
Fig10 - Cover System.dwg

REV NO:	FIGURE NO:
2	10

APPENDIX A

NYSDEC SMP PRR CERTIFICATION FORM

Enclosure 2

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

Site Details **Box 1**

Site No. **C915298**

Site Name 837 Bailey Ave.

Site Address: 837 Bailey Ave. Zip Code: 14206
City/Town: Buffalo
County: Erie
Site Acreage: 8.740

Reporting Period: April 30, 2022 to April 30, 2023

	YES	NO
1. Is the information above correct?	X	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	X	☐
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	X	☐
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	X
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	X

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	X	☐
7. Are all ICs in place and functioning as designed?	X	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. C915298

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
112.80-1-12.1	837 Bailey LLC	Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan IC/EC Plan

. Prohibition of use of groundwater.
. Soil Vapor Intrusion Evaluation for any future structures.
. Soil Management or Excavation Work Plan for any future intrusive work.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
112.80-1-12.1	Cover System

. Maintenance of the cover system

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
X	☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

   (a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C915298

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I John F. Ruh (print name) at 124 Meadow Rd Orchard Park NY 14127 (print business address),

am certifying as owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

John F. Ruh
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

8/12/2023
Date

EC CERTIFICATIONS

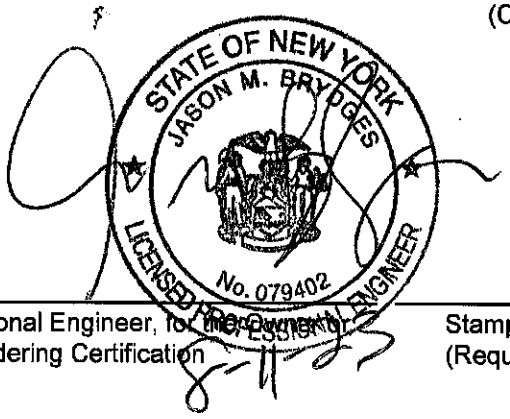
Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Jason Brydges at BE3 Corp, 960 Busti Ave, Ste B-150, Buffalo, NY 14213
print name print business address

am certifying as a Professional Engineer for the Owner (i.e. 837 Bailey Avenue, LLC)
(Owner or Remedial Party)



Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

Date

Jeffrey C. Stravino
Partner
Direct Dial: 716.848.1394
Direct Facsimile: 716.819.4659
jstravino@hodgsonruss.com

November 11, 2022

Via U.S. Mail

Kelly A. Lewandowski, P.E.
Chief, Site Control Section
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7020

Re: 837 Bailey Avenue Site
Buffalo, New York 14206
DEC Site ID No. C915298

Dear Ms. Lewandowski:

In accordance with 6 NYCRR Part 375-1.9(f), I am enclosing the Notice of Transfer of Certificate of Completion for the above-referenced Site that was filed yesterday in the Erie County Clerk's Office. I am also enclosing the Recording Receipt which evidences that this Notice was paid and properly filed. Please note that the Notice includes Schedule A (Property Description), Schedule B (the Certificate of Completion), and Schedule C (Deed from Near Dingens, LLC to Quaker Development, Inc.).

As set forth in 6 NYCRR Part 375-1.9(f)(2), the Certificate of Completion is now issued to Quaker Development, Inc. Please let me know if you have any questions.

Respectfully submitted,

Jeffrey C. Stravino

JCS/sy
Enclosure
cc: *via email*:
Jason Brydges, P.E.
Mr. Thomas Krug
Megan Kuczka (NYSDEC)
Michael Lennon, Esq.
Stanley Radon (NYSDEC)
Mr. Jack Ruh
Ms. Maritza Ruh
Mr. John Sullivan
Alexander Vilardo, Esq.

COPY

NOTICE OF TRANSFER OF CERTIFICATE OF COMPLETION

Brownfield Cleanup Program
Pursuant to 6 NYCRR Part 375-1.9(f)
837 Bailey Avenue Site, Site ID No. C915298
837 Bailey Avenue, Buffalo, New York 14206

PLEASE TAKE NOTICE, that pursuant to Article 27, title 14 of the Environmental Conservation Law and 6 NYCRR 375-1.9(f), Near Dingens, LLC hereby transfer(s) the Certificate of Completion (COC) issued by the Department of Environmental Conservation on December 20, 2019 for the Site described below. Such COC was issued upon satisfaction of the Commissioner, following review by the Department of the final engineering report and data submitted pursuant to the Brownfield Cleanup Agreement, as well as any other relevant information regarding the Site, that the remediation requirements set forth in ECL Article 27, title 14 had been or would be achieved in accordance with the time frame, if any, established in the remedial work plan.

PLEASE TAKE NOTICE, that the 837 Bailey Avenue Site is located at 837 Bailey Avenue, Buffalo, Erie County, New York. The Site is bearing DEC site number C915298 and is more fully described on Schedule A attached hereto. The Tax Map Identification Number(s) for the Site is/are: 112.80-1-12.1.

PLEASE TAKE NOTICE, that a Notice of Certificate of Completion for the Site was filed in the Erie County Clerk's Office on March 16, 2020 in Liber 11358 Of Deeds at Page 4448. A copy of the Certificate of Completion is attached hereto as Schedule B.

PLEASE TAKE NOTICE, that on November 9, 2022, Near Dingens, LLC conveyed title to the Site to Quaker Development, Inc. by Deed recorded in Liber 11910 of Deeds at Page 3322. A copy of said Deed is attached hereto as Schedule C.

PLEASE TAKE NOTICE, that Near Dingens, LLC hereby transfers the Certificate to the following new property owner(s) as provided for pursuant to Article 27, title 14 of the Environmental Conservation Law and 6 NYCRR 375-1.9(f):

Quaker Development, Inc.
(New Property Owner)

124 Meadow Road, Orchard Park, NY 14127
(Address)

16-1515817
(Employer Identification Number)

Jeffrey C. Stravino, Esq.
Representative (if applicable)

Hodgson Russ LLP, The Guaranty Building
140 Pearl Street, Buffalo, NY 14202
(Address)

FILED
NOV 10 2022
ERIE COUNTY
CLERK'S OFFICE

PLEASE TAKE FURTHER NOTICE, that if there is an environmental easement for this site, that Quaker Development, Inc. recognizes and agrees to implement the Department-approved Site Management Plan, and any amendments thereto, and to fully comply with all restrictions and affirmative obligations contained therein as well as in the Environmental Easement for the Site.

WHEREFORE, the undersigned have signed this Notice of Transfer of Certificate of Completion as of this 9th day of November, 2022.

Near Dingens, LLC — *Certificate holder(s)*

Thomas R. Krug, Member — By *authorized signator*

STATE OF NEW YORK)
) ss:
COUNTY OF ERIE)

On the 9th day of November, in the year 2022, before me, the undersigned, personally appeared THOMAS R. KRUG, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public - State of New York

JAMES MICHAEL LENNON
Notary Public, State of New York
Qualified in Erie County
My Commission Expires May 31, 2023

New Property Owner: Quaker Development, Inc.

By: _____
Name: Maritza B. Ruh
Its: President

STATE OF North Carolina)
) ss:
COUNTY OF Currituck)

On the 9 day of November, in the year 2022, before me, the undersigned, personally appeared Maritza B. Ruh, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her capacity, and that by her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Abigail E Hodgson
Notary Public

Jeffrey C. Stravino
Partner
Direct Dial: 716.848.1394
Direct Facsimile: 716.819.4659
jstravino@hodgsonruss.com

Hodgson Russ LLP
ATTORNEYS

January 13, 2023

Via U.S. Mail and Email

Kelly A. Lewandowski, P.E.
Chief, Site Control Section
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7020

Re: 837 Bailey Avenue Site
Buffalo, New York 14206
DEC Site ID No. C915298

Dear Ms. Lewandowski:

In accordance with 6 NYCRR Part 375-1.9(f), I am enclosing the Notice of Transfer of Certificate of Completion for the above-referenced Site that was filed yesterday on January 12, 2023 in the Erie County Clerk's Office. I am also enclosing the Recording Receipt which evidences that this Notice was paid and properly filed. Please note that the Notice includes Schedule A (Property Description), Schedule B (the Certificate of Completion), and Schedule C (Deed from Quaker Development, Inc. to 837 Bailey LLC).

As set forth in 6 NYCRR Part 375-1.9(f)(2), the Certificate of Completion is now issued to both Quaker Development, Inc. and 837 Bailey LLC, and 837 Bailey LLC now holds title to the real property. Please let me know if you have any questions.

Respectfully submitted,

Jeffrey C. Stravino

JCS/sy
Enclosure
cc: *via email*:
Jason Brydges, P.E.
Ms. Megan Kuczka (NYSDEC)
Stanley Radon (NYSDEC)
Mr. Jack Ruh
Ms. Maritza Ruh
Gregory Scholand, Esq. (NYSDEC)
Alexander Vilardo, Esq.

COPY

FILED

JAN 12 2023

ERIE COUNTY
CLERK'S OFFICE

NOTICE OF TRANSFER OF CERTIFICATE OF COMPLETION
Brownfield Cleanup Program
Pursuant to 6 NYCRR Part 375-1.9(f)
837 Bailey Avenue Site, Site ID No. C915298
837 Bailey Avenue, Buffalo, New York 14206

PLEASE TAKE NOTICE, that pursuant to Article 27, title 14 of the Environmental Conservation Law and 6 NYCRR 375-1.9(f), Quaker Development, Inc. hereby adds 837 Bailey LLC to the Certificate of Completion ("COC") issued by the Department of Environmental Conservation on December 20, 2019 for the Site described below. Such COC was issued upon satisfaction of the Commissioner, following review by the Department of the final engineering report and data submitted pursuant to the Brownfield Cleanup Agreement, as well as any other relevant information regarding the Site, that the remediation requirements set forth in ECL Article 27, title 14 had been or would be achieved in accordance with the time frame, if any, established in the remedial work plan.

PLEASE TAKE NOTICE, that the 837 Bailey Avenue Site is located at 837 Bailey Avenue, Buffalo, Erie County, New York. The Site is bearing DEC site number C915298 and is more fully described on Schedule A attached hereto. The Tax Map Identification Number(s) for the Site is/are: 112.80-1-12.1.

PLEASE TAKE NOTICE, that a Notice of Certificate of Completion for the Site was filed in the Erie County Clerk's Office on March 16, 2020 in Liber 11358 Of Deeds at Page 4448. A copy of the Certificate of Completion is attached hereto as Schedule B.

PLEASE TAKE NOTICE, that on December 22, 2022, Quaker Development, Inc. conveyed title to the Site to 837 Bailey LLC by Deed recorded in the Erie County Clerk's Office in Liber 11412 Of Deeds at Page 2035. A copy of said Deed is attached hereto as Schedule C.

PLEASE TAKE NOTICE, that Quaker Development, Inc. hereby adds the following new property owner to the COC as provided for pursuant to Article 27, title 14 of the Environmental Conservation Law and 6 NYCRR 375-1.9(f):

837 Bailey LLC
(New Property Owner)

124 Meadow Road, Orchard Park, NY 14127
(Address)

Federal Tax ID No. 92-1088989
(Employer Identification Number)

Jeffrey C. Stravino, Esq.

Representative (if applicable)

Hodgson Russ LLP, The Guaranty Building
140 Pearl Street, Buffalo, NY 14202
(Address)

PLEASE TAKE FURTHER NOTICE, that if there is an environmental easement for this site, that 837 Bailey LLC recognizes and agrees to implement the Department-approved Site Management Plan, and any amendments thereto, and to fully comply with all restrictions and affirmative obligations contained therein as well as in the Environmental Easement for the Site.

WHEREFORE, the undersigned have signed this Notice of Transfer of Certificate of Completion as of this 3 day of January, 2023.

Quaker Development, Inc. *Certificate holder(s)*

By *authorized signator*

STATE OF NEW YORK)
) ss:
COUNTY OF Erie)

On the 3rd day of January, in the year 2023, before me, the undersigned, personally appeared Maritza Ruiz, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public - State of New York

JEANNE M. SAMSON
Notary Public, State of New York
No. 01SA6120277
Qualified in Erie County
Commission Expires Dec. 20, 2024

837 Bailey LLC *(New Property Owner(s))*

By *authorized signator*

STATE OF NEW YORK)
) ss:
COUNTY OF Erie)

On the 3rd day of January, in the year 2023, before me, the undersigned, personally appeared Maritza Ruh, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public - State of New York

JEANNE M. SAMSON
Notary Public, State of New York
No. 01SA6120277
Qualified in Erie County
Commission Expires Dec. 20, 2024

APPENDIX B

SITE WIDE INSPECTION FORMS
AND
SITE PHOTOS

BE3Corp
960 Busti Avenue Suite B-150
Buffalo, New York

BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

SITE WIDE INSPECTION FORM

Date: April 25, 2023

Site Name: 837 Bailey Avenue

Location: 837 Bailey Avenue, Buffalo, NY

General Site Conditions: The gravel pathway that previously extended east is now covered in vegetation. The site remains vacant (ie. no development has occurred since the last PRR was completed).

Weather Conditions: 52°F and partly cloudy

Compliance/Evaluation ICs and ECs :

Some minor rutting was observed near the entrance along Bailey Avenue and some minor holes requiring filling existed along the northern fence line. Additionally, borings and test pits were performed without obtaining permission from the DEC, thus disturbing the cover system.

Site management Activities (sampling, H & S Inspection, etc.):

As noted in the site photographs, groundwater and soil samples will need to be collected in order to evaluate the origin of the staining and sheen in the eastern drainage ditch. This will be addressed in a separate Corrective Measures Work Plan.

Compliance with Permits and O & M Plan:

The site remedy does not rely on any mechanical systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in the SMP.

Records Compliance:

To the extent possible, records were obtained regarding the soil borings and test pits that were performed without DEC approval.

General Comments:

A Corrective Measures Work Plan will be developed to address compliance issues (ie. Unapproved soil borings and test pits) and remedial measures, sampling procedures regarding the unknown sheen in the eastern drainage ditch and remedial actions to address the minor rutting and soil disturbances

INSPECTOR'S NAME: Alexis Palumbo-Compton – Project Engineer

1. View of the southern border on the west side of the site

2. View of drainage ditch located along the central southern border

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

3. View of the southern border on the east side of the site

4. View of cover system and minor debris facing north

4. View of minor vegetation disturbances in the southeastern corner

5. View of vegetative overgrowth in the southeastern corner

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6. View of unknown substance in the eastern drainage ditch

7. Limited view of vegetative staining further east of the eastern drainage dich

9. Close up view of the unknown substance demonstrating a light sheen

10. View of mild soil disturbances in the northeastern corner

11. View of drainage ditch along the northern border on the east side of the site

12. View of fencing along the northern border

13. View of minor soil disturbances along the northern border on the east side of the site

14. View of a minor hole along the northern fence on the east side of the site

15. View of debris along the northern border on the west side of the site

16. View of stone pathway on the western border along Bailey Avenue

17. View of rutting neighboring the western border along Bailey Avenue

18. View of concrete blocks adjacent to the stone pathway near the western border along Bailey Avenue

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IN ENVIRONMENT AND ENERGY, DPC

APPENDIX C

GEOTECHNICAL INFORMATION

BRYDGES ENGINEERING

ATLANTIC TESTING LABORATORIES

Buffalo
5167 South Park Avenue
Hamburg, NY 14075
716-649-8110 (T)
atlantictesting.com

WBE certified company

June 12, 2023

Greenwood Construction, LLC
31 Tonawanda Street
Buffalo, New York 14207

Telephone: 716-949-1233
Email: sruh@ruhdevelopment.com

Attn: Stoyan Ruh

Re: Subsurface Investigation and Geotechnical Evaluation
Proposed Secure Storage Facility
837 Bailey Avenue
City of Buffalo, New York
ATL Report No. BD003E-01-04-23

Ladies and Gentlemen:

Enclosed is one (1) electronic copy of the referenced report. ATL appreciates the opportunity to provide geotechnical services for your project.

Please note that upon completion of the subsurface investigation, the borings and test pits were backfilled with on-site soils and the surface was patched to match the corresponding surface conditions. It is important that the backfilled borings and test pits be monitored for settlement or subsidence. This will be the responsibility of Greenwood Construction, LLC. ATL assumes no liability for loss or damage resulting from borehole settlement.

The soil samples obtained during this investigation will be retained for a period of six months and subsequently discarded, unless otherwise instructed.

Please contact our office should you have any questions or comments on this information, or if we may be of further service. We look forward to our continued association to obtain a successful completion of this project.

Sincerely,
ATLANTIC TESTING LABORATORIES, Limited

Thomas R. Seider, PE
Senior Engineer

TRS/BTB/sw

Enclosure

SUBSURFACE INVESTIGATION
AND
GEOTECHNICAL EVALUATION

PROPOSED SECURE STORAGE FACILITY
837 BAILEY AVENUE
CITY OF BUFFALO, NEW YORK

GREENWOOD CONSTRUCTION, LLC

PREPARED FOR: **Greenwood Construction, LLC**
31 Tonawanda Street
Buffalo, New York 14207

PREPARED BY: **Atlantic Testing Laboratories, Limited**
5167 South Park Avenue
Hamburg, New York 14075

ATL Report No. BD003E-01-04-23

June 12, 2023

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SUBSURFACE INVESTIGATION
AND
GEOTECHNICAL EVALUATION

PROPOSED SECURE STORAGE FACILITY
837 BAILEY AVENUE
CITY OF BUFFALO, NEW YORK

GREENWOOD CONSTRUCTION, LLC

1.0 INTRODUCTION

At the request of Mr. Stoyan Ruh, representing Greenwood Construction, LLC, and in accordance with the April 5, 2023 Assignment and Consent to Assignment between WMA Engineering, DPC, Atlantic Testing Laboratories, Limited (ATL), and Greenwood Construction, LLC (Greenwood Construction), ATL performed a subsurface investigation and geotechnical evaluation for the referenced project.

The purpose of the investigation was to ascertain the general subsurface soil and groundwater conditions at the site, to evaluate the engineering significance of these findings, and to provide recommendations related to the design and construction of the proposed facility.

2.0 SITE AND PROJECT DESCRIPTION

The project site consist of an irregular shaped, approximate 8.7 acre parcel, located along the east side of Bailey Avenue, between its intersection with Dingens Street and Peru Place (street address 837 Bailey Avenue), within the City of Buffalo, New York. The approximate site limits are shown on the **Exploration Location Plan,** included in **Appendix A**. All dimensions and elevations referenced in this report are in units of feet, unless otherwise noted.

The existing site consists of a relatively level, grass covered field, with some brush and trees at the east end. A gravel covered driveway provides access to the central portion of the site. Other than some utility poles and overhead wires, no above ground structures exist on the stie. However, based on a cursory review of historic aerial mapping (www.historicaerials.com), a majority of the site was previously used as an automobile salvage yard, with some buildings located within the west end of the site along Bailey Avenue.

Based on information provided by Greenwood Construction, the secure storage facility will include two buildings within the west end of the site, with relatively square footprints of about 20,000 square feet and 31,000 square feet. Four additional buildings are planned within the central portion of the site, each about 190 feet long, with widths ranging from 20 feet to 40 feet, or about 3,800 square feet to 7,600 square feet. The buildings are planned as pre-engineered

steel structures, with metal panel walls. The floors are planned as concrete slab-on-grades, with each building having a finished floor elevation near the current site grades. No below grade pit structures are planned. The approximate location of the proposed buildings are shown on the Exploration Location Plan.

3.0 ATL SUBSURFACE INVESTIGATION & SAMPLING METHODOLOGY

3.1 Soil Borings

Five (5) soil boring locations, designated as B-1 through B-5, were selected by representatives of Greenwood Construction, and were provided to ATL on a site plan. The soil boring locations were then staked in the field by representatives of ATL, using a hand held global positioning system (GPS) instrument. Laser level survey techniques were utilized by ATL to determine the relative ground surface elevation at the test boring locations. The ground surface elevations were referenced to the rim of an electric manhole within Bailey Avenue, which was assigned an arbitrary datum elevation of 100.0 feet by ATL. The soil boring locations, the recorded coordinates, and the approximate benchmark location, are shown on the Exploration Location Plan.

The test borings were completed by ATL on April 6th and 7th, 2023, using a Central Mine Equipment (CME) model 550X, all-terrain terrain tire mounted drill rig. The test borings were advanced through the overburden using hollow stem auger and split spoon soil sampling techniques. Soil sampling and standard penetration testing was performed utilizing a 2-inch outside diameter split spoon sampler and automatic drop hammer in accordance with ASTM D 1586. Soil sampling was performed continuously to a depth of 12 feet, and at 5-foot intervals thereafter.

All five test borings were advanced through the overburden until encountering auger refusal conditions at depths ranging from 26.2 feet to 27.9 feet. Following auger refusal within test boring B-5, five feet of rock coring was completed, using an NQ size double tube core barrel in accordance with ASTM D 2113.

The soil samples were visually classified in the laboratory by an engineering technician using the Burmister Soil Classification System. The split spoon sampler does not recover particles larger than 1⅜-inch in nominal dimension; therefore, the soil classifications may not be representative of the entire soil matrix. The recovered rock core from test boring B-5 was also described, including characteristics such as color, rock type, hardness, weathering, bedding thickness, core recovery and rock quality designation (RQD). The visual classifications and the standard penetration test results are presented on the **Test Boring Logs** included in **Appendix B**.

3.2 Test Pit Excavations

Following the completion of the test borings, ATL returned to the site to complete five (5) test pit excavations, designated as TP-1 through TP-5, to further evaluate the nature and thickness of the fill soils, and evaluate for shallow groundwater conditions. The test pit locations were selected by ATL to provide general coverage of the site. Similar to the soil borings, ATL used a hand held GPS instrument to stake the test pit locations. Ground surface elevations at the test pit excavations were not obtained. The test pit locations and the recorded coordinates are shown on the Exploration Location Plan.

The test pits were excavated by ATL on May 9th, 2023, using a Ford 555E, rubber tired backhoe. The test pits were excavated to depths ranging from about 5.7 feet to 7.4 feet, and were generally terminated after encountering groundwater, which caused the excavation sidewalls to cave-in. The test pits were observed and logged in the field by a Geologist. The **Test Pit Logs** are included in **Appendix C**.

3.3 Backfill of Boreholes and Test Pits

The boreholes and test pit excavations were backfilled with on-site soils upon completion of the subsurface investigation. It is important that the backfilled borings and test pits be monitored for settlement or subsidence. This will be the responsibility of Greenwood Construction. ATL assumes no liability for loss or damage resulting from borehole settlement.

4.0 PREVIOUS SUBSURFACE INVESTIGATIONS BY OTHERS

Greenwood Construction provided ATL with a copy of the June 2016 / Revised July 2016 Geotechnical Report for the proposed Buffalo Truck Center, prepared by Daigler Engineering, P.C. (2016 Geotechnical Report). This report was based on the findings from four test borings (designated GTSB-1 through GTSB-4) and four test pit excavations (designated GTTP-1 through GTTP-4), completed within the central portion of the site. The proposed truck center was not constructed. The approximate location of these explorations are shown on the Exploration Location Plan. Copies of the **Test Boring Logs and Test Pit Logs from the 2016 Report** are included in **Appendix D**. The subsurface conditions identified within the 2016 explorations are included within this report, as appropriate.

5.0 LABORATORY ANALYSES

Select soil samples collected from the test borings were submitted to ATL's geotechnical laboratory for the following physical analyses:

- Five (5) Water Content Determinations of Soil (ASTM D 2216).
- Two (2) Liquid Limit, Plastic Limit, and Plasticity Index of Soils (ASTM D 4318).

One (1) piece of the recovered bedrock core was tested by ATL for Unconfined Compressive Strength (ASTM D 7012, Method C).

One (1) composite sample of the fill soils collected from test pit TP-3 was tested to evaluate its potential corrosiveness to steel and concrete. This testing included:

- Resistivity, Redox, pH, and Sulfides according to procedures established by the Ductile Iron Pipe Research Association (AWAA Specifications C105/A21.5-10 Appendix A).
- Water Soluble Sulfate in Soil (ASTM C 1580).
- Water Soluble Chloride Ion Content in Soil (AASHTO T 291, Method A).

The **Laboratory Test Results** are included in **Appendix E** and are summarized in the following sections of this report.

6.0 SITE SUBSURFACE CONDITIONS

The following description of subsurface conditions is based on the subsurface soil and water conditions encountered during the subsurface investigations performed by ATL on April 6th, April 7th, and May 9th, 2023. Findings from the 2016 Geotechnical Report are also incorporated into the following sections. Actual subsurface conditions should be expected to vary across the site in both the horizontal and vertical dimensions. More detailed subsurface descriptions are provided on the exploration logs in Appendices B, C, and D.

6.1 Surface Conditions and Fill Soils

6.1.1 Surface Conditions

Test boring B-1 was completed within the gravel driveway. The remaining ATL test borings and test pit excavations encountered topsoil at the surface. At the test pit locations, between 4 and 7 inches of topsoil / organic material was encountered at the surface. Topsoil measurements were not made within the ATL test borings. The previous use of the site for automobile salvage operations, along with past filling and grading activities, have likely disturbed the surface. Accordingly, the reported topsoil / organic material thicknesses should be considered approximate and should be expected to vary across the limits of the site. These measurements should not be relied on for construction quantity estimates. We recommend the Contractor, and/or others, make their own observations and measurements, prior to bidding and construction, to determine the quantities and effort that will be required for topsoil removal and associated replacement with appropriate suitable fill materials. Topsoil thicknesses were not reported in the 2016 Geotechnical Report.

6.1.2 Fill Soils / Materials

Beneath the topsoil, fill type soils were encountered within all the test borings, which extended to depths ranging from about 4 feet to 12 feet. The following table summarizes the fill depths and apparent bottom of fill elevations encountered at the test boring locations. The fill soils were not fully penetrated within the 5.7 feet to 7.4 feet deep test pits completed by ATL or the 4.5 feet to 5.2 feet deep test pits completed as part of the 2016 Geotechnical Report.

Approximate Fill Depths and Bottom of Fill Elevations at the Test Boring Locations

Test Boring	Surface Elevation (feet)	Fill Depth / Bottom Elevation (feet)
ATL Test Borings		
B-1	102.4	4 / 98.4
B-2	102.4	8 / 94.4
B-3	103.1	8 / 95.1
B-4	102.4	6 / 96.4
B-5	103.0	4 / 99.0

Approximate Fill Depths and Bottom of Fill Elevations at the Test Boring Locations (continued)		
Test Boring	Surface Elevation (feet)	Fill Depth / Bottom Elevation (feet)
2016 Geotechnical Report Test Borings		
GTSB-1	not reported	10
GTSB-2	not reported	10 to 12
GTSB-3	not reported	8
GTSB-4	not reported	8

As summarized above, the fill thickness was about 4 feet to 6 feet thick within ATL test borings B-1, B-4, and B-5, which were completed within the west end of the site. Moving towards the east, about 8 feet of fill soils were encountered within ATL test boring B-2 and B-3 and the 2012 test borings GTSB-3 and GTSB-4. Within the eastern most test borings (GTSB-1 and GTSB-2), the fill thickness was about 10 to 12 feet thick. It should be expected that the fill thickness will vary between and away from the test boring locations, and will be dependent on the original site topography prior to filling. The fill soils will also extend to the bottom of the excavations made for any former building foundations and any existing or former utilities.

Within ATL test borings B-1 through B-5, the fill layer consisted of a reworked mixture of varying proportions of silty clays, sands, and gravels. Trace amounts of organics, brick fragments, cinders, ash, slag, were typically observed within most of the fill samples. Several other samples consisted predominately of concrete fragments, brick fragments, and wood. The Standard Penetration Test (SPT) “N” values obtained within the fill soils at the ATL test borings mostly ranged from 2 to 10, indicating the fill soils have a “very loose” to “loose” relative density. The variable nature of the fill soils and the relatively low SPT “N” values are indications the fill soils were installed in an uncontrolled or non-engineered manner.

Beneath the topsoil within the ATL test pits, the fill layer to about 2 feet deep consisted of silty clays with sand and gravel, along with varying amounts of amounts of glass, bricks, cinders, concrete, metal, slag, and organics. The remaining deeper fill consisted of sands and gravels with the same types of intermixed fill materials. In addition, sandstone blocks were encountered within test pits TP-1 and TP-2, and cobbles were observed throughout test pit TP-5.

The shallower fill layer within the test borings and test pits completed for the 2016 Geotechnical Report were described as a mixture of silt, sand, and gravel, with brick fragments, cinders, concrete, and ash. Beneath about 4 feet, the fill was noted to transition to a mixture of cinders, ash, and brick fragments, and then predominately to ash and cinders near the bottom of the fill layer. The SPT “N” values obtained within the fill soils at these test borings were variable, ranging from 2 to 53, but were often less than 10, correlating to a “very loose” to “loose” relative density.

6.1.3 Corrosivity Laboratory Results

One composite sample of the fill soils collected from test pit TP-3, from about 2 feet to 6 feet, was tested to evaluate its corrosiveness to ductile iron pipe, steel, and concrete. The results are included in Appendix E and are summarized below.

DIPRA Test Results							
Test Boring	Sample Depth (ft. bgs)	Resistivity (ohm-cm)	Redox (mv)	pH	Sulfides	Moisture (%)	Total DIPRA Points
TP-3	2 to 6	6,837	7.68	7.1	negative	moist	1

Note: ft. bgs = feet below ground surface.

Based on the DIPRA publication "American National Standard for Polyethylene Encasement for Ductile Iron Pipe Systems", if the total DIPRA points is 10 or more, the soil is considered corrosive to ductile iron pipe, and protection against exterior corrosion should be provided. Although the total DIPRA points for the sample tested were only 1, consideration should be given to using corrosion protection measures at this site. This is due to the highly variable nature of the fill soils encountered, and the potential to encounter more corrosive type soils within other areas of the site.

Chlorides and Sulfate Test Results			
Test Boring	Sample Depth (feet bgs)	Chloride (mg / kg)	Sulfate (mg / kg)
TP-3	2 to 6	100	1300

Note: ft. bgs = feet below ground surface.

Based on the sulfate concentrations, the soils tested are considered to have a moderate potential for sulfate exposure to concrete. Accordingly, a Type II Portland cement or a cement with grater resistance to sulfate attack should be used at this site.

6.2 Indigenous Soils

Beneath the fill layer, and extending to the top of bedrock, the indigenous soils consisted mostly of silty clays. These soils are classified as a CL group soil using the Unified Soil Classification System (USCS). Within the ATL test borings B-1 through B-5, the SPT "N" values obtained within the silty clay soils at depths less than 15 to 20 feet, ranged from 7 to 27, with an average of about 13, indicating the shallower soils are generally "stiff". Beneath these depths, the SPT "N" values ranged from 2 to 5, indicating the deeper silty clay soils at these locations have a "very soft" to "medium" consistency. Exceptions to the silty clay soils, include the last soil samples collected from test borings B-1 and B-4, which consisted of a mixture of gravels, sands, and silty clays, which are classified as a GC-GM group soil using the USCS.

Similar silty clay soils were encountered within test borings GTSB-1 through GTSB-3, completed for the 2016 Geotechnical Report. However, at these locations, the soils were relatively softer. Beneath a depth of about 10 feet within these test borings, the SPT "N" values ranged from 1 to 6, with an average of about 4, indicating these same soils farther to the west are mostly "very soft" to "soft".

Samples of the silty clay soils were tested by ATL for moisture content and liquid / plastic limits. The results are included in Appendix E, are summarized in the following table, and generally confirm the visual soil classifications. Similar testing was completed as part of the 2016 Geotechnical Report, with the results also summarized below.

Geotechnical Laboratory Testing Results – Indigenous Soils				
Test Boring	Sample Depth (ft. bgs)	SPT "N" Values	Moisture Content (%)	PL / LL / PI
ATL Test Borings				
B-5	6 to 8	27	25.3	21 / 37 / 16
B-5	20 to 22	3	36.0	19 / 43 / 24
2016 Geotechnical Report Test Borings				
GTSB-1	12 to 16	4	29.0	19 / 32 / 13
GTSB-2	16 to 20	4 and 3	38.6	21 / 40 / 19

Notes:
1. ft. bgs = feet below ground surface.
2. PL = Plastic Limit, LL = liquid limit, PI = Plasticity Index.

Additional moisture content testing indicates the silty clay soils, shallower than about 12 feet have a moisture content ranging from 22.6% to 25.3%. Beneath about 12 feet, the silty clay soils have a moisture content ranging from about 29.0% to 38.6%.

6.3 Bedrock

All five of the ATL test borings were advanced through the overburden until encountering auger refusal conditions at the top of apparent bedrock. Subsequent rock coring within test boring B-5 confirmed the refusal material consisted of Limestone bedrock. Test boring GTSB-2 completed for the 2016 Geotechnical Report was also advanced to auger refusal and the bedrock was cored. The remaining test borings completed for the 2016 Geotechnical Report were terminated prior to encountering auger refusal conditions. The following table summarizes the depth and elevation where the top of bedrock was encountered, as identified by rock coring (C) or auger refusal (AR).

Approximate Depth and Elevation of Top of Bedrock			
Test Boring	Approximate Ground Surface Elevation (feet)	Depth / Elevation of Top of Bedrock (feet)	
ATL Test Borings			
B-1	102.4	26.4 / 76.0	(AR)
B-2	102.4	26.2 / 76.2	(AR)
B-3	103.1	27.3 / 75.8	(AR)
B-4	102.4	27.9 / 74.5	(AR)
B-5	103.0	27.0 / 76.0	(C)
2016 Geotechnical Report Test Borings			
GTSB-2	not reported	26.8 / unknown	(C)

As summarized above, the depth to the top of bedrock was relatively consistent between test boring locations. The recovered rock core from ATL test boring B-2 was described as gray, hard to very hard, sound, bedded to massively bedded, Limestone bedrock. The bedrock core recovery from ATL test boring B-2 was 97% and the Rock Quality Designation RQD value was 97%. The RQD value for the bedrock core recovered from test boring GTSB-2 was 92%. These RQD values indicate the recovered rock cores have an “excellent” rock mass quality. One piece of the recovered bedrock core from ATL test boring B-5 was tested for unconfined compressive strength. The results indicate the bedrock core tested has an unconfined compressive strength of about 18,000 pounds per square inch (psi).

6.4 Subsurface Water

Water level observations were made in the test borings at the completion of overburden drilling and sampling, and within the test pit excavations, and are noted on the exploration logs in Appendices B, C, and D. Based on this information, and the soil moisture descriptions, a general groundwater condition is expected within the silty clay indigenous soils at depths ranging from about 8 feet to 12 feet. A zone of perched or trapped groundwater also exists within the fill soils, near a depth of about 4 to 6 feet. It should be expected that both general and perched groundwater conditions will vary with location and with changes in soil conditions, precipitation, and seasonal conditions. Installation of groundwater observation wells would be necessary to better define the groundwater conditions at the site.

6.4.1 ATL Explorations

Within the ATL test borings B-1, B-2, and B-4, water was measured at depths ranging from 16 feet to 24 feet. No water was observed within completed test boring B-3, and a water level measurement was not made within completed test boring B-5. Based on the variable depths, it is likely that the groundwater did not have time to fully accumulate and stabilize in the test borings during the time that had elapsed from the completion of drilling operations and the time

of the measurements. The collected samples of silty clay soils were described as “moist to wet” or “wet” beginning at depths of about 8 feet to 12 feet. This information, coupled with the lower SPT “N” values beginning at a depth of about 15 feet, suggest a general groundwater condition within these test borings is about 12 to 15 feet deep.

Some of the samples of fill soils from the test borings were described as “moist to wet”. Similar wetter fill soils were also apparent within the test pit excavations. At the completion of the test pit excavations, free standing water was typically about 5 to 6 feet below the surface. When attempting to excavate below the water level, the sidewalls of the test pit excavations collapsed. The water appears to be the result of some perched or trapped groundwater accumulation within the more granular and looser soils, which overlie the less permeable silty clay soils. Perched groundwater conditions can be more prevalent following heavy or extended periods of precipitation and during seasonally wet periods.

6.4.2 2016 Geotechnical Report Explorations

The water levels observed within both the test borings and test pits completed for the 2016 Geotechnical Report, were about 4.5 feet to 5 feet below the surface. The water level within these test borings appeared to have stabilized to near the same water levels observed within the test pits. Most of the collected sample of soils (from both the test borings and test pits) beneath a depth of 4 to 5 feet, were described as “wet”. Accordingly, it is difficult to distinguish between perched groundwater and general groundwater conditions within these explorations.

7.0 GEOTECHNICAL ENGINEERING DISCUSSION & RECOMMENDATIONS

7.1 General Considerations and Recommendations

The geotechnical engineering discussion and recommendations are based on information provided by Greenwood Construction and the subsurface conditions outlined in this report. The following sections provide generalized recommendations, with more detailed recommendations presented in the subsequent sections of this report.

1. Construction of the proposed storage buildings will be primarily impacted by: the existing fill type soils; the shallower zones of groundwater; and the relatively softer silty clay soils encountered beneath a depth of 10 to 15 feet.

2. Although the 2016 Geotechnical Report provided recommendations for constructing spread foundations bearing within the fill soils, ATL does not recommend using this approach. Construction of spread foundations within the fill soils can undergo potentially excessive and unpredictable total and differential settlement. Therefore, for spread foundations to be used, the existing fill soils would have to be completely removed from beneath the proposed spread foundations, and be replaced with Engineered Fill. This could be a viable option within the west end of the site (ATL test borings B-1, B-4, and B-5), where about 4 feet to 6 feet of fill soils were encountered. For the remaining areas, where 8 feet to 12 feet of fill soils were encountered, spread foundations are not expected to be a practical option. As noted, when attempting to excavate the test pits beneath the groundwater, the sidewalls became unstable and collapsed.

3. Considering the issues associated with using spread foundations with a majority of the site, we recommend a deep foundation system be used, which will transfer the building loads through the fill soils, and into the Limestone bedrock. Both driven piles and drilled piers are suitable deep foundation options for this site.

4. Other foundation systems that could be considered include rigid inclusions and stone columns, which could possibly allow for conventional spread foundations to be used.

   - Rigid inclusions are grout columns, typically 12 to18 inches in diameter, installed at a relatively frequent spacing through the fill and overburden soils, extending to the top of bedrock. Through grout / soil interaction, the rigid inclusions increase the bearing capacity support of the fill soils.
   - Stone columns are similar to rigid inclusions, with the exception that a crushed stone material is used instead of grout. The stone is compacted using a drop hammer or vibratory probe.
   - A load transfer platform, consisting of a Structural Fill layer is typically required between the top of the rigid inclusions or stone columns and the bottom of the spread foundations.

5. Excavations are expected to encounter groundwater conditions near depths of about 4 to 6 feet. Appropriate dewatering measures should be implemented to allow for construction to proceed in the dry.

6. Our investigation work did not include an environmental evaluation of the fill soils/materials or groundwater. However, given the historical use of the site and the unknown origins of the fill soils/materials, special handling, sampling, and staging requirements of the soils and groundwater could become necessary. These conditions should be considered when selecting the foundation system. The use of driven piles or rigid inclusions would be expected to develop lesser amounts of excess soils and require limited amounts of dewatering compared to drilled piers and spread foundations.

7. Based on the subsurface conditions encountered, the site should be classified as Seismic Site Class “D” in accordance with the criteria in the New York State Building Code.

8. The deep foundation support will generally eliminate the settlement risks discussed above for spread foundations. However, settlement risks will remain with regard to the ground level floors. This is due to the variable nature and thickness of the fill soils, and the possibility for other undetected unsuitable soils to exist within the fill layer, such as buried organics. We understand that removal and replacement of all fill soils within the proposed building limits is not economically practical. Therefore, the Owner could consider removing a portion of the existing fill and provide some additional Structural Fill/Subbase Stone beneath the slab-on-grade construction. There are some uncertainties with this approach, such as long-term differential settlement, which could potentially occur with leaving undetected, unsuitable fill soils in-place. If the Owner is not willing to accept the risks with leaving the fill in-place in its current state, then consideration will need to be given to using a structural floor slab supported by a deep foundation system.

7.2 Spread Foundations

As noted, conventional spread foundations could be considered for use within the west end of the site, in the area of ATL test borings B-1, B-4, and B-5, where the fill layer was only about 4 feet to 6 feet thick. Spread foundations should bear on suitable, relatively undisturbed, indigenous soil subgrades or they can bear on Engineered Fill (i.e. compacted Structural Fill or Flowable Backfill) placed over suitable indigenous soil subgrades. Suitable indigenous soil bearing grades should consist of the “stiff” to “very stiff” silty clay indigenous soils. The bearing grades must be free of all fill soils, organics, soft, wet, or otherwise deleterious material. The

suitable bearing grade depths/elevations that were encountered in the test borings are presented in the following table.

Recommended Suitable Bearing Grade Depth / Elevation for Spread Foundations or Engineered Fill		
ATL Test Boring	Approximate Ground Surface Elevation (feet)	Suitable Bearing Grade Depth / Elevation (feet)
B-1	102.4	5.0 / 97.4
B-4	102.4	7.0 / 95.4
B-5	103.0	4.5 / 98.5

Subsurface conditions could vary between and away from the exploration locations, and therefore could require adjustments in the suitable subgrade elevation, based on actual conditions encountered at the time of construction. Accordingly, full time inspection of the foundation bearing subgrades, by qualified geotechnical personnel, is recommended as the excavations are made at the time of construction.

Structural Fill, if used as an Engineered Fill layer beneath the spread foundations, should extend out horizontally a distance equal to at least 0.5 times the thickness of the Structural Fill layer beneath the foundations. Excavations, therefore, will need to be planned and sized accordingly. Recommendations for Structural Fill material and its placement and compaction are provided in Section 9.1 of this report.

Flowable backfill material, if used as the Engineered Fill layer, should be a non-swelling type of material and should have a minimum 28-day compressive strength (f'c) of 250 pounds per square inch (psi). The flowable backfill should extend at least 12 inches horizontally beyond the foundation limits for its entire depth.

Continuous wall footings should be at least 2.0 feet in width and column/individual footings should be at least 3.0 feet in width. Foundations should be embedded a minimum of 4.0 feet below final exterior grades for frost protection. All foundations, however, should bear on suitable indigenous soils or Engineered Fill installed over suitable indigenous soils, in accordance with the recommendations above.

Spread foundations, constructed in accordance with the above recommendations, can be sized based on a maximum net allowable bearing pressure of 2,000 pounds per square foot. It is estimated that 2 feet wide wall footings and 6 feet isolated square spread foundations sized and properly constructed in accordance with our recommendations, and our understanding of the proposed project, will undergo a total settlement of less than 1 inch. If wider footings are required, additional settlement evaluations should be completed.

7.3 Driven Pile Foundations

The Limestone bedrock, which was encountered at depths ranging between about 26 feet and 28 feet below the existing ground surface, will provide a suitable bearing stratum for a driven pile foundation system. H-piles or pipe piles driven to refusal on the bedrock will derive their capacity predominately through end bearing.

Zones of rubble and other obstructions may be present at various locations and depths within the existing fill layer. These potential obstructions could hinder and impact the installation of the driven piles, and therefore should be anticipated and addressed as appropriate by the pile driving contractor in developing the methods and costs for the driven pile foundation system. In some cases pre-drilling or pre-excavation through the fill layer could be required to allow for the proper installation of the driven piles.

All driven piles should be of a minimum Grade 50 (Fy ≥ 50 ksi) steel. The piles should be equipped with a hardened driving tip or shoe to limit potential damage when driving to the top of bedrock.

An H-pile, driven to refusal on the bedrock, may be designed for an allowable axial capacity equal to 30% of the pile yield strength or 15.0 kips per square inch (ksi), whichever is less, times the cross sectional area of the pile. We recommend that a 10% reduction in the cross sectional area be used to account for potential corrosion and section loss over the pile life.

Based on the above criteria, an HP12x53 section (Grade 50 steel), with a cross sectional area of 15.5 in^2, would provide an allowable axial capacity of about 104 tons per pile, when accounting for the 10% section loss. This pile section, however, should be driven and tested for an ultimate capacity of 233 tons to account for the above section reduction.

A lighter or heavier H-pile section could also be used to obtain a different allowable axial capacity, using the same criteria outlined above. The following table summarizes the allowable axial compressive capacity and required ultimate test capacity for three possible H-pile sections, based on the above design criteria. These capacities assume the use of Grade 50 Steel, as well as account for the 10% section loss.

H-Pile Section	Cross-Sectional Area (square inches)	Allowable Axial Compressive Capacity (tons)	Required Ultimate Test Capacity (tons)
HP 10 x 42	12.4	83	186
HP 12 x 53	15.5	104	233
HP 12 x 74	21.8	147	327

The ultimate load test capacities presented above assume a Factor of Safety of 2.0 as required by the Building Code of New York State, as well as consider the section reduction for potential corrosion loss.

Pipe piles should have a minimum wall thickness of 0.375 inches and may be driven open ended or with a closed end. These conditions should be determined, as appropriate, by the pile driving Contractor. A pipe pile, driven to refusal on the bedrock, can be designed using the same parameters used for the H-piles, as described above.

The following table summarizes the allowable axial compressive capacity and required ultimate test capacity for various pipe pile sections based on the above design criteria. These capacities also assume the use of Grade 50 Steel, as well as account for the 10% section loss.

Pipe Pile Section	Cross-Sectional Area (square inches)	Allowable Axial Compressive Capacity (tons)	Required Ultimate Test Capacity (tons)
9.625” O.D. Pipe (0.375” wall)	10.9	73	164
10.75” O.D. Pipe (0.375” wall)	12.2	82	183
12.75” O.D. Pipe (0.375” wall)	14.5	97	218

The ultimate load test capacities presented above assume a Factor of Safety of 2.0 as required by the Building Code of New York State, as well as consider the section reduction for potential corrosion loss.

Other pipe pile sections could also be used, based on current product availability, to obtain different allowable axial capacities, provided the same design criteria outlined above is used. The use of “off-spec” or used oil field pipe (a.k.a. "Mill Seconds") for the pipe piles will be acceptable provided that appropriate mill certifications are provided by the Contractor.

Driven pile foundations end bearing on the bedrock are expected to undergo insignificant total settlement, when designed and constructed in accordance with our recommendations. Driven piles should be spaced a minimum of 3 pile widths apart, or three feet, whichever is greater. At this spacing, no group reduction factor is considered necessary, for the axial compressive loads. Exterior pile caps and grade beams for driven pile foundations should be embedded a minimum of 4 feet below final exterior grades for frost protection.

7.4 Drilled Pier Foundations

Drilled pier foundations (i.e. drilled, cast in-place caisson foundations) can be used to support the proposed buildings. Drilled piers should be seated a nominal 3 inches into the Limestone bedrock (i.e. extend to caisson auger refusal) and be monitored by qualified geotechnical personnel to ensure that the piers are bearing on the competent, sound, bedrock surface. The expected depth and elevation at the top of bedrock is summarized in Section 6.3. These depths / elevations, however, could vary between and away from the test boring locations.

Drilled pier foundations, bearing on sound, competent Limestone bedrock can be sized based on an allowable end bearing pressure of 30 tons per square foot. We recommend that any side shear resistance contributed by the fill soils / materials, indigenous soils, be neglected.

A minimum pier diameter of 30 inches is recommended. Drilled piers should be spaced no closer than 3 pier diameters, center to center. Drilled piers constructed on the `bedrock, with the above design conditions, and in accordance with our recommendations should undergo insignificant total settlement. All exterior grade beams (pier caps) should be embedded a minimum of 4 feet below the finished grades for frost protection.

7.5 Rigid Inclusions / Stone Columns

Rigid inclusions are grout columns, typically 12 to18 inches in diameter, installed at a relatively frequent spacing through the fill and overburden soils and to the top of bedrock. Through grout / soil interaction, the rigid inclusions increase the bearing capacity support of the fill soils. Stone columns are similar to rigid inclusions, however, compacted crushed stone material is used in place of the grout. A load transfer platform, consisting of a Structural Fill layer is typically required between the top of the rigid inclusions and the bottom of the spread foundations.

Rigid inclusions and stone columns would be designed and installed by a qualified and experienced Geotechnical Specialty Contractor, through a delegated design contract. Therefore, it is general practice for the Structural Engineer to develop a performance specification (i.e. establishing the required bearing capacities, tolerable total and differential settlement criteria, etc.), and then have the Specialty Contractor provide a suitable design, which considers the logistics of the installation and the subsurface conditions.

The rigid inclusions should be designed by a New York State Registered Professional Engineer, who is experienced in this type of design, and who is retained by the Specialty Contractor. The design should include a quality control / load testing program to confirm the rigid inclusion provides the required capacities. Based on the results of the load testing program, it may become necessary to revise the rigid inclusion or stone column design.

7.6 Seismic Design Considerations

Based on the subsurface conditions encountered in the test borings, the project site should be classified as Seismic Site Class “D” in accordance with ASCE 7-16, Table 20.3-1, as referenced in the 2020 Building Code of New York State. Therefore, seismic design can be based on this seismic site classification. The spectral response accelerations at the project site were obtained by ATL using the OSHPD web site application https://seismicmaps.org/. Using the site location, the spectral response accelerations are 0.164g for the short period (0.2 second) response (S_S) and 0.044g for the one second response (S_1). For design purposes, these spectral response accelerations must be adjusted for the Seismic Site Class “D” soil profile determined for the project site.

Accordingly, the adjusted spectral response accelerations for Site Class “D” are as follows:

- Short Period Response (S_{MS}) - 0.262g
- 1 Second Period Response (S_{M1}) - 0.107g

The corresponding five percent damped design spectral response accelerations (S_{DS} and S_{D1}) are as follows:

- S_{DS} - 0.175g
- S_{D1} - 0.071g

7.7 At-Grade Floors

7.7.1 Slab-on-Grade Floors

As described above, if the floors are constructed as a slab-on-grade over the existing fill soils, the Owner must be willing to accept the risks associated with this option. These risks include the potential for some on-going, long-term settlement, and unpredictable differential settlement, because of the variable composition and density of the fill soils and potentially other undetected areas of unsuitable fill soils, such as buried organics, wood, etc. If the Owner is willing to accept

these risks, then we would recommend the subgrade first be prepared and evaluated in accordance with the recommendations in Section 8.6 of this report.

Following subgrade preparation, and any site filling, the slab-on-grade floor systems should be constructed over a minimum 12-inch thick layer of Subbase Stone, separated from the existing fill soil subgrades with a suitable stabilization/separation geotextile, such as Mirafi 600X. Additional steel reinforcing within the floor slab should be considered to help further bridge and reduce the risks of any differential subsidence effects, should they occur. The slab-on-grade floor can be designed using a modulus of subgrade reaction of 150 pounds per cubic inch at the top of the Subbase Stone.

The floor slabs will be constructed above the finished site grades. Therefore, the use of a moisture barrier does not appear warranted, unless otherwise recommended by the finished flooring manufacturer, or as required to meet interior air moisture requirements. It is recommended that the slab-on-grade floors be constructed such that they float on the subbase and subgrades, and are not structurally connected to wall or column footings, to limit potential differential settlement effects, unless the slab column interface is designed with sufficient reinforcement to bridge potential differential settlement effects at these interfaces.

7.7.2 Structural Floor Slabs

As discussed above, the at-grade floor could be designed as a structural floor slab supported by driven piles, drilled piers, or rigid inclusions. Although more costly, a deep foundation supported structural floor slab will negate the settlement risks associated with constructing the floor over the fill soils.

A minimum of 4-inches of Subbase Stone should be installed beneath the structural floor slab to provide a suitable working surface for construction. If used with rigid inclusions, the designer should develop the minimum required Subbase Stone thickness. It is understood the finished floor grade will be established above the surrounding exterior grades. Therefore, the use of a moisture barrier does not appear warranted, unless otherwise recommended by the finished flooring manufacturer, or as required to meet interior air moisture requirements.

We note that the above subbase stone thickness is not adequate for carrying construction vehicle loads. Therefore, it may be desirable for the Contractor to temporarily increase the Subbase Stone thickness within the building pad area to provide a suitable working surface to stage the construction, carry construction vehicle loads and protect the underlying subgrades. This will be particularly important if construction proceeds during seasonally wet periods. The additional subbase stone material could then be removed and re-graded in preparation for the actual floor construction and re-used as foundation backfill, pavement subbase, or as otherwise determined appropriate.

7.8 Asphalt Pavement Design Recommendations

7.8.1 Asphalt Pavement Design

Pavement design recommendations are provided for a Commercial Duty Asphalt Concrete Pavement section, for use by passenger vehicles and occasional package delivery size trucks. The pavement section recommended below assumes that the subgrades will be prepared following the recommendations provided in the Site Preparation and Construction section of this report.

Commercial Duty Asphalt Concrete Pavement

- 1.5 inches - Top Course
- 3.0 inches - Binder Course
- 12 inches - Subbase Course*
- Geotextile

*It is recommended the subbase course thickness be increased to 15 inches at the site entrance / exit to the site, which will be subject to more frequent traffic along with turning and starting / stopping traffic loads. Also, it could become necessary to increase the subbase thickness in some areas to improve subgrade conditions and to promote drainage to underdrains, as discussed below.

Materials for the above pavement structure components should consist of the following:

A. Asphalt Concrete Top Course - NYSDOT Standard Specifications, Hot Mix Asphalt, 9.5 F3 Top Course.

B. Asphalt Concrete Binder Course - NYSDOT Standard Specifications, Hot Mix Asphalt, 19 F9 Binder Course.

C. Subbase Course – Should comply with NYSDOT Standard Specifications, Item No. 304.12 - Type 2 Crushed Stone Subbase, as described in the Material Recommendations section of the Report.

D. Geotextile - Woven polypropylene stabilization/separation geotextile (i.e., Mirafi 600X or approved suitable equivalent).

7.8.2 Pavement Drainage

The installation of underdrains or edge drains are recommended to drain the pavement subbase course within any low points, to limit the potential for frost action and improve pavement structure performance and design life. Alternatively, the pavement subbase course can also be allowed to daylight/drain to an adjacent perimeter drainage swale. This could be accomplished by raising the pavement grade. Drainage of the pavement subgrades can be achieved by grading the subgrade to a slope of at least 2 percent to allow drainage to the underdrains or drainage swale.

Underdrains, if used, should include a non-woven geotextile (i.e. Mirafi 160N or suitable equivalent), selected considering drainage and filtration, installed around drainage stone surrounding a slotted or perforated drain pipe. The drainage stone should be sized in accordance with the pipe slotting or perforations. A crushed aggregate (½-inch washed gravel or stone) is generally acceptable for slotted underdrain pipe. The underdrain pipes should be set in the bottom of the subbase layer, or preferably below the top of the soil subgrade elevation. The drainage stone and surrounding geotextile should extend above the underdrain pipe and into the subbase layer. Underdrain pipes should be connected to the site storm water drainage system.

7.8.3 Pavement Construction

Placement of the pavement Subbase course can proceed, following proper subgrade preparation and subgrade filling as described in the following section. Installation of adjacent geotextile panels should have minimum overlap of 12 to 18 inches. The Subbase Stone should be placed and compacted in accordance with the recommendations in the Material Recommendations section of this report.

Construction of the Asphalt Concrete Pavement should be performed in accordance with NYSDOT Standard Specification Section 400. The Binder and Top Course compaction / evaluation should comply with NYSDOT Standard Specifications – 80 Series Compaction procedures, as a minimum, or as otherwise required by the jurisdictional agency. In addition, placement of asphalt concrete courses should not be permitted on wet or snow covered surfaces or when the subgrade surface is less than 40° F.

8.0 SITE PREPARATION AND CONSTRUCTION

8.1 Construction Dewatering

Construction dewatering will be required for surface water control and for excavations which encounter groundwater conditions. Dewatering should be implemented in conjunction with excavation work such that the work generally proceeds in the dry. Surface water should be diverted away from and prevented from accumulating on exposed soil subgrades. It is anticipated that diversion berms and proper site grading should generally be sufficient to control surface water conditions.

Excavations for the spread foundations or for the pile / pier caps and grade beams are expected to extend near or below the groundwater elevation. It is possible that the excavations could be dewatered with the use of conventional sump and pump methods of dewatering, provided the excavations do not extend more than 1 foot below the groundwater level. More substantial methods of dewatering, such as deeper wells or deep sumps, are expected to be necessary where excavations must extend further below the groundwater level.

It is recommended that the Contractor excavate some test pits in advance of the excavation work, particularly where deeper excavations are required, to ascertain potential groundwater conditions at the time of construction and plan the dewatering that will be necessary. Groundwater dewatering plans should include implementation of measures to control erosion, sedimentation, and the migration of soil fines. All dewatering activities should comply with New York State Department of Environmental Conservation (NYSDEC) storm water discharge requirements and/or applicable federal and local regulations for construction.

8.2 Excavation and Spread Foundation Construction

Excavation to the proposed bearing grades, should be performed using a method which reduces disturbance to the indigenous soil bearing grades, such as a backhoe equipped with a smooth blade bucket. All existing fill, organic soils, or otherwise deleterious soil material beneath the proposed foundation bearing grades should be removed. Any resulting over-excavations should be backfilled with Engineered Fill.

The indigenous soil bearing grades should be observed and evaluated by qualified geotechnical personnel, prior to placement of Engineered Fill and/or the foundation structure. Placement and compaction of Structural Fill beneath foundations should also be observed and tested.

If the foundation bearing grades are not protected and they degrade, they should be undercut/removed accordingly. All soil bearing grades for foundation construction should be protected from precipitation and surface water. We recommend the foundations be placed immediately upon excavation to the design foundation bearing grade. However, if construction of the foundations proceeds during seasonal wet periods and/or the foundations will not be constructed on the same day of the excavation, it may be desirable to place a 2 to 3 inch thick lean concrete mud mat in the excavation bottom to help protect the exposed subgrades and provide a suitable working surface to set the reinforcing.

After completion of the foundation construction, the excavations should be backfilled as soon as possible and prior to construction of the superstructure. It is recommended that the foundation excavations, within slab-on-grade and pavement areas, be backfilled with a Suitable Granular Fill or Structural Fill, as described in Section 9.0.

8.3 Driven Pile Installation

The piles should be driven to refusal, into the Limestone bedrock, using a pile hammer having a suitable energy rating, without overstressing the pile. The pile driving Contractor should anticipate that possible obstructions may be present within the existing fill. These conditions could cause some difficulties with the pile foundation installation and therefore, the Contractor should be prepared to handle such conditions (i.e. with pre-drilling or pre-excavation) should they be encountered.

Driven piles should be equipped with a driving shoe to limit potential damage when driving through any obstructions in the fill soils, and into the hard Limestone bedrock. Plumbness of the piles should be maintained within 1% of the total length. Any misaligned or damaged piles should be replaced.

The piles should be driven to absolute refusal into the Limestone bedrock bearing stratum, using a pile hammer having a suitable energy rating. Absolute refusal is generally defined as when about 5 blows have been recorded for less than ¼ inch of pile penetration, when the pile reaches the predetermined bedrock elevation. The actual criteria, however, should be determined by the pile testing program.

The pile driving criteria should be confirmed by the Contractor using the wave equation, based on the actual pile, pile hammer and cushions that will be used, to determine the final driving criteria and that adequate stresses can be developed in the pile to confirm its capacity through dynamic testing, and to determine that the pile will not be overstressed during driving. Pile stresses should not exceed 85% of the pile yield stress.

At least 2 random piles of each driven pile type used, or no less than a total of 3 piles for the project, should be dynamically tested in accordance with *ASTM D 4945 – "Standard Test Method for High Strain Dynamic Testing of Piles"* to confirm that the required pile test capacity has been obtained as required by the Building Code of New York State. Dynamic testing should also be performed on any piles which are suspected of not having been seated on bedrock.

The Contractor should mark all piles with appropriate foot and inch intervals in order to properly monitor and document the pile installations and testing. A qualified individual should observe all pile driving and should prepare an individual pile driving report for each pile installed. The report should include, pile number and location, hammer and cushion types, pile size and material, installed length, blows per foot, unusual conditions encountered during driving, top of pile elevation following driving and notes on any necessary re-striking. Installed piles should also be monitored for potential heaving during installation of adjacent piles. Any piles that heave should be re-driven and reseated as appropriate.

8.4 Drilled Pier Foundation Construction

Construction of the drilled pier foundations are expected to encounter some perched groundwater within the fill soils, and a general groundwater condition about 8 to 12 feet below the current site grades. Therefore, dewatering of drilled pier excavations should be implemented as necessary in order to properly construct the pier structure in the dry.

Alternatively, procedures for constructing the drilled piers below groundwater can also be implemented. However, there is less control during construction in-the-wet, and therefore, there may be greater risk associated with this construction procedure. If this method is used, the hole must be stabilized with a proper drilling slurry and the concrete must be placed in a manner that displaces the slurry from the hole, such as using a tremie. In both cases, installation of temporary casing during drilling will likely be necessary to prevent the sloughing of wet and loose / soft soils into the excavation, particularly with the presence of groundwater conditions. The contractor, however, should be responsible for the means and methods of advancing the excavations to the design depths.

Initially, the excavation should extend to the proposed bedrock bearing grade. All soil and any weathered or loose bedrock should be removed from the bedrock bearing surface. The final bearing surface should be level or near level. Plumbness of the pier should be maintained within 1% of the total length. The concrete must be placed in a manner that displaces the slurry from the hole, such as utilizing tremie methods. The tremie pipe must be maintained below the water level and at least five feet below the top of the concrete during concrete placement. The fresh concrete must be above the bottom of the casing at all times. Casing removal during concrete placement should proceed in a manner that prevents the concrete from mixing with drilling mud, cave-in of the excavation and/or the formation of voids. The drilled pier construction should be monitored by qualified geotechnical personnel to ensure adequate soil conditions are encountered, and proper installation techniques are followed.

8.5 Excavation and Pile / Pier Cap and Grade Beam Construction

Excavations for the pile / pier cap and grade beam structure construction should be performed using a method which reduces disturbance to the subgrade soils, such as a backhoe equipped with a smooth blade bucket. The subgrades could also be undercut by about 8 to 12 inches and be replaced with a Structural Fill layer, to provide a firm and stable working surface for the pile / pier cap and grade beam construction, and to assist with dewatering efforts, if necessary.

Subgrades should be protected from precipitation, surface water, and groundwater. Water should not be allowed to accumulate on the soil subgrades and the subgrades should not be allowed to freeze, either prior to or after construction of foundations. If subgrades are not protected and degrade, they must be undercut/removed accordingly.

Foundation excavations should be backfilled as soon as possible and prior to construction of the superstructure. It is recommended that the foundation excavations, within slab-on-grade and pavement areas, be backfilled with a Suitable Granular Fill or Structural Fill, as described in Section 9.0.

8.6 Subgrade Preparation for Floor Slab and Asphalt Pavement Construction

The site preparation work should be performed during seasonally dry periods to minimize potential degradation of the subgrade soils and undercuts which may be required to establish a stable base for construction. It should be understood that the existing fill soils encountered at the site are sensitive and can degrade and lose strength when they are wet and disturbed by construction equipment traffic. Accordingly, efforts should be made to maintain the subgrades in a dry and stable condition at all times, and minimize construction traffic directly over these soils. These efforts could include:

- Installation of drainage swales and underdrains (i.e. “French drains”) to intercept and divert surface runoff and groundwater away from the construction areas;
- Proper grading and sloping of the subgrade and “sealing” of the surface with a smooth drum roller, at the end of each day or when rain is anticipated to promote runoff; and
- Restricting construction equipment traffic from traveling directly over the subgrade surfaces, especially when they are wet. Any subgrades, which become damaged, rutted, or unstable should be undercut and repaired as necessary prior to placement of the overlying fill courses.

All topsoil, organics, or other unsuitable soils within the proposed building and pavement areas should be removed. It should be anticipated that stripping the site beyond the topsoil layer will be necessary to remove organics and tree stumps / roots within the wooded portions of the site. If unsuitable soils are encountered at the subgrade elevation, some additional undercutting could become necessary to establish a firm and stable subgrade condition for installation of the Subbase Stone.

Following removal of the surface materials and excavation to the proposed subgrades, the exposed soil subgrades should be allowed to dry, as necessary, and then be thoroughly compacted/densified and then proof-rolled. The subgrade compaction and proof-rolling should be performed prior to any required fill placement, using a vibratory smooth drum roller weighing at least 10 tons. The roller should be operated in the vibratory mode for compacting the subgrades and in the static mode for proof rolling. The roller should complete at least four passes over the exposed subgrades for the compaction/densification operation and at least two passes for the proof rolling evaluation.

The subgrade compaction and proof-rolling should be done under the guidance of, and observed by, qualified geotechnical personnel. Any areas, which appear wet, loose, soft, unstable, or otherwise contain unsuitable materials, should be undercut. Over excavation, which may be required as the result of the subgrade inspection and/or proof-rolling, should be performed based on evaluation of the conditions and guidance provided by qualified geotechnical personnel. The resulting over-excavations should be backfilled with compacted Structural Fill material. The placement of an initial lift of oversized stone fill material (i.e. “surge stone”, “shot rock”, etc.) encased in stabilization geotextile top and bottom, may be necessary in some cases to help stabilize the subgrades. All fill placement and compaction should be closely monitored and tested on a “full-time” basis by qualified geotechnical personnel.

The subgrade fill should be placed to a stable condition and should not “pump” or show signs of movement or significant deflection (i.e. unstable conditions) as it is being constructed. During construction the Contractor should take precautions to limit construction traffic over the subgrades for slab-on-grade and pavement construction. Any subgrades, including existing fill soil subgrades or new fill subgrades, which become damaged, rutted, or unstable should be undercut and repaired as necessary prior to placement of overlying fill courses. The fill subgrades should also be properly graded, drained, and protected from excessive moisture and frost. Placement of fill over wet, soft, snow covered or frozen subgrades is not acceptable. It is recommended that utility trenches located within slab-on-grade and pavement areas be backfilled with compacted Structural Fill.

8.7 Testing and Inspection

All sitework and foundation installations should be continuously monitored by qualified geotechnical personnel to verify the stability and uniformity of the subgrade soil, to identify the presence of deleterious fill, and to ensure that adequate soil bearing capacity is obtained.

The final site grading and foundation plans and project specifications should be reviewed by ATL, as the Geotechnical Engineer of Record, to verify that there has not been a misinterpretation of this report and/or ATL's understanding of the project.

We recommend that ATL, as the Geotechnical Engineer of Record, be retained to perform Special Inspections in accordance with the Building Code of New York State during site earthwork and foundation installations. An ATL geotechnical representative familiar with the findings and recommendations of this report will be able to assess the subsurface conditions encountered during construction, provide necessary remedial recommendations, and verify that adequate bearing capacities and proper foundation installation requirements are achieved.

All foundation construction and backfilling should be monitored and tested by an Independent Testing Agency, conforming to ASTM E-329, "Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection." ATL conforms to ASTM E-329 and can be retained to perform required construction phase monitoring and testing services, including applicable Special Inspections and Structural Tests in accordance with the Building Code of New York State.

9.0 MATERIAL RECOMMENDATIONS

9.1 Structural Fill Material

Structural Fill, which is placed beneath foundations, should consist of crusher run stone, which is free of clay, organics and friable or deleterious particles. The Structural Fill should meet the requirements of New York State Department of Transportation, Standard Specifications, Item 304.12 – Type 2 Subbase, with the following gradation requirements.

Sieve Size Distribution	Percent Finer by Weight
2 inch	100
¼ inch	25-60
No. 40	5-40
No. 200	0-10

The crusher run stone Structural Fill should be compacted to a minimum of 95 percent of the maximum dry density as measured by the modified Proctor test (ASTM D1557). Placement of fill should not exceed a maximum loose lift thickness of 6 to 9 inches. The loose lift thickness should be reduced in conjunction with the compaction equipment used so that the required density is attained. The crusher run stone should have a moisture content within two percent of the optimum moisture content at the time of compaction.

9.2 Subbase Stone

The subbase stone course placed as the aggregate beneath the slab-on-grade and pavement construction, should conform to the same material requirements as Structural Fill as stated above, and should be installed to the same requirements.

9.3 Suitable Granular Fill

Suitable, well graded from coarse to fine, soil material classified as GW, GP, GM, SW, SP and SM soils using the Unified Soil Classification System (ASTM D-2487) and having no more than 85 percent by weight material passing the No. 4 sieve, no more than 20 percent by weight material passing the No. 200 sieve and which is generally free of particles greater than 4 inches, will be acceptable as Suitable Granular Fill. It should also be free of topsoil, asphalt, concrete rubble, wood, debris, clay, and other deleterious materials.

Suitable Granular Fill can be used as excavation backfill material and for raising site grades beneath the Subbase Stone layer. Material meeting the requirements of New York State Department of Transportation, Standard Specifications, Item 203.07 – Select Granular Fill is acceptable for use as Suitable Granular Fill. The Suitable Granular Fill should be placed and compacted in accordance with the requirements for the Structural Fill as stated above.

10.0 LIMITATIONS

The subsurface investigation logs and this report in its entirety should be provided to the contractors for information and interpretation. The subsurface investigation logs may not be representative of the entire site subsurface condition, but only what was encountered at the individual test locations at the time of the investigation. The subsurface soil, bedrock, and water conditions encountered at the time of construction may be different from those described on the subsurface investigation logs.

This report was prepared to present the findings of our subsurface investigation and engineering evaluation, and to outline concepts to be utilized in foundation design and construction. These concepts may require alterations to meet the specific design and economic considerations for this project.

Prepared by:

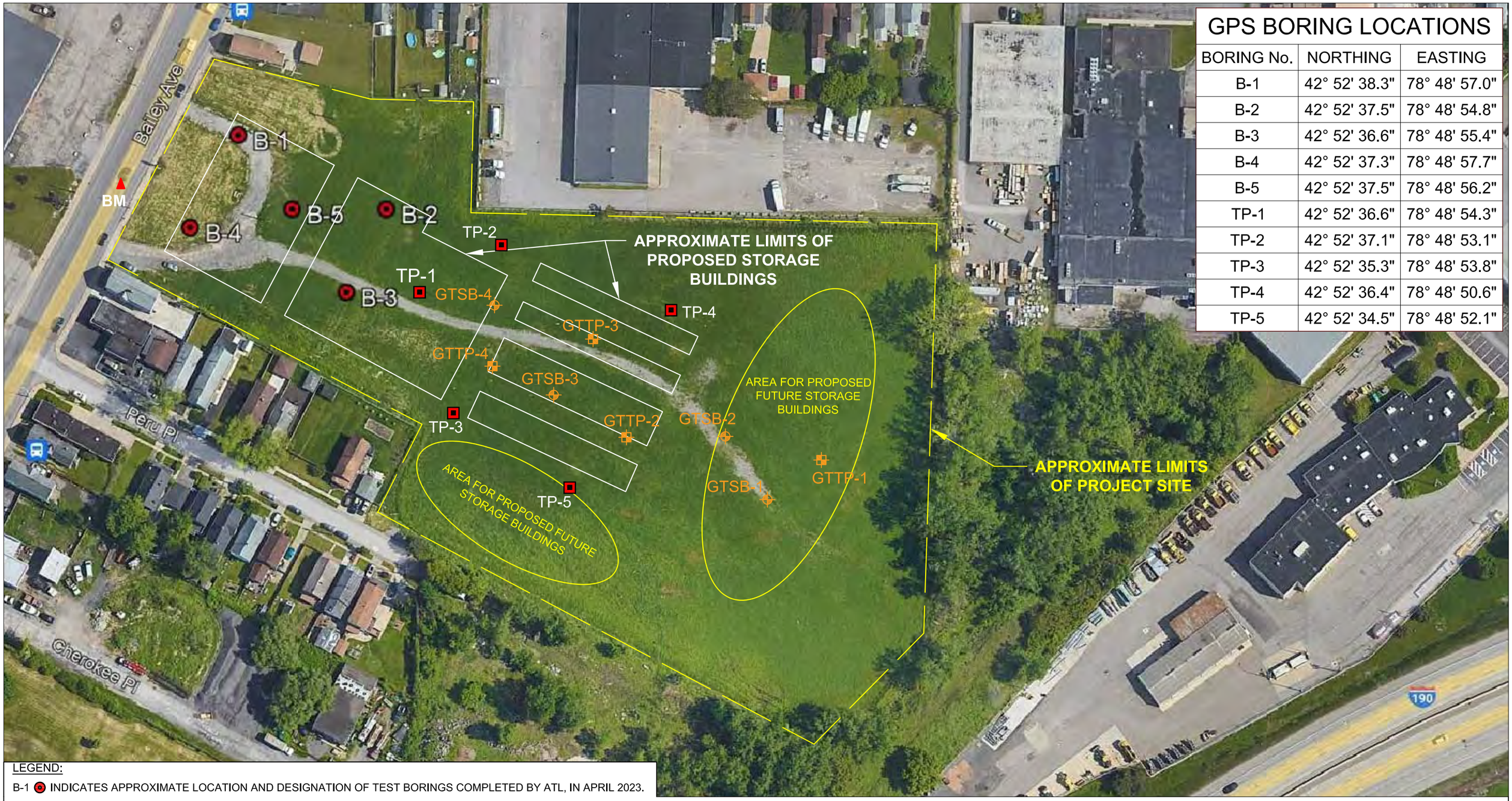
Thomas R. Seider, PE
Senior Engineer

Reviewed by:

Brian T. Barnes, PE
Senior Engineer

APPENDIX A

EXPLORATION LOCATION PLAN



GPS BORING LOCATIONS

BORING No.	NORTHING	EASTING
B-1	42° 52' 38.3"	78° 48' 57.0"
B-2	42° 52' 37.5"	78° 48' 54.8"
B-3	42° 52' 36.6"	78° 48' 55.4"
B-4	42° 52' 37.3"	78° 48' 57.7"
B-5	42° 52' 37.5"	78° 48' 56.2"
TP-1	42° 52' 36.6"	78° 48' 54.3"
TP-2	42° 52' 37.1"	78° 48' 53.1"
TP-3	42° 52' 35.3"	78° 48' 53.8"
TP-4	42° 52' 36.4"	78° 48' 50.6"
TP-5	42° 52' 34.5"	78° 48' 52.1"

LEGEND:

B-1 INDICATES APPROXIMATE LOCATION AND DESIGNATION OF TEST BORINGS COMPLETED BY ATL, IN APRIL 2023.

TP-1 INDICATES APPROXIMATE LOCATION AND DESIGNATION OF TEST PITS COMPLETED BY ATL, IN MAY 2023.

GTSB-1 INDICATES APPROXIMATE LOCATION AND DESIGNATION OF TEST BORINGS COMPLETED BY NATURES WAY ENVIRONMENTAL, IN MARCH 2016.

GTTP-1 INDICATES APPROXIMATE LOCATION AND DESIGNATION OF TEST PITS COMPLETED BY DAIGLER ENGINEERING, P.C., IN MARCH 2016.

BM INDICATES APPROXIMATE LOCATION AND DESIGNATION OF BENCHMARK USED BY ATL: RIM OF ELECTRIC MANHOLE. ASSIGNED AN ARBITRARY ELEVATION DATUM OF 100.0 FEET.

NOTE: FIGURE DEVELOPED FROM GOOGLE EARTH; OCTOBER 18, 2022 BOUNDARY SURVEY PREPARED BY NUSSBAUMER & CLARKE, INC.; PROPOSED BUILDING LAYOUT PLAN PROVIDED BY GREENWOOD CONSTRUCTION, LLC.; AND JUNE 2016 SOIL BORING AND TEST PIT LOCATIONS PLAN PREPARED BY DAIGLER ENGINEERING, P.C.

N

Exploration Location Plan

Date: 06/9/2023

Project No.: BD003E

Scale: Not to scale

Drawn by: BVB

***Atlantic Testing Laboratories*, Limited**

Albany, NY · Binghamton, NY · Canton, NY · Elmira, NY
Plattsburgh, NY · Syracuse, NY · Rochester, NY · Utica, NY
Watertown, NY · Hamburg, NY · Poughkeepsie, NY

PROPOSED SECURE STORAGE FACILITY
837 BAILEY AVENUE
CITY OF BUFFALO, NEW YORK

APPENDIX B

TEST BORING LOGS – COMPLETED BY ATL

DATE:
START 4/7/2023
FINISH 4/7/2023
SHEET 1 OF 1

Atlantic Testing Laboratories, Limited
Subsurface Log

HOLE NO. B-1
SURF. ELEV 102.4'
G.W. DEPTH See Notes

PROJECT: PROPOSED SECURE STORAGE FACILITY
PROJ. NO.: BD003
LOCATION: 837 BAILEY AVE
BUFFALO, NY

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	9	4			GRAVEL DRIVEWAY	Driller noted Gravel Driveway at the surface
		5	7		9	Gray-Brown fine GRAVEL, some f-c Sand, little Silty Clay	
	2	11	4			tr. brick, tr. organics (moist, FILL)	S-1: Contains Wood
		4	3		8	Brown-Gray Silty CLAY, little Brick, tr. cinders,	
5	3	3	5			tr. organics, tr. sand (moist-wet, FILL)	
		6	10		11	Brown-Gray Silty CLAY, tr. sand (moist, stiff, CL)	
	4	10	10			Becomes Brown, Contains Silt Partings (v. stiff)	
		11	11		21		
	5	5	8				
10		10	12		18		
	6	3	5			Contains no Silt Partings (moist-wet, stiff)	
		4	6		9		
15							
	7	2	1			(wet, soft)	
		2	1		3		
20							
	8	WOH/1.0				Brown fine GRAVEL, some Silty Clay, little f-c Sand	WOH = Weight of Hammer and Rods
		2	2		2	(wet, v. loose, GC-GM)	
25							REF = Sample Spoon Refusal
	9	WOH	10			Contains little Silty Clay	
		50/0.4			REF		
						Boring Complete at 26.4' with Auger Refusal	Free Standing Water recorded at 24' at boring completion
30							
35							
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: S. WOLKIEWICZ JR.

DRILL RIG TYPE : CME 550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE:
START 4/6/2023
FINISH 4/6/2023
SHEET 1 OF 1

Atlantic Testing Laboratories, Limited
Subsurface Log

HOLE NO. B-2
SURF. ELEV 102.4'
G.W. DEPTH See Notes

PROJECT: PROPOSED SECURE STORAGE FACILITY
PROJ. NO.: BD003
LOCATION: 837 BAILEY AVE
BUFFALO, NY

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	2	4			TOPSOIL	Driller noted Topsoil at the surface
		5	7		9	Dark Brown Silty CLAY, some fine Gravel, litte Brick, tr. sand, tr. organics (moist, FILL)	
	2	15	21				
		25	27		46	Gray CONCRETE, some f-c Sand, tr. cinders, tr. brick, tr. silty clay (moist, FILL)	
5	3	3	3				
		4	5		7	Brown-Gray fine GRAVEL, little f-c Sand, tr. concrete, tr. slag, tr. brick, tr. cinders, tr. ash, tr. organics (moist-wet, FILL)	S-4: Poor Recovery
	4	1	1				
		1	1		2		
	5	2	3			(wet)	
10		4	6		7	Brown Silty CLAY, tr. gravel, tr. sand (moist-wet, medium, CL)	
	6	5	5				
		5	5		10	Contains no gravel (stiff)	
15							
	7	4	7				
		6	8		13		
20							
	8	6	6				
		7	6		13		
25							REF = Sample Spoon Refusal
	9	9	11			Contains tr. gravel (wet)	
		50/0.1			REF		
						Boring Complete at 26.2' with Auger Refusal	Free Standing Water recorded at 16' at boring completion
30							
35							
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: S. WOLKIEWICZ JR.

DRILL RIG TYPE : CME 550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE:
START 4/6/2023
FINISH 4/6/2023
SHEET 1 OF 1

Atlantic Testing Laboratories, Limited
Subsurface Log

HOLE NO. B-3
SURF. ELEV 103.1'
G.W. DEPTH See Notes

PROJECT: PROPOSED SECURE STORAGE FACILITY
PROJ. NO.: BD003
LOCATION: 837 BAILEY AVE
BUFFALO, NY

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	WOH	1			TOPSOIL	Driller noted Topsoil at the surface
		7	12		8	Dark Brown Silty CLAY, some fine Gravel, little f-c Sand, tr. brick, tr. cinders, tr. concrete, tr. organics (moist, FILL)	
	2	11	7				WOH = Weight of Hammer and Rods
		7	5		14		
5	3	2	2			Dark Brown-Gray fine GRAVEL, some f-c Sand, tr. brick, tr. ash, tr. cinders, tr. silty clay (moist, FILL)	
		2	4		4		
	4	4	3			Contains tr. organics (wet)	S-4: Poor Recovery
		3	3		6		
	5	7	5			Brown Silty CLAY, tr. sand, tr. gravel (moist, stiff, CL)	
10		4	5		9		
	6	4	5				
		7	9		12		
15							
	7	6	6			Contains no gravel (moist-wet)	
		5	7		11		
20							
	8	4	3			(medium)	
		3	4		6		
25							
	9	WOH/1.0				Contains tr. gravel (wet, v. soft)	
		2	2		2		
						Boring Complete at 27.3' with Auger Refusal	No Free Standing Water encountered at boring completion
30							
35							
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: S. WOLKIEWICZ JR.

DRILL RIG TYPE : CME 550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE:
START 4/7/2023
FINISH 4/7/2023
SHEET 1 OF 1

Atlantic Testing Laboratories, Limited
Subsurface Log

HOLE NO. B-4
SURF. ELEV 102.4'
G.W. DEPTH See Notes

PROJECT: PROPOSED SECURE STORAGE FACILITY
PROJ. NO.: BD003
LOCATION: 837 BAILEY AVE
BUFFALO, NY

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	1	1			TOPSOIL	Driller noted Topsoil at the surface
		3	7		4	Brown Silty CLAY, some fine Gravel, little f-c Sand, tr. brick, tr. cinders, tr. organics (moist, FILL)	
	2	3	3				
		7	5		10	Brown fine GRAVEL, some Silty Clay, little f-c Sand, tr. brick, tr. cinders, tr. slag, tr. organics (moist, FILL)	S-3: Contains Wood
5	3	2	2				
		5	4		7	Dark Brown-Gray Silty CLAY, little fine Gravel, tr. sand, tr. organics, tr. brick, tr. ash (moist, FILL)	
	4	3	3				
		5	8		8	Brown Silty CLAY, tr. sand (moist, stiff, CL)	
	5	5	8			(v. stiff)	
10		12	14		20		
	6	8	10				
		9	12		19		
15							
	7	3	2			(moist-wet, medium)	
		3	4		5		
20							
	8	WOH/1.0				(wet, soft)	WOH = Weight of Hammer and Rods
		3	2		3		
25							
	9	WOH	1			Gray fine GRAVEL, some Silty Clay, little f-c Sand (wet, v. loose, GC-GM)	
		1	7		2		REF = Sample Spoon Refusal
	10	31	50/0.4		REF	Gray f-c GRAVEL, tr. sand, tr. silty clay (moist, v. compact, GP-GW)	
30						Boring Complete at 27.9' with Auger Refusal	Free Standing Water recorded at 20' at boring completion
35							
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: S. WOLKIEWICZ JR.

DRILL RIG TYPE : CME 550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE:
START 4/6/2023
FINISH 4/6/2023
SHEET 1 OF 1

Atlantic Testing Laboratories, Limited
Subsurface Log

HOLE NO. B-5
SURF. ELEV 103.0'
G.W. DEPTH See Notes

PROJECT: PROPOSED SECURE STORAGE FACILITY
PROJ. NO.: BD003
LOCATION: 837 BAILEY AVE
BUFFALO, NY

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	2	3			TOPSOIL	Driller noted Topsoil at the surface
		50/0.1			REF	Brown-Orange Silty CLAY, little Brick, little f-c Sand, little fine Gravel, tr. cinders, tr. organics (moist, FILL)	S-2: No Recovery
	2	4	4				
		4	5		8		
5	3	6	6			Brown-Gray Silty CLAY, tr. sand (moist, stiff, CL)	REF = Sample Spoon Refusal
		9	9		15		
	4	9	12			(v. stiff)	
		15	13		27		
	5	5	6			(stiff)	
10		7	9		13		
	6	7	7			(moist-wet)	
		8	7		15		
15							
	7	4	5			(medium, wet)	
		3	3		8		
20							
	8	WOH	1			Contains tr. gravel (soft)	WOH = Weight of Hammer and Rods
		2	2		3		
25							
	9	WOH/1.0				Contains some f-c Sand, little fine Gravel (v. soft)	
		2	5		2		NQ '2' Size Rock Core
						Gray LIMESTONE Rock, sound, hard to v. hard, bedded to massively bedded, both natural and mechanical fractures	Run #1: 27' - 32' REC = 97% RQD = 97%
30							
						Boring Complete at 32.0'	No Free Standing Water reading obtained prior to or after coring
35							
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: S. WOLKIEWICZ JR.

DRILL RIG TYPE : CME 550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

APPENDIX C

TEST PIT LOGS – COMPLETED BY ATL

ATLANTIC TESTING LABORATORIES

TEST PIT LOG

Client:	Greenwood Construction, LLC	Project No.:	BD003
Project:	Proposed Secure Storage Facility	Test Pit No.:	TP-1
Test Pit Location:	837 Bailey Avenue, Buffalo, New York	Date:	5/9/23
		Elevation:	Not Determined

GROUNDWATER OBSERVATIONS

Date	Time	Hole Depth	Water Depth
5/9/23	1:15	7.4’	7.2’

SOIL STRATIGRAPHY

Sample Number	Depth of Sample From	Depth of Sample To	Depth of Change	CLASSIFICATION OF MATERIALS (‘C’ COARSE, ‘M’ MEDIUM, ‘F’ FINE) (‘AND’ 35-50%, ‘SOME’ 20-35%, ‘LITTLE’ 10-20%, ‘TRACE’ 0-10%)
			6” ±	TOPSOIL and ORGANIC MATERIAL
1	0’	2’	2’ ±	Brown Silty CLAY, some f-c Gravel, little f-c Sand, tr. glass, tr. organics, tr. brick, tr. cinders, tr. concrete, tr. metal (moist, FILL)
2	2’	6’		Gray f-c SAND, little f-c Gravel, tr. clayey silt, tr. organics, tr. cinders, tr. ash, tr. brick, tr. masonry debris, tr. metal (moist, FILL)
3	6’	7.4’		Contains little Cinders, little Masonry Debris, tr. gravel (wet, FILL)
				Test pit terminated at 7.4 feet.

NOTES

1. Type of Excavator: **Ford 555E Backhoe**
2. **Large sandstone blocks (1’ to 3’ in size) observed throughout test pit.**
3.

ATL Representative: **J. Porter**

ATLANTIC TESTING LABORATORIES

TEST PIT LOG

Client:	Greenwood Construction, LLC	Project No.:	BD003
Project:	Proposed Secure Storage Facility	Test Pit No.:	TP-2
Test Pit Location:	837 Bailey Avenue, Buffalo, New York	Date:	5/9/23
		Elevation:	Not Determined

GROUNDWATER OBSERVATIONS

Date	Time	Hole Depth	Water Depth
5/9/23	12:40	6.5’	5.7’

SOIL STRATIGRAPHY

Sample Number	Depth of Sample From	Depth of Sample To	Depth of Change	CLASSIFICATION OF MATERIALS (‘C’ COARSE, ‘M’ MEDIUM, ‘F’ FINE) (‘AND’ 35-50%, ‘SOME’ 20-35%, ‘LITTLE’ 10-20%, ‘TRACE’ 0-10%)
			7” ±	TOPSOIL and ORGANIC MATERIAL
1	0’	2’	2’ ±	Brown Silty CLAY, little f-c Sand, little f-c Gravel, tr. brick, tr. organics, tr. glass, tr. ceramic, tr. plastic (moist, FILL)
2	2’	4’		Gray-Brown f-c SAND, little f-c Gravel, little Brick, tr. silty clay, tr. organics, tr. glass, tr. ash, tr. cinders, tr. metal, tr. ceramic (moist, FILL)
3	4’	6.3’		Becomes Gray, Contains little Clayey Silt, tr. brick (moist-wet, FILL)
				Test pit terminated at 6.3 feet.

NOTES

1. Type of Excavator: **Ford 555E Backhoe**
2. **Cobbles observed from 2’ to 6.3’.**
3. **Large sandstone blocks (1’ to 3’ in size) observed at 2’ to 3’.**

ATL Representative: **J. Porter**

ATLANTIC TESTING LABORATORIES

TEST PIT LOG

Client:	Greenwood Construction, LLC	Project No.:	BD003
Project:	Proposed Secure Storage Facility	Test Pit No.:	TP-3
Test Pit Location:	837 Bailey Avenue, Buffalo, New York	Date:	5/9/23
		Elevation:	Not Determined

GROUNDWATER OBSERVATIONS

Date	Time	Hole Depth	Water Depth
5/9/23	12:00	6.0’	5.8’

SOIL STRATIGRAPHY

Sample Number	Depth of Sample From	Depth of Sample To	Depth of Change	CLASSIFICATION OF MATERIALS (‘C’ COARSE, ‘M’ MEDIUM, ‘F’ FINE) (‘AND’ 35-50%, ‘SOME’ 20-35%, ‘LITTLE’ 10-20%, ‘TRACE’ 0-10%)
			6” ±	TOPSOIL and ORGANIC MATERIAL
1	0’	2’		Brown Silty CLAY, little f-c Sand, little f-c Gravel, tr. organics, tr. brick, tr. cinders, tr. plastic (moist, FILL)
2	2’	6’	2’ ±	Black-Brown f-c SAND, some f-c Gravel, tr. clayey silt, tr. organics, tr. glass, tr. ash, tr. brick, tr. cinders, tr. masonry debris (moist, FILL) Becomes Gray-Brown, Contains little Ash, tr. gravel, tr. metal
				Test pit terminated at 6.0 feet.

NOTES

1. Type of Excavator: **Ford 555E Backhoe**
2.
3.

ATL Representative: **J. Porter**

ATLANTIC TESTING LABORATORIES

TEST PIT LOG

Client:	Greenwood Construction, LLC	Project No.:	BD003
Project:	Proposed Secure Storage Facility	Test Pit No.:	TP-4
Test Pit Location:	837 Bailey Avenue, Buffalo, New York	Date:	5/9/23
		Elevation:	Not Determined

GROUNDWATER OBSERVATIONS

Date	Time	Hole Depth	Water Depth
5/9/23	9:10	6.1’	5.5’

SOIL STRATIGRAPHY

Sample Number	Depth of Sample From	Depth of Sample To	Depth of Change	CLASSIFICATION OF MATERIALS (‘C’ COARSE, ‘M’ MEDIUM, ‘F’ FINE) (‘AND’ 35-50%, ‘SOME’ 20-35%, ‘LITTLE’ 10-20%, ‘TRACE’ 0-10%)
+	0	2	4” ±	TOPSOIL and ORGANIC MATERIAL
1	0’	2’		Brown Silty CLAY, little f-c Sand, little f-c Gravel, tr. metal, tr. organics, tr. brick, tr. slag (moist, FILL)
2	2’	4’	2’ ±	Red-Brown BRICK, little Slag, tr. sand, tr. gravel, tr. ash, tr. organics, tr. clayey silt, tr. concrete (moist, FILL)
3	4’	6.1’	4’ ±	Gray f-c SAND, little Brick, tr. clayey silt, tr. gravel, tr. glass, tr. concrete, tr. slag, tr. ash, tr. organics, tr. plastic, tr. masonry debris, tr. cinders (moist, FILL) Contains little Clayey Silt, no plastic, tr. brick
				Test pit terminated at 6.1 feet.

NOTES

1. Type of Excavator: **Ford 555E Backhoe**
2.
3.

ATL Representative: **J. Porter**

ATLANTIC TESTING LABORATORIES

TEST PIT LOG

Client:	Greenwood Construction, LLC	Project No.:	BD003
Project:	Proposed Secure Storage Facility	Test Pit No.:	TP-5
Test Pit Location:	837 Bailey Avenue, Buffalo, New York	Date:	5/9/23
		Elevation:	Not Determined

GROUNDWATER OBSERVATIONS

Date	Time	Hole Depth	Water Depth
5/9/23	10:50	5.7’	5.1’

SOIL STRATIGRAPHY

Sample Number	Depth of Sample From	Depth of Sample To	Depth of Change	CLASSIFICATION OF MATERIALS (‘C’ COARSE, ‘M’ MEDIUM, ‘F’ FINE) (‘AND’ 35-50%, ‘SOME’ 20-35%, ‘LITTLE’ 10-20%, ‘TRACE’ 0-10%)
1			6” ±	TOPSOIL and ORGANIC MATERIAL
1	0’	1’	1’ ±	Brown Silty CLAY, little f-c Sand, tr. gravel, tr. brick, tr. glass, tr. plastic, tr. cinders, tr. organics (moist, FILL)
2	1’	5’		Gray f-c GRAVEL, some Concrete, little Brick, little f-c Sand, tr. organics, tr. masonry debris, tr. metal, tr. slag, tr. ash, tr. cinders (moist, FILL)
3	5’	5.7’		Contains little Concrete (wet)
				Test pit terminated at 5.7 feet.

NOTES

1. Type of Excavator: **Ford 555E Backhoe**
2. **Cobbles observed from 1’ to 5.7’.**
3.

ATL Representative: **J. Porter**

APPENDIX D

TEST BORING LOGS AND TEST PIT LOGS FROM 2016 GEOTECHNICAL REPORT

EnSol, Inc.				**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 16-0011 OOS	**Client:** Near Dingens, LLC	**Boring No.** GTSB-1
Address, City, State 837 Bailey Ave., Buffalo, NY			**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Truck-Mounted
Logged By: JMS	**Date**	**Started:** 3/10/2016	**Hammer Weight (lbs):** 140	**Hammer Drop (in.):** 30
Drill Crew: Steve		**Completed:** 3/10/2016	**GW Depth (ft.):** Approx. 4.5	**Total Depth of Boring (ft.):** 16.0

Depth (ft.)	Sample Type	Recovery (in.)	Blow Counts (blows/ft.)	N-Value	Lithology	Description	Pocket Penetrometer (tons/sft)	Samples Collected
2		5/18	2-24-29-50	53		Silt, Gravel (Fill), V. Dense, Moist	1.75	
4		4/24	11-10-9-3	19		Silt, Gravel, Brick (C&D Fill), Med. Dense, Moist	0.25	
6		4/24	1-1-1-1	2		Cinders, Gravel, Brick (C&D Fill), V. Loose, Moist	0.156(1)	
8		10/24	3-1-3-5	4		Ash, Cinders (Fill), Loose, Wet	0.094(1)	
10		8/24	4-2-1-1	3		Ash, Cinders (Fill), V. Loose, Wet	0.2	
12		14/24	7-3-3-4	6		Brown-Gray, Silty Clay, Med. Stiff, Wet	1.75	
14		18/24	1-2-2-3	4		Brown-Gray, Silty Clay, Soft, Wet	0.2	Liquid/Plastic Limit, Moisture Content (12'-16')
16		18/24	1-2-2-1	4		Brown-Gray, Silty Clay, Soft, Wet	0.1	
18								
20								
22								

Standard Penetration Slit Spoon Sampler (SPT)
Shelby Tube
CPP Sampler
WH = Weight of Hammer
NR = No Recovery

Rock Core Sample (RC)
Groundwater at Time of Drilling
Bulk Sample
1) - Value corrected for use of the penetrometer "foot".

EnSol, Inc. **661 Main St., Niagara Falls, NY 14301**

Project: 837 Bailey Ave. Site	**Project Number:** 16-0011 OOS	**Client:** Near Dingens, LLC	**Boring No.** GTSB-2
Address, City, State 837 Bailey Ave., Buffalo, NY		**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Truck-Mounted
Logged By: JMS	**Date** **Started:** 3/10/2016	**Hammer Weight (lbs):** 140	**Hammer Drop (in.):** 30
Drill Crew: Steve	**Completed:** 3/11/2016	**GW Depth (ft.):** Approx. 4.5	**Total Depth of Boring (ft.):** 26.8 (31.8 with Rock Core)

Depth (ft.)	Sample Type	Recovery (in.)	Blow Counts (blows/ft.)	N-Value	Lithology	Description	Pocket Penetrometer (tons/sft)	Samples Collected
2		6/24	5-9-7-5	16		Silt, Gravel, Cinder, Brick (C&D Fill), Med. Dense, Moist	0.0	
4		6/24	4-3-2-1	5		Silt, Gravel, Cinder, Brick (C&D Fill), Loose, Moist	0.2	
6		4/24	2-1-2-3	3		Silt, Gravel, Cinder, Brick (C&D Fill), V. Loose, Wet	0.0938(1)	
8		2/24	6-4-2-2	6		Silt, Gravel, Cinder, Brick (C&D Fill), Loose, Wet	0.0625(1)	
10		4/24	5-4-4-1	8		Ash, Cinders (Fill), Loose, Wet	0.0469(1)	
12		0/24	1-2-3-2	5		No Recovery	NR	
14		20/24	2-1-2-3	3		Brown-Gray, Silty Clay, Soft, Wet	0.188(1)	
16		24/24	3-3-3-3	6		Brown-Gray, Silty Clay, Med. Stiff, Wet	0.0938(1)	
18		24/24	1-2-2-2	4		Brown-Gray, Silty Clay, Soft, Wet	0.141(1)	Liquid/Plastic Limit, Moisture Content (16'-20')
20		24/24	1-2-1-2	3		Brown-Gray, Silty Clay, Soft, Wet	0.0938(1)	
22		20/24	WH-WH-1-2	1		Brown-Gray, Silty Clay, V. Soft, Wet	0.0781(1)	
24		24/24	WH-2-2-2	4		Brown-Gray, Silty Clay, Soft, Wet	0.0781(1)	
26		24/24	1-2-2-2	4		Brown-Gray, Silty Clay, Soft, Wet	0.0469(1)	
		6/6	WH-50	25		Brown-Gray, Silty Clay, Soft, Wet,Grades to Weathered Rock	0.0125(1)	
28						Dark Gray Limestone @26.8'		RQD (26.8'-31.8')
30								
32								

Standard Penetration Slit Spoon Sampler (SPT)
Shelby Tube
CPP Sampler
WH = Weight of Hammer
NR = No Recovery

Rock Core Sample (RC)
Groundwater at Time of Drilling
Bulk Sample
1) - Value corrected for use of the penetrometer "foot".

EnSol, Inc.				**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 16-0011 OOS	**Client:** Near Dingens, LLC	**Boring No.** GTSB-3
Address, City, State 837 Bailey Ave., Buffalo, NY			**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Truck-Mounted
Logged By: JMS	**Date**	**Started:** 3/10/2016	**Hammer Weight (lbs):** 140	**Hammer Drop (in.):** 30
Drill Crew: Steve		**Completed:** 3/10/2016	**GW Depth (ft.):** Approx. 4.5	**Total Depth of Boring (ft.):** 16.0

Depth (ft.)	Sample Type	Recovery (in.)	Blow Counts (blows/ft.)	N-Value	Lithology	Description	Pocket Penetrometer (tons/sft)	Samples Collected
2		4/24	3-17-10-3	17		Silt, Gravel, Brick (C&D Fill), Med. Dense, Moist	0	
4		0/24	3-3-2-1	5	▽	No Recovery	NR	
6		6/24	1-1-1-1	2		Ash, Cinders (Fill), V. Loose, Wet	0.0625(1)	
8		10/24	8-15-9-7	24		Ash, Cinders, Some Brick (Fill), Med. Dense, Wet	3.5	
10		10/24	6-5-5-6	10		Brown-Gray, Silty Clay, Stiff, Wet	0.25	
12		24/24	1-1-2-2	3		Brown-Gray, Silty Clay, Soft, Wet	0.156(1)	
14		24/24	2-2-3-4	5		Brown-Gray, Silty Clay, Med. Stiff, Wet	0.219(1)	
16								
18								
20								
22								

Standard Penetration Slit Spoon Sampler (SPT)
Shelby Tube
CPP Sampler
WH = Weight of Hammer
NR = No Recovery

Rock Core Sample (RC)
Groundwater at Time of Drilling
Bulk Sample
1) - Value corrected for use of the penetrometer "foot".

EnSol, Inc. **661 Main St., Niagara Falls, NY 14301**

Project: 837 Bailey Ave. Site	**Project Number:** 16-0011 OOS	**Client:** Near Dingens, LLC	**Boring No.** GTSB-4
Address, City, State 837 Bailey Ave., Buffalo, NY		**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Truck-Mounted
Logged By: JMS	**Date** **Started:** 3/10/2016	**Hammer Weight (lbs):** 140	**Hammer Drop (in.):** 30
Drill Crew: Steve	**Completed:** 3/10/2016	**GW Depth (ft.):** Approx. 4.5	**Total Depth of Boring (ft.):** 16.0

Depth (ft.)	Sample Type	Recovery (in.)	Blow Counts (blows/ft.)	N-Value	Lithology	Description	Pocket Penetrometer (tons/sft)	Samples Collected
2		2/24	3-20-15-15	35		Silt, Sand, Gravel, Brick (C&D Fill), Dense, Moist	0	
4		0/24	7-7-4-3	11		No Recovery	NR	
6		8/24	2-2-1-1	3		Ash, Cinders (Fill), V. Loose, Wet	0.156(1)	
8		6/24	1-1-1-1	2		Ash, Cinders (Fill), V. Loose, Wet	0.0625(1)	
10		12/24	1-3-4-12	7		Brown-Gray, Silty Clay, Med. Stiff, Wet	1.25	
12		18/24	2-3-2-3	5		Brown-Gray, Silty Clay, Med. Stiff, Wet	0.25	
14		24/24	2-3-4-4	7		Brown-Gray, Silty Clay, Med. Stiff, Wet	0.2	
16								
18								
20								
22								

Standard Penetration Slit Spoon Sampler (SPT)
Shelby Tube
CPP Sampler
WH = Weight of Hammer
NR = No Recovery

Rock Core Sample (RC)
Groundwater at Time of Drilling
Bulk Sample
1) - Value corrected for use of the penetrometer "foot".

DAIGLER ENGINEERING, P.C.
CIVIL & GEO-ENVIRONMENTAL ENGINEERING
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ph: (716) 773-6872 / fax: (716)773-6873 www.daiglerengineering.com

Test Pit Logs

PROJECT: Buffalo Truck			SHEET ___ of ___
CLIENT:		WEATHER: Sunny & Clear	
CONTRACTOR:		EQUIPMENT: PC 350 LC	
OPERATOR:		INSPECTOR: T. Hooper	
LOG OF TEST PIT No: GTTP-1	DATE: 3/9/16	GROUND ELEVATION:	

DEPTH (FEET)	CLASSIFICATION	COMMENTS/SAMPLE
0	Dark Brown – Black loose Moist Clay-Silt Fill w/ concrete + Brick Shale; pockets of Fine Gravel	
2.5	Black moist to wet Fine Silt, Little (-) Medium to Fine Gravel	
3.6	Lt. Gray Very wet Silt, Little(-) Fine Sand, Little (+) Fine Medium Gravel & slag	
5.2	Bottom of Excavation Water at 5.0'	

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Test Pit Logs

PROJECT: Buffalo Truck	SHEET ___ of ___
CLIENT:	WEATHER: Sunny Clear
CONTRACTOR:	EQUIPMENT: PC 350 LC
OPERATOR:	INSPECTOR: T. Hooper

LOG OF TEST PIT No: GTTP-2	DATE: 3/9/16	GROUND ELEVATION:

DEPTH (FEET)	CLASSIFICATION	COMMENTS/SAMPLE
0	Brown, Dry to Moist Fine Silt, Little (-) Fine Sand, Red Brick + Fragments	
1.7'	Black moist to wet Fine Silt Little (-) Medium - Fine Gravel	
2.5'	Lt. Gray very wet Silt, Little (-) Fine Sand, Little (+) Fine - Medium Gravel + Slag	
4.5	Bottom of Excavation	
	4.4' - Water Elevation	

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Test Pit Logs

PROJECT: Buffalo Truck	SHEET 3 of 4
CLIENT:	WEATHER: Sunny Clear
CONTRACTOR:	EQUIPMENT: PC 350LC
OPERATOR:	INSPECTOR: T. Hooper
LOG OF TEST PIT No: GTTP-3	DATE: 3/9/16
	GROUND ELEVATION:

DEPTH (FEET)	CLASSIFICATION	COMMENTS/SAMPLE
0	Lt. Gray to Brown Dry Fine Silt Little Fine Sand w/ Red Brick & Fragments	
1.5'	Brown - Black Wet Fine Silt Little Medium to Coarse Sand	
3.6	Lt. Gray Very Wet Silt, Little (-) Fine Sand, Little (+) Fine Medium Gravel + Slag	
4.9	Bottom of Excavation Water at 4.8'	

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Test Pit Logs

PROJECT: Buffalo Truck	SHEET 4 of 4
CLIENT:	WEATHER: Sunny Clear
CONTRACTOR:	EQUIPMENT: PC 350 LC
OPERATOR:	INSPECTOR: T. Hooper
LOG OF TEST PIT No: GTTP 4 DATE: 3/9/16	GROUND ELEVATION:

DEPTH (FEET)	CLASSIFICATION	COMMENTS/SAMPLE
0	Brown Dry Fine Silt, Little Fine Sand, Red Brick + concrete w/ Fragments	
3.0	Lt. Gray V. wet Silt, Little(-) Fine Sand, Little(+) Fine medium Gravel + Slag	
4.5	Bottom of Excavation Water at 4.4'	

APPENDIX E

LABORATORY TEST REPORTS – COMPLETED BY ATL

ATLANTIC TESTING LABORATORIES

WBE certified company

LABORATORY DETERMINATION OF MOISTURE CONTENT OF SOILS

ASTM D 2216

PROJECT INFORMATION

Client:	Greenwood Construction, LLC	**ATL Report No.:**	BD003-B1-05-23
Project:	Proposed Secure Storage Facility	**Report Date:**	May 22, 2023
		Date Received:	April 28, 2023

TEST DATA

Boring No.	Sample No.	Depth (ft)	Moisture Content (%)
B-5	S-4 [1]	6-8	25.3
	S-5 [1]	8-10	22.6
	S-6 [1]	10-12	23.0
	S-7 [1]	15-17	37.5
	S-8 [1]	20-22	36.0

REMARKS

2. Upon visual observation the number of layers (or materials types) present were zero
3. The drying temperature was 110°C ±5°C.
4. No material was excluded from the test sample.

Reviewed By: _____ Date: 22-May-23

ATLANTIC TESTING LABORATORIES

WBE certified company

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOIL
ASTM D 4318

PROJECT INFORMATION

Client: Greenwood Construction, LLC
Project: Proposed Secure Storage Facility

ATL Report No.: BD003-B1-05-23
Report Date: May 22, 2023
Date Received: April 28, 2023

TEST DATA

Boring No.	Sample No.	LL	PL	PI
B-5	S-4	37	21	16
B-5	S-7	43	19	24

SAMPLE INFORMATION

Boring No.	Sample No.	Maximum Grain Size (mm)	Estimated Amount of Sample Retained on No. 40 Sieve (%)	As Received Moisture Content (%)
B-5	S-4	2	5	25.3
B-5	S-7	2	5	37.5

PREPARATION INFORMATION

Boring No.	Sample No.	Preparation	Method of Removing Oversized Material
B-5	S-4	wet	hand picking
B-5	S-7	wet	hand picking

EQUIPMENT INFORMATION

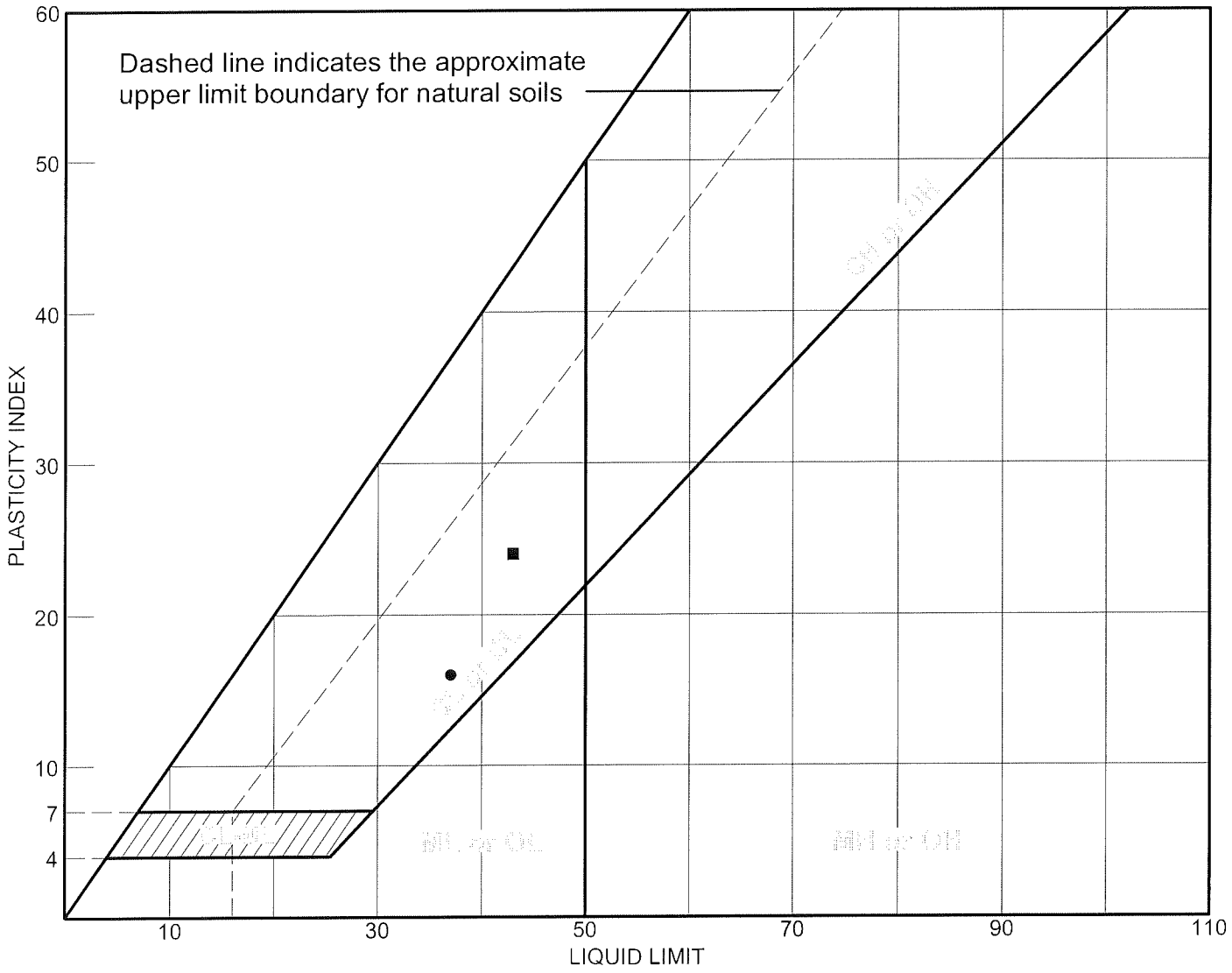
Liquid Limit Procedure:	Multipoint - Method A	X	Single Point - Method B	
Liquid Limit Apparatus:	Manual	X	Motor Driven	
Liquid Limit Grooving Tool Material:	Plastic		Metal	X
Liquid Limit Grooving Tool Shape:	Flat	X	Curved (AASHTO Only)	
Plastic Limit:	Hand Rolled	X	Mechanical Rolling Device	

REMARKS

1 The drying temperature was 110° ± 5° C
2 5% was excluded from the test sample.

Reviewed By: _____ Date: 5/22/2023

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	B-5	S-4	6' - 8'	25.3 %	21	37	16	
■	B-5	S-7	15' - 17'	37.5 %	19	43	24	

LIQUID AND PLASTIC LIMITS TEST REPORT	**Client:** Greenwood Construction, LLC **Project:** Proposed Secure Storage Facility **Project No.:** BD003 **Reviewed by:**

ATLANTIC TESTING LABORATORIES

WBE certified company

PROJECT INFORMATION

Client: Greewood Construction, LLC
Project: Proposed Secure Storage Facility

ATL Report No.: BD003-B1-05-23
Report Date: May 22, 2023
Date Received: April 28, 2023

UNCONFINED COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS
ASTM D 7012, Method C

Core ID	Depth (ft)	Diameter (in)	Length (in)	Load Rate (lbs/sec)	Total Load (lbs)	Area (in^2)	Compressive Strength (psi)	Calculated Density (pcf)
B-5, Run 1	27.0 - 27.5	1.98	4.19	250	55,510	3.08	18,020	167.4

Reviewed By: _____ Date: 22-May-23

ATLANTIC TESTING LABORATORIES

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CORROSIVITY ANALYSIS OF SOIL
AWWA Specification C105/A21.5-10 Appendix A

PROJECT INFORMATION

Client: Greenwood Construction, LLC
Project: Proposed Secure Storage Facility

ATL Report No.: BD003E-01-05-23
Report Date: May 18, 2023
Date Received: May 11, 2023

Tabulation of Corrosive Anaysis of Soil Results

Boring No.	Sample No.	Sample Depth (ft)	Resistivity (Ωcm)	Points*	pH	Points*	Redox Potential (mV)	Points*	Sulfides	Points*	Moisure Points	Total Points**
TP-3	S-2	2-6	6837	0	7.1	0	768	0	Negative	0	1	1

REMARKS

1. Points are based on AWWA Specification C105/A21.5-10 Appendix A, Polyethylene Encasement for Ductile-Iron Pipe Systems, see attached table.

2. ** Ten points indicate that soil is corrosive to ductile-iron pipe and protection is recommended.

Reviewed By: _____ Date: 05/18/23

ATLANTIC TESTING LABORATORIES

CORROSION ANALYSIS SUITE

Client: Greenwood Construction, LLC
Project: Proposed Secure Storage Facility
Location:

ATL Report No. BD003E-01-05-23
Report Date: May 18, 2023
Date Received: May 11, 2023

Boring: TP-3 Sample: S-2 Depth (ft): 2-6

WATER-SOLUBLE SULFATE IN SOIL
ASTM C 1580

Sulfate by Mass of Sample (%)	Sulfate by Mass of Sample (mg/kg)
0.13	1300

WATER-SOLUBLE CHLORIDE ION CONTENT IN SOIL
AASHTO T 291, Method A

Chloride by Mass of Soil (mg/kg)
100

Reviewed By: Date: 05/18/23

APPENDIX D

SAMPLING RESULTS

BRYDGES ENGINEERING

1.Dried up eastern drainage ditch

2. Eastern drainage ditch soil

Brydges Engineering in Environment and Energy

3. Eastern drainage ditch demonstrating overgrowth of vegetation

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS

Parameter Tested	BE3 Corrective Measures Work Plan Sampling July 2023 - Sample Identification and Sample Date	NYSDEC Soil Cleanup Objectives (SCOs)				
	SS1	Unrestricted	Residential	Restricted Residential	Commerical	Industrial
	7/5/2023					
METALS/INORGANICS						
Arsenic	11.5	13	16	16	16	16
Barium	184.0	350	350	400	400	10,000
Beryllium	0.65	7.2	14	72	590	2,700
Cadmium	1.1	2.5	2.5	4.3	9.3	60
Chromium	21.6	30	36	180	1,500	6,800
Copper	35.6	50	270	270	270	10,000
Lead	83.8	63	400	400	1,000	3,900
Manganese	3100 B	1,600	2,000	2,000	10,000	10,000
Mercury	0.2	0.18	0.81	0.81	2.8	5.7
Nickel	22.3	30	140	310	310	10,000
Selenium	1.5 J	3.9	36	180	1,500	6,800
Silver	0.47 J	2	36	180	1,500	6,800
Zinc	278.0	109	2,200	10,000	10,000	10,000
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)						
Acenaphthene	0.085 J	20	100	100	500	1,000
Acenaphthylene	0.039 J	100	100	100	500	1,000
Anthracene	0.210 J	100	100	100	500	1,000
Benzo(a)anthracene	0.69	1	1	1	5.6	11
Benzo(a)pyrene	0.76	1	1	1	1	1.1
Benzo(b)fluoranthene	0.79	1	1	1	5.6	11
Benzo(g,h,i)perylene	0.58	100	100	100	500	1,000
Benzo(k)fluoranthene	0.44	0.8	1	3.9	56	110
Chrysene	0.77	1	1	3.9	56	110
Dibenz(a,h)anthracene	0.18 J	0.33	0.33	0.33	0.56	1.1
Dibenzofuran	0.041 J	7	14	59	350	1,000
Fluoranthene	1.4	100	100	100	500	1,000
Fluorene	0.081 J	30	100	100	500	1,000
Indeno(1,2,3-cd)pyrene	0.56	0.5	0.5	0.5	5.6	11
Phenanthrene	0.84	100	100	100	500	1,000
Pyrene	1.2	100	100	100	500	1,000

Note: All units are in parts per million (ppm)
J Estimated Concentration
B Analyte detected in method blank

	Analyte detected
	Reported concentration greater than or equal to the NYSDEC Unrestricted SCO
	Reported concentration greater than or equal to the NYSDEC Residential SCO
	Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO
	Reported concentration greater than or equal to the NYSDEC Commercial SCO
	Reported concentration greater than or equal to the NYSDEC Industrial SCO

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ANALYTICAL REPORT

PREPARED FOR

Attn: Jason Brydges
Brydges Engineering in Environment & Energy DPC
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JOB DESCRIPTION

837 Bailey Avenue

JOB NUMBER

480-210494-1

Eurofins Buffalo
10 Hazelwood Drive
Amherst NY 14228-2298

See page two for job notes and contact information.

Job Notes

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
vs	Reported analyte concentrations are below 200 ug/kg and may be biased low due to the sample not being collected according to 5035A-L low-level specifications.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-210494-1
Project/Site: 837 Bailey Avenue

Job ID: 480-210494-1

Laboratory: Eurofins Buffalo

Narrative

Job Narrative
480-210494-1

Comments
No additional comments.

Receipt
The sample was received on 7/5/2023 4:45 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.3º C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 480-675708 recovered above the upper control limit for 1,1,1-Trichloroethane, 1,1-Dichloroethene, Benzene, Carbon tetrachloride, trans-1,2-Dichloroethene, Trichloroethene and Vinyl chloride. The sample associated with this CCV was non-detect for the affected analytes; therefore, the data has been reported. The associated sample is impacted: SS1 (480-210494-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) analyzed in batch 480-675715 was outside the method criteria for the following analyte(s): 2,4,6-Tribromophenol (Surr). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-210494-1
Project/Site: 837 Bailey Avenue

Client Sample ID: SS1
Lab Sample ID: 480-210494-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	85	J	260	39	ug/Kg	1	☼	8270D	Total/NA
Acenaphthylene	39	J	260	34	ug/Kg	1	☼	8270D	Total/NA
Anthracene	210	J	260	65	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	690		260	26	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	760		260	39	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	790		260	42	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	580		260	28	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	440		260	34	ug/Kg	1	☼	8270D	Total/NA
Chrysene	770		260	59	ug/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	180	J	260	47	ug/Kg	1	☼	8270D	Total/NA
Dibenzofuran	41	J	260	31	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	1400		260	28	ug/Kg	1	☼	8270D	Total/NA
Fluorene	81	J	260	31	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	560		260	33	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	840		260	39	ug/Kg	1	☼	8270D	Total/NA
Pyrene	1200		260	31	ug/Kg	1	☼	8270D	Total/NA
Arsenic	11.5		3.3	0.66	mg/Kg	1	☼	6010C	Total/NA
Barium	184	F1	0.82	0.18	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.65		0.33	0.046	mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.1		0.33	0.049	mg/Kg	1	☼	6010C	Total/NA
Chromium	21.6		0.82	0.33	mg/Kg	1	☼	6010C	Total/NA
Copper	35.6		1.6	0.35	mg/Kg	1	☼	6010C	Total/NA
Lead	83.8		1.6	0.39	mg/Kg	1	☼	6010C	Total/NA
Manganese	3100	B	0.33	0.053	mg/Kg	1	☼	6010C	Total/NA
Nickel	22.3		8.2	0.38	mg/Kg	1	☼	6010C	Total/NA
Selenium	1.5	J	6.6	0.66	mg/Kg	1	☼	6010C	Total/NA
Silver	0.47	J	0.99	0.33	mg/Kg	1	☼	6010C	Total/NA
Zinc	278		3.3	1.1	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.20		0.028	0.0065	mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-210494-1
Project/Site: 837 Bailey Avenue

Client Sample ID: SS1
Date Collected: 07/05/23 12:15
Date Received: 07/05/23 16:45

Lab Sample ID: 480-210494-1
Matrix: Solid
Percent Solids: 62.7

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	7.8	U vs	7.8	0.56	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
1,1-Dichloroethane	7.8	U vs	7.8	0.95	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
1,1-Dichloroethene	7.8	U vs	7.8	0.95	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
1,2,4-Trimethylbenzene	7.8	U vs	7.8	1.5	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
1,2-Dichlorobenzene	7.8	U vs	7.8	0.61	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
1,2-Dichloroethane	7.8	U vs	7.8	0.39	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
1,3,5-Trimethylbenzene	7.8	U vs	7.8	0.50	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
1,3-Dichlorobenzene	7.8	U vs	7.8	0.40	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
1,4-Dichlorobenzene	7.8	U vs	7.8	1.1	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
1,4-Dioxane	160	U vs	160	34	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
2-Butanone (MEK)	39	U vs	39	2.8	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
Acetone	39	U vs	39	6.5	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
Benzene	7.8	U vs	7.8	0.38	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
Carbon tetrachloride	7.8	U vs	7.8	0.75	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
Chlorobenzene	7.8	U vs	7.8	1.0	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
Chloroform	7.8	U vs	7.8	0.48	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
cis-1,2-Dichloroethene	7.8	U vs	7.8	0.99	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
Ethylbenzene	7.8	U vs	7.8	0.53	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
Methyl tert-butyl ether	7.8	U vs	7.8	0.76	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
Methylene Chloride	7.8	U vs	7.8	3.6	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
n-Butylbenzene	7.8	U vs	7.8	0.67	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
N-Propylbenzene	7.8	U vs	7.8	0.62	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
sec-Butylbenzene	7.8	U vs	7.8	0.67	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
tert-Butylbenzene	7.8	U vs	7.8	0.81	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
Tetrachloroethene	7.8	U vs	7.8	1.0	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
Toluene	7.8	U vs	7.8	0.59	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
trans-1,2-Dichloroethene	7.8	U vs	7.8	0.80	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
Trichloroethene	7.8	U vs	7.8	1.7	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
Vinyl chloride	7.8	U vs	7.8	0.95	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1
Xylenes, Total	16	U vs	16	1.3	ug/Kg	☼	07/09/23 18:54	07/10/23 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*07/09/23 18:54*	*07/10/23 01:42*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 126*	*07/09/23 18:54*	*07/10/23 01:42*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*	*07/09/23 18:54*	*07/10/23 01:42*	*1*
Toluene-d8 (Surr)	*94*		*71 - 125*	*07/09/23 18:54*	*07/10/23 01:42*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	160	U	160	86	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
2-Methylphenol	260	U	260	31	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
3-Methylphenol	510	U	510	40	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
4-Methylphenol	510	U	510	31	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Acenaphthene	**85**	**J**	260	39	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Acenaphthylene	**39**	**J**	260	34	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Anthracene	**210**	**J**	260	65	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Benzo[a]anthracene	**690**		260	26	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Benzo[a]pyrene	**760**		260	39	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Benzo[b]fluoranthene	**790**		260	42	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Benzo[g,h,i]perylene	**580**		260	28	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1

Client Sample ID: SS1
Date Collected: 07/05/23 12:15
Date Received: 07/05/23 16:45

Lab Sample ID: 480-210494-1
Matrix: Solid
Percent Solids: 62.7

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	440		260	34	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Chrysene	770		260	59	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Dibenz(a,h)anthracene	180	J	260	47	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Dibenzofuran	41	J	260	31	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Fluoranthene	1400		260	28	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Fluorene	81	J	260	31	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Hexachlorobenzene	260	U	260	36	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Indeno[1,2,3-cd]pyrene	560		260	33	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Naphthalene	260	U	260	34	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Pentachlorophenol	510	U	510	260	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Phenanthrene	840		260	39	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Phenol	260	U	260	40	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1
Pyrene	1200		260	31	ug/Kg	☼	07/07/23 15:48	07/10/23 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*92*		*54 - 120*	*07/07/23 15:48*	*07/10/23 13:48*	*1*
2-Fluorobiphenyl (Surr)	*94*		*60 - 120*	*07/07/23 15:48*	*07/10/23 13:48*	*1*
2-Fluorophenol (Surr)	*81*		*52 - 120*	*07/07/23 15:48*	*07/10/23 13:48*	*1*
Nitrobenzene-d5 (Surr)	*92*		*53 - 120*	*07/07/23 15:48*	*07/10/23 13:48*	*1*
Phenol-d5 (Surr)	*83*		*54 - 120*	*07/07/23 15:48*	*07/10/23 13:48*	*1*
p-Terphenyl-d14 (Surr)	*93*		*79 - 130*	*07/07/23 15:48*	*07/10/23 13:48*	*1*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11.5		3.3	0.66	mg/Kg	☼	07/10/23 09:43	07/14/23 22:33	1
Barium	184	F1	0.82	0.18	mg/Kg	☼	07/10/23 09:43	07/14/23 22:33	1
Beryllium	0.65		0.33	0.046	mg/Kg	☼	07/10/23 09:43	07/14/23 22:33	1
Cadmium	1.1		0.33	0.049	mg/Kg	☼	07/10/23 09:43	07/14/23 22:33	1
Chromium	21.6		0.82	0.33	mg/Kg	☼	07/10/23 09:43	07/14/23 22:33	1
Copper	35.6		1.6	0.35	mg/Kg	☼	07/10/23 09:43	07/17/23 15:08	1
Lead	83.8		1.6	0.39	mg/Kg	☼	07/10/23 09:43	07/14/23 22:33	1
Manganese	3100	B	0.33	0.053	mg/Kg	☼	07/10/23 09:43	07/14/23 22:33	1
Nickel	22.3		8.2	0.38	mg/Kg	☼	07/10/23 09:43	07/14/23 22:33	1
Selenium	1.5	J	6.6	0.66	mg/Kg	☼	07/10/23 09:43	07/14/23 22:33	1
Silver	0.47	J	0.99	0.33	mg/Kg	☼	07/10/23 09:43	07/17/23 15:08	1
Zinc	278		3.3	1.1	mg/Kg	☼	07/10/23 09:43	07/17/23 15:08	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20		0.028	0.0065	mg/Kg	☼	07/11/23 10:45	07/11/23 13:51	1

Surrogate Summary

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-210494-1
Project/Site: 837 Bailey Avenue

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(64-126)	(72-126)	(60-140)	(71-125)
480-210494-1	SS1	101	100	102	94
LCS 480-675707/1-A	Lab Control Sample	95	107	103	92
LCSD 480-675707/2-A	Lab Control Sample Dup	96	106	107	92
MB 480-675707/3-A	Method Blank	99	104	104	91

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHd14
Lab Sample ID	Client Sample ID	(54-120)	(60-120)	(52-120)	(53-120)	(54-120)	(79-130)
480-210494-1	SS1	92	94	81	92	83	93
LCS 480-675641/2-A	Lab Control Sample	113	85	74	82	76	98
LCSD 480-675641/3-A	Lab Control Sample Dup	107	88	76	84	82	97
MB 480-675641/1-A	Method Blank	99	102	95	102	103	114

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-675707/3-A
Matrix: Solid
Analysis Batch: 675708

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 675707

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	5.0	U	5.0	0.36	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
1,1-Dichloroethane	5.0	U	5.0	0.61	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
1,1-Dichloroethene	5.0	U	5.0	0.61	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
1,2,4-Trimethylbenzene	5.0	U	5.0	0.96	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
1,2-Dichlorobenzene	5.0	U	5.0	0.39	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
1,2-Dichloroethane	5.0	U	5.0	0.25	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
1,3,5-Trimethylbenzene	5.0	U	5.0	0.32	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
1,3-Dichlorobenzene	5.0	U	5.0	0.26	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
1,4-Dichlorobenzene	5.0	U	5.0	0.70	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
1,4-Dioxane	100	U	100	22	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
2-Butanone (MEK)	25	U	25	1.8	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
Acetone	25	U	25	4.2	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
Benzene	5.0	U	5.0	0.25	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
Carbon tetrachloride	5.0	U	5.0	0.48	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
Chlorobenzene	5.0	U	5.0	0.66	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
Chloroform	0.382	J	5.0	0.31	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.64	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
Ethylbenzene	5.0	U	5.0	0.35	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
Methyl tert-butyl ether	5.0	U	5.0	0.49	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
Methylene Chloride	5.0	U	5.0	2.3	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
n-Butylbenzene	5.0	U	5.0	0.44	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
N-Propylbenzene	5.0	U	5.0	0.40	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
sec-Butylbenzene	5.0	U	5.0	0.44	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
tert-Butylbenzene	5.0	U	5.0	0.52	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
Tetrachloroethene	5.0	U	5.0	0.67	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
Toluene	5.0	U	5.0	0.38	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.52	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
Trichloroethene	5.0	U	5.0	1.1	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
Vinyl chloride	5.0	U	5.0	0.61	ug/Kg		07/09/23 18:54	07/09/23 23:16	1
Xylenes, Total	10	U	10	0.84	ug/Kg		07/09/23 18:54	07/09/23 23:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 126*	*07/09/23 18:54*	*07/09/23 23:16*	*1*
4-Bromofluorobenzene (Surr)	*104*		*72 - 126*	*07/09/23 18:54*	*07/09/23 23:16*	*1*
Dibromofluoromethane (Surr)	*104*		*60 - 140*	*07/09/23 18:54*	*07/09/23 23:16*	*1*
Toluene-d8 (Surr)	*91*		*71 - 125*	*07/09/23 18:54*	*07/09/23 23:16*	*1*

Lab Sample ID: LCS 480-675707/1-A
Matrix: Solid
Analysis Batch: 675708

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 675707

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	50.0	59.1		ug/Kg		118	77 - 121
1,1-Dichloroethane	50.0	55.3		ug/Kg		111	73 - 126
1,1-Dichloroethene	50.0	57.1		ug/Kg		114	59 - 125
1,2,4-Trimethylbenzene	50.0	45.1		ug/Kg		90	74 - 120
1,2-Dichlorobenzene	50.0	44.3		ug/Kg		89	75 - 120
1,2-Dichloroethane	50.0	52.0		ug/Kg		104	77 - 122

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-675707/1-A
Matrix: Solid
Analysis Batch: 675708

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 675707

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,3,5-Trimethylbenzene			50.0	45.9		ug/Kg		92	74 - 120		
1,3-Dichlorobenzene			50.0	44.7		ug/Kg		89	74 - 120		
1,4-Dichlorobenzene			50.0	44.1		ug/Kg		88	73 - 120		
1,4-Dioxane			1000	946		ug/Kg		95	64 - 124		
2-Butanone (MEK)			250	269		ug/Kg		108	70 - 134		
Acetone			250	258		ug/Kg		103	61 - 137		
Benzene			50.0	55.8		ug/Kg		112	79 - 127		
Carbon tetrachloride			50.0	65.6		ug/Kg		131	75 - 135		
Chlorobenzene			50.0	48.4		ug/Kg		97	76 - 124		
Chloroform			50.0	54.2		ug/Kg		108	80 - 120		
cis-1,2-Dichloroethene			50.0	55.1		ug/Kg		110	81 - 120		
Ethylbenzene			50.0	49.0		ug/Kg		98	80 - 120		
Methyl tert-butyl ether			50.0	52.8		ug/Kg		106	63 - 125		
Methylene Chloride			50.0	52.1		ug/Kg		104	61 - 127		
n-Butylbenzene			50.0	47.8		ug/Kg		96	70 - 120		
N-Propylbenzene			50.0	47.1		ug/Kg		94	70 - 130		
sec-Butylbenzene			50.0	47.6		ug/Kg		95	74 - 120		
tert-Butylbenzene			50.0	47.0		ug/Kg		94	73 - 120		
Tetrachloroethene			50.0	51.1		ug/Kg		102	74 - 122		
Toluene			50.0	48.6		ug/Kg		97	74 - 128		
trans-1,2-Dichloroethene			50.0	57.4		ug/Kg		115	78 - 126		
Trichloroethene			50.0	56.3		ug/Kg		113	77 - 129		
Vinyl chloride			50.0	54.7		ug/Kg		109	61 - 133		
Xylenes, Total			100	97.6		ug/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*64 - 126*
4-Bromofluorobenzene (Surr)	*107*		*72 - 126*
Dibromofluoromethane (Surr)	*103*		*60 - 140*
Toluene-d8 (Surr)	*92*		*71 - 125*

Lab Sample ID: LCSD 480-675707/2-A
Matrix: Solid
Analysis Batch: 675708

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 675707

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane			50.0	53.8		ug/Kg		108	77 - 121	9	20
1,1-Dichloroethane			50.0	51.1		ug/Kg		102	73 - 126	8	20
1,1-Dichloroethene			50.0	50.3		ug/Kg		101	59 - 125	13	20
1,2,4-Trimethylbenzene			50.0	42.2		ug/Kg		84	74 - 120	7	20
1,2-Dichlorobenzene			50.0	42.2		ug/Kg		84	75 - 120	5	20
1,2-Dichloroethane			50.0	51.2		ug/Kg		102	77 - 122	1	20
1,3,5-Trimethylbenzene			50.0	42.0		ug/Kg		84	74 - 120	9	20
1,3-Dichlorobenzene			50.0	42.2		ug/Kg		84	74 - 120	6	20
1,4-Dichlorobenzene			50.0	42.2		ug/Kg		84	73 - 120	4	20
1,4-Dioxane			1000	964		ug/Kg		96	64 - 124	2	20
2-Butanone (MEK)			250	270		ug/Kg		108	70 - 134	1	20
Acetone			250	251		ug/Kg		100	61 - 137	3	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 480-675707/2-A
Matrix: Solid
Analysis Batch: 675708

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 675707

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			50.0	52.5		ug/Kg		105	79 - 127	6	20
Carbon tetrachloride			50.0	55.8		ug/Kg		112	75 - 135	16	20
Chlorobenzene			50.0	45.7		ug/Kg		91	76 - 124	6	20
Chloroform			50.0	51.7		ug/Kg		103	80 - 120	5	20
cis-1,2-Dichloroethene			50.0	51.5		ug/Kg		103	81 - 120	7	20
Ethylbenzene			50.0	45.0		ug/Kg		90	80 - 120	8	20
Methyl tert-butyl ether			50.0	53.6		ug/Kg		107	63 - 125	2	20
Methylene Chloride			50.0	49.8		ug/Kg		100	61 - 127	5	20
n-Butylbenzene			50.0	41.9		ug/Kg		84	70 - 120	13	20
N-Propylbenzene			50.0	42.7		ug/Kg		85	70 - 130	10	20
sec-Butylbenzene			50.0	42.4		ug/Kg		85	74 - 120	12	20
tert-Butylbenzene			50.0	42.3		ug/Kg		85	73 - 120	10	20
Tetrachloroethene			50.0	46.1		ug/Kg		92	74 - 122	10	20
Toluene			50.0	44.6		ug/Kg		89	74 - 128	8	20
trans-1,2-Dichloroethene			50.0	52.0		ug/Kg		104	78 - 126	10	20
Trichloroethene			50.0	51.2		ug/Kg		102	77 - 129	10	20
Vinyl chloride			50.0	45.9		ug/Kg		92	61 - 133	17	20
Xylenes, Total			100	90.5		ug/Kg		91	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*64 - 126*
4-Bromofluorobenzene (Surr)	*106*		*72 - 126*
Dibromofluoromethane (Surr)	*107*		*60 - 140*
Toluene-d8 (Surr)	*92*		*71 - 125*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-675641/1-A
Matrix: Solid
Analysis Batch: 675715

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 675641

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	99	U	99	54	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
2-Methylphenol	170	U	170	20	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
3-Methylphenol	330	U	330	26	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
4-Methylphenol	330	U	330	20	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Acenaphthene	170	U	170	25	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Acenaphthylene	170	U	170	22	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Anthracene	170	U	170	42	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Benzo[a]anthracene	170	U	170	17	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Benzo[a]pyrene	170	U	170	25	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Benzo[b]fluoranthene	170	U	170	27	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Benzo[g,h,i]perylene	170	U	170	18	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Benzo[k]fluoranthene	170	U	170	22	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Chrysene	170	U	170	38	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Dibenz(a,h)anthracene	170	U	170	30	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Dibenzofuran	170	U	170	20	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Fluoranthene	170	U	170	18	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Fluorene	170	U	170	20	ug/Kg		07/07/23 15:48	07/10/23 12:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-675641/1-A
Matrix: Solid
Analysis Batch: 675715

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 675641

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	170	U	170	23	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Indeno[1,2,3-cd]pyrene	170	U	170	21	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Naphthalene	170	U	170	22	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Pentachlorophenol	330	U	330	170	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Phenanthrene	170	U	170	25	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Phenol	170	U	170	26	ug/Kg		07/07/23 15:48	07/10/23 12:08	1
Pyrene	170	U	170	20	ug/Kg		07/07/23 15:48	07/10/23 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*99*		*54 - 120*	*07/07/23 15:48*	*07/10/23 12:08*	*1*
2-Fluorobiphenyl (Surr)	*102*		*60 - 120*	*07/07/23 15:48*	*07/10/23 12:08*	*1*
2-Fluorophenol (Surr)	*95*		*52 - 120*	*07/07/23 15:48*	*07/10/23 12:08*	*1*
Nitrobenzene-d5 (Surr)	*102*		*53 - 120*	*07/07/23 15:48*	*07/10/23 12:08*	*1*
Phenol-d5 (Surr)	*103*		*54 - 120*	*07/07/23 15:48*	*07/10/23 12:08*	*1*
p-Terphenyl-d14 (Surr)	*114*		*79 - 130*	*07/07/23 15:48*	*07/10/23 12:08*	*1*

Lab Sample ID: LCS 480-675641/2-A
Matrix: Solid
Analysis Batch: 675715

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 675641

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	1640	749		ug/Kg		46	23 - 120
2-Methylphenol	1640	1410		ug/Kg		86	54 - 120
3-Methylphenol	1640	1420		ug/Kg		87	55 - 120
4-Methylphenol	1640	1420		ug/Kg		87	55 - 120
Acenaphthene	1640	1510		ug/Kg		92	62 - 120
Acenaphthylene	1640	1580		ug/Kg		96	58 - 121
Anthracene	1640	1620		ug/Kg		99	62 - 120
Benzo[a]anthracene	1640	1590		ug/Kg		97	65 - 120
Benzo[a]pyrene	1640	1740		ug/Kg		106	64 - 120
Benzo[b]fluoranthene	1640	1610		ug/Kg		98	64 - 120
Benzo[g,h,i]perylene	1640	1720		ug/Kg		105	45 - 145
Benzo[k]fluoranthene	1640	1860		ug/Kg		113	65 - 120
Chrysene	1640	1530		ug/Kg		93	64 - 120
Dibenz(a,h)anthracene	1640	1820		ug/Kg		111	54 - 132
Dibenzofuran	1640	1500		ug/Kg		92	63 - 120
Fluoranthene	1640	1660		ug/Kg		101	62 - 120
Fluorene	1640	1560		ug/Kg		95	63 - 120
Hexachlorobenzene	1640	1900		ug/Kg		116	60 - 120
Indeno[1,2,3-cd]pyrene	1640	1720		ug/Kg		105	56 - 134
Naphthalene	1640	1450		ug/Kg		88	55 - 120
Pentachlorophenol	3280	3630		ug/Kg		111	51 - 120
Phenanthrene	1640	1580		ug/Kg		96	60 - 120
Phenol	1640	1400		ug/Kg		85	53 - 120
Pyrene	1640	1710		ug/Kg		104	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*113*		*54 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-675641/2-A
Matrix: Solid
Analysis Batch: 675715

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 675641

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	85		60 - 120
2-Fluorophenol (Surr)	74		52 - 120
Nitrobenzene-d5 (Surr)	82		53 - 120
Phenol-d5 (Surr)	76		54 - 120
p-Terphenyl-d14 (Surr)	98		79 - 130

Lab Sample ID: LCSD 480-675641/3-A
Matrix: Solid
Analysis Batch: 675715

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 675641

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane			1650	759		ug/Kg		46	23 - 120	1	50
2-Methylphenol			1650	1450		ug/Kg		88	54 - 120	2	27
3-Methylphenol			1650	1500		ug/Kg		91	55 - 120	5	24
4-Methylphenol			1650	1500		ug/Kg		91	55 - 120	5	24
Acenaphthene			1650	1500		ug/Kg		91	62 - 120	1	35
Acenaphthylene			1650	1620		ug/Kg		98	58 - 121	3	18
Anthracene			1650	1650		ug/Kg		100	62 - 120	2	15
Benzo[a]anthracene			1650	1650		ug/Kg		100	65 - 120	4	15
Benzo[a]pyrene			1650	1710		ug/Kg		104	64 - 120	2	15
Benzo[b]fluoranthene			1650	1550		ug/Kg		94	64 - 120	4	15
Benzo[g,h,i]perylene			1650	1710		ug/Kg		104	45 - 145	1	15
Benzo[k]fluoranthene			1650	1780		ug/Kg		108	65 - 120	5	22
Chrysene			1650	1570		ug/Kg		95	64 - 120	3	15
Dibenz(a,h)anthracene			1650	1810		ug/Kg		109	54 - 132	1	15
Dibenzofuran			1650	1560		ug/Kg		95	63 - 120	4	15
Fluoranthene			1650	1720		ug/Kg		104	62 - 120	4	15
Fluorene			1650	1620		ug/Kg		98	63 - 120	4	15
Hexachlorobenzene			1650	1900		ug/Kg		115	60 - 120	0	15
Indeno[1,2,3-cd]pyrene			1650	1730		ug/Kg		105	56 - 134	1	15
Naphthalene			1650	1450		ug/Kg		88	55 - 120	0	29
Pentachlorophenol			3300	3570		ug/Kg		108	51 - 120	1	35
Phenanthrene			1650	1650		ug/Kg		100	60 - 120	4	15
Phenol			1650	1440		ug/Kg		87	53 - 120	3	35
Pyrene			1650	1630		ug/Kg		98	61 - 133	5	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	107		54 - 120
2-Fluorobiphenyl (Surr)	88		60 - 120
2-Fluorophenol (Surr)	76		52 - 120
Nitrobenzene-d5 (Surr)	84		53 - 120
Phenol-d5 (Surr)	82		54 - 120
p-Terphenyl-d14 (Surr)	97		79 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-675727/1-A
Matrix: Solid
Analysis Batch: 675929

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 675727

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.0	U	2.0	0.39	mg/Kg		07/10/23 09:43	07/11/23 11:52	1
Barium	0.49	U	0.49	0.11	mg/Kg		07/10/23 09:43	07/11/23 11:52	1
Beryllium	0.20	U	0.20	0.028	mg/Kg		07/10/23 09:43	07/11/23 11:52	1
Cadmium	0.20	U	0.20	0.030	mg/Kg		07/10/23 09:43	07/11/23 11:52	1
Chromium	0.49	U	0.49	0.20	mg/Kg		07/10/23 09:43	07/11/23 11:52	1
Copper	0.98	U	0.98	0.21	mg/Kg		07/10/23 09:43	07/11/23 11:52	1
Lead	0.98	U	0.98	0.24	mg/Kg		07/10/23 09:43	07/11/23 11:52	1
Manganese	0.0886	J	0.20	0.031	mg/Kg		07/10/23 09:43	07/11/23 11:52	1
Nickel	4.9	U	4.9	0.23	mg/Kg		07/10/23 09:43	07/11/23 11:52	1
Selenium	3.9	U	3.9	0.39	mg/Kg		07/10/23 09:43	07/11/23 11:52	1
Silver	0.59	U	0.59	0.20	mg/Kg		07/10/23 09:43	07/11/23 11:52	1
Zinc	2.0	U	2.0	0.63	mg/Kg		07/10/23 09:43	07/11/23 11:52	1

Lab Sample ID: LCSSRM 480-675727/2-A
Matrix: Solid
Analysis Batch: 675929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 675727

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	183	161.0		mg/Kg		88.0	69.9 - 130.1
Barium	297	273.9		mg/Kg		92.2	75.1 - 125.3
Beryllium	78.8	70.42		mg/Kg		89.4	75.0 - 124.9
Cadmium	221	185.7		mg/Kg		84.0	75.1 - 124.9
Chromium	200	174.7		mg/Kg		87.4	70.0 - 130.0
Copper	136	119.7		mg/Kg		88.0	75.0 - 125.0
Lead	257	268.8		mg/Kg		104.6	73.9 - 126.1
Manganese	381	349.5		mg/Kg		91.7	75.9 - 124.1
Nickel	169	166.3		mg/Kg		98.4	69.8 - 129.6
Selenium	217	183.3		mg/Kg		84.5	69.1 - 131.3
Silver	67.8	58.14		mg/Kg		85.7	70.6 - 129.2
Zinc	224	194.9		mg/Kg		87.0	70.1 - 130.4

Lab Sample ID: 480-210494-1 MS
Matrix: Solid
Analysis Batch: 676479

Client Sample ID: SS1
Prep Type: Total/NA
Prep Batch: 675727

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	11.5		63.5	73.43		mg/Kg	☼	97	75 - 125
Barium	184	F1	63.5	269.1	F1	mg/Kg	☼	134	75 - 125
Beryllium	0.65		63.5	68.84		mg/Kg	☼	107	75 - 125
Cadmium	1.1		63.5	64.40		mg/Kg	☼	100	75 - 125

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 480-210494-1 MS
Matrix: Solid
Analysis Batch: 676479

Client Sample ID: SS1
Prep Type: Total/NA
Prep Batch: 675727

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	21.6		63.7	89.31		mg/Kg	☼	106	75 - 125
Lead	83.8		63.5	154.2		mg/Kg	☼	111	75 - 125
Manganese	3100	B	63.5	2741	4	mg/Kg	☼	-570	75 - 125
Nickel	22.3		63.5	92.39		mg/Kg	☼	110	75 - 125
Selenium	1.5	J	63.5	62.12		mg/Kg	☼	95	75 - 125

Lab Sample ID: 480-210494-1 MS
Matrix: Solid
Analysis Batch: 676652

Client Sample ID: SS1
Prep Type: Total/NA
Prep Batch: 675727

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Copper	35.6		63.5	95.51		mg/Kg	☼	94	75 - 125
Silver	0.47	J	15.9	14.80		mg/Kg	☼	90	75 - 125
Zinc	278		63.5	321.8	4	mg/Kg	☼	68	75 - 125

Lab Sample ID: 480-210494-1 MSD
Matrix: Solid
Analysis Batch: 676479

Client Sample ID: SS1
Prep Type: Total/NA
Prep Batch: 675727

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	11.5		65.9	79.65		mg/Kg	☼	103	75 - 125	8	20
Barium	184	F1	65.9	276.6	F1	mg/Kg	☼	140	75 - 125	3	20
Beryllium	0.65		65.9	71.27		mg/Kg	☼	107	75 - 125	3	20
Cadmium	1.1		65.9	68.42		mg/Kg	☼	102	75 - 125	6	20
Chromium	21.6		66.1	95.23		mg/Kg	☼	111	75 - 125	6	20
Lead	83.8		65.9	158.9		mg/Kg	☼	114	75 - 125	3	20
Manganese	3100	B	65.9	3078	4	mg/Kg	☼	-38	75 - 125	12	20
Nickel	22.3		65.9	96.61		mg/Kg	☼	113	75 - 125	4	20
Selenium	1.5	J	65.9	65.89		mg/Kg	☼	98	75 - 125	6	20

Lab Sample ID: 480-210494-1 MSD
Matrix: Solid
Analysis Batch: 676652

Client Sample ID: SS1
Prep Type: Total/NA
Prep Batch: 675727

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Copper	35.6		65.9	100.8		mg/Kg	☼	99	75 - 125	5	20
Silver	0.47	J	16.5	15.79		mg/Kg	☼	93	75 - 125	6	20
Zinc	278		65.9	326.9	4	mg/Kg	☼	73	75 - 125	2	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-675870/1-A
Matrix: Solid
Analysis Batch: 675947

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 675870

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.020	U	0.020	0.0046	mg/Kg		07/11/23 10:45	07/11/23 13:15	1

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCSSRM 480-675870/2-A ^10
Matrix: Solid
Analysis Batch: 675947

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 675870

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	18.2	18.86		mg/Kg		103.6	59.9 - 140.1

GC/MS VOA

Prep Batch: 675707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210494-1	SS1	Total/NA	Solid	5035A_L	
MB 480-675707/3-A	Method Blank	Total/NA	Solid	5035A_L	
LCS 480-675707/1-A	Lab Control Sample	Total/NA	Solid	5035A_L	
LCSD 480-675707/2-A	Lab Control Sample Dup	Total/NA	Solid	5035A_L	

Analysis Batch: 675708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210494-1	SS1	Total/NA	Solid	8260C	675707
MB 480-675707/3-A	Method Blank	Total/NA	Solid	8260C	675707
LCS 480-675707/1-A	Lab Control Sample	Total/NA	Solid	8260C	675707
LCSD 480-675707/2-A	Lab Control Sample Dup	Total/NA	Solid	8260C	675707

GC/MS Semi VOA

Prep Batch: 675641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210494-1	SS1	Total/NA	Solid	3550C	
MB 480-675641/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-675641/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 480-675641/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	

Analysis Batch: 675715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210494-1	SS1	Total/NA	Solid	8270D	675641
MB 480-675641/1-A	Method Blank	Total/NA	Solid	8270D	675641
LCS 480-675641/2-A	Lab Control Sample	Total/NA	Solid	8270D	675641
LCSD 480-675641/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D	675641

Metals

Prep Batch: 675727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210494-1	SS1	Total/NA	Solid	3050B	
MB 480-675727/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-675727/2-A	Lab Control Sample	Total/NA	Solid	3050B	
480-210494-1 MS	SS1	Total/NA	Solid	3050B	
480-210494-1 MSD	SS1	Total/NA	Solid	3050B	

Prep Batch: 675870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210494-1	SS1	Total/NA	Solid	7471B	
MB 480-675870/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-675870/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 675929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-675727/1-A	Method Blank	Total/NA	Solid	6010C	675727
LCSSRM 480-675727/2-A	Lab Control Sample	Total/NA	Solid	6010C	675727

Analysis Batch: 675947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210494-1	SS1	Total/NA	Solid	7471B	675870

Metals (Continued)

Analysis Batch: 675947 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-675870/1-A	Method Blank	Total/NA	Solid	7471B	675870
LCSSRM 480-675870/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	675870

Analysis Batch: 676479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210494-1	SS1	Total/NA	Solid	6010C	675727
480-210494-1 MS	SS1	Total/NA	Solid	6010C	675727
480-210494-1 MSD	SS1	Total/NA	Solid	6010C	675727

Analysis Batch: 676652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210494-1	SS1	Total/NA	Solid	6010C	675727
480-210494-1 MS	SS1	Total/NA	Solid	6010C	675727
480-210494-1 MSD	SS1	Total/NA	Solid	6010C	675727

General Chemistry

Analysis Batch: 675510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210494-1	SS1	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-210494-1
Project/Site: 837 Bailey Avenue

Client Sample ID: SS1
Lab Sample ID: 480-210494-1
Date Collected: 07/05/23 12:15
Matrix: Solid
Date Received: 07/05/23 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	675510	IMZ	EET BUF	07/06/23 15:36

Client Sample ID: SS1
Lab Sample ID: 480-210494-1
Date Collected: 07/05/23 12:15
Matrix: Solid
Date Received: 07/05/23 16:45
Percent Solids: 62.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035A_L			675707	CDC	EET BUF	07/09/23 18:54
Total/NA	Analysis	8260C		1	675708	CDC	EET BUF	07/10/23 01:42
Total/NA	Prep	3550C			675641	SJM	EET BUF	07/07/23 15:48
Total/NA	Analysis	8270D		1	675715	JMM	EET BUF	07/10/23 13:48
Total/NA	Prep	3050B			675727	MP	EET BUF	07/10/23 09:43
Total/NA	Analysis	6010C		1	676652	LMH	EET BUF	07/17/23 15:08
Total/NA	Prep	3050B			675727	MP	EET BUF	07/10/23 09:43
Total/NA	Analysis	6010C		1	676479	LMH	EET BUF	07/14/23 22:33
Total/NA	Prep	7471B			675870	NVK	EET BUF	07/11/23 10:45
Total/NA	Analysis	7471B		1	675947	NVK	EET BUF	07/11/23 13:51

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-210494-1
Project/Site: 837 Bailey Avenue

Laboratory: Eurofins Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	03-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-210494-1
Project/Site: 837 Bailey Avenue

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET BUF
6010C	Metals (ICP)	SW846	EET BUF
7471B	Mercury (CVAA)	SW846	EET BUF
Moisture	Percent Moisture	EPA	EET BUF
3050B	Preparation, Metals	SW846	EET BUF
3550C	Ultrasonic Extraction	SW846	EET BUF
5035A_L	Closed System Purge and Trap	SW846	EET BUF
7471B	Preparation, Mercury	SW846	EET BUF

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-210494-1
Project/Site: 837 Bailey Avenue

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-210494-1	SS1	Solid	07/05/23 12:15	07/05/23 16:45

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Alexis Palumbo-Compton	Lab PM: Beninati, John	Carrier Tracking No(s):	COC No: 480-186601-39397.1
Client Contact: Alexis Palumbo-Compton	Phone: (585)944-6793	E-Mail: John.Beninati@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: Brydges Engineering in Environment & Energy DPC	PWSID:			Job #:
Address: 960 Busti Ave Suite B-150	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14213	Compliance Project: Δ Yes Δ No			
Phone: 716-362-6533(Tel)	PO #: Purchase Order not required			
Email: apalumbo@be3corp.com	WO #:			
Project Name: 837 Bailey Avenue	Project #: 48026671			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7471B	8270D - Part 375 SVOCs	8260C - Part 375 VOCs (LL BULK)	6010C, 7470A	8260C - Part 375 VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	D	A		
SS1	7-5-23	12:15pm		Solid			X	X	X				
[redacted]	7-5-23			Water			[redacted]	X	[redacted]	X	X		Please ignore the blanked out portion (not analyzed)

480-210494 Chain of Custody

Possible Hazard Identification

Δ Non-Hazard Δ Flammable Δ Skin Irritant Δ Poison B Δ Unknown Δ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Δ Return To Client Δ Disposal By Lab Δ Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date: 7/5/23	Time: 16:45	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Joseph Gambino	7/5/23	BE3	LC	7/5/23 16:45	
	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.3 #1

Ver: 06/08/2021

7/18/2023

Login Sample Receipt Checklist

Client: Brydges Engineering in Environment & Energy DPC

Job Number: 480-210494-1

Login Number: 210494
List Number: 1
Creator: Sabuda, Brendan D

List Source: Eurofins Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.3 #1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

APPENDIX E

CORRECTIVE MEASURES

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Monday, July 17th 2023
Site Name:	837 Bailey Avenue (BCP Site #C915298)
Location:	837 Bailey Avenue, Buffalo, NY 14206
Contractor/Sub-Contractor:	Gauthier Blacktop/Jack Ruh
Weather Conditions:	Sunny 70 ˚F NE 8 mph

Description of Work Performed:

Arrived on-site at 837 Bailey Avenue around 7:30 am. Met with site forman.
Importing stone to fill in erosion areas (i.e., bare spots, ruts, holes and rills)
Had difficulty locating all areas of erosion due to vegetative overgrowth
Did a site inspection and photographed work being performed.
2 truckloads were imported and import tickets were received

Problems/Observations:	Difficulty locating all compliance issues noted during the PRR site visit because of overgrown vegetation
Health and Saftey Concerns:	None.
Contractor Work Force:	2 Laborers, 1 Foreman
Contractor Equipment	1 mini-excavator, 1 dump truck
Attachments : Photo Log	
Inspectors Name	Alexis Palumbo-Compton

960 Busti Ave.
Buffalo, New York 14213

Daily Field Report Continued

Date:	Monday, July 17th 2023
Site Name:	837 Bailey Avenue (BCP Site #C915298)
Location:	837 Bailey Avenue, Buffalo, NY 14206

Work Performed Continued

NYSDEC approved 2" crusher run stone was imported from New Enterprise Stone 7 lime Co., Inc. This took two truckloads

Imported Material	Loads:	Amount (Cubic Yards)
2" crusher run stone	2	27.14

Exported Material	Destination	Loads:	Amount (Cubic Yards)
None			

Total Material Hauled - Approx. (Cubic Yards)	0

1.Completed backfill of Test Pit 2

2. Completed backfill of Test Pit 4

Brydges Engineering in Environment and Energy

3. Completed backfill of Test Pit 5

4. Completed backfill of Test Pit 1

5. Completed backfill of Test Pit 3

6. Area backfilled in the western portion of the site

7. Backfill of rutting near the property entrance along Bailey Avenue

8. Dump truck and mini-excavator used to complete work

9. Stone being dumped into test pits by dump truck

10. Stone being leveled by mini-excavator

11. Stone being compacted by mini-excavator

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Monday, July 26th 2023
Site Name:	837 Bailey Avenue (BCP Site #C915298)
Location:	837 Bailey Avenue, Buffalo, NY 14206
Contractor/Sub-Contractor:	Gauthier Blacktop/Jack Ruh
Weather Conditions:	Sunny 74 ˚F N 2 mph

Description of Work Performed:

Arrived on-site at 837 Bailey Avenue around 8:00 am. Met with site foreman.
Mowed until approximately 12:00 pm due to the hydraulic line breaking.

Problems/Observations:	Hydraulic line broke on brush hog around 12:00 pm Mowing to be continued tomorrow after line repaired
Health and Saftey Concerns:	None.
Contractor Work Force:	1 Foreman
Contractor Equipment	1 dump truck and 1 brush hog
Attachments : Photolog	
Inspectors Name	Alexis Palumbo-Compton

1. Dump truck utilized to transport the brush hog

2. Side view of brush hog mowing facing west

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3. View of brush hog mowing facing north

4. View of first pass of brush hog facing west

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Monday, July 27th 2023
Site Name:	837 Bailey Avenue (BCP Site #C915298)
Location:	837 Bailey Avenue, Buffalo, NY 14206
Contractor/Sub-Contractor:	Gauthier Blacktop/Jack Ruh
Weather Conditions:	Partly cloudy 75 ˚F SW 9 mph

Description of Work Performed:

Arrived on-site at 837 Bailey Avenue around 9:30 am. Met with site foreman.
Completed mowing at approximately 5:00 pm.

Problems/Observations:	None.
Health and Saftey Concerns:	None.
Contractor Work Force:	1 Foreman
Contractor Equipment	1 dump truck and 1 brush hog
Attachments : Photolog	
Inspectors Name	Alexis Palumbo-Compton

1. View of site after mowing was completed facing west

2. View of site after mowing was completed facing southwest

Brydges Engineering in Environment and Energy

3. View of site after mowing was completed facing south

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Monday, August 11th 2023
Site Name:	837 Bailey Avenue (BCP Site #C915298)
Location:	837 Bailey Avenue, Buffalo, NY 14206
Contractor/Sub-Contractor:	Gauthier Blacktop/Jack Ruh
Weather Conditions:	Sunny 68 ˚F WNW 6 mph

Description of Work Performed:

Arrived on-site at 837 Bailey Avenue around 8:00 am. Met with site foreman and laborer.
Met with DEC PM around 8:30 am and conducted site walk together
Importing stone to reair cover system disturbance areas (i.e., bare spots, ruts, holes and rills)
Did a site inspection and photographed work being performed.
1 truckload was imported and import ticket was received

Problems/Observations:	None.
Health and Saftey Concerns:	None.
Contractor Work Force:	1 Foreman and 1 laborer
Contractor Equipment	1 mini-excavator, 1 dump truck
Attachments : Photo Log	
Inspectors Name	Alexis Palumbo-Compton

960 Busti Ave.
Buffalo, New York 14213

Daily Field Report Continued

Date:	Monday, August 11th 2023
Site Name:	837 Bailey Avenue (BCP Site #C915298)
Location:	837 Bailey Avenue, Buffalo, NY 14206

Work Performed Continued

NYSDEC approved 2" crusher run stone was imported from New Enterprise Stone 7 lime Co., Inc. (utilized same previously approved stock pile)

Imported Material	Loads:	Amount (Cubic Yards)
2" crusher run stone	1	11.59

Exported Material	Destination	Loads:	Amount (Cubic Yards)
None			

Total Material Hauled - Approx. (Cubic Yards)	0

1. View of dump truck holding stone and mini-excavator used to transport and compact stone facing northeast

2. View of mini-excavator facing west

Brydges Engineering in Environment and Energy

3. View of mini-excavator laying stone in the northwestern portion of the site facing northeast

3. View of completed cover repair along northern site border facing north

5. View of mini-excavator grading soil mounds in southeast corner of site facing south

2. View of completed cover repair in southeast corner of site facing east

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Request to Import/Reuse Fill or Soil

This form is based on the information required by DER-10, Section 5.4(e). Use of this form is not a substitute for reading the applicable Technical Guidance document.

SECTION 1 – SITE BACKGROUND

The allowable site use is: Commercial or Industrial Use

Have Ecological Resources been identified? no

Is this soil originating from the site? no

How many cubic yards of soil will be imported/reused? 100-200

If greater than 1000 cubic yards will be imported, enter volume to be imported:

SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone? yes

Does it contain less than 10%, by weight, material that would pass a size 10 sieve? no

Does it contain less than 10%, by weight, material that would pass a size 100 sieve? yes

Is this virgin material from a permitted mine or quarry? yes

Is this material recycled concrete or brick from a DEC registered processing facility? no

SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

Not Applicable

Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.

If the material meets requirements of DER-10 section 5.4(e)5 (other material), no chemical testing needed.

SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

Not Applicable.

Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.

If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.

SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

New Enterprise Stone and Lime Co., Inc.

Location where fill was obtained:

500 Como Park Boulevard, Buffalo, NY 14227

Identification of any state or local approvals as a fill source:

Not Applicable

If no approvals are available, provide a brief history of the use of the property that is the fill source:

Quarried Stone.

Provide a list of supporting documentation included with this request:

Sieve Test Analysis and Certification

CME Associates, Inc.

2727 Broadway St., Suite 2
Cheektowaga, New York 14227
(716) 877-9577
(716) 877-9629 (Fax)

www.cmeassociates.com

LAB REPORT SUMMARY

PROJECT: NESL Source Pre-Qual 2021
CLIENT: NESL
DATE: 04/29/2022

REPORT NO.: 17330L-05
REPRESENTATIVE: Austin Glasier

This CME Associates, Inc representative performed a sieve analysis and moisture density test (Modified Proctor) on a 2" R.O.C. sample delivered to CME's Buffalo laboratory on 04/13/2022. Tests were performed according to ASTM standards C136, C117, and D1557.

The following table distinguishes your sample from some common NYSDOT items:

Sample No.:	Location:
BL3134	Source #5-3R

MECHANICAL ANALYSIS (ASTM C136, C117)

Sieve Size	Percent Passing by Weight Sample BL3134	Item 304.12 Subbase Type II	Item 203.07 Select Granular Fill	Item 203.25 Sand Backfill	Item 605.0901 Underdrain Filter Type 1
4"	100		100		
2"	100	100			
1"	94				100
3/4"	86				
1/2"	68			100	30-100
3/8"	58				
1/4"	46	25-60		90-100	0-30
No. 4	40				
No. 10	23				0-10
No. 40	10	5-40	0-70		
No. 80	8				
No. 200	6	0-10	0-15	0-5	0-5

CLASSIFICATION

Gray cmf Gravel; some cmf Sand; trace Silt/Clay

LABORATORY MOISTURE-DENSITY RELATIONSHIP (ASTM D1557)

Corrected Maximum Dry Density	=	**143.1**	**Pcf**
Corrected Optimum Moisture Content	=	**5.5**	**%**

It is recommended the engineer of record review and comment on the use of this material. Please see attached documents for lab test results.

Feel free to contact this office should you have any questions.

CME Associates, Inc.

2727 Broadway Ave, Suite #2
Buffalo, New York 14227
(716) 877-9577
(716) 877-9629 (Fax)

www.cmeassociates.com

LABORATORY TEST SUMMARY
NESL
NESL Source Pre-Qual 2021
CME Report Number: 17330L-05
4/29/2022
Page 2 of 3

The CME Associates Representative obtained a sample at the above referenced project. The sample was delivered to CME's Buffalo facility, an AASHTO[1] accredited laboratory, for a Particle Size Analysis and a Moisture Density Relationship determination. The results are as follow:

1) Material Identification

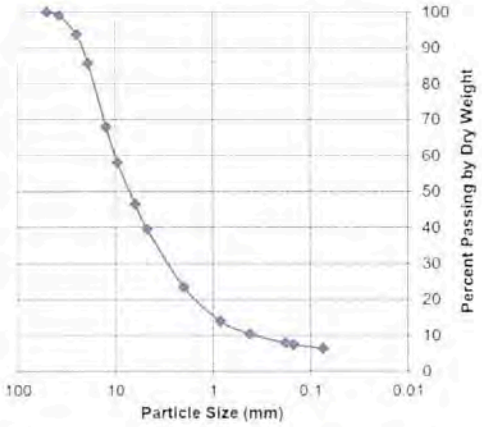
Sample #	Date Sampled	Classification	Source
BL3134	04/13/22	Gray cmf Gravel; some cmf Sand; trace Silt/Clay	Source #5-3R

2) Particle Size Analysis ASTM D422

Sieve Size	Sieve Size (mm)	% Passing by Dry Weight Sample # BL3134
2"	50	100
1-1/2"	37.5	99
1"	25	94
3/4"	19	86
1/2"	12.5	68
3/8"	9.50	58
1/4"	6.25	46
#4	4.75	40
#10	2.00	23
#20	0.850	14
#40	0.425	10
#80	0.180	8
#100	0.150	7
#200	0.075	6

Note: Proposed use of material not provided.

Grain Size Distribution



3) Moisture-Density Relationship (ASTM D-1557: Modified Proctor)

	Sample # BL3134
Corrected Maximum Dry Density (pcf)	= 143.1
Corrected Optimum Moisture Content (%)	= 5.5
Oversized Particles, Percent by Weight (%)	= 14 *

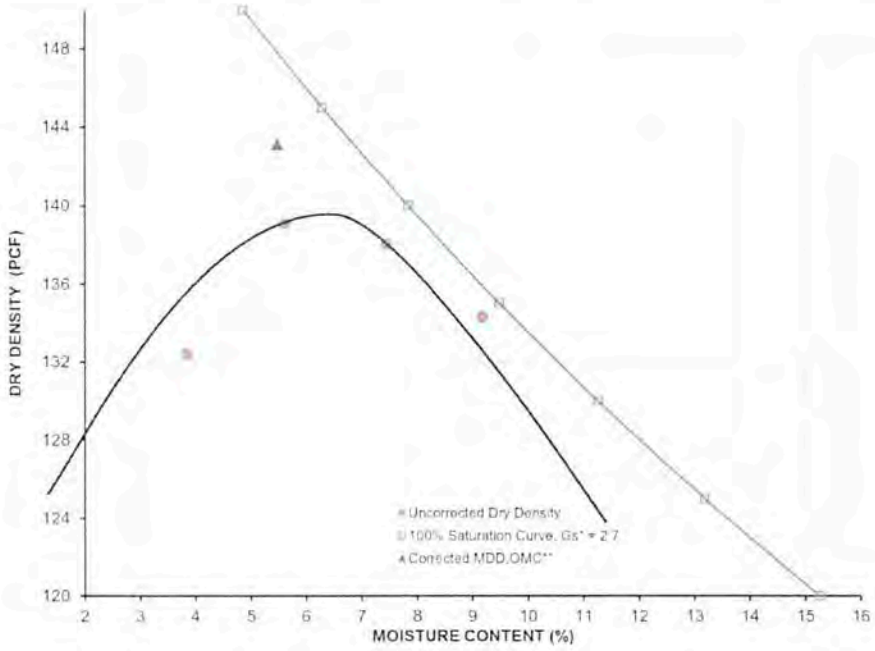
* Particles retained on 3/4-inch sieve

[1]AASHTO - American Association of State Highway & Transportation Officials (AASHTO) Materials Reference Laboratory. CME Buffalo accreditation includes tests of Portland Cement Concrete, Aggregate and Soil Materials. www.aashtoresource.org

LABORATORY TEST SUMMARY
NESL
NESL Source Pre-Qual 2021
CME Report Number: 17330L-05
Page 3 of 3

SAMPLE LOCATION:	Source #5-3R	DATE SAMPLED:	4/13/22
SOIL CLASSIFICATION:	Gray cmf Gravel; some cmf Sand; trace Silt/Clay	SAMPLE NO.:	BL3134

Moisture - Density Relationship Curve



Particle Size Analysis ASTM D422

Sieve Size	% Passing
2"	100
1-1/2"	99
1"	94
3/4"	86
1/2"	68
3/8"	58
1/4"	46
No.4	40
No.10	23
No.20	14
No.40	10
No.80	8
No.100	7
No.200	6

Test Procedure Information

Test Method	☑ ASTM D-1557 (Modified)	☐ ASTM D-698 (Standard)	
Procedure Used	☐ A	☐ B	☑ C
Preparation Method	☐ Dry	☑ Moist	
Description of Rammer	☑ Manual	☐ Mechanical	

Test Results

Corrected MDD (PCF) = **143.1**
Corrected OMC (%) = **5.5**

Oversize Fraction by Dry Weight
14 % Retained on ☐ No.4 Sieve ☐ 3/8" Sieve ☑ 3/4" Sieve

* Specific Gravity, estimated
** MDD = Maximum Dry Density, OMC = Optimum Moisture Content
Please feel free to contact our office if you have any questions.

Austin Glasier
Laboratory Technician

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation
700 Delaware Avenue, Buffalo, NY 14209
P: (716) 851-7220| F: (716) 851-7226
www.dec.ny.gov

July 13, 2023

Alexis Palumbo-Compton
Be3 Corp
960 Busti Ave, Suite B-150
Buffalo, NY 14213

Re: Site Management (SM) –
Import Request
837 Bailey Ave., Buffalo
Erie County, Site No.: **C915298**

Dear Alexis Palumbo-Compton:

The Department has reviewed your request dated July 12, 2023 to import approximately 200 cubic yards of 2" R.O.C. from New Enterprise Stone & Lime Co., Inc. Based on the information provided, the request is hereby approved.

The proposed fill material meets the requirements for material other than soil (i.e., gravel, rock, stone, recycled concrete or recycled brick) as specified in section 5.4(e)5 of DER-10. Therefore, this material may be placed below the demarcation barrier or above the demarcation layer as part of final site cover.

Testing in accordance with DER-10 and approval by the Department is required for any additional material imported from this source.

If you have any questions, please contact me at 716-851-7220 or email: megan.kuczka@dec.ny.gov.

Sincerely,

Megan Kuczka
Environmental Program Specialist – 1

ec: Maritza Ruh – 837 Bailey LLC, Quaker Development, Inc.
Jason Brydges – Be3 Corp
John Berry – Be3 Corp

New Enterprise Stone & Lime Co., Inc.

500 Como Park Blvd
Buffalo, New York 14227
Phone: (716) 826-7310 Fax: (716) 826-1342

PLANT INFORMATION - 54230100 - WEHRLE AGGREGATES (716) 826-7310

ORDER NO.	TICKET NUMBER	SCALE	AUTO/MANUAL	DATE	TIME
1000361765	50202296	1	W	07/17/2023	7:21 am

SOLD TO:
Gauthier Blacktop Inc
1790 Bullis Rd
Elma, NY 14059-

CUSTOMER: 81296
PHONE:
PO #: bailey ave

SHIP TO:

QUOTE:
STATE NY
ZONE:

PRODUCT ID	PRODUCT DESCRIPTION
280300	STONE, 2" CRUSHER RUN

JOB NAME / LOCATION
2023 CUSTOM SEASONAL- 23/21

Item

JOB REQUIRED NUMBERS
COUNTY: ERIE 2023 CUSTOM SEASONAL- 23/21

TAG NO.	AXLES	TRUCK	CARRIER NAME	CARRIER CODE
11991ME	3	B00GAU4		

FREIGHT PICKUP	FREIGHT COLLECT 70,000		ACCUMULATIVE QUANTITIES		PAYMENT METHOD CREDIT		
US WEIGHT 66,300	33.15 Ton	GROSS	ORDERED 0.00		MATERIAL		
24,460	12.23 Ton	TARE	TODAY 20.92	LOADS 1	HAUL		
41,840	20.92 Ton	NET	TODATE 396.89	LOADS 22	ADD'L CHARGES		
20.92		Ton	ACCUMULATED CASH SALE		TAX		

WEIGHED BY
14540

TOTAL THIS LOAD ➤

INSPECTOR'S SIGNATURE

JOB ARRIVAL TIME

JOB DEPARTURE TIME

RECEIVED ABOVE MATERIAL IN GOOD CONDITION. YOUR SIGNATURE OR ACTUAL RECEIPT/DELIVERY ACKNOWLEDGES ACCEPTANCE OF THE NESL TERMS & CONDITIONS REFERENCED BELOW

X

A SERVICE CHARGE NOT TO EXCEED THE MAXIMUM ALLOWABLE BY LAW WILL BE APPLIED TO ALL AMOUNTS OVER 30 DAYS PAST DUE

Truck Desc: gauthier blacktop

Crushed Stone, Pulverized Limestone, or Sand and Gravel DANGER - May Cause Cancer (Inhalation). May cause damage to organs (lungs, respiratory system) through prolonged or repeated overexposure to dust from these products(inhalation). **Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. **Response:** If exposed or concerned, get medical advice/attention. **Handling and Storage:** Follow personal protection and control measures set forth in the product SDS. Avoid dust formation and breathing dust. **Disposal:** Dispose of contents/container in accordance with all local, regional, national and international regulations. **Read the Safety Data Sheet (SDS) before handling this product** to determine the appropriate ventilation or respiratory protection necessary to safeguard your health. The risk of silicosis or lung cancer depends upon the duration and levels of silica exposure in the workplace. Safety Data Sheets are available at www.nesl.com <http://www.nesl.com> or by calling (814) 766-2211.

Plant #: 54230100 Ticket #: 50202296 PICKUP

HAULER

Void - Customer Do Not Accept

New Enterprise Stone & Lime Co., Inc.

500 Como Park Blvd
Buffalo, New York 14227
Phone: (716) 826-7310 Fax: (716) 826-1342

PLANT INFORMATION - 54230100 - WEHRLE AGGREGATES (716) 826-7310

ORDER NO.	TICKET NUMBER	SCALE	AUTO/MANUAL	DATE	TIME
1000361765	50202383	1	W	07/17/2023	10:13 am

SOLD TO:
Gauthier Blacktop Inc
1790 Bullis Rd
Elma, NY 14059-

CUSTOMER: 81296
PHONE:
PO #: bailey ave

SHIP TO:

QUOTE:
STATE: NY
ZONE:

PRODUCT ID	PRODUCT DESCRIPTION
280300	STONE, 2" CRUSHER RUN

JOB NAME / LOCATION
2023 CUSTOM SEASONAL- 23/21

Item

JOB REQUIRED NUMBERS
COUNTY: ERIE 2023 CUSTOM SEASONAL- 23/21

TAG NO.	AXLES	TRUCK	CARRIER NAME	CARRIER CODE
11991ME	3	B00GAU4		

FREIGHT PICKUP	FREIGHT COLLECT 70,000		ACCUMULATIVE QUANTITIES		PAYMENT METHOD CREDIT		
US WEIGHT 64,040	32.02 Ton	GROSS	ORDERED 0.00		MATERIAL		
24,460	12.23 Ton	TARE	TODAY 40.71	LOADS 2	HAUL		
39,580	19.79 Ton	NET	TODATE 416.68	LOADS 23	ADD'L CHARGES		
19.79		Ton	ACCUMULATED CASH SALE		TAX		

WEIGHED BY
14540

TOTAL THIS LOAD ➤

INSPECTOR'S SIGNATURE

JOB ARRIVAL TIME

JOB DEPARTURE TIME

RECEIVED ABOVE MATERIAL IN GOOD CONDITION YOUR SIGNATURE OR ACTUAL RECEIPT/DELIVERY ACKNOWLEDGES ACCEPTANCE OF THE NESL TERMS & CONDITIONS REFERENCED BELOW

X

A SERVICE CHARGE NOT TO EXCEED THE MAXIMUM ALLOWABLE BY LAW WILL BE APPLIED TO ALL AMOUNTS OVER 30 DAYS PAST DUE.

Truck Desc: gauthier blacktop

Crushed Stone, Pulverized Limestone, or Sand and Gravel DANGER - May Cause Cancer (Inhalation). May cause damage to organs (lungs, respiratory system) through prolonged or repeated overexposure to dust from these products(inhalation). **Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. **Response:** If exposed or concerned, get medical advice/attention. **Handling and Storage:** Follow personal protection and control measures set forth in the product SDS. Avoid dust formation and breathing dust. **Disposal:** Dispose of contents/container in accordance with all local, regional, national and international regulations. **Read the Safety Data Sheet (SDS) before handling this product** to determine the appropriate ventilation or respiratory protection necessary to safeguard your health. The risk of silicosis or lung cancer depends upon the duration and levels of silica exposure in the workplace. Safety Data Sheets are available at www.nesl.com <http://www.nesl.com> or by calling (814) 766-2211.

Plant #: 54230100 Ticket #: 50202383 PICKUP

HAULER

Void - Customer Do Not Accept

New Enterprise Stone & Lime Co., Inc.

500 Como Park Blvd
Buffalo, New York 14227
Phone: (716) 826-7310 Fax: (716) 826-1342

PLANT INFORMATION - 54230100 - WEHRLE AGGREGATES (716) 826-7310

ORDER NO.	TICKET NUMBER	SCALE	AUTO/MANUAL	DATE	TIME
1000361765	50207746	1	W	08/11/2023	7:34 am

SOLD TO:
Gauthier Blacktop Inc
1790 Bullis Rd
Elma, NY 14059-

CUSTOMER: 81296
PHONE:
PO #: BAILEY AVE

SHIP TO:

QUOTE:
STATE NY
ZONE:

PRODUCT ID	PRODUCT DESCRIPTION
280300	STONE, 2" CRUSHER RUN

JOB NAME / LOCATION
2023 CUSTOM SEASONAL- 23/21

Item

JOB REQUIRED NUMBERS
COUNTY: ERIE 2023 CUSTOM SEASONAL- 23/21

TAG NO.	AXLES	TRUCK	CARRIER NAME	CARRIER CODE
70281JT	2	B00GAU5		

FREIGHT PICKUP	FREIGHT COLLECT 70,000		ACCUMULATIVE QUANTITIES		PAYMENT METHOD CREDIT		
US WEIGHT 57,300	28.65 Ton	GROSS	ORDERED 0.00		MATERIAL		
22,540	11.27 Ton	TARE	TODAY 17.38	LOADS 1	HAUL		
34,760	17.38 Ton	NET	TODATE 434.06	LOADS 24	ADD'L CHARGES		
17.38		Ton	ACCUMULATED CASH SALE		TAX		

WEIGHED BY
14540

TOTAL THIS LOAD ➤

INSPECTOR'S SIGNATURE JOB ARRIVAL TIME JOB DEPARTURE TIME

RECEIVED ABOVE MATERIAL IN GOOD CONDITION. YOUR SIGNATURE OR ACTUAL RECEIPT/DELIVERY ACKNOWLEDGES ACCEPTANCE OF THE NESL TERMS & CONDITIONS REFERENCED BELOW

X

A SERVICE CHARGE NOT TO EXCEED THE MAXIMUM ALLOWABLE BY LAW WILL BE APPLIED TO ALL AMOUNTS OVER 30 DAYS PAST DUE

Truck Desc: gauthier blacktop

Crushed Stone, Pulverized Limestone, or Sand and Gravel DANGER - May Cause Cancer (Inhalation). May cause damage to organs (lungs, respiratory system) through prolonged or repeated overexposure to dust from these products(inhalation). **Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. **Response:** If exposed or concerned, get medical advice/attention. **Handling and Storage:** Follow personal protection and control measures set forth in the product SDS. Avoid dust formation and breathing dust. **Disposal:** Dispose of contents/container in accordance with all local, regional, national and international regulations. **Read the Safety Data Sheet (SDS) before handling this product** to determine the appropriate ventilation or respiratory protection necessary to safeguard your health. The risk of silicosis or lung cancer depends upon the duration and levels of silica exposure in the workplace. Safety Data Sheets are available at www.nesl.com <http://www.nesl.com> or by calling (814) 766-2211.

Plant #: 54230100 Ticket #: 50207746 PICKUP

ORIGINAL - CUSTOMER